



## DAYLIGHT HARVESTING & ON/OFF PHOTOCELL SENSORS

CEILING MOUNT • LOW VOLTAGE

### OVERVIEW

**PerfectSense** photocell sensors control lighting according to measured ambient lighting in a space. Basic on/off units signal a connected power pack to turn lights off when ambient levels are high enough that desired overall light levels are maintained.

Units with the daylight harvesting (dimming) option track a space's overall illumination and dim connected lighting to achieve energy savings. During times of high daylight contribution to a space, controlled artificial lighting will be gradually dimmed to a minimum dimmed level. During times of no or low daylight contribution, controlled artificial lighting will increase back up to its maximum level. The sensor can also be configured to signal a connected power pack to switch lighting off completely in maintained high daylight conditions. Additional configurable parameters include high & low trim levels and fade rates.

All photocells provide the option of selecting the ambient light threshold (e.g., setpoint) from a range of preset values or running an auto-selection mode where the unit will determine the setpoint based on the measured amount of light it is controlling.



### FEATURES

- Auto-Setpoint Selection Mode
- Adjustable High & Low Dimming Trim Level
- Works Together w/ Low Voltage Occupancy Sensors
- Compact Size and Matte Finish
- Four Contractor Friendly Mounting Methods
- Mounting Nipple Attachment with Integrated Hole Saw

### SPECIFICATIONS

#### ELECTRICAL

**OPERATING VOLTAGE**  
12-24 VAC/VDC

**CURRENT DRAW**  
2mA

**DIMMING CAPACITY**  
50mA

**DIMMING COMPATIBILITY**  
0-10 VDC Ballasts or Drivers  
Compliant with IEC 60929 Annex E.2

#### PHYSICAL

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

**WEIGHT**  
4.75 oz

**COLOR**  
White

#### ENVIRONMENTAL

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

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

#### OPERATIONAL MODES

Daylight Harvesting to Low Trim  
Daylight Harvesting to Off  
(requires power pack)  
Photocell Override (On/ Off)

#### CODE COMPLIANCE

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

### ORDERING INFO

SAMPLE MODEL # PS-SWX-250-1-D

	PRODUCT DESCRIPTION		VOLTAGE		OPTIONS	
PS-SWX	Ceiling Mount Ambient Daylight Photocell	-250	Low Voltage	-1	Dimming / Daylight Harvesting (0-10V)	-D

### ACCESSORIES

**PS-SWX-299-JP** - Ceiling Sensor Trim Ring for Mounting to Single Gang Mudring, Handy Box, or 4" Octagon Box

# APPLICATIONS

There are two types of photocell operation; ON/OFF PHOTOCELL CONTROL and DAYLIGHT HARVESTING CONTROL (see descriptions below). A photocell sensor can be used by itself (e.g., STANDALONE operation) or together with low voltage occupancy sensors. Only one photocell sensor should be configured to control any particular group of lights.

## ON/OFF PHOTOCELL CONTROL

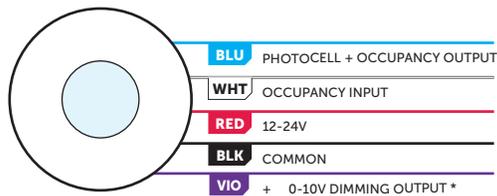
- Recommended for public spaces (hallways, entryways, etc) where fully switching lighting off/on will not be noticed.
- Photocell output (blue wire) will turn lights off if ambient light level surpasses threshold and back on if level drops.
- To prevent cycling of lights back on after lighting is turned off, a "deadband" level equal to the measured level of light being controlled is continuously maintained in the unit. For lighting to turn off the ambient light level must be higher than the sum of the setpoint and the deadband.

## DAYLIGHT HARVESTING CONTROL

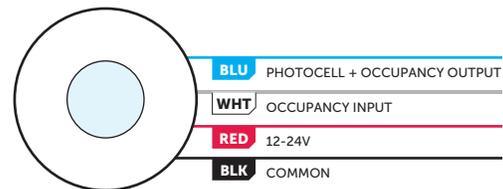
- Recommended for spaces where it is important to not distract occupants (e.g., offices, classrooms).
- Unit will gradually dim lighting in order to maximize energy savings while maintaining desired overall lighting level.
- After dimming to low trim level, unit can optionally be enabled to turn off lights completely.

