



# WIDE VIEW & HALLWAY OCCUPANCY SENSOR

LINE VOLTAGE

## OVERVIEW

**PerfectSense**® line voltage wide view and hallway occupancy sensors are self-contained lighting control solutions that mount to the wall, corner, or ceiling. Using an adjustable angled bracket and multi-position chase nipple, these sensors reduce contractor installation time and provide a secure and clean finished appearance. **PerfectSense** products utilize the latest passive infrared technology and digital signal processing techniques to provide unmatched detection performance. Additionally, these **PerfectSense** units are available with an integrated microphone to provide overlapping passive acoustic occupancy detection for rooms with obstructions or where occupant motion will be limited.

## BASIC OPERATION

Sensors detect movement in the infrared energy that radiates from occupants as they move within the device's 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. Units can be parallel wired if necessary to increase coverage area for larger areas or longer hallways.

- Classrooms
- Large Offices
- Hallways
- Open Areas
- Conference Rooms

## FEATURES

- **Digital Passive Infrared (PIR) Detection**
- **Convenient Test Mode and Adjustable Time Delays**
- **Passive Acoustic Detection (optional)**
- **Electronically Timed Switching Designed for LED Fixture Control**
- **Wide View (120°) or Hallway Coverage Pattern Options**
- **Optional Ambient Light Override (Photocell)**
- **Compact Size and Matte Finish**

## SPECIFICATIONS

### ELECTRICAL

**OPERATING VOLTAGE**  
MVOLT (120/277 VAC)  
Single Phase

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

**LOAD TYPES**  
LED Driver/Lamps  
CFL, Electronic/Magnetic Ballasts (Fluorescent)  
Tungston (Incandescent)

### 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**  
2.875" H x 2.75" W x 3.25" D  
(7.30 x 6.98 x 8.25 cm)

**WEIGHT**  
4.75 oz.

**COLOR**  
White

### OPERATION

**TIME DELAYS**  
30 sec to 30 min  
10 minute default

**TEST MODE**  
5 sec

### OTHER

**LISTINGS**  
UL/CUL



# COVERAGE PATTERNS

## WIDE VIEW 120° - PASSIVE INFRARED

- Designed for 8 to 12 ft (2.44 to 3.66 m) high mounting
- Small motion (e.g. hand movements) detection up to 40 ft (12.19 m)
- Large motion (e.g. walking) detection up to 70 ft (21.34 m)
- For hallway applications, install two units (parallel wired) facing each other from hall ends or back to back from center of hall

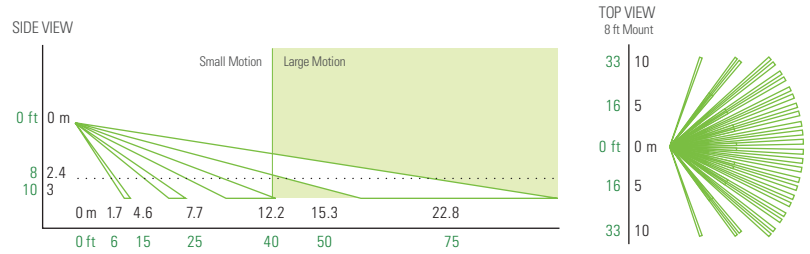
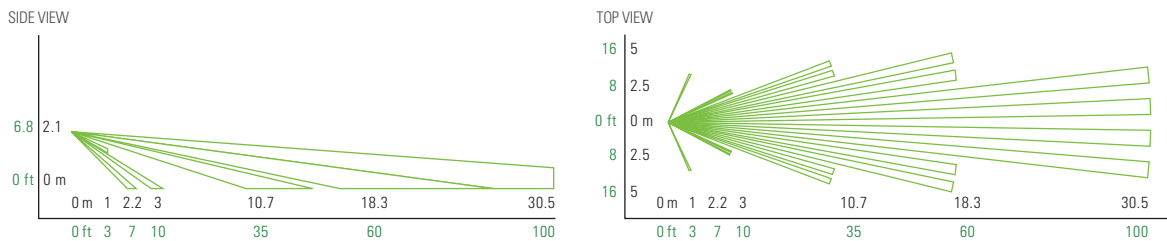


Diagram reflects sensor in first position. Adjust angle downward if mounting above 10 feet or to decrease gap directly under sensor.

