INSTALLATION INSTRUCTIONS
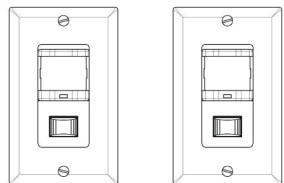
OS150B, VS150
OCCUPANCY SENSOR, VACANCY SENSOR WALL SWITCH

OS150B   VS150

◆ SPECIFICATIONS

Voltage ....…… 120VAC,60Hz

Fluorescent...…500VA
Motor ....……1/8Hp
Incandescent 500W
Time Delay ....… 15Sec to 30Mins
Light Level... 30 Lux--Daylight
Operation Temperature...................................... 32°F--131°F

◆ 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), and also includes a Ambient Light Level Sensor.

Coverage Area

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 sensors' view and prevent detection, causing the light to turn off even though someone is still in the detection area.
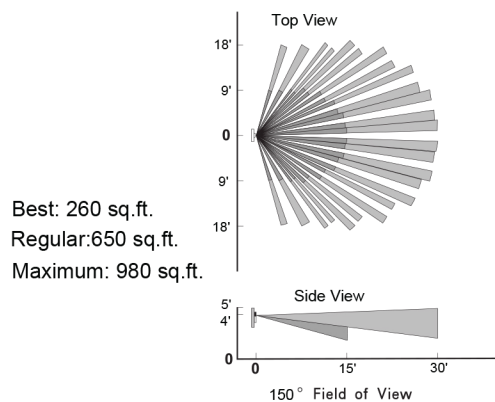
Top View

18'
9'
0
9'
18'

Best: 260 sq.ft.
Regular:650 sq.ft.
Maximum: 980 sq.ft.

Side View
5'
4'
0
0   15'   30'
150° Field of View

Figure 1

WARNING: Turn off the circuit breaker before installation.
Indoor use only.
Do not exceed electrical ratings.

◆ INSTALLATION:

1. Connect lead wires as WIRING DIAGRAM (see Figure 2): Black lead to Line(Hot), Red lead to Load wire, White lead to Neutral wire, Green lead to Ground.

OS150B / VS150

Wiring Diagram:

Neutral
White

TOP

Hot   Load
Black   Red   LOAD

Ground   Neutral(White)
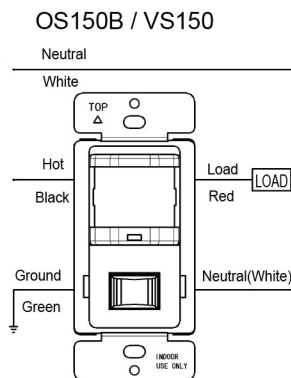Green

INDOOR USE ONLY

Figure 2

2. Gently position wires in wall box, attach sensor switch to the box.
3. Mount device "TOP" up.
4. Restore power at circuit breaker or fuse, wait **one minute.**
5. Remove the small cover plate (Illustrated in Figure 3).
6. Locate the adjustment knobs on the control panel to perform test and adjustment (Illustrated in Figure 3).
7. Replace the small cover plate after testing and adjustment.
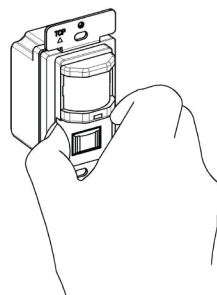8. Attach the wallplate.

Figure 3

◆ ADJUSTMENT

Time Delay knob

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

TIME   RANGE   LIGHT

Figure 4

Sensor Sensitivity Range Knob

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

Note: Turn toward right for greater room space. Turn toward left to avoid false alert in smaller room and near the doorway or heat source.
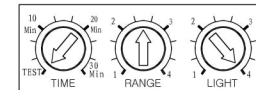
Ambient Light Level Knob

Default position: Daylight (100% at position 4)
Adjustable: Daylight to 30Lux (Counter clockwise)

Note: avoid wasting energy by turning on the light under daylight.

