INTERMATIC IOS-DOV In Wall PIR Occupancy and Vacancy Sensor Switch Installation Guide

Contents

INTERMATIC IOS-DOV In Wall PIR Occupancy and Vacancy Sensor Switch

Product Information

Specifications

- **Model:** IOS-DOV
- **Function:** Occupancy / Vacancy Sensor Switch (2-IN-1)
- **Technology:** Passive Infrared Sensors
- **Coverage Area:** Up to 1200 sq.ft.
- **Relay Type:** Single Pole
- **Includes:** Ambient Light Level Sensor

Frequently Asked Questions

- **Q:** What should I do if the sensor switch does not detect motion accurately?
  - **A:** Check for any obstructions in the sensor's view such as large objects or transparent barriers like glass windows. Ensure proper mounting without exposure to direct heat sources or drafts.
- **Q:** Can I adjust the sensitivity of the sensor switch?
  - **A:** The sensitivity of the sensor switch can be indirectly adjusted by changing the mounting location and angle to optimize motion detection.

Ratings

- **Input Voltage:** 120 VAC, 60 Hz
- **Tungsten (Incandescent):** 800 W
- **Fluorescent** / **Ballast:** 800 VA
- **Resistive (Heater):** 12 A
- **Motor:** 1/4 HP
- **Time Delay:** 15 Sec – 30 Min
- **Light Level:** 30 Lux – Daylight
- **Operation Temperature:** 32° – 131° F / 0° – 55° C
- No minimum load required

WARNING: Risk of Fire, Electrical Shock or Personal Injury

- Turn OFF power at circuit breaker or fuse and test that the power is OFF before wiring.
- To be installed and/or used in accordance with appropriate electrical codes and regulations.
- If you are not sure about any part of these instructions, consult a qualified electrician.
- Use this device only with copper or copper clad wire.
- INDOOR USE ONLY

INSTALLATION INSTRUCTIONS

Description

- The passive infrared sensors work by detecting the difference between heat emitted from the human body in motion and the background space.
- The sensor switch can turn a load ON and hold it as long as the sensor detects occupancy. After no motion is detected for the set time delay, the load turns OFF automatically. The sensor switch has one relay (equal to single pole switch), it also includes Ambient Light Level Sensor.

Coverage Area:

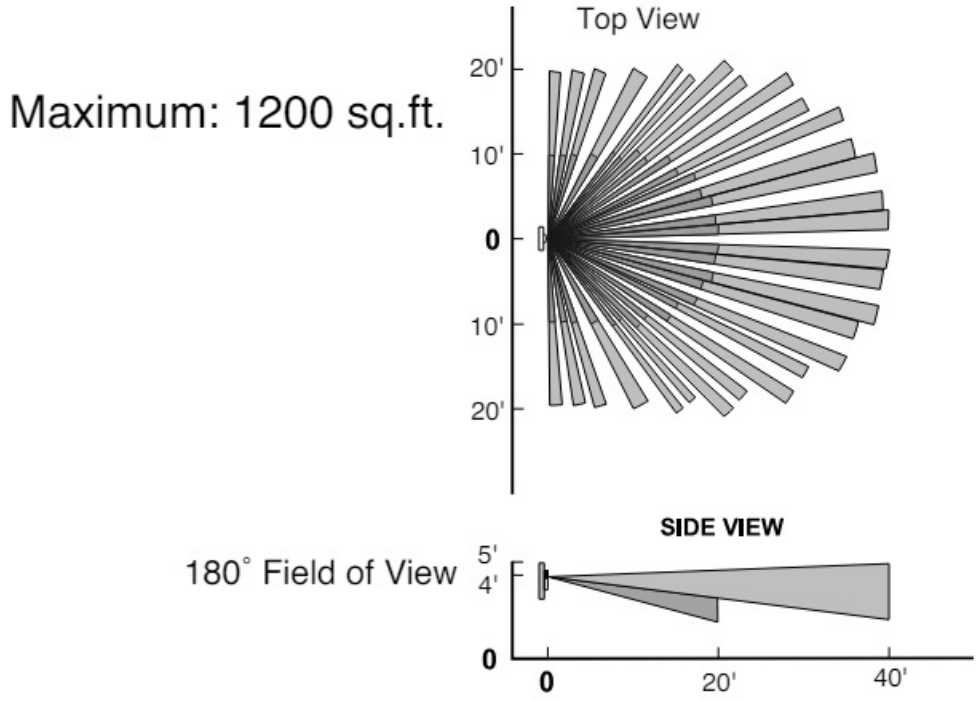


Figure 1

The coverage range of the sensor switch is specified and illustrated in Figure 1. Large objects and some transparent barriers like glass windows will obstruct the sensor's view and prevent detection, causing the light to turn off even though someone is still in the detection area.