# WIRING

## BASIC WIRING

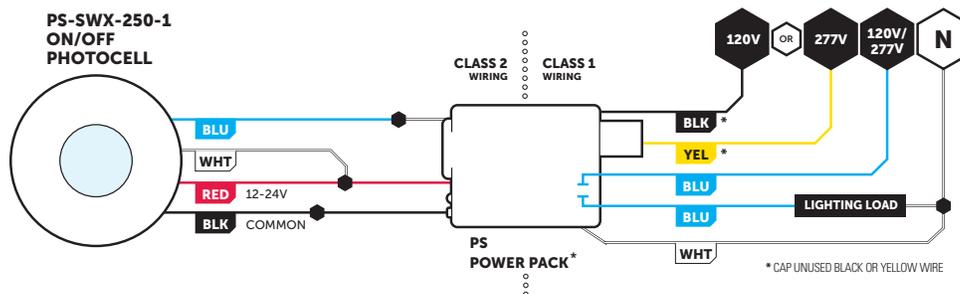


**PS-SWX-250-1-D**  
DAYLIGHT  
HARVESTING  
SENSOR

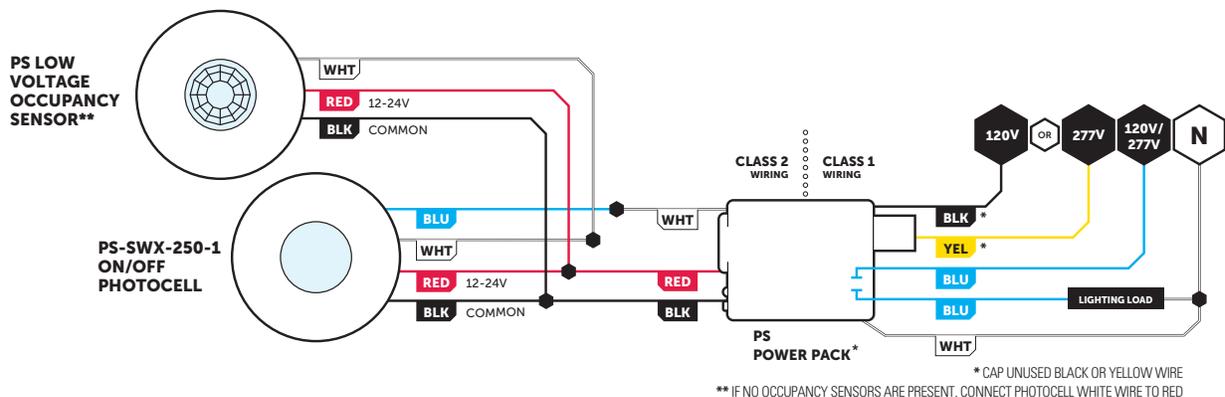


**PS-SWX-250-1**  
ON/OFF  
PHOTOCELL

## STANDALONE ON/OFF PHOTOCELL APPLICATION

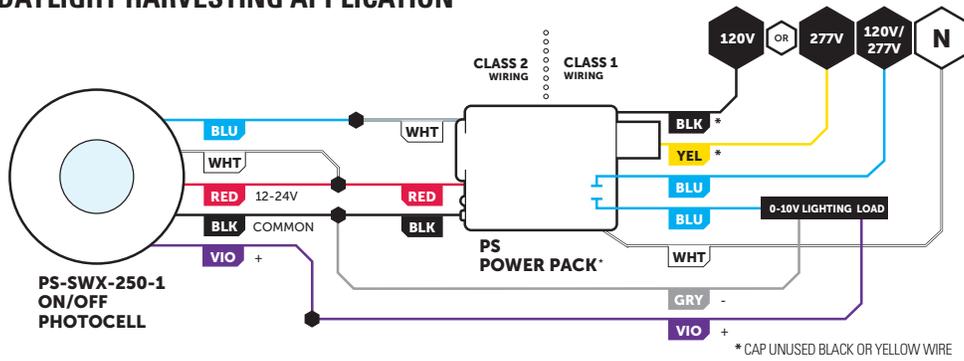


## ON/OFF PHOTOCELL + OCCUPANCY APPLICATION

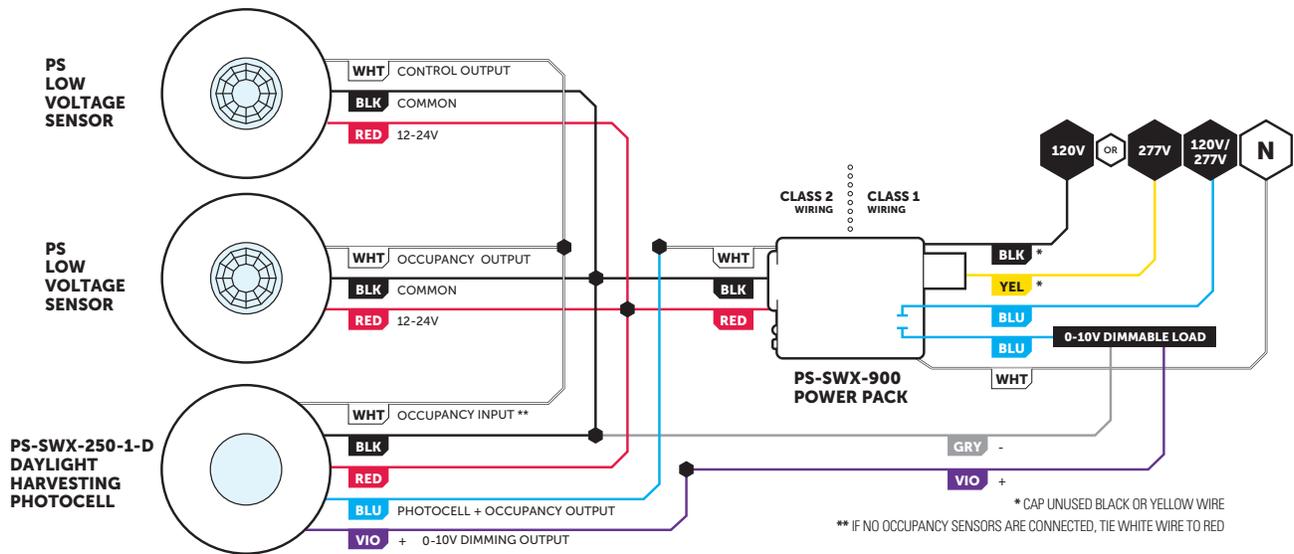


