

Please read all instructions before installing

YM2503A
360° HI-BAY PIR FIXTURE MOUNT
PLUG-IN OCCUPANCY SENSOR
 (Adapter, sold separately)



SPECIFICATIONS

Voltage-----120 /277/347VAC, 60Hz
 Load requirement-----
 800VA @ 120V AC Fluorescent Ballasts No Min
 1200VA @ 277V AC Fluorescent Ballasts No Min
 1500VA @ 347V AC Fluorescent Ballasts No Min
 Load Horsepower-----1/6HP
 Time Delay Adjustment-----Fixed 15 seconds to 30 minutes
 Operating Temperature-----32° to 131° F (0° to 55° C)
 Humidity range-----0%–90%RH, non–condensing
 Coverage range-----Up to 30 ft mounting / 360 Degrees
 Terminal Line-----Black–Hot, White–Neutral, Red–Load

PHYSICAL SPECS

SIZE 3.55" Hx3.55" Wx1.57" D
 (9.02 cm x 9.02 cm x 4.0 cm)
 WEIGHT 5 oz
 MOUNTING 1/2 knockout

DESCRIPTION AND OPERATION

The YM2503A Occupancy sensor is designed to replace a standard light or fan switch. It is ideal for high mounted areas such as warehouses, manufacturing and other high ceiling applications.

Sensor Operation

The sensor detects changes in the infrared energy given off by occupants as they move within the field-of-view. When occupancy is detected, a self-contained relay switches the connected lighting load on. The sensor is line powered and can switch line voltage. An internal timer, factory set at 15 seconds, keeps the lights on during brief periods of inactivity.

Initial Power Up (30 seconds warm-up)

The sensor's relay is shipped in a latched closed position so the lights will come on upon initial power-up. The lights contacted with sensor will keep on working during the 30 seconds warm-up period, and the LED in the sensor will blink during this period. If the lights do not immediately turn on (initial installation only) the latching relay opened during shipment and will close after warm-up period is over.

Coverage Area

• Best choice for 15 to 30 ft (4.57m to 9.1m) mounting heights
 • 15to 20 ft (4.57 to 6.1 m) radial coverage overlaps area lit by a typical high bay fixture (refer to Fig 1).

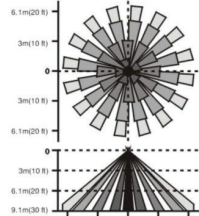


Fig1 Sensor Coverage Area

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

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

Installation Instructions

INSTALLATION & WIRING



CAUTION FOR YOUR SAFETY: IF YOU ARE NOT SURE ABOUT ANY PART OF THESE INSTRUCTIONS, CONSULT A QUALIFIED ELECTRICIAN.

Avoiding HVAC Turbulence

When Heating, Ventilating or Air Conditioning (HVAC) registers turn on, they create turbulence which can cause the sensor to activate. It is important that the sensor and HVAC register be separated by at least 6'.

If the sensor's location give it a view of other rooms or hallways, lights will turned on when movements is detected in those adjacent areas. The sensor's detection zone may be restricted by masking a portion of the lens; or move sensor to eliminate detection through doorway.

NOTE : The Sensor's field-of-view may be partially obstructed by the Luminaries housing (refer to Fig.2A). At higher mounting heights, the outer beams are not used. As long as the bottom of the sensor is mounted within 1" from the bottom of the luminaire, the field-of-view will not affected (refer to Fig.2B)



Fig. 2A

Fig. 2B

Sensor Installation 1

- 1.Remove the lock-nut from the thread clockwise on to the threaded nipple into a half inch hole of the luminaries' body or the electrical box.
- 2.Slide the lock-nut over the wires and thread clockwise on to the threaded nipple to secure the sensor firmly in place making sure the lens is orientated towards the area to be monitored(field-of-view). (refer to Fig.3A)
- 3.Connect wire per Wiring Diagram as follows: BLACK lead to LINE(HOT);RED lead to LOAD; WHITE lead to NEUTRAL. Twist the existing wires together with the wire leads on YM2501A sensor as indicated below. Cap them securely using the wire nuts provided.(refer to Fig.3B)
- 4.Restore power at circuit break or fuse

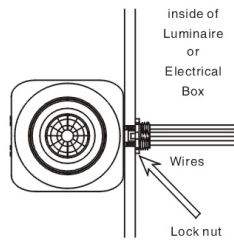


Fig. 3A

Wiring Diagram

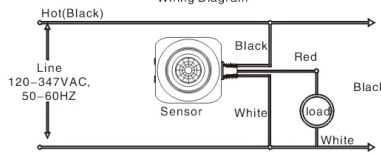


Fig. 3B

Sensor replacement 1

- 1.Press down the two-sides buttons simultaneously, and extract out the main part of sensor switch. (Fig.4A and Fig.4B)

- 2.Plug in the replaceable main part of sensor switch just need several seconds. No need to disassemble the screws of fixture, saving time and effort.