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.

INSTALLATION

1. Remove existing single pole switch or dimmer installation, if applicable.
2. Remove 3/4: (1.9 cm) of insulation from each circuit conductor. Make sure the ends of wires are straight.

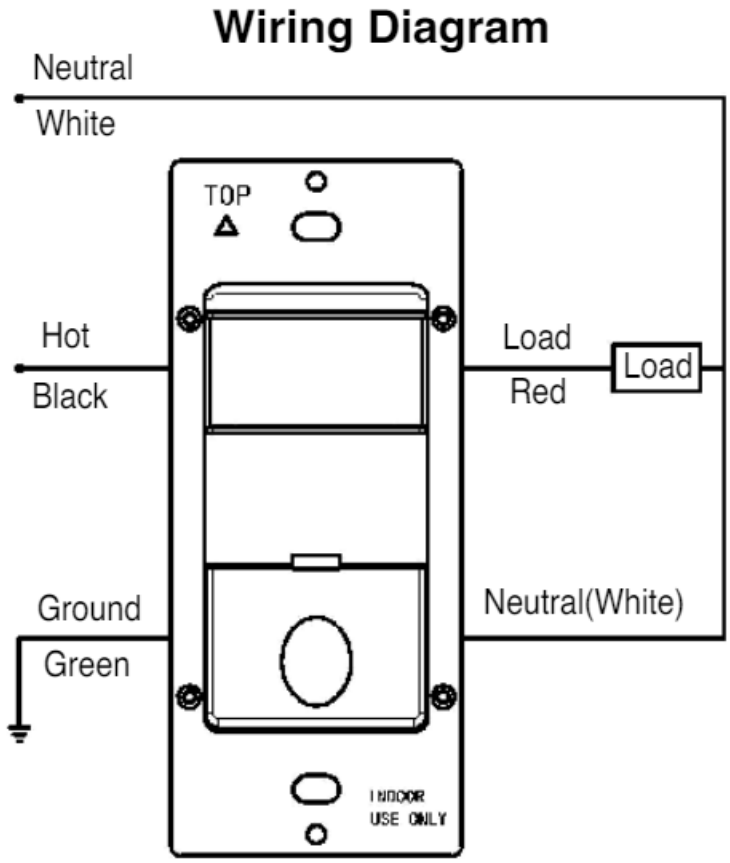


Figure 2

3. Connect lead wires as shown in WIRING DIAGRAM (see Figure 2): Black lead to Line (Hot), Red lead to Load wire, White lead to Neutral wire, Green lead to Ground.
4. Gently position wires in wall box, attach sensor switch to the box.
5. Mount device “TOP” up.
6. Restore power at circuit breaker or fuse, wait one minute.

