



Motion Sensor Switch without Neutral

PIR Motion sensor switch 180° 3-Way
Occupancy and Vacancy without neutral
Ordering code: MS1-800W-3-L-XX-V2

SPECIFICATIONS

Voltage	120/277VAC, 60Hz
Maximum power	120V 800VA fluorescent lamp Rapid Start 277V 1200VA fluorescent lamp Rapid Start
Minimum load	5W
Load Horse power	1/6HP
Time Delay Adjustment	15 Secs to 30Mins
Operating Temperature	0° to 55°C
Operation humidity range	95%RH, non-condensing
Coverage range	180 degrees (at an optimum temperature of 20° to 25°C)
Tools Needed	Insulated Screwdriver, Wire Strippers

DESCRIPTION AND OPERATION

The switch Vacancy & Occupancy Sensor is designed to replace a standard light or fan switch. This device can detect motion from a heat-emitting source (such as a person entering a room) within its field-of-views and automatically turn lights ON and OFF. The controlled lights will remain ON until no motion is detected and time delay has expired. It is ideal for private offices, conference rooms, break rooms, lounges and any room which would benefit from automatic light control as well as hallways or stairways, or large spaces with multiple entries. It is suitable for indoor use only.

WARM UP

It usually needs 30seconds to warm up sensor, and LED indicator will not blink until sensor starts to work.

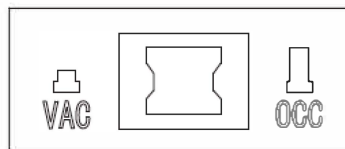
LED INDICATOR

Work light. It operates by detecting heat generated energy, It will be open, when a person occupied. It will be closed, when a person unoccupied.



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TWO OPERATION MODES



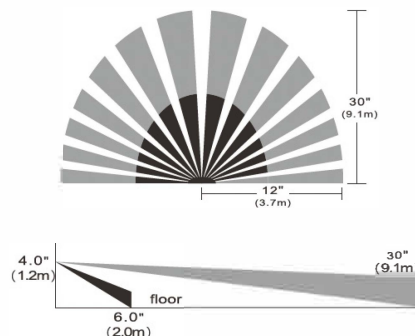
VAC	When the button is pressed	Manual ON, Auto OFF
OCC	When the button is released	Auto ON, Auto Off with Stand-by mode*

* Stand-by Mode

If the load is switched off via the ON/OFF button, stand-by mode is activated and Auto mode is restored after 1 minute without motion detection. This prevents unintentional switch-on after manual switch-off.

COVERAGE AREA

The switch has a maximum coverage range of 180 degrees and a coverage area of 720 square feet (67 square meters). The sensor must have a clear and unobstructed view of the coverage area. Objects blocking the sensor's lens may prevent detection thereby causing the



light to turn off even though someone is in the area.

Figure 1 : Sensor Coverage Area

Windows, glass doors, and other transparent barriers will obstruct the sensor's view and prevent detection.

Note: The coverage area data is measured under the best temperature condition (20°C to 25°C), and a higher temperature may not lead to an ideal coverage area.

INSTALLATION INSTRUCTIONS

AVOIDING HVAC TURBULENCE

When Heating, Ventilating, or Air Conditioning (HVAC) registers and high-wattage bulbs (over 100W incandescent) turn on, they create turbulence that may trigger the sensor. To prevent this, ensure the sensor is placed at least 6 feet (2m) away from HVAC registers.

Additionally, if the sensor has a direct view of adjacent rooms or hallways, it may activate lights when detecting movement in those areas. If this occurs, reposition the sensor to eliminate detection through doorways.

INSTALLATION & WIRING

Warning

Disconnect power to the wallswitch box by turning OFF the circuit breaker or removing the fuse for the circuit before installing the motion sensor, replacing lamps, or doing any electrical work. The ground wire must be tightly secured or the sensor can not work normally.

1.Prepare the switch box.

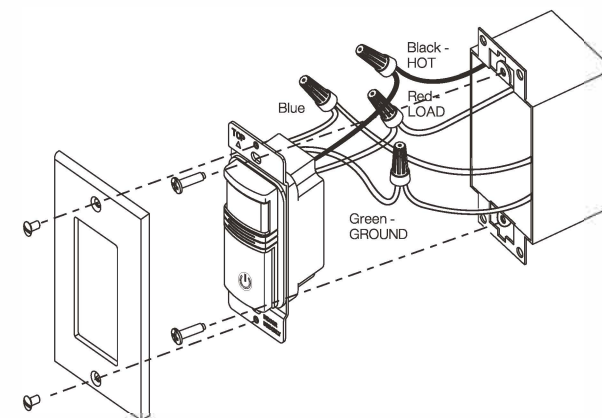
After the power is turned off at the circuit breaker box, remove the existing wall plate and mounting screws. Pull the old switch out from the wall box if applicable.

2.Prepare the Wires.

