PASSIVE INFRARED WALL SWITCH OCCUPANCY SENSOR │ PW-301

High sensitivity and dense coverage for exceptional performance

Defaults to Manual-ON operation for maximum energy savings

Color-matched lens and low profile for appealing design

Optional neutral connection with break off tab to expose neutral terminals

120/277 VAC and 347 VAC models

Allows multi-way control from one of up to four control locations

Description

The PW-301 passive infrared (PIR) wall switch sensor can turn lights OFF and ON based on occupancy. It is characterized by high sensitivity to small and large movements, appealing aesthetics, and a variety of features.

Operation

The PW-301 replaces existing wall switches and installs in a single gang junction box with or without either neutral wiring. Factory default operation is for Manual-ON, so that users turn lights on only when needed. It uses advanced PIR technology to detect occupancy and keep lighting ON when it is needed. Once the space is vacated and the time delay elapses, lights automatically turn OFF. DIP switch settings allow for a variety of control options such as Auto-ON operation, walk-through and test modes. Multiple sensors may be used for control of one or more loads from up to four locations.

Optional Neutral Connection

The PW-301 sensor uses a patent pending Neutral Sense Technology. Any PW-301 sensor can be used for a two-wire or three wire application, either to work with existing wiring, or to meet local or national code requirements. An easy-to-break plastic tab covers neutral screw terminals. Once the sensor is connected to neutral it complies with all codes that restrict current leakage to ground.

Applications

The PW-301 sensor is great for retrofit projects and well suited for small, enclosed spaces with clear line of sight of the occupant. Common applications include small offices, small conference rooms and lunch/break rooms.

Features

- Complies with 2011 NEC requirements
- Zero-crossing for long relay life
- Vandal resistant lens combines precise coverage with durability
- 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 adjustments
- Selectable audible and/or visual alerts for impending shutoff

- LED indicates occupancy detection
- In automatic mode, sensor returns automatically to Auto-ON after lights are turned off manually; ideal for presentations
- Optional light level sensing with simple setup
- Service mode allows sensor to operate as a service switch in the unlikely event of a failure
- Sensor coverage tested to NEMA Guide Publication WD 7-2000
- Compatible with decorator wall plates
- BAA/TAA-compliant models available

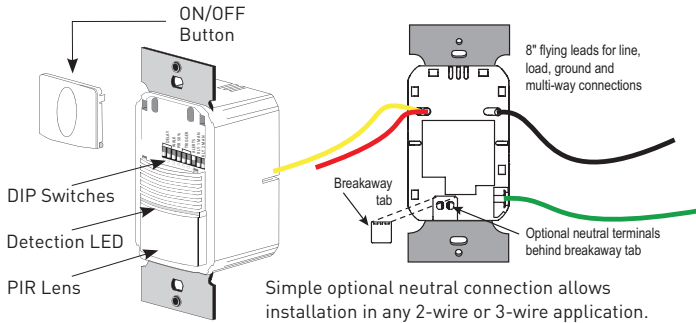| PROJECT | | LOCATION/ TYPE | |

Specifications

- PW-301: 120/277VAC; 50/60Hz, 1/4 hp
  @ 120VAC, 0-1000W ballast, LED, and tungsten
  @ 277VAC, 0-1200W ballast and LED

- PW-301-347: 347VAC; 50/60Hz, 1/4 hp; 0-1500W ballast
  and LED

- Time delays: 5, 10, 15, 20, 25 or 30 minutes, walk-through,
  test-mode

- 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

- Five year warranty

Controls & Settings

Product Controls & Neutral Option

ON/OFF Button

DIP Switches

Detection LED

PIR Lens

8" flying leads for line, load, ground and multi-way connections

Breakaway tab

Optional neutral terminals behind breakaway tab

Simple optional neutral connection allows installation in any 2-wire or 3-wire application.

