

### TYPICAL APPLICATIONS

- Classrooms
- Large Open Areas

### FEATURES

- Patented Dual Technology with PIR/Microphonics™ Detection
- 120° by 40ft. Coverage for Small Motion
- Self-Contained Relay(s) - No Power Packs needed
- No Minimum Load Requirements
- Single and 2-Pole Models
- Relay Protection on each relay
- Time Delay: 30 sec. to 20 minutes
- Green LED Indicator

### AVAILABLE OPTIONS

- 2nd Relay Control (-2P)
- Inhibit Photocell (-P)
- Low Temp/Hi Humidity (-LT)

### SPECIFICATIONS

- Size: 4.96" H x 3.10" W x 1.70" D  
(12.60 cm x 7.87 cm x 4.32 cm)
- Sensor Weight: 7 oz
- Sensor Color: Ivory, White
- Mounting: Single Gang Handy Box  
(add Wiremold Box # V5719 for Corner Mounting)
- Mounting Height: 7 to 8 feet
- Relative Humidity: 20 to 90% non-condensing
- Operating Temp: 14° to 85° F  
(-10° to 29° C)
- Storage Temp: -14° to 85° F  
(-26° to 29° C)
- 120/277/347 VAC Operating Voltage
- 13 Amps / Pole  
(347 VAC must be same phase)
- 1/4 HP Motor Load
- UL and CUL Listed
- 5 Year Warranty
- Made in U.S.A.

### LOW TEMP/HI HUMIDITY(-LT)

- Conformally coated Circuit Board is corrosion resistant from moisture
- Operates down to -4° F (-20° C)

## WVR-PDT SERIES

The *WVR-PDT Series* sensor mounts in a corner, provides line of sight PIR detection of small movements up to 40 feet away as well as Microphonics™ for detection around obstructions. These features make it ideal for retrofit applications like classrooms with inaccessible ceilings. *WVR-PDT* sensors are powered by and directly switch line voltage, therefore no Power Packs are needed. Additionally, these sensors do not require a neutral, making wiring directly off local switches with wiremold a convenient option. Together, these features make them perfect for retrofit applications where running new wiring is difficult. A *WVR-PDT* sensor is equipped with either one relay or an optional 2nd relay (-2P), each with the ability to control up to 13 Amps.



### SENSOR OPERATIONS

Sensors with Passive Dual Technology (PDT) first "See" motion using Passive Infrared (PIR) and then engage Microphonics™ to "Hear" sounds that indicate continued occupancy. This patented technology uses Automatic Gain Control (AGC) to dynamically self adapt a sensor to its environment by filtering out constant background noise and detecting only noises typical of human activity. An internal timer, factory set at 10 minutes, keeps the lights "On" during brief periods of no activity. Once the lights turn "Off", a 10 second grace period allows for the occupant to voice re-activate the lights back "On" if needed. This timer is selectable from 30 seconds to 20 minutes, and is reset every time occupancy is re-detected.

### TIME DELAY ADJUSTMENT

Pull up the top of the *WVR-PDT* to expose the time delay adjustment potentiometer. Use the provided tool to set the time between 30 seconds (fully counterclockwise) and 20 minutes (fully clockwise).

### DAYLIGHTING CONTROL OPTION (WVR-PDT-P)

When the Inhibit Photocell is used (-P option), sufficient daylight will keep the lights from turning "On" upon initial occupancy. However, if the room darkens and the lights turn "On", the lights will *only* go out upon vacancy. If the unit is a 2-Pole, the photocell overrides the 2<sup>nd</sup> pole only, providing automatic dual level lighting control.

### PHOTOCELL ADJUSTMENT

Rotating the adjustment clockwise requires less light to activate the photocell override. Rotating the adjustment fully clockwise will put the sensor in permanent photocell override no matter how dark it becomes.

#### Steps to adjustment:

1. For single Pole units, manually override the sensor to "Off". For 2-Pole Units, set the 1<sup>st</sup> pole "On" and the second pole "Off".
2. Set the light level in the space (adjust curtains) where the ambient is sufficient with the sensor overridden "Off".
3. Turn the photocell adjustment fully clockwise, and the Time Delay counterclockwise to minimum. Switch the manual override(s) to Auto and leave the space, allowing the lights to cycle "Off". Re-enter the space: For single Pole units, the lights will remain "Off"; For 2-Pole units the 1<sup>st</sup> Pole will come "On", and the 2nd Pole will stay "Off".
3. On 2-Pole units, manually turn "Off" the 1<sup>st</sup> pole.
4. Rotate the photocell adjustment counterclockwise slowly until the lights come "On". Make sure the sensor is not shadowed during this process.



**Hint:** If occupant wishes the lights on when the photocell is overriding the unit, simply shadow the lens until lights come "On".