◆ OPERATION

Push-button for OS150B

As illustrated in Figure 5, the Load stays Off when the button is pushed in and locked. (switched Off)
As illustrated in Figure 6, the Load turns On after the button is pressed and released.The sensor switch stays at the OCC Mode until the button is pressed Off next time.
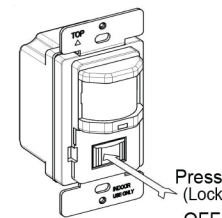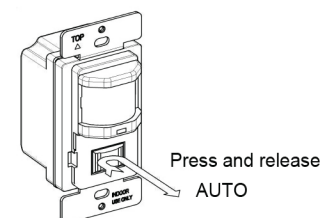
TOP   TOP

Press (Lock)   Press and release
OFF   AUTO

Figure 5   Figure 6

VS150
Manual On/Off Button

By Pushing in the button, the Load can be turned On/Off as illustrated in Figure 5.

Turning On

Manually turn On the Load by pushing the button whenever the Load is Off.

Turning Off

Manually turn Off the Load by pushing the button . Without pushing the button, the Load is to be turned Off after set time delay.

Turning On Automatically

Only after the Load automatically turns Off, the Load can be turned On automatically if occupancy detected within 30 seconds.

INSTALLATION INSTRUCTIONS

◆ TROUBLESHOOTING - OS150B

For proper operation, the Sensor Switch has to consume power from hot and Neutral, therefore, **Secured Neutral Wiring is required.**

Initialization

The Sensor Switch needs to initialize for one minute. During initialization the load might be turned On and Off several times.

The Time Delay knob is set to 15 seconds by default, do not adjust it until initialization is complete and proper operation confirmed.

The Load is out of control (frequently flashing)

1. It can take up to one minute for initialization.
2. Check the wiring connections, especially the **Neutral Wiring.**

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

1. Push and release the button
(for WOSS). If the load doesn't turn On, go to step 3.

2. Verify the Sensitivity Range is on high.

3. Check the wiring connections.

The Load does not turn On while LED flashes with motion detected

1. Check to see if Ambient Light Level is enabled by covering the lens by hand.
2. Push and release the button. If the load doesn't turn On, go to step 3.
3. Verify the Sensitivity Range is on high.
4. Check the wiring connections.

The Load does not turn Off

1. Verify if the Mode is ON.

2. There can be up to a 30 minutes time delay after the last motion detected. To verify proper operation, turn the Time Delay Knob to 15s (Test Mode), and make sure there is no motion (no LED flashing). The Load should turn Off in 15 seconds.

3. Check if there is any significant heat source mounted within six feet (two meters) that may cause false detection such as a high wattage light bulb, portable heater, or HAVC device.
4. Check the wiring connections.

The Load turns On when not desired

1. Mask the Sensor Switch's lens to eliminate unwanted coverage area.
2. Turn the Sensitivity Level knob toward the left to avoid false alert in a smaller room and when near a doorway.

◆ TROUBLESHOOTING - VS150

For proper operation, the Sensor Switch has to consume power from hot and Neutral, therefore a **Secured Neutral Wiring is required.**

Initialization

The Sensor Switch needs to initialize for one minute. During initialization the load might be turned On and Off several times.

The Time Delay knob is set to 15 seconds by default, do not adjust it until initialization is complete and proper operation confirmed.

The Load is out of control (frequently flashing)

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

The Load does not turn On

1. Push Manual On/Off Button, If the Load does not turn On, go to Step 2.
2. Check the wiring connections, especially Hot Line and Neutral wiring.

The Load does not turn Off automatically

1. There can be up to a 30 minutes time delay after the last motion detected. To verify proper operation, turn the Time Delay Knob to 15s (Test Mode), and make sure there is no motion (no LED flashing). The Load should turn Off in 15 seconds.

2. Check if there is any significant heat source mounted within six feet (two meters) that may cause false detection such as a high wattage light bulb, portable heater, or HAVC device.

3. Check the wiring connections, especially the Neutral wiring to the sensor switch.

The Load turns On when not desired

1. Mask the Sensor Switch's lens to eliminate unwanted coverage area.
2. Turn the Sensitivity Level knob toward left to avoid false alert in a smaller room and when near a doorway.