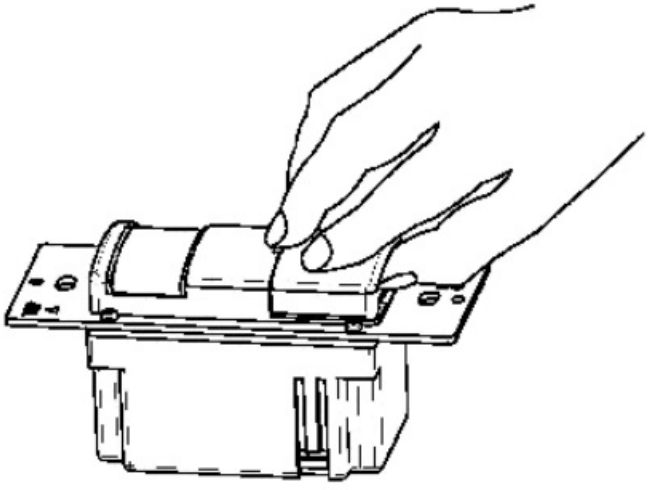


Figure 3

7. Remove the small cover plate. (Illustrated as Figure 3.)

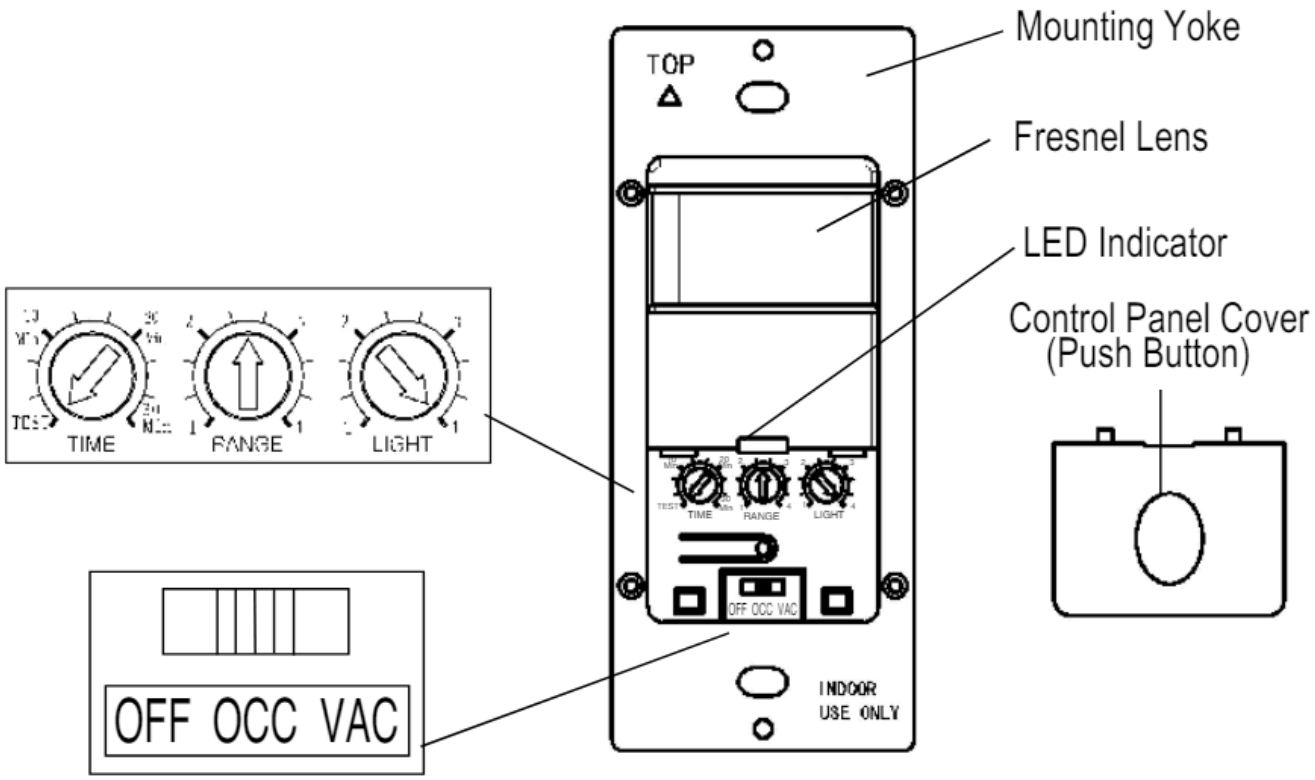


Figure 4

8. Locate the adjustment knobs on the control panel to perform test. and adjustments. (Illustrated as Figure 4.)
9. Replace the small cover plate after testing and adjusting.
10. Attach the wallplate.

NOTE: If twist on wire connector is provided, use to join one supply conductor with one 16 AWG device control lead.

ADJUSTMENT

Band Switch

Mode	Position	Description	React to the push button
OFF	LEFT	Circuit is permanently opened	None
OCC	Center	Occupancy Mode: Automatic ON automatic OFF after set time d elay.	Manually toggles ON/OFF the load .
VAC	RIGHT	Vacancy Mode: Manual ON only auto-matic OFF after set time delay	Manually toggles ON/OFF the load .

Time Delay Knob

- **Default position:** 15 Seconds (Test mode)
- **Adjustable:** from 15 Seconds to 30 Minutes (clockwise)

Sensor Sensitivity Range Knob

- **Default position:** Center at 65%
- **Adjustable:** 30% (Position 1) to 100% (Position 4)

Note: Turn clockwise for larger rooms. Turn counterclockwise to avoid false alerts in smaller rooms or near doorway or heat source.

- **Ambient Light Dial:** The ambient light setting is adjusted with the Ambient Light dial (refer to figure 4). Turning the Light Dial fully counter clockwise (CW), lights always turn ON, when the motion is detected. All other settings will cause the lights to turn ON only when the light level is less than the setting.
- **Default position:** Daylight (100% at position 4)
- **Adjustable:** Daylight to 39 Lux (Counter-clockwise)