# WIRING (CONT.)

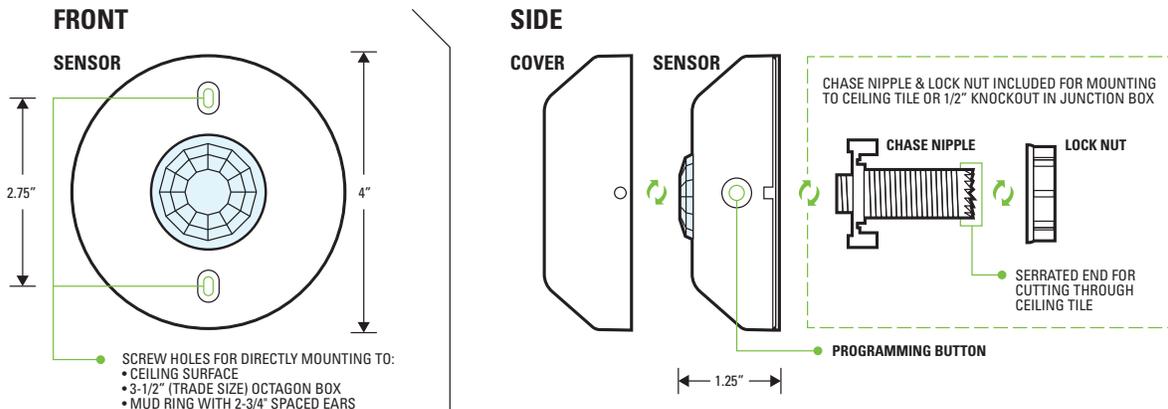
## STANDALONE DAYLIGHT HARVESTING APPLICATION



## DAYLIGHT HARVESTING + OCCUPANCY SENSOR(S) APPLICATION



# INSTALLATION OPTIONS



**Note:** If mounting to a Single Gang Mudring, Handy Box, or 4" Octagon Box, a trim ring is required. Part Number: **PS-WX-299-JP**