## HALLWAY (LONG RANGE) - PASSIVE INFRARED

- Designed for 8 to 12 ft (2.44 to 3.66 m) high mounting
- Large motion (e.g. walking) detection up to 100 ft (30.48 m)
- Detection occurs sooner when crossing coverage beams upon entry to a hallway as opposed to entering from the end and walking directly at the sensor



## DUAL TECHNOLOGY (PIR/ACOUSTIC)

- Units with dual technology (PS-SWX-421-2 and PS-SWX-422-2) 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

## AMBIENT LIGHT OVERRIDE (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.

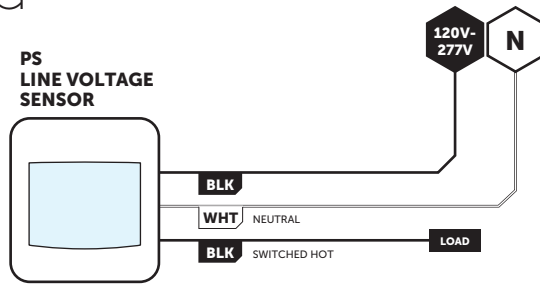
# ORDERING INFO

SAMPLE MODEL # PS-SWX-421-2

	PRODUCT		DETECTION		COVERAGE		VOLTAGE		ENVIRONMENT	
PS-SWX	Corner/Wall Mount	-4	PIR	0	120° Wide View	1	MVOLT (120/277 VAC)	-2	Standard Environment	Blank
			PIR + Daylight	1	Hallway*	2			High Humidity Environment	-HE
			Dual Tech (PIR + Acoustic)	2						
			Dual Tech + Daylight	3						
			(PIR + Acoustic + Daylight)							

\* Dual Tech detection options not available for units with the Hallway coverage option.

# WIRING



**INSTALLATION NOTES:**

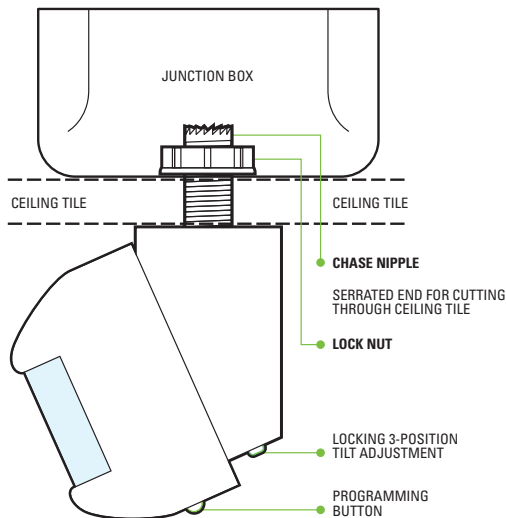
For supply connections, use wires rated for at least 75°C or equivalent.

# INSTALLATION OPTIONS

## MOUNTING INSTRUCTIONS

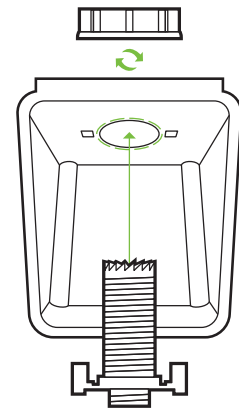
- 1a. Mount bracket directly to a junction box using included chase nipple and plastic flange nut or,
- 1b. If ceiling tiles are present, use serrated end of chase nipple to cut hole in tile. Then mount junction box above ceiling tile so that a 1/2 knockout aligns with hole in tile. See diagram below.
2. Align latches at top of sensor to slots on bracket. Thread sensor wires through chase nipple and terminate inside junction box.
3. Push in bottom of sensor until bottom locking adjustment engages.
4. To adjust sensor angle, depress locking adjustment and slide sensor to desired position.

### SENSOR & MOUNTING BRACKET THROUGH CEILING TILE TO JUNCTION BOX



## ADDITIONAL MOUNTING DIAGRAMS

### TOP INSTALLATION



### REAR INSTALLATION

