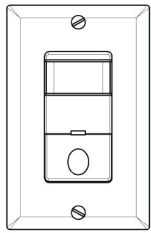


# INSTALLATION INSTRUCTIONS



DOS180LP

DOS180LP  
OCCUPANCY / VACANCY  
(2-IN-1)  
SENSOR SWITCH

## SPECIFICATIONS

Voltage .....	120/277VAC, 60Hz
Incandescent .....	800W
Fluorescent/Ballast.....	800VA@120VAC /1600VA@277VAC
Motor .....	1/4Hp
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 Ambient Light Level Sensor, Auto Set, and Walk-Through features.

### 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.

Best: 320 sq.ft.  
Regular: 800 sq.ft.  
Maximum: 1200 sq.ft.

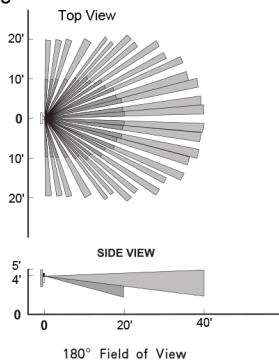


Figure 1

**WARNING:** Turn off the circuit breaker before installation.  
Ground wire is required.  
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, Green lead to Ground.

Wiring Diagram:

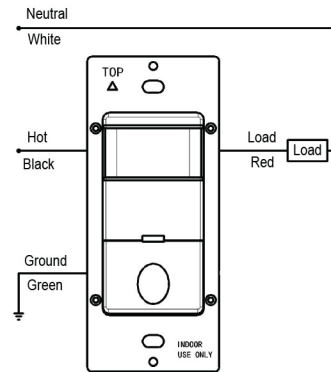


Figure 2

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 **three** minutes
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.

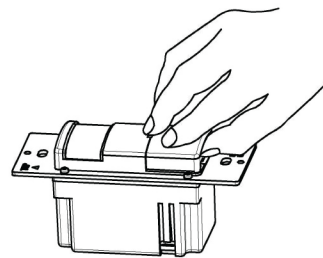


Figure 3

## ADJUSTMENT

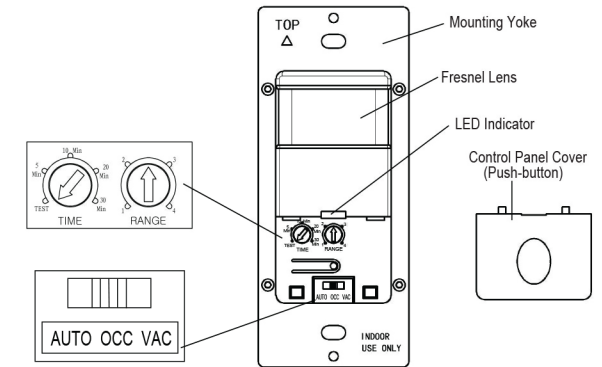


Figure 4

Band switch prescription.

Mode	Position	Description	React to the push-button
AUTO	Left	Auto Set Occupancy Mode: Automatic On ,Automatic Off after digital auto set delay time, including walk-through Mode	Manually toggles the load On/Off
OCC	Center	Occupancy Mode: Automatic On, automatic Off after set time delay.	Manually toggles the load On/Off
VAC	Right	Vacancy Mode: Manual On only, automatic Off after set time delay.	Manually toggles the load On/Off

### 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 toward right for greater room space. Turn toward left to avoid false alert in smaller room and near the door way or heat source.*

### Ambient Light Level Adjustment

After Initialization (3 minutes), set the Band Switch to VAC, press and hold the Manual ON/OFF Button for 6 seconds until the Load turns on. Release the button within the next 4 seconds. The Load will turn off and stay off or a maximum 10 seconds. The Load will turn on again (2 seconds) and then Off. This ensures that the present light level becomes

# INSTALLATION INSTRUCTIONS

the set Ambient Light Level. Set the Band Switch to OCC or AUTO mode. The Load will turn on only if motion is detected and the Ambient Light Level also below the set light level.

*Note: Use ambient light feature when daylight source is available.*

## Back to factory default(daylight)

Set the Band Switch to VAC, press and hold the Manual ON/OFF Button for 6 seconds till the Load turns on, continue holding the button for another 5 seconds until the Load turns off, then release the button and set the Band switch to OCC or AUTO Mode, it confirms that the sensor switch goes back to factory default.

## ◆ OPERATION

The Sensor Switch can be used independently for any mode (AUTO, OCC, or VAC) as set by the Band Switch position under the control panel cover. Some might call the Vacancy mode, "Manual On Occupancy Mode."

### Manual On/Off Button

By Pushing the Control Panel Cover, the Load can be turned On/Off under either OCC or VAC mode (illustrated in Figure 5).

### Occupancy Mode - Auto on, Auto Off

Load will be Automatically On once occupancy is detected.

### Vacancy Mode - Manual On, Auto Off

On/Off Button must be pushed to turn On the Load.

### Automatic Off

Under any Mode, the sensor keeps the Load On until no motion is detected plus the set time delay. Turns Off automatically.

### Manual Off

By pushing the Manual On/Off button, the Load can be turned Off under any Mode. Under AUTO/OCC Mode, the Load cannot be automatically turned On for 5 minutes after the last motion is detected.

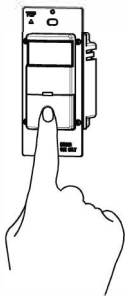


Figure 5

## Auto Set Occupancy Mode

Automatically set the time delay between 7 to 30 minutes based on occupancy patterns. Auto set behavior starts right after the time delay knob is turned away from Test Mode. Includes the walk-through mode.

## Walk-Through Mode

In case of walk-through, the Load automatically turns On and then turns Off 2.5 minutes after a brief occupancy moment of 30 seconds. If motion is detected within the first 30 seconds and also continues in the coming 2.5 minutes, Auto Set Occupancy Mode applies.

## ◆ TROUBLESHOOTING

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

### Initialization

The Sensor Switch needs to initialize for 3 minutes. During the 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 completed and proper operation confirmed.

### The Load is out of control (frequently flashing)

1. It can take up to three minutes for initial run.
2. Check the wiring connections, especially the Ground Wiring.

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

1. Push Manual On/Off Button. If the load turns On, verify that the Sensitivity Range is on high. If the Load does not turn On, go to Step 2.
2. 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 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 Ground wiring.

### 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) 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 HVAC device.

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

### The Load turns On when not desired

1. Mask the Sensor Switch lens to eliminate unwanted coverage area.
2. Turn the Sensitivity Level knob toward left to avoid false alert in a small room and when near a doorway.
3. Set the Band Switch to the VAC position.