

# Residential Grade passive infrared vacancy sensor wall switch—MANUAL ON/AUTO OFF

- Ratings**  
*Incandescent / Tungsten: 500W-120VAC, 50/60Hz;*  
*Resistive load: 500W-120VAC, 50/60Hz;*  
*Fluorescent / Ballast: 500VA-120VAC, 50/60Hz*  
*Motor: 1/8HP-120V*  
**INDOOR USE ONLY**  
*No Minimum Load required.*  
*Compatible with incandescent lamps, electronic and magnetic low-voltage ballasts, electronic and magnetic ballasts, and fans*

**◆ INSTALLATION INSTRUCTIONS**

**Description:**  
 The Residential Grade Passive Infrared Vacancy Sensor is a motion sensing lighting control which replaces a conventional wall switch for energy saving and convenience. Light turn off automatically after a room is vacated.

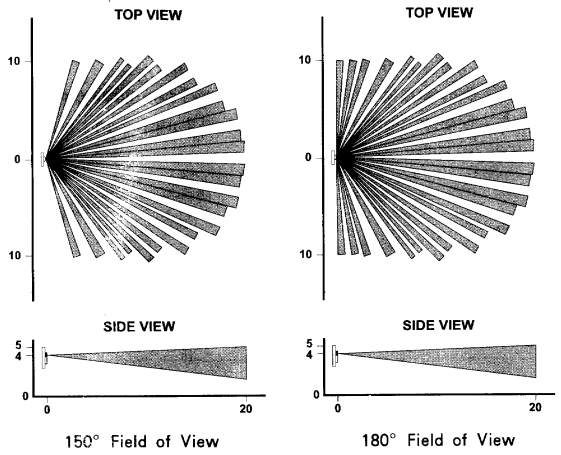
This device is designed to detect motion from a heat-emitting source (such as a person moving within a room) within its field-of-view (Figure 1) and automatically turn lights off after no motion is detected for a selected time elapsing.

This device is UL listed.

**◆ SPECIFICATIONS:**

- Manual ON-Automatic OFF: The occupant must press the sensor's button to turn the light on.
- Adjustable light and time delay are located on the front of the device (Figure 2).
- LED indicator flashes when motion is detected.
- Installing this device requires experience with residential and commercial wiring practices. Consult local building codes before attempting to install this device.
- Operating Temperature: 68°F-77°F

Figure 1: Coverage Pattern:



**◆ GENERAL INFORMATION**

- Clean outer surface gently with damp cloth only. Do not use soaps or cleaning liquids.
- Do not attempt to service or repair. No user serviceable components.

**◆ LOCATION/MOUNTING**

Since this device responds to temperature changes, care should be taken when mounting the device. DO NOT mount directly above a heat source, in a location where hot or cold drafts will blow directly on the sensor, or where unintended motion will be within sensor's field-of-view.

**Precautions**

**WARNING: TO BE INSTALLED AND/OR USED IN ACCORDANCE WITH APPROPRIATE ELECTRICAL CODES AND REGULATIONS.**

**WARNING: IF YOU ARE NOT SURE ABOUT ANY PART OF THESE INSTRUCTIONS, CONSULT A QUALIFIED ELECTRICIAN.**

**CAUTION: USE THIS DEVICE ONLY WITH COPPER OR COPPER CLAD WIRE. WITH ALUMINUM WIRE USE ONLY DEVICES MARKED CO/ALR OR CU/AL.**

**◆ INSTALLATION**

1. **WARNING: TO AVOID FIRE, SHOCK, OR DEATH, TURN OFF POWER AT CIRCUIT BREAKER OR FUSE AND TEST THAT THE POWER IS OFF BEFORE WIRING!**
2. Remove existing single-pole switch or dimmer installation, if applicable.
3. Remove 3/4" (1.9 cm) of insulation from each circuit conductor. Make sure the ends of wires are straight.
4. Connect lead wires per WIRING DIAGRAM as follows: Black lead to Line (Hot), Red lead to Load wire, White lead to Neutral wire, Green lead to Ground. Twist strands of each lead tightly, and with circuit conductors, push firmly into appropriate wire connector. Screw connectors on clockwise ensuring that no bare conductor shows below the wire connectors. Secure each connector with electrical tape.

**NOTE:**

If wire nut is provided, use to join one 14 AWG supply conductor with one 16 device control lead.

5. Gently position wires to provide room in wall box for switch.
6. Mount device "TOP" up.
7. Restore power at circuit breaker or fuse.
8. Locate the adjustment controls on the front of the switch. Proceed to the "SETTINGS" section before mounting the device in the wall box.

