

# PASSIVE INFRARED WALL SWITCH OCCUPANCY SENSOR

WS-301

Defaults to Manual-ON operation for maximum energy savings

180° coverage, maximum of 900 ft<sup>2</sup>

Shallow (1") back housing and flying leads for easy installation

Built-in light level sensor



Optional neutral connection with break off tab to expose neutral terminals

120/240/277 VAC and 347 VAC models

Button provides positive tactile feedback

## DESCRIPTION

The WS-301 Passive Infrared (PIR) Wall Switch Sensor turns lighting or fan loads on and off based on occupancy and ambient light level. The sensor replaces existing wall switches and fits behind a standard decorator wall plate.

## OPERATION

The WS-301 senses the difference between infrared energy from a human body in motion and the background space to turn on lighting automatically when occupancy is detected. After a user-specified length of time when no occupancy is detected, lighting automatically switches off. The sensor can also be used with line voltage switches for multi-level lighting.

## APPLICATIONS

The WS-301 is great for retrofit projects and has the flexibility to work in a variety of applications including offices, conference rooms, break rooms and utility rooms. Energy savings for these areas can be as high as 60% since lighting will no longer remain on once the room is vacant. With a competitive price, low installation cost, and high energy savings, paybacks are usually well under two years.

The WS-301 120/240/277v model uses a blue and white signal wire to connect to neutral or, in cases of retrofit or replacement when no neutral is present, can be connected to ground. The WS-301-347 model has a plastic tab that covers neutral screw terminals; once the sensor is connected to neutral it complies with all codes that restrict current leakage to ground.

## FEATURES

- Complies with 2017 NEC requirements (WS-301)
- Zero crossing circuitry reduces stress on the relay and results in increased sensor life
- Adjustable time delay and sensitivity
- Custom two-tier Fresnel lens enhances detection at the desktop level
- Sensor coverage tested to NEMA Guide Publication WD 7-2000
- Light level sensor holds lights off when ambient lighting is above the preset level
- Patented voltage drop protection
- For safety, there is no leakage to load in the off mode and sensor is safety grounded
- LED indicates occupancy detection
- BAA/TAA-compliant models available

PROJECT

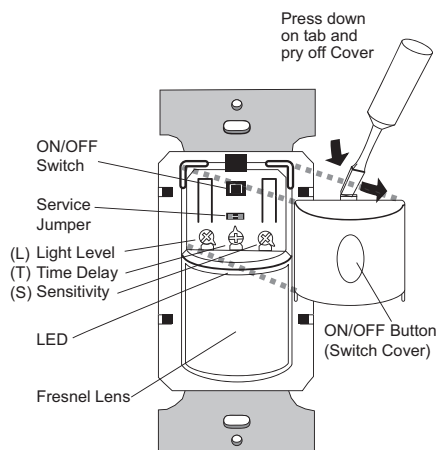
LOCATION/  
TYPE

## SPECIFICATIONS

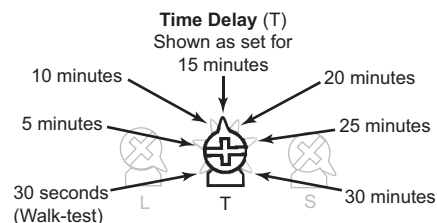
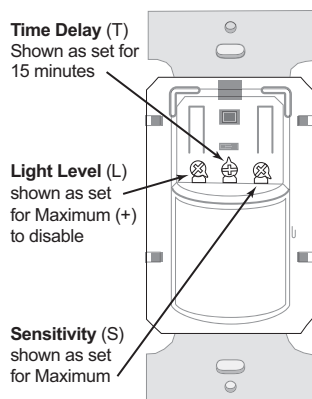
- WS-301: 120/240/277VAC; 50/60Hz, 1/4 hp
  - @ 120VAC, 0-1000W ballast, LED, and tungsten
  - @ 240/277VAC, 0-1200W ballast and LED
- WS-301-347: 347VAC; 50/60Hz, 1/4 hp; 0-1500W ballast and LED
- Time delay adjustable from 30 seconds up to 30 minutes
- Adjustable light level setting of 10 to 200 footcandles (107.6 to 2,153 lux)
- Adjustable sensitivity from 20% to 100%
- Coverage: Major motion 35' x 30'  
Minor motion 20' x 15'
- Dimensions (L x W x D): 2.68" x 1.75" x 1.04"  
(68mm x 44mm x 27mm)
- UL and cUL listed
- Five year warranty

