



CEILING MOUNT OCCUPANCY SENSOR

LINE VOLTAGE

OVERVIEW

The **PerfectSense**® family of line voltage ceiling mount occupancy sensors provides a compact control solution capable of switching lighting loads without requiring a powerpack. **PerfectSense** products utilize the latest passive infrared technology and digital signal processing techniques to provide unmatched detection performance. Additionally **PerfectSense** units are available with an integrated microphone to provide overlapping passive acoustic occupancy detection for rooms with obstructions.

BASIC OPERATION

Sensors detect movement in the infrared energy that radiates from occupants as they move within the devices field-of-view. Once occupancy is identified, the sensor's internal relay switches power on to the connected lighting. If equipped with passive acoustic detection, the unit's microphone is then also enabled to further enhance detection while the lights are on. An internal timer is set to keep lights on during brief periods of inactivity, and is reset every time occupancy is signaled by either the passive infrared or acoustic detection technologies. Additionally, optional daylight detection is available that will turn off controlled lighting whenever there is sufficient ambient light in the space.

APPLICATIONS

Line voltage sensors are self-contained units that directly power from and switch 120/277 VAC. Typically they are used to control areas where a single sensor's coverage area is sufficient for the entire space.

- Private Restrooms
- Small Offices
- Break Rooms
- Copy Rooms
- Conference Rooms
- Walk-In Closets
- Vestibules

FEATURES

- Digital Passive Infrared (PIR) Detection
- Compact Size and Matte Finish
- Convenient Test Mode and Adjustable Time Delays
- Passive Acoustic Detection (optional)
- Electronically Timed Switching Designed for LED Fixture Control
- 360° Coverage Pattern
- Field Changeable Lens
- Optional Ambient Light Override (Photocell)

SPECIFICATIONS

ELECTRICAL

OPERATING VOLTAGE
MVOLT (120-277 VAC)

LOAD RATINGS
800W @ 120 VAC
1200W @ 277 VAC

LOAD TYPES
Tungsten
Ballast
LED

ENVIRONMENTAL

OPERATING TEMP
-10° to 122°F (14° to 50°C)

RELATIVE HUMIDITY
0-95% Non-Condensing,
Indoor Use Only

CODE COMPLIANCE

Sensors can be used to meet ASHRAE 90.1, IECC, & Title 24 energy code requirements

PHYSICAL

SIZE
4.00" Diameter x 1.25" H
(10.16 x 3.17 cm)

WEIGHT
4.75 oz

COLOR
White

MOUNTING STYLE
Mud Ring w/ 2.75" Spaced Ears
3.5" Trade Size Octagon Box

OPERATION

TIME DELAYS
30 sec to 30 min
10 Minute Default

TEST MODE
5 sec

OTHER

LISTINGS
UL/CUL



COVERAGE PATTERNS

PASSIVE INFRARED (PIR)

- 8 to 15 ft (2.44 to 4.57 m) mounting height recommended
- Detection range improves when walking across beams as compared to into beams
- Lenses can be swapped in field if necessary, contact technical support for assistance

DUAL TECHNOLOGY (PIR/ACOUSTIC)

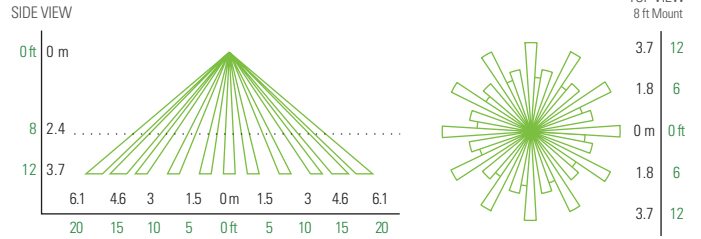
- Units with dual technology (PS-SWX-221-2 and PS-SWX-222-2) have overlapping acoustic detection of the complete PIR coverage area
- A PIR event is required to initially enable acoustic detection
- Sounds indicating occupancy reset the sensor's time delay while non-occupant noises are filtered out
- Occupant sounds alone will not keep lights on indefinitely, PIR motion must be periodically detected for lights to remain on for an extended time
- After sensor time out expires, acoustic detection remains enabled for 10 seconds to enable voice reactivation of lights for additional convenience and safety

PHOTOCELL OPERATION

Sensors with an integrated photocell will turn lights on/off depending on the amount of ambient light detected. This operation makes them ideal for lighting near skylights or windows.