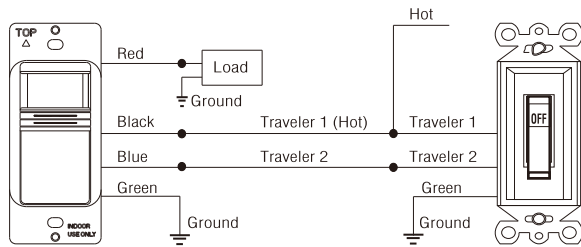
Tag the wires currently connected to the existing switch, so that they can be identified later. Disconnect the wires.

3.Installing your Sensor-Single-Pole Application:

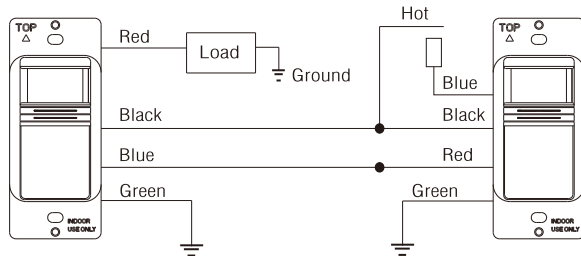
The switch also offers automatic lighting shut off as well as multi-way control. Two sensors controlling one load ensure optimal coverage of random traffic areas, such as hallways or stairways, or large spaces with multiple entries. The three-way wiring shown as Fig.3



Wiring with regular 3-Way switch



Wiring two Motion Sensor Switches | 3 way



4. Put the sensor in the wall box.

Position the lens above the standby button (lens at top, button at bottom) and secure it to the wall box with the screws provided.

5. Attach the new cover plate.

Secure it to the wall box with the screws provided.

6. Restore power to the circuit.

Turn ON the breaker or replace the fuse.

SENSOR ADJUSTMENT & PROGRAMMING

To remove the cover below the sensor lens, insert a small screwdriver into the notch at the bottom of the cover. Gently lift the screwdriver upward to unlatch it (see Fig. 4).

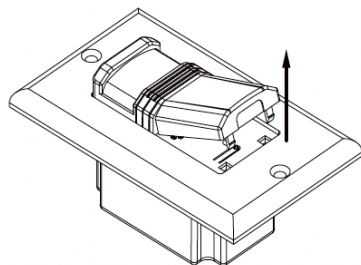


Fig.4

COVERAGE AREA

The sensor has a maximum coverage range of 180 degrees and a coverage area of 720 square feet (67 square meters). The sensor must have a clear and unobstructed view of the coverage area. Objects blocking the sensor's lens may prevent detection thereby causing the light to turn off even though someone is in the area.

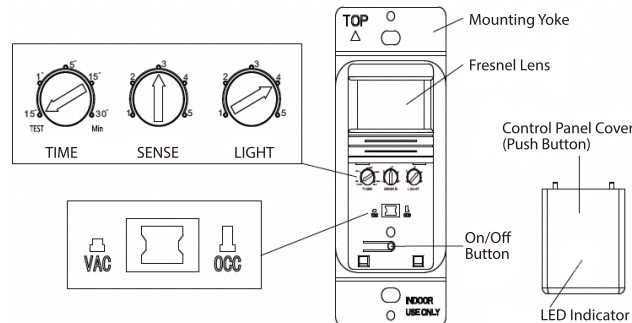


Fig.5

Time Delay Knob

Turn the adjustment on the left "TEST" fully counter clockwise to the minimum setting (15 seconds) while fully clockwise to the maximum setting (30 minutes), verify by turning lights on with pushbutton.

Sensor Sensitivity Range Knob

Default position: 75% (Position 3)

Adjustable: 50% (Position 1) to 100% (Position 5)

The sensitivity adjustment is in the center and marked "SENSE", Adjust the sensitivity setting to avoid unwanted detection such as hallway traffic or adjacent movement, Turning the setting counter clockwise will decrease sensitivity while turning it clockwise will increase it. Max sensitivity while turning it clockwise will increase it. Max sensitivity can be achieved by turning fully clockwise on Position 5.

Ambient Light Level Knob

Default position: Daylight (Position 5)

This light level is in the right and marked "LIGHT". it used to detect if other light source such as sunlight, are enough to illuminate the space without turning on the lights. If use of Ambient light level is desired, please turn the adjustment knob counter clockwise, and push the button to make sure the sensor start to work. If use of the light level is not desired, please leave it on the maximum setting (Position 5). This will allow the sensor to turn the light on and off regardless of ambient light conditions.

TROUBLESHOOTING

Load will not turn ON

Push standby button. The load should turn ON. If not:

- Check the light bulb and/or motor switch on the fan mechanism.
- Turn off power to the circuit then check wire connections.

Load will not turn OFF

- Make sure no motion is occurring in the coverage area until the set time period.
- Hot air currents and heat radiating devices can cause false detection. Make sure the sensor is at least 6 feet (2 meters) away from devices that are a significant heat source (e.g., heater, heater vent, high wattage light bulb).
- Push the ON/OFF button to the OFF. If load does not turn off, turn off power to the circuit then check wire connections.

Lights turn OFF and ON too quickly

- Sensor may be mounted too closely to an air conditioning or heating vent: Move the sensor to another location or close the vent.
- Time delay set improperly: Refer to Time Delay Adjustment