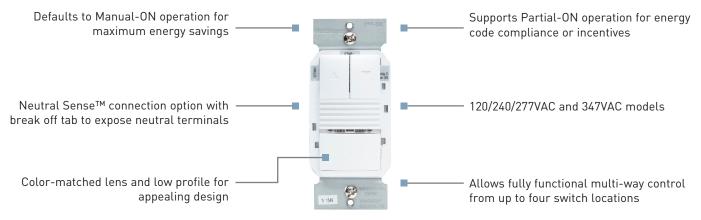
# PASSIVE INFRARED 0-10 VOLT DIMMING WALL SWITCH OCCUPANCY SENSOR



#### Description

The PW-311 passive infrared (PIR) dimming wall switch sensor can turn lights OFF and ON based on occupancy and allow the user to increase or decrease the lighting level. It works with 0-10 VDC dimming drivers and ballasts to control lighting loads including LEDs.

#### Operation

The PW-311 installs in a single gang junction box with or without neutral wiring. Factory default operation is for Manual-ON, so that users turn lights on only when needed. It uses PIR technology to detect occupancy. Once the space is vacated and the time delay elapses, lights automatically turn OFF. DIP switch settings enable a variety of control options such as Auto-ON operation, high and low trim, ramp up and fade down times, power loss mode, smart light level, walkthrough and test modes. Multiple sensors may be used to dim a lighting load from up to four locations.

On loss of normal power to the PW-311, the 0-10V dimming control will open. Any light fed with a separate circuit but controlled by the unit's 0-10V signal will go to 100%. When combined with a Wattstopper ELCU-200, this ensures lights

#### **Features**

PROJECT

- Complies with 2017 NEC requirements
- Vandal resistant lens combines precise coverage with durability
- Presentation mode may be deactivated to allow Auto-ON operation after 15 second time delay
- Optional Smart Light Level adapts ambient light hold off threshold to meet user needs
- Selectable walk-through mode turns lights off three minutes after the room is initially occupied if no motion is detected after the first 30 seconds
- Test mode allows quick and easy verification of coverage

fed with a separate Emergency Power Circuit but dimmed with the DW-311's 0-10V signal circuit will go to 100% when normal power fails.

#### Partial-ON Option

When set for Automatic-ON operation, the PW-311 typically comes ON to the last non-zero light level for occupant comfort and convenience. However, this default setting may be changed to a fixed light level value of 50%, 75% or 100%. The dimmed level options (Preset On Level) support new state and federal energy code requirements.

#### **Applications**

The PW-311 sensor is ideal for enclosed spaces with clear line of sight of the occupant. Common applications include small offices, small conference rooms and lunch/break rooms. The PW-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 PW-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.

- Selectable audible and/or visual alerts for impending shutoff
- LED indicates occupancy detection
- Service mode allows sensor to operate as a service switch in the unlikely event of a failure
- Zero-crossing for long relay life
- No derating required for multi-gang applications
- Sensor coverage tested to NEMA Guide Publication WD 7-2000
- Compatible with decorator wall plates
- This product meets the material restrictions of RoHS

LOCATION/ TYPE



#### **Specifications**

- PW-311: 120/240/277VAC; 50/60Hz
- PW-311-347: 347VAC; 50/60Hz
- Dimming control signal: 0-10VDC, sinks up to 50mA for control of compatible ballasts (25 if each sources 2mA); Class 1 wiring
- Time delays: 3, 5, 15 or 30 minutes, walk-through, test-mode
- Power up after power loss: On, Off or last state

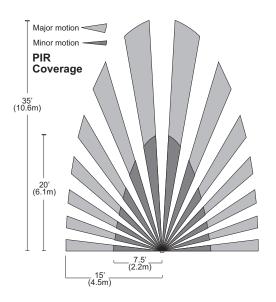
#### • Coverage: Major motion 35' x 30', Minor motion 20' x 15'

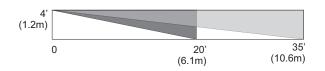
- Sensitivity adjustment: PIR (high/low)
- Dimensions (L x W x D): 2.73" x 1.75" x 1.81" (69mm x 44mm x 46mm)
- UL and cUL listed (E101196)
- Five year warranty