## CONTROLS & SETTINGS

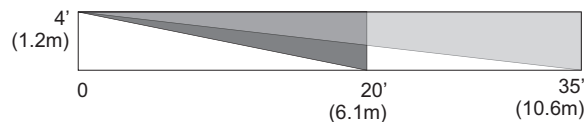
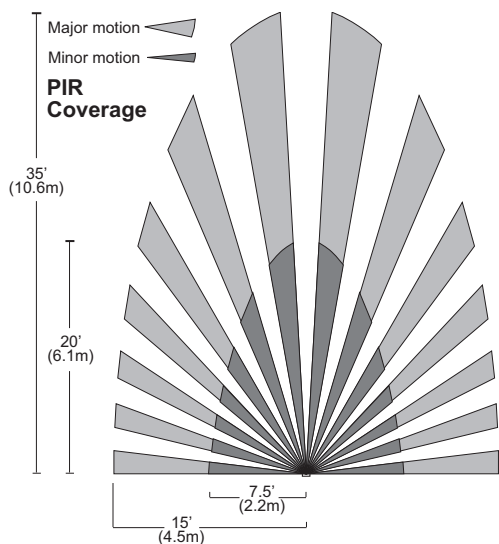
### Product Controls



### Settings



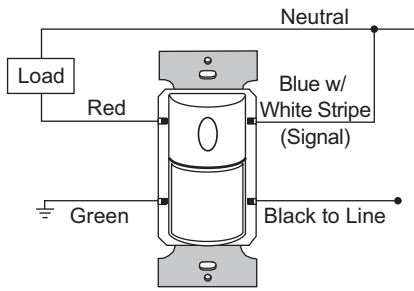
## COVERAGE PATTERNS



For best performance, Legrand recommends using this sensor in spaces no larger than 15' x 12'.

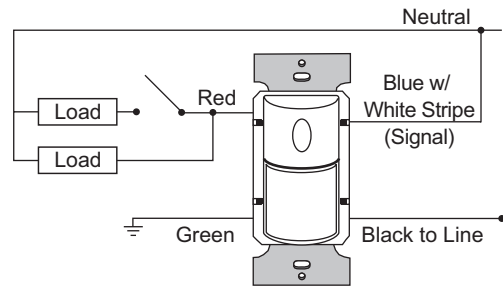
WIRING

WS-301



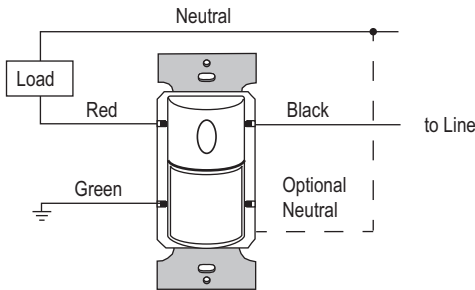
Single-level wiring

Signal wire connects to neutral. Signal wire can connect to ground in replacement or retrofit application