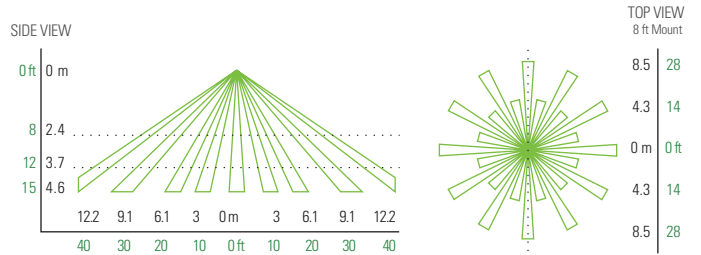
SMALL MOTION 360°

- Best choice for detection of small motions from sitting occupants (e.g., hand motion)
- ~500 ft² of coverage

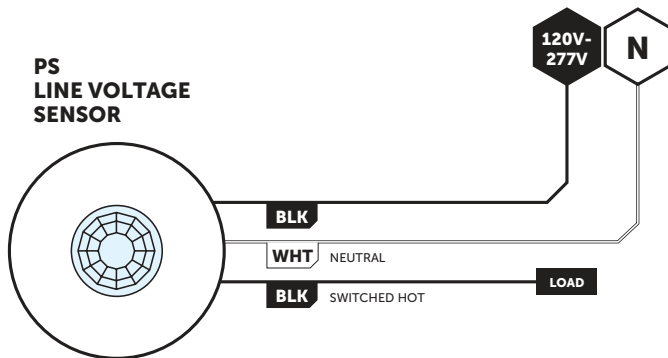


LARGE MOTION 360°

- Best choice for detection of larger motion (e.g., walking)
- ~2000 ft² of coverage
- Longest segment of coverage pattern aligns with screw hole axis on sensor (shown as dotted line on Top View diagram below)



WIRING



Note: If wiring in an additional override off toggle switch, connect between the sensor and the load.

ORDERING INFO

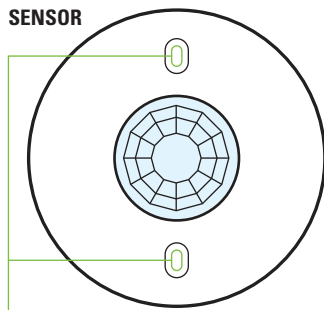
SAMPLE MODEL # PS-SWX-221-2

PRODUCT	DETECTION	COVERAGE	VOLTAGE	ENVIRONMENT
PS-SWX Ceiling Mount Sensor	PIR	0	MVOLT (120/277 VAC)	Standard Environment High Humidity Environment
	PIR + Daylight	1		
	Dual Tech (PIR + Acoustic)	2		
	Dual Tech + Daylight (PIR + Acoustic + Daylight)	3		
PS-SWX-299	Ceiling Sensor Trim Ring for Single Gang Mudring, Handy Box, or 4" Octagon Box			

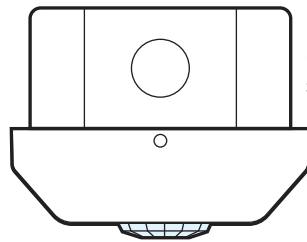
INSTALLATION OPTIONS

BASIC MOUNTING OPTIONS

FRONT

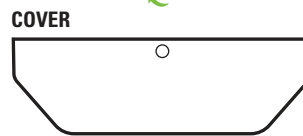
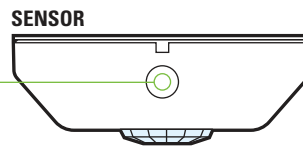
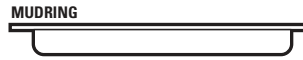
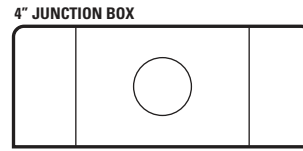


- SCREW HOLES FOR DIRECTLY MOUNTING TO:
- CEILING SURFACE
 - 3-1/2" (TRADE SIZE) OCTAGON BOX
 - MUD RING WITH 2-3/4" SPACED EARS



SENSOR MOUNTED DIRECTLY TO 3.5" TRADE SIZE OCTAGON BOX

SIDE



4" JUNCTION BOX

MUDRING

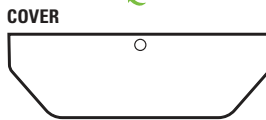
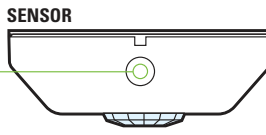
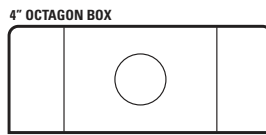
SENSOR

COVER

PROGRAMMING BUTTON

ADDITIONAL MOUNTING OPTIONS USING PS-SWX-299 TRIM RING

SIDE



4" OCTAGON BOX

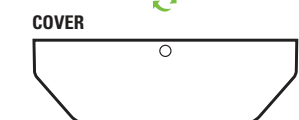
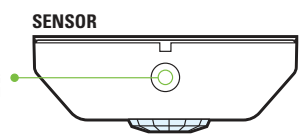
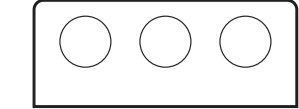
TRIMRING

SENSOR

COVER

PROGRAMMING BUTTON

4" HANDY BOX (or SINGLE GANG MUDRING)



SENSOR

COVER

PROGRAMMING BUTTON

HANDY BOX MOUNT

SENSOR MOUNT (SCREWS PROVIDED)

4" OCTAGON BOX MOUNT