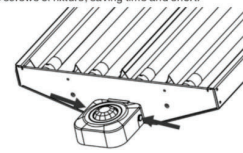


Fig.4A



Fig.4B

Sensor Installation 2

- 1.Put the threaded nipple of the sensor part A(with wires)into a half inch hole of the luminaries' body or the electrical box and clockwise the lock-nut onto the threaded nipple. This whole installation process will be done by factory, if you purchase the fixture with sensor part A or the electrical box with sensor part A.(Fig.5A)
- 2.Prepare the sensor part B(main sensor part)and make the sensor part A insert into sensor part B directly.(Fig.5B)

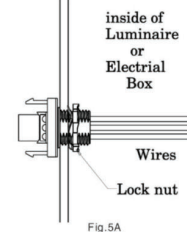


Fig.5A

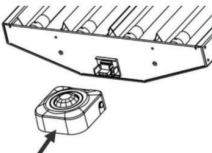


Fig.5B

Sensor replacement 2

See sensor replacement 1

Adapter Installation

1. Position one half of the Adapter body on the end of the luminaire to determine the appropriate mounting hole to be used on the Adapter that will position the sensor for optimum coverage. The bottom of the sensor should be at or below the luminaire body.(refer to Fig.6A)
2. Punch out the keyed hole of the Adapter half body to be mounted on the luminaire or electrical box.(refer to Fig.6B)
3. Thread the provided lock nut part way on the keyed threaded nipple and insert through the keyed hole from the inside of the Adapter half body and snap into the half inch hole of the luminaire or electrical box and tighten.(refer to Fig.6A)
4. Punch out the non-keyed hole on the other Adapter body half and insert the wires and threaded nipple of the Sensor into the hole. Thread the provided lock nut on the nipple and the tighten positioning sensor towards the area to be motioned (refer to Fig.6B)
5. Feed the sensor wires through the keyed nipple attached to the luminaire or electrical box and connect wires per Wiring Diagram as follows: Twist the existing wires together with the wire leads on YM2501A sensor as indicated above. Cap them securely using the wire nuts provided. (refer to Fig.3B)
6. After wiring connections are completed, snap the two Adapter body halves together.
7. Restore power at circuit breaker or fuse.

INSTALLATION IS COMPLETE.

Note: To open the Adapter, user a small, flat blade screw driver and carefully insert into slots and push tabs down while pulling the two halves apart.

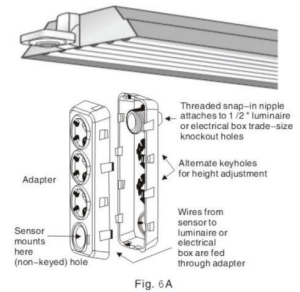


Fig. 6A

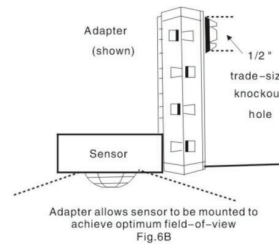
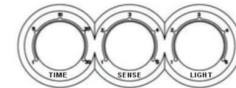


Fig.6B

SENSOR ADJUSTMENT & PROGRAMMING



Time Delay Knob

Turn the adjustment on the left "TIME" fully counter clockwise to the minimum setting (30 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.

TROUBLESHOOTING

Lights Will Not Turn ON

- Circuit breaker or fuse is OFF: Turn the breaker ON. Ensure the lights being controlled are in working order (i.e., working bulbs, ballasts, etc.)
- Sensor is wired incorrectly or may be defective: Confirm that the sensor's wiring is done correctly and inspect visually for problems.
- Lens is dirty or obstructed: Inspect the lens visually and clean if necessary, or remove the obstruction.

Lights Will Not Turn OFF

- Make sure no motion is occurring in the coverage area until the 15 seconds (factory set) time delay expires.
- Sensor is wired incorrectly or may be defective: Confirm that the sensor's wiring is done correctly and inspect visually for problems.
- Sensor may be mounted too closely to an air conditioning or heating vent: Move the sensor or close the vent.
- The line voltage has dropped: Perform the necessary tests to ensure the line voltage has not dropped beneath 100V.

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