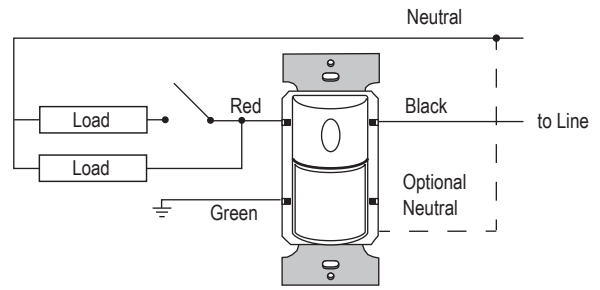


Manual bi-level lighting wiring

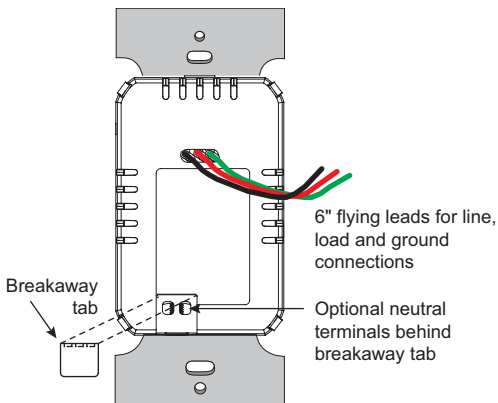
WS-301-347



Single-level wiring



Manual bi-level lighting wiring



Simple optional neutral connection allows installation in any 2-wire or 3-wire application. When used in a multi-way application, all devices in that space must be wired using the same method of either with neutral or without neutral.

**ORDERING INFORMATION**

| Catalog #                |              | Color        |  | Voltage  | Load Rating  |
|--------------------------|--------------|--------------|--|--|--|
| <input type="checkbox"/> | WS-301-W     | White        | PIR Wall Switch Occupancy Sensor                     | 120VAC; 50/60Hz<br><br>or<br><br>240/277VAC; 50/60Hz | @ 120VAC: 0-1000W ballast, LED, tungsten; 1/4 hp motor<br><br>or<br><br>@ 240/277VAC: 0-1200W ballast, LED; 1/4 hp motor |
| <input type="checkbox"/> | WS-301-LA    | Light Almond |  |  |  |
| <input type="checkbox"/> | WS-301-I     | Ivory        |  |  |  |
| <input type="checkbox"/> | WS-301-G     | Gray         |  |  |  |
| <input type="checkbox"/> | WS-301-B     | Black        |  |  |  |
| <input type="checkbox"/> | WS-301-R     | Red          |  |  |  |
| <input type="checkbox"/> | WS-301-W-U   | White        | PIR Wall Switch Occupancy Sensor, BAA/TAA compliant* |  |  |
| <input type="checkbox"/> | WS-301-I-U   | Ivory        |  |  |  |
| <input type="checkbox"/> | WS-301-347-W | White        | PIR Wall Switch Occupancy Sensor                     | 347VAC; 50/60Hz                                      | 0-1500W ballast, LED; 1/4 hp motor   |

\* BAA/TAA compliant. Product is compliant with Buy American Act and Trade Agreement Act  
Order wall plate separately.