OPERATION

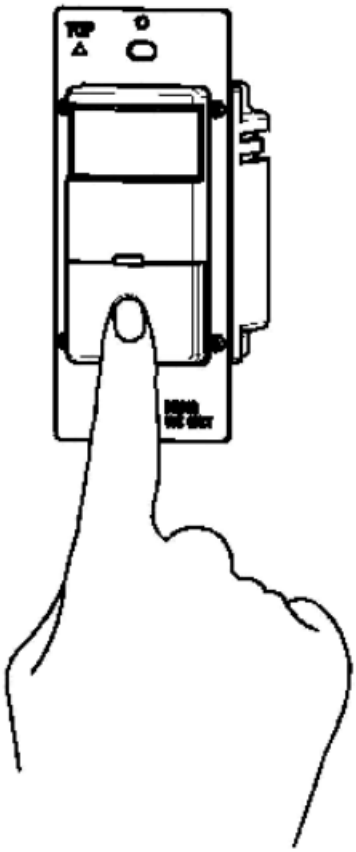


Figure 5

The Sensor Switch is programmed independently for either Occupancy Mode or Vacancy Mode as referred to the Band Switch position under the control panel cover. Vacancy mode is also known as “Manual On Occupancy Mode”. By pushing the Control Panel Cover, the load can be turned On/Off under either OCC or VAC mode. (Illustrated as Figure 5)

Turning On the load under Occupancy Mode

- Load to be Automatic ON once occupancy is detected.

Turning On the load under Vacancy Mode

- Manual ON/OFF Button has to be pushed to turn ON the Load.

Automatic Turning Off the load

- Under either mode, the Sensor keeps the Load On until no motion is detected or the set time delay, load(s) to be Off automatically.
- Under VAC Mode, the Load can turn On automatically if motion is detected within the 1st 30 seconds.

Manual Turning Off the Load

- By Manual ON/OFF Button, the Load can be turned OFF under either OCC or VAC mode.
- Under OCC Mode, the Load cannot automatically turn ON 5 mins after the last motion is detected.

TROUBLESHOOTING

For proper operation, the Sensor Switch has to consume power from hot and Neutral. Therefore, Secured Neutral Wires are required.

Initial run

- The Sensor Switch needs initial run within one minute. During the initial run, the load might be turned On and Off several times.
- The Time Delay knob is set to 15 seconds default, do not adjust it until initial run is finished and proper operation function is confirmed.

The load is flashing frequently

1. It can take up to one minute for initial run.
2. Check the wiring connections, especially the Neutral Wire.

The Load does not turn ON without LED flashing or LED flashing regardless of motion

1. Push Manual On/Off Button, if the load turns On; verify that Sensitive Range is on high. If the Load does not turn ON, go to Step 2.
2. Check the wiring connections, especially Hot line and Neutral wire.

The Load does not turn ON while LED is flashing and motion is detected

1. Check to see if Ambient Light Level is enabled by covering the lens by hand.
2. Push Manual On/Off Button, if the load turns On; verify that Sensitivity Range is on high. If the Load does not turn On, go to Step 3.
3. Check the wiring connections, especially Hot Line and Neutral wire.

The Load does not turn Off

1. There can be up to a 30 minute time delay after the last motion is detected. To verify proper operation, turn the Time Delay Knob to 15s (Test Mode), make sure there is no motion (no LED flashing), the Load should turn Off in 15 seconds.
2. Check if there are any significant heat sources mounted within six feet (two meters) that may cause false detection such as, high wattage light bulb, portable heater or HVAC device.
3. Check the wiring connections, especially the Neutral wire to the sensor switch.

The Load turns On unintentionally

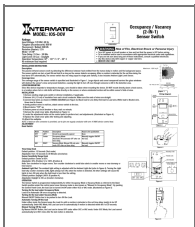
1. Switch from OCC to VAC mode.
2. Mask the Sensor Switch's lens to eliminate unwanted coverage area.
3. Turn the Sensitivity Level knob counter-clockwise to avoid false alerts in smaller rooms or near doorway.

NOTE: If problems continue, consult a qualified electrician.

LIMITED WARRANTY

Warranty service is available by either (a) returning the product to the dealer from whom the unit was purchased or (b) completing a warranty claim online at **www.intermatic.com**. This warranty is made by: Intermatic Incorporated, 1950 Innovation Way, Suite 300, Libertyville, IL 60048. For additional product or warranty information go to: **http://www.Intermatic.com** or call **815-675-7000**.

Documents / Resources

	**INTERMATIC IOS-DOV In Wall PIR Occupancy and Vacancy Sensor Switch** [pdf] Installation Guide IOS-DOV, IOS-DOV In Wall PIR Occupancy and Vacancy Sensor Switch, In Wall PIR Occupancy and Vacancy Sensor Switch, PIR Occupancy and Vacancy Sensor Switch, Occupancy and Vacancy Sensor Switch, Vacancy Sensor Switch, Sensor Switch

References

- **User Manual**