#### **Controls & Settings**

#### **Product Controls DIP Switch Settings** Up Button Time Delay Additional Features Additional Features 6 7 8 9 Green LED # of Blinks Down Button Exit Programming Mode 🔸 🔸 🔸 Visual Alert 🖌 🖊 🛧 🛧 1=0FF, 2=0N Audio Alert 🔸 🔸 🛧 1=ON, 2=OFF Walk-Thru 🖌 🛧 🛧 1=0FF. 2=0N Mode 0 PIR Sensitivity | + | + | + | 1=100%, 2=50% Unused High Trim 🔸 🛧 🛧 1=10V, 2=Manual Adjustment Low Trim 🖌 🛧 🛧 🚽 1=0V, 2=Manual Adjustment Mode 1 ÷ Manual - On 🕈 Ramp Up Time 🖌 🛧 🛧 1=1, 2=2.5, 3=5, 4=10 seconds **Dip Switches** Auto - On 🖌 Fade Down Time 🛧 🕁 🕁 🕇 1=2.5, 2=5, 3=15, 4=30 seconds Button F Light Level Adjust 🛧 🔸 🛧 1=Disable, 2=Enable, Hinges Tabs 3=Smart Light Level Time Delay 2 3 Detection LED Power Loss Mode 🛧 🕁 🛧 🕁 **1=Keep Last State**, 2=Default On, 3=Default Off Test/3 min ↓ ↓ **PIR Lens** 5 minutes 🔸 🛧 1=0N, 2=0FF Presentation Mode 🛧 🔸 🛧 15 minutes |↑ |↓ Service Mode 🛧 🛧 🕁 🕁 1=0FF, 2=ON 30 minutes 🛧 🛧 Preset On Level ↑ ↑ ↓ ↑ 1=Last Non-Zero Value, 2=50%, 3=75%, 4=100% ↑=ON ↓=OFF O Non-Dim Mode ₩ 1=0FF, 2=0N Default Values Shown Press and Hold UP or Reset To Default $\uparrow$ $\uparrow$ $\uparrow$ ♠ in Bold DOWN for 5 seconds

#### **Coverage Patterns**



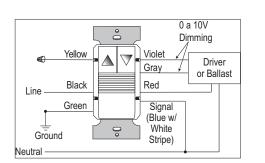


For best performance, Legrand recommends using this sensor in spaces no larger than 15' x 12'.

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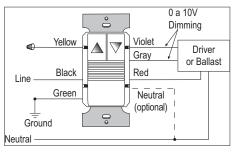
### Wiring

#### PW-301

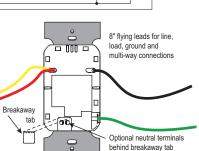


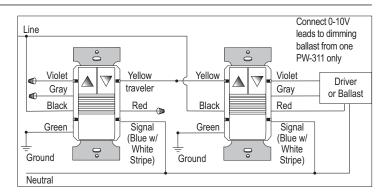
Signal wire connects to neutral. Signal wire can connect to ground in replacement or retrofit application

#### PW-301-347

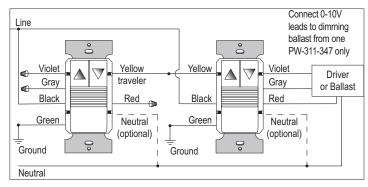


Simple optional neutral connection allows installation in any 2-wire or 3-wire application. When used in a multi-way application, all devices in that space must be wired using the same method of either with neutral or without neutral.





Multi-way Wiring (up to 4 sensors)



Multi-way Wiring (up to 4 sensors)

Note: For multi-way wiring, All units should be on the same phase

#### **Ordering Information**

| Catalog #     | Color      | Voltage                                      | Load Rating  |
|---------------|------------|--|--|
| PW-311-W      | White      | 120VAC; 50/60Hz<br>or<br>240/277VAC; 50/60Hz | @ 120VAC: 0-1000W ballast, E-ballast, LED,<br>tungsten; 1/4hp motor<br>or<br>@ 240/277VAC: 0-1200W ballast, E-ballast,<br>LED; 1/4hp motor |
| PW-311-W-U    | White      |  |  |
| PW-311-LA     | Lt. Almond |  |  |
| PW-311-I      | lvory      |  |  |
| PW-311-I-U    | lvory      |  |  |
| PW-311-G      | Grey       |  |  |
| PW-311-B      | Black      |  |  |
| PW-311-R      | Red        |  |  |
| PW-311-R-U    | Red        |  |  |
| PW-311-347-W  | White      | 347VAC; 50/60Hz                              | 0-1500W ballast, LED; 1/4hp motor  |
| PW-311-347-LA | Lt. Almond |  |  |
| PW-311-347-I  | lvory      |  |  |
| PW-311-347-G  | Grey       |  |  |
| PW-311-347-B  | Black      |  |  |
| PW-311-347-R  | Red        |  |  |

-U = BAA/TAA compliant. Product is compliant with Buy American Act and Trade Agreement Act Order wall plate separately.

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