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PROJECT

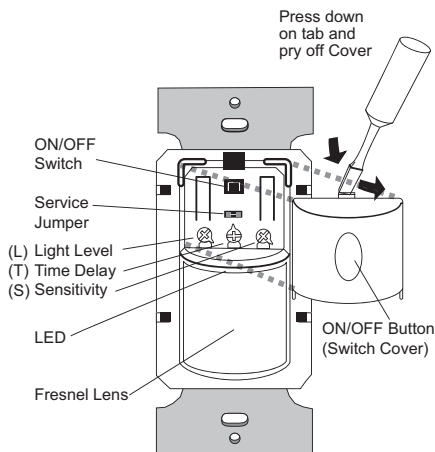
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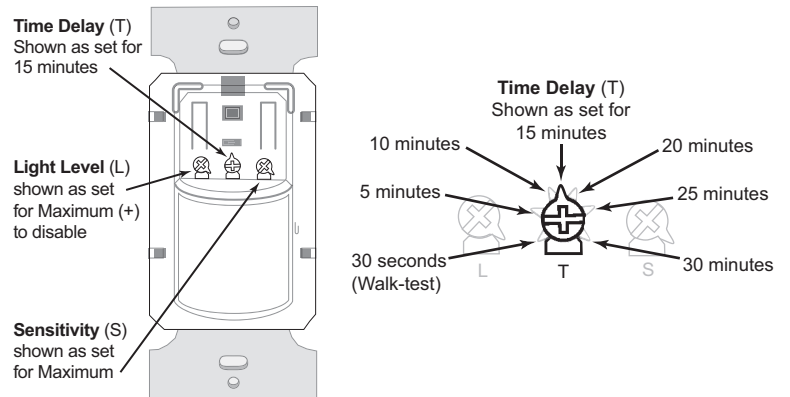
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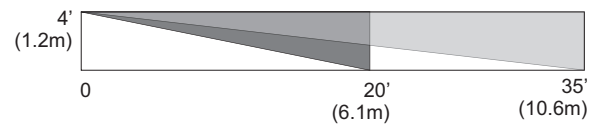
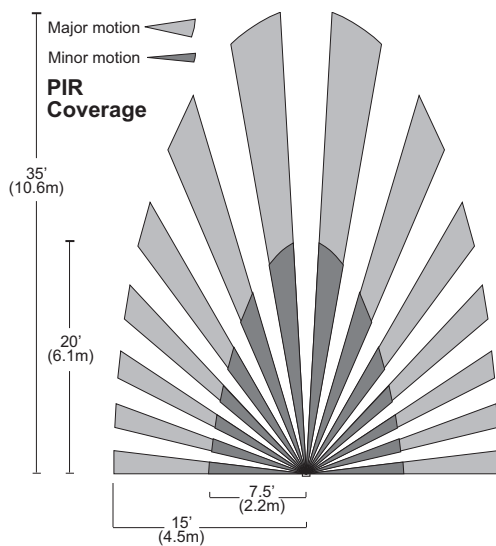
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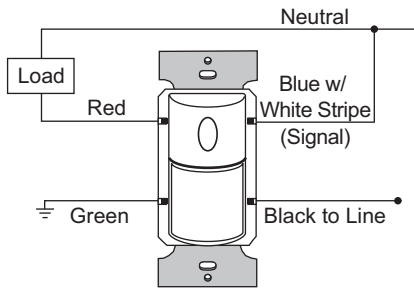
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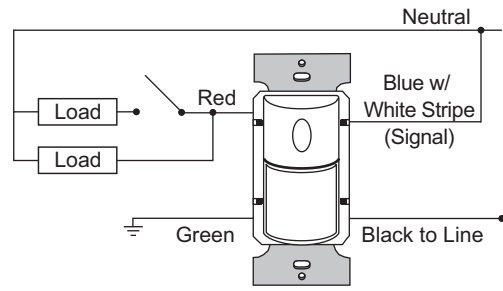
WIRING

WS-301



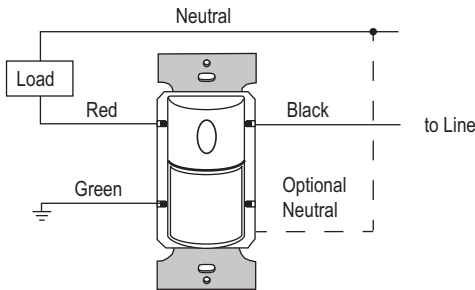
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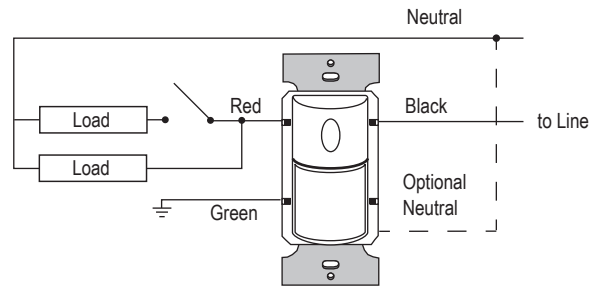


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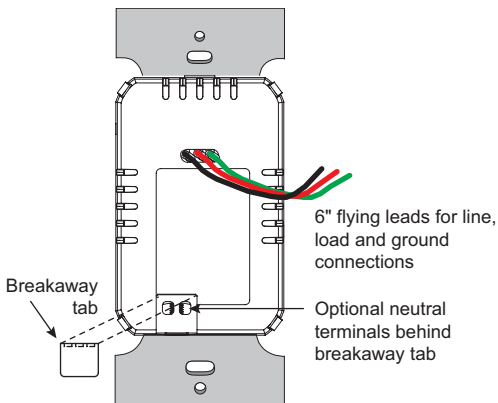
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