### Model Numbering System:-WVR-PDT-[POLES]-[DAYLIGHTING]-[VOLTAGE]-[COLOR]-[TEMP/HUMIDITY]

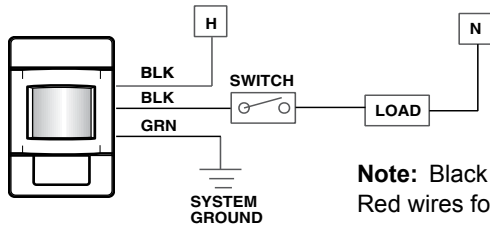
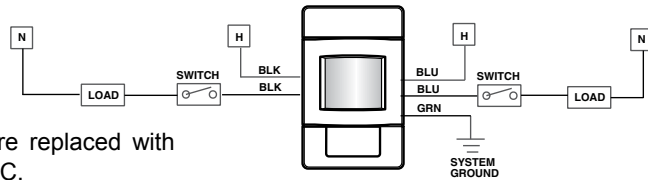
MODEL #	# OF POLES	DAYLIGHTING	VOLTAGE	COLOR	TEMP/HUMIDITY
WVR-PDT	Blank = 1 Pole -2P = 2 Poles	Blank = None -P = Inhibit Photocell	Blank = 120/277 VAC -3 = 347 VAC*	Blank = Ivory -W = White	Blank = 14° to 85° F -LT = -4° to 85° F

\*Note: 347 VAC -2P units must be same phase

T152-001-P

**TYPICAL WIRING DIAGRAM (DO NOT WIRE HOT)**

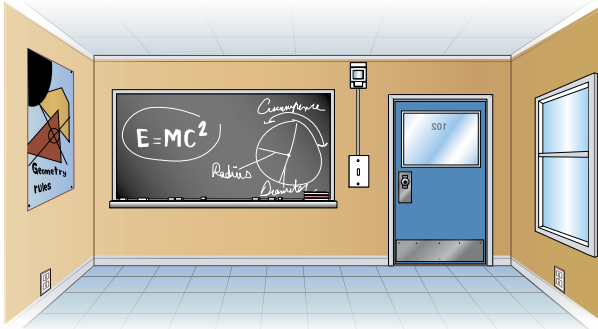
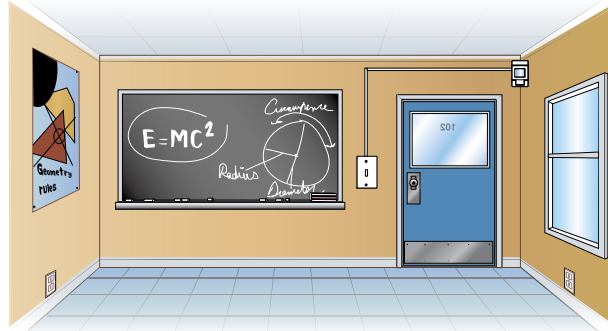
Sensor must be wired to receive constant power.

**WVR-PDT**

**WVR-PDT-2P**


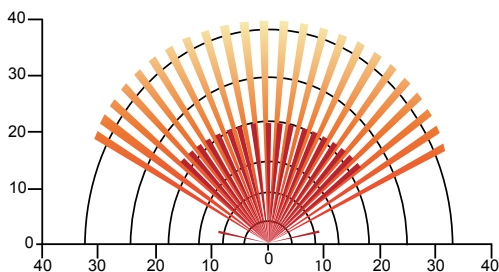
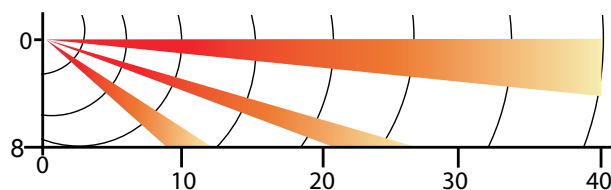
**Note:** Black wires are replaced with Red wires for 347 VAC.

**SENSOR PLACEMENT**

The WVR-PDT mounts in the corner of a room above the door. A Wiremold switch extension box is placed on the switch, and a Wiremold raceway runs up the side of the door and over to the corner. A Wiremold corner box (V5719), with a "field drilled hole", mounts to a single gang switch box to which the WVR-16 is mounted. This positioning scheme, with the sensor mounted typically at 7 to 8 feet high, allows the sensor a full view of the room. The existing switch will now provide Auto and Off operation, and the lights can be manually turned "Off".


**AESTHETICALLY PLEASING**

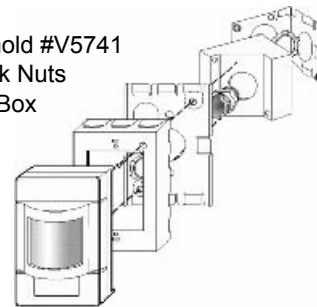
- Out of Occupant's Reach
- Wiremold connects from Switch to Sensor
- Toggle Switch Acts as Sensor Override Switch
- Economical Approach to Classroom Lighting Control

**FIELD OF VIEW**
**TOP VIEW**

**SIDE VIEW**


If the room has only one door, then the WVR-PDT is mounted 7 to 8 feet up the wall above the switch, with the raceway running up alongside the door. With two doors, the sensor should be corner mounted to detect occupants entering either door.

**CORNER MOUNTING**

- Sensor mounts to Wiremold #V5741
- Use 1/2" Nipple with Lock Nuts
- Drill 7/8" Hole in Corner Box (Wiremold #V5719)



**WARRANTY:** Sensor Switch, Inc. warrants these products to be free of defects in manufacture and workmanship for a period of sixty months. Sensor Switch, Inc., upon prompt notice of such defect will, at its option, provide a Returned Material Authorization number and repair or replace returned product.

**LIMITATIONS AND EXCLUSIONS:** This Warranty is in full lieu of all other representation and expressed and implied warranties (including the implied warranties of merchantability and fitness for use) and under no circumstances shall Sensor Switch, Inc. be liable for any incidental or consequential property damages or losses.

**sensorswitch**

**SENSOR SWITCH, INC.**

900 Northrop Rd., Wallingford, CT 06492  
(203) 265-2842 info@sensorswitch.com  
www.sensorswitch.com

revised 9/25/2007  
copyright Sensor Switch, Inc. 2007