DW-100 Dual Technology Wall Switch Sensor

High sensitivity and dense coverage for exceptional performance

Color-matched lens and low profile for appealing design

Multiple features such as selectable walk-through, test and presentation modes

SmartSet™ technology for increased energy savings

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

PROJECT
LOCATION/TYPE

Product Overview

Description

The DW-100 dual technology wall switch sensor combines the benefits of passive infrared (PIR) and ultrasonic technologies to turn lights ON and OFF based on occupancy. It is characterized by high sensitivity to small and large movements, appealing aesthetics, and variety of features.

Operation

The DW-100 fits in a single gang junction box. By default, when both PIR and ultrasonic technologies detect occupancy, lights turn ON automatically. Once the lights are ON, detection by either technology holds lights ON until occupancy is no longer detected and the time delay elapses. Through DIP switch settings, the user can customize the sensor by choosing the combination of technologies to turn -ON and hold-ON lights. Additional DIP switch settings allow for a variety of control options such as Auto-ON or Manual-ON, walk-through, and test mode.

SmartSet™

Using SmartSet technology, the DW-100 continuously monitors the controlled space to identify usage patterns and automatically adjust the time delay for optimal energy efficiency. The sensor assigns short delays (as low as seven minutes) for times when the space is usually vacant, and longer delays (up to 30 minutes) for busier times. SmartSet is also able to differentiate electrical noise from human motion for greater performance.

Applications

Watt Stopper's dual technology has the flexibility to work in a variety of applications where one technology alone may not be sufficient. Common applications include small and executive offices, small and medium conference rooms and lunch/break rooms. In addition, dual technology sensors are the perfect choice for ADA compliant buildings due to lower mounting height requirements.

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 Auto-ON or Manual-ON operation
- Selectable SmartSet automatically adjusts time delay for maximum savings
- 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
- Selectable test mode allows quick and easy adjustments

- Selectable audible alert for impending shutoff
- In automatic mode, sensor returns automatically to Auto-ON after lights are turned off manually; ideal for presentations
- Four occupancy logic options give users the ability to customize control to meet application needs
- Features built-in light level sensing with simple, one-step setup
- Override mode allows sensor to operate as a service switch in the unlikely event of a failure
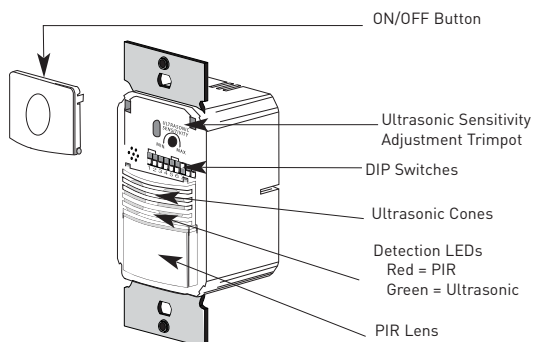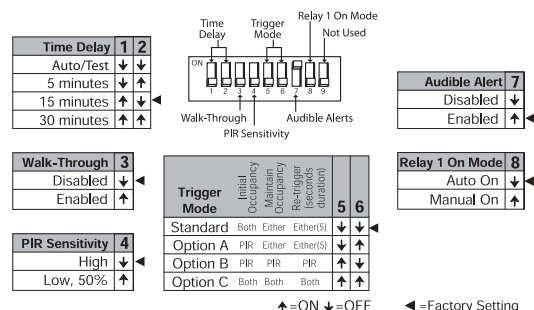- NEMA WD 7 guideline utilized for coverage testing

Specifications

- DW-100: 120/230/277 VAC; 50/60 Hz
  @ 120 VAC, 0-800 W ballast or tungsten,1/6 hp
  @ 230/277 VAC, 0-1200 W ballast
- DW-100-347: 347 VAC; 50/60Hz, 0-1500 W ballast
- Time delays: SmartSet (automatic), fixed (5, 15 or 30 minutes), walk-through, test-mode