DIP Switch Settings

Time Delay	1	2	3
Test/20 min	↓	↓	↓
5 minutes	↓	↓	↑
10 minutes	↓	↑	↓
15 minutes	↓	↑	↑
20 minutes	↑	↓	↓
25 minutes	↑	↓	↑
30 minutes	↑	↑	↓
⊘ Service	↑	↑	↑

Walk-Through	4
Enabled	↑
Disabled	↓

PIR Sensitivity	5
Low, 50%	↑
High	↓

Visible Alert	6
Enabled	↑
Disabled	↓

Audible Alert	7
Enabled	↑
Disabled	↓

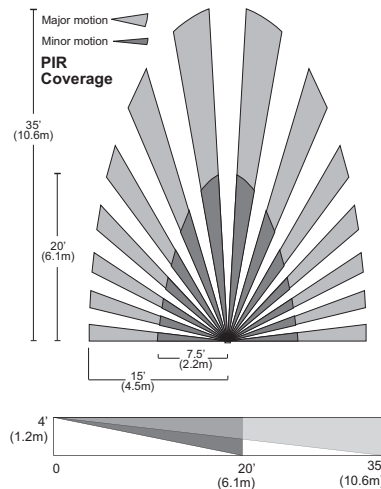| Relay 1 Mode	8
Manual On	↑
Auto On	↓

PW-302 ONLY
Relay 2 Mode	9
Manual On	↑
Auto On	↓

⊘ Service bypasses occupancy & light level functions. Control the load manually using ON/OFF button.

↑=ON ↓=OFF

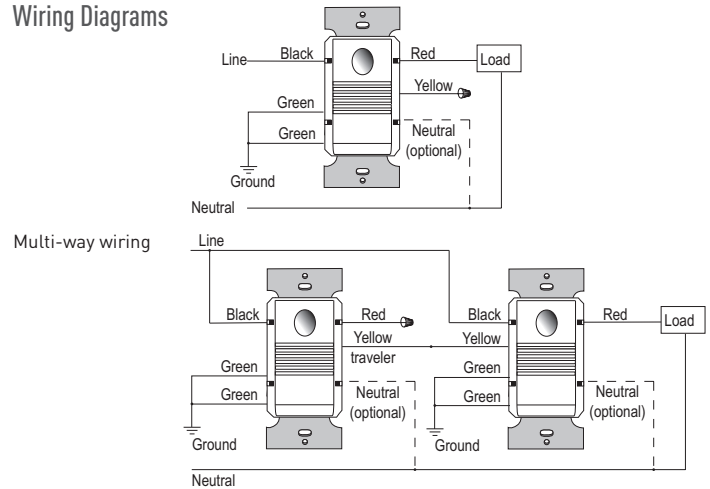Factory Settings:
◄ All models
◭ PW-301 series
◮ PW-302 series

Coverage & Wiring

Coverage Pattern

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

Major motion
Minor motion
PIR Coverage

35' (10.6m)
20' (6.1m)
7.5' (2.2m)
15' (4.5m)

4' (1.2m)
0   20' (6.1m)   35' (10.6m)

Wiring Diagrams

Line — Black — Red — Load
Green — Yellow
Green — Neutral (optional)
Ground
Neutral

Multi-way wiring

Line
Black — Red
Yellow traveler
Green — Neutral (optional)
Green
Ground

Black — Red — Load
Yellow
Green — Neutral (optional)
Green
Ground
Neutral

Ordering Information

Catalog #	Color	Voltage	Load Rating
☐ PW-301-W ☐ PW-301-W-U	White	120VAC; 50/60Hz or 277VAC; 50/60Hz	@ 120VAC, 0-1000W ballast, LED, tungsten, 1/4 hp or @ 277VAC 0-1200W ballast, LED, 1/4 hp
☐ PW-301-LA	Lt. Almond		
☐ PW-301-I ☐ PW-301-I-U	Ivory		
☐ PW-301-G	Gray		
☐ PW-301-B	Black		
☐ PW-301-R	Red		
☐ PW-301-347-W	White	347VAC; 50/60H	0-1500W ballast & LED, 1/4 hp
☐ PW-301-347-LA	Lt. Almond		
☐ PW-301-347-I	Ivory		
☐ PW-301-347-G	Gray		
☐ PW-301-347-B	Black		
☐ PW-301-347-R	Red		

Order wall plate separately.

-U = BAA/TAA-compliant models available. Product is compliant with Buy American Act and Trade Agreement Act