



# PW-100D Passive Infrared Dimmable Wall Switch Occupancy Sensor

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



Pushbutton dimming control and optional locked preset level for many lighting types

Selectable operation, walk-through, test and presentation modes for increased energy savings and convenience

Part of a comprehensive line of PIR, Ultrasonic and Dual Technology wall switch sensors

PROJECT

LOCATION/TYPE

## Product Overview

### Description

The PW-100D passive infrared (PIR) dimmable wall switch sensor can turn light 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-100D replaces existing wall switches and fits in a single gang junction box. Factory default operation is for Manual-ON. 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 fade OFF. The ramp and fade times can be fast or slow. DIP switch settings allow for control options including Auto-ON to the last used level or a locked preset level, walk-through and test modes.

### Dimming Control

The PW-100D can dim lighting from a minimum level of 10% to full output. When the pushbutton is pressed and held, lighting will ramp up or dim down. The dimming direction is reversed when the pushbutton is momentarily released and then pressed and held again. To save energy and increase lamp life, the PW-100D is shipped with a factory preset of 85%. This preset level may be changed to any lighting level.

### Applications

The PW-100D sensor is well suited for small, enclosed spaces with clear line of sight of the occupant. Common applications include small offices and small conference rooms.

## Features

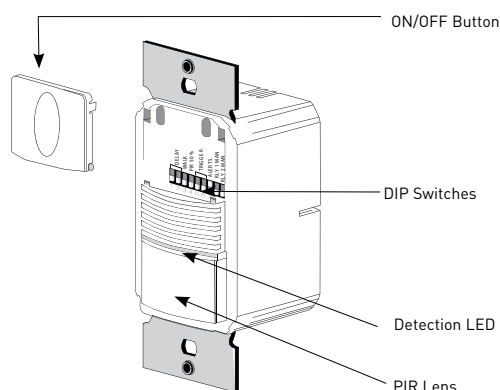
- Detection Signature Processing eliminates false triggers and provides immunity to RFI and EMI
- Zero-crossing for long relay life
- Vandal resistant lens combines precise coverage with durability
- Choice of Manual-ON or Auto-ON operation
- Selectable walk-through mode turns lights off three minutes 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
- Can dim lights to any level without affecting the preset level
- Preset ramp and fade times
- In automatic mode, sensor returns automatically to Auto-ON after lights are turned off manually; ideal for presentations
- LED indicates occupancy detection
- Optional light level sensing with simple setup
- Service mode allows sensor to operate as a service switch in the unlikely event of a failure
- 2-wire and 3-wire models available for applications with or without neutral wire
- Sensor coverage tested to NEMA Guide Publication WD 7-2000
- Compatible with decorator wall plates



## Sensor Dimmers

- Fade rates: Ramp on, 1.5 seconds; fade off, 5 seconds
- Coverage: Major motion 35' x 30'  
Minor motion 20' x 15'
- Sensitivity adjustment: PIR (high/low)
- Dimensions: 2.73" x 1.76" x 1.83"  
(69.3mm x 44.7mm x 46.5mm) L x W x D
- UL and cUL listed
- Five year warranty

## Product Controls

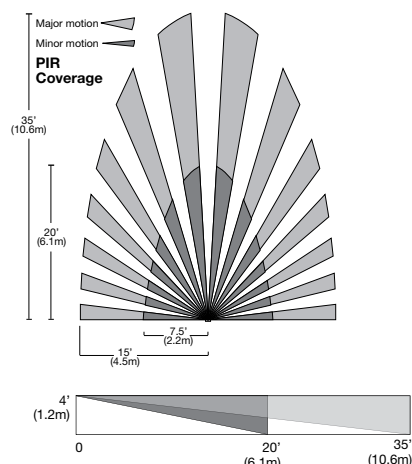


The diagram illustrates the ON Mode control panel with various settings and their default states. The settings are organized into a grid with columns for Time Delay, Preset Light Level, Load Type, Audible Alert, and Walk-Through. The settings are as follows:

- Time Delay:** 1 (Test/20 min), 2 (5 minutes), 3 (10 minutes), 4 (15 minutes), 5 (20 minutes), 6 (25 minutes), 7 (30 minutes), 8 (Service).
- Walk-Through:** 9 (Enabled), 10 (Disabled).
- Preset Light Level:** 11 (Low, 50%), 12 (High).
- Load Type:** 13 (Fluorescent), 14 (Incandescent).
- Audible Alert:** 15 (Enabled), 16 (Disabled).
- PIR Sensitivity:** 17 (Low, 50%), 18 (High).
- Factory default 85%** is indicated for the PIR Sensitivity setting.

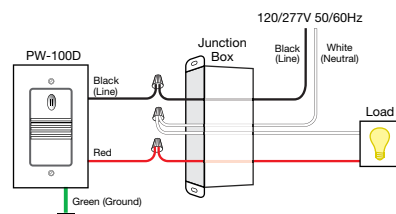
Legend:  $\uparrow$  = ON,  $\downarrow$  = OFF,  $\blacktriangleleft$  = Factory Setting.

## Coverage Pattern

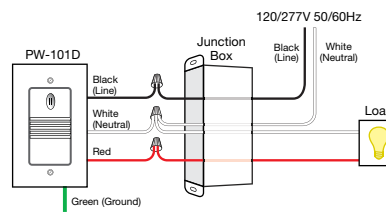


\* For best performance, WattStopper recommends using this sensor in spaces no larger than 15' x 12'.

## Wiring Diagrams



Wiring for PW-100D with no neutral wire run to the dimmer.



Wiring for PW-101D with a neutral connection.

| Catalog No.                         | Color      | Voltage                                    | Load Rating                                                                                                                   |
|-------------------------------------|------------|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> PW-100D-W  | White      | 120/277 VAC; 50/60 Hz                      | Ⓢ 120 VAC, 0-600 W Incandescent or 2-wire fluorescent dimming ballast (Advance Mark 10 or equivalent)                         |
| <input type="checkbox"/> PW-100D-LA | Lt. Almond | 2-wire sensor; no neutral connection       | Ⓢ 277 VAC, 0-1200 W 2-wire fluorescent dimming ballast (Advance Mark 10 or equivalent)                                        |
| <input type="checkbox"/> PW-100D-I  | Ivory      |                                            |                                                                                                                               |
| <input type="checkbox"/> PW-100D-G  | Grey       |                                            |                                                                                                                               |
| <input type="checkbox"/> PW-100D-B  | Black      |                                            |                                                                                                                               |
| <input type="checkbox"/> PW-101D-W  | White      | 120/277 VAC; 50/60 Hz                      | Ⓢ 120 VAC, 0-600 W Incandescent, MLV, ELV, cold cathode or 2-wire fluorescent dimming ballast (Advance Mark 10 or equivalent) |
| <input type="checkbox"/> PW-101D-LA | Lt. Almond | 3-wire sensor; requires neutral connection | Ⓢ 277 VAC, 0-1200 W 2-wire fluorescent dimming ballast (Advance Mark 10 or equivalent)                                        |
| <input type="checkbox"/> PW-101D-I  | Ivory      |                                            |                                                                                                                               |
| <input type="checkbox"/> PW-101D-G  | Grey       |                                            |                                                                                                                               |
| <input type="checkbox"/> PW-101D-B  | Black      |                                            |                                                                                                                               |

Order wall plate separately.