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## Wiring Diagram:

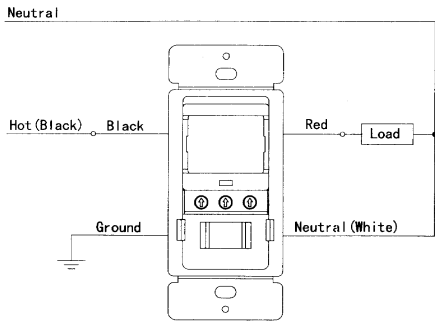
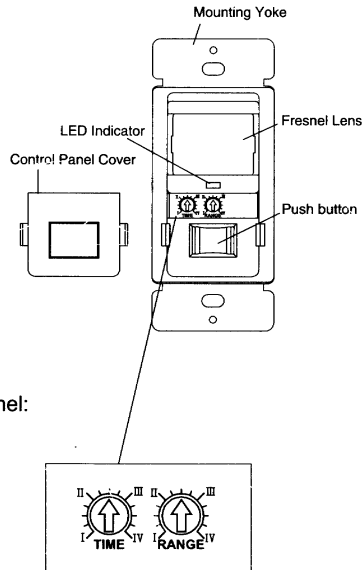


Figure:2



## ◆ PROGRAMMING FEATURES

**Factory settings:** The sensor is shipped from the factory to work in almost all situations without any added adjustments. The factory settings are: time-out 10 minutes, and intermediate range.  
**Time-out:** The value of this time-out is user selected through

the use of the Time Control Setting.

**Time Setting:** The time-out value is selected by rotating the time control dial. Rotate the control fully clockwise (CW), the time-out will increase. Rotate the control fully counter-clockwise (CCW), the time-out will decrease.

**Range:** To decrease detection range and sensitivity, rotate the dial CCW (refer to figure). The detection range can be adjusted from 100% to 30%.

### NOTE:

Do not set the range at the maximum level, it may cause the error operation. If you want to adjust the range, please consult a qualified electrician.

## ◆ SETTINGS

1. With power restored and wallplate removed, use a small screwdriver to adjust the range and time setting on the device as follows:

### Time Selection:

- Adjust the time selector to the desired length of time the lights are to remain ON. Lights will remain ON from 15 seconds to 30 minutes after the room is vacated.
- Rotate the control fully clockwise (CW). Lights will remain ON up to 30 minutes.
- Rotate the control fully counter-clockwise (CCW). Lights will remain ON up to 15 seconds.

### Range:

- To decrease detection range and sensitivity, rotate the control CCW.
  - To increase detection range and sensitivity, rotate the control CW.
2. Test that the time selection and range adjustment are as desired. If not, repeat adjustments until satisfied.
3. Mount the wallplate. **INSTALLATION IS COMPLETE.**

## ◆ TO OPERATE

This device provides a Manual ON/Automatic OFF operation. Turn the lights on by pressing the pushbutton on the switch, and automatically turn lights off after no motion is detected and a selected time-out elapses.

Lights will remain on as motion is detected in the room. A grace period of 30 seconds follows the lights turning off automatically. During that grace period, lights can be turned on again motion within

30 seconds.

At any time, lights may be turned off while the room is occupied by pressing the pushbutton.

## TROUBLESHOOTING

1. Light always stay ON:

- Check the time setting.
- Make sure no motion is occurring in the coverage area until the time delay expires.
- Try lowering the range control. rotate the dial CCW.
- Check that the switch is not installed near hot air currents and heat radiating devices, or detecting motion from an adjacent area(e.g., hallway traffic). If so, switch may have to be relocated.

Light do not turn ON:

- Check that switch is installed correctly.
- Check that power is ON.
- Check that light bulb is functioning.
- If applicable, check that switch on controlled unit is ON.

## Capacity Chart:

Cat. NO.	Coverage	Description
42ES624	150°, 450sq.ft	Single Pole, PIR Wall Switch,

## ◆ FULL TWO YEAR WARRANTY

If within two(2) year from the date of purchase, this product fails due to a defect in material or workmanship, we will repair or replace it, at its sole option, free of charge. This warranty does not apply to: (a) damage to units caused by accident, dropping or abuse in handling, acts of God or any negligent use; (b) units which have been subject to unauthorized repair, opened, taken apart or otherwise modified; (c) unit not used in accordance with instructions; (d) damages exceeding the cost of the product; (e) sealed lamps and/or lamp bulbs, LED's and batteries; (f) the finish on any portion of the product, such as surface and /or weathering, as this is considered normal wear and tear; (g) transit damage, initial installation costs, removal costs, or reinstallation costs.

This warranty service is available by returning the product with proof of purchase date and a description of the problem to the dealer from whom the unit was purchased.