- Coverage: PIR Major motion 35'x 30'
  PIR Minor motion 20' x 15'
  Ultrasonic Major motion 20'x 20'
  Ultrasonic Minor motion 15' x 15'
- Sensitivity adjustment: PIR (high/low), Ultrasonic (fully variable)
- 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
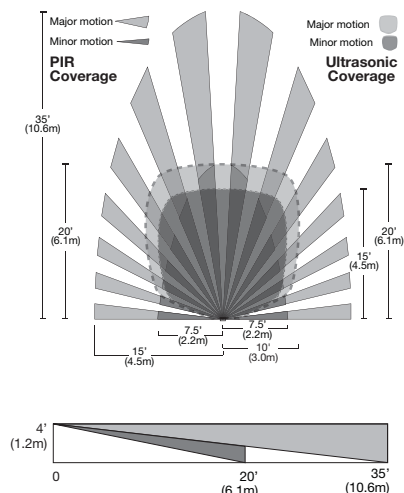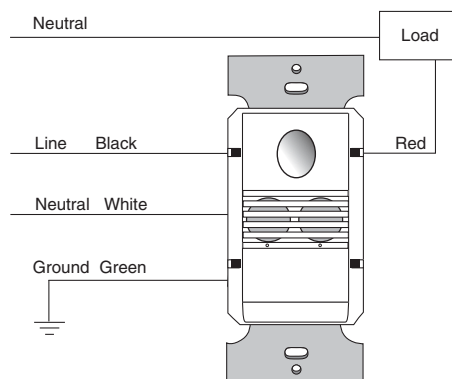
Controls & Settings

Product Controls

ON/OFF Button

Ultrasonic Sensitivity Adjustment Trimpot

DIP Switches

Ultrasonic Cones

Detection LEDs
Red = PIR
Green = Ultrasonic

PIR Lens

DIP Switch Settings

Time Delay	1	2
Auto/Test	↓	↓
5 minutes	↓	↑
15 minutes	↑	↓
30 minutes	↑	↑

Time Delay — Trigger Mode — Relay 1 On Mode — Not Used

ON

Walk-Through — PIR Sensitivity — Audible Alerts

Walk-Through	3
Disabled	↓
Enabled	↑

PIR Sensitivity	4
High	↓ ◄
Low, 50%	↑

Trigger Mode	Initial Occupancy	Maintain Occupancy	Re-trigger (seconds duration)	5	6
Standard	Both	Either	Either(5)	↓	↓ ◄
Option A	PIR	Either	Either(5)	↓	↑
Option B	PIR	PIR	PIR	↑	↓
Option C	Both	Both	Both	↑	↑

Audible Alert	7
Disabled	↓
Enabled	↑ ◄

Relay 1 On Mode	8
Auto On	↓ ◄
Manual On	↑

↑=ON ↓=OFF ◄ =Factory Setting

Coverage & Wiring

Coverage Pattern

Major motion ◄ | Major motion ▢
Minor motion ◄ | Minor motion ▢
PIR Coverage | **Ultrasonic Coverage**

35' (10.6m)
20' (6.1m)
20' (6.1m)
15' (4.5m)
7.5' (2.2m) 7.5' (2.2m)
15' (4.5m) 10' (3.0m)

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

* For best performance, Watt Stopper/Legrand recommends using this sensor in spaces no larger than 18' x 15'

DW-100/347 Single Level Lighting

Neutral — Load
Line — Black — Red
Neutral — White
Ground — Green

Ordering Information

Catalog No.	Color	Voltage	Load Rating
☐ DW-100-W	White	120/230/277 VAC; 50/60 Hz	@ 120 VAC, 0-800 W ballast or tungsten,1/6 hp @ 230/277 VAC, 0-1200 W ballast
☐ DW-100-LA	Lt. Almond		
☐ DW-100-I	Ivory		
☐ DW-100-G	Grey		
☐ DW-100-B	Black		
☐ DW-100-347-W	White	347 VAC; 50/60 Hz	0-1500 Watt Ballast
☐ DW-100-347-LA	Lt. Almond		
☐ DW-100-347-I	Ivory		
☐ DW-100-347-G	Grey		
☐ DW-100-347-B	Black		

One ASP-211 single-gang cover plate included. Order ASP-422 for blank 2-gang cover plate, ASP-432 for 2-gang cover plate with switch option (specify color).