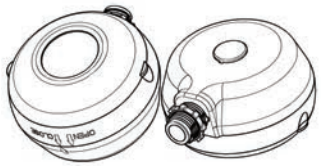
INSTALLATION INSTRUCTIONS

HBOS360

High Bay 360° Passive Infrared Line Voltage Occupancy Sensor Control Module



◆ SPECIFICATIONS

Voltage 120/277VAC,50/60Hz
Load Requirements:
@ 120VAC, ...0-800W ballast or tungsten
@ 277VAC, ...0-1200W ballast
@ 120VAC .....1/4 hp
Adjustable Light Level.....10FC—150FC
Sensitivity Adjustable.....50% or 100%(DIP switch)
Coverage:
MPC-50H-L1: Mounting height: 50ft Field of view: 360° Coverage :2800 sq.ft
MPC-50H-L2: Mounting height: 8ft Field of view: 360° Coverage :1200 sq.ft
Operating Temperature .....32°to 131°F (0°to 55°C)
Relative Humidity .....20-90%, non-condensing
Material.....ABS

◆ FEATURES

-LED indicator of occupancy detection for easy verification of coverage
-Easy front access to time delay, sensitivity range and ambient light level adjustment
-Easy mounting using 1/2" knockout at end of luminaire fixture
-Hardware choices for side and back mount
-Compatible with all program start ballasts
-Zero crossing circuitry reduces stress on relay and extends sensor life

◆ DESCRIPTION

The HBOS360 occupancy sensor is designed for automatic lighting control in high bay applications such as warehouses, distribution cen--ters, gymnasiums, and other areas with direct access to the lighting fixtures. Specifically for indoor locations. This product contains a passive infrared sensor (PIR) and is made up of two parts: a control module and a lens.

◆ COVERAGE

Lens choice:

The coverage area is determined by the type of lens attached to the HBOS360 (See Figure 1).

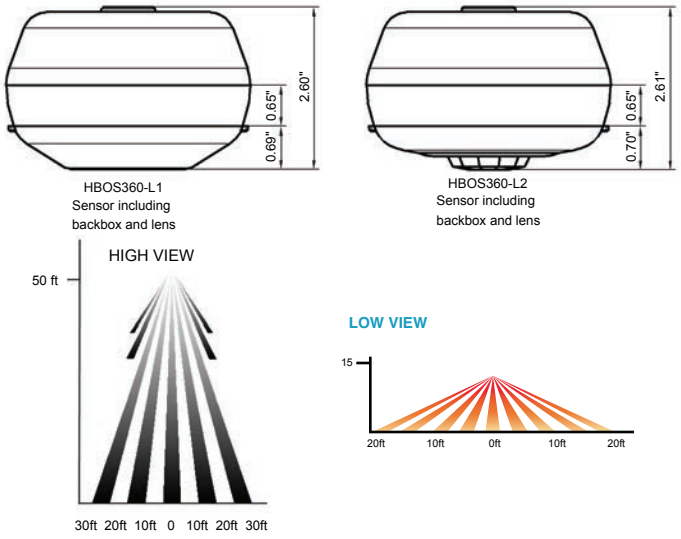


Figure 1

◆ INSTALLATION

WARNING: Turn the power off at the circuit breaker before installing the sensor

1. Determine the mounting location appropriate to the control module and the coverage area. Careful consideration must be given where the edge of a fixture, shelving or other obstructions are located as they may block sensor's line of sight. Mount the sensor below the edge of the fixture and away from fluorescent lamps so that the heat from the lamps does not affect the sensor.
2. Make sure that you have the appropriate accessories for your sensor mounting configuration. (See Mounting Options.)
3. Connect the line voltage and load wires to the sensor leads as shown in the Wiring Diagram
   - Do not allow bare wire to show.
   - Make sure all connections are secure.
4. Attach the HBOS360 as shown in the assembly drawing on the next page.
5. Restore power from the circuit breaker.

◆ WIRING

Refer to the wire diagram of the sensor (See Figure 2)

1. Connect the hot wire to the black wire from the sensor
2. Connect the neutral wire to the white wire from the sensor
3. Connect the load wire to the red wire from the sensor

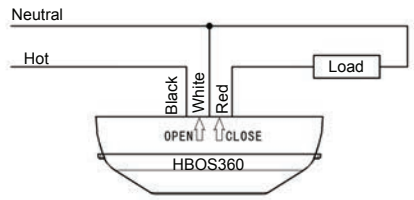
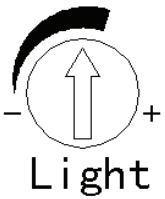


Figure 2

◆ LIGHT LEVEL ADJUSTMENT

Turn the potentiometer on the sensor to the "-", if adequate ambient light, the output of sensor will be inhibited, and the load can not be on. Only when the ambient light is down to a certain level will the sensor auto-matically turn on.Therefore, potentiometers require adjustments suitable to each locations ambient light level. When properly setup this feature effectively turns off the load when adequate ambient light exists, maximizing energy-savings. Turn the potentiometer on the sensor to the "+", regardless of the ambient light level and the load will be On as long as there are signals from occupancy.

1. Avoid mounting the sensor close to lighting fixtures.
2. Adjust during daylight hours when ambient light in the area is at desired level. Open the Front Cover and adjust the Light level.



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

INSTALLATION INSTRUCTIONS

◆ MOUNTING OPTIONS

The HBOS360 can be attached to the fixture or junction box using the back box and chase nipple or directly to the fixture surface via the two screw holes provided in the Control Module (See Figure 3 below)

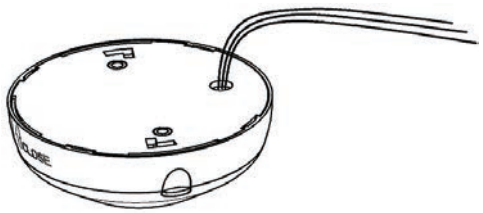


Figure 3

Back box mounting

This requires a standard 1/2” knockout for the chase nipple.The Control Module mounts to the back box with a bayonet type fitting requiring a slight twist of the units to separate them or lock them into place.The box comes ready for side mounting (See Figure 4). It can be modified for rear mounting as follows:

1. Pop out the cap in the rear 1/2" knockout.
2. Unsnap the chase nipples from the side mount and snap into the rear mounting hole.
3. Use the cap to close the side mount hole.
4. The chase nipple provided can be pushed into a standard 1/2” knockout in a metal fixture (max of 1 mm (0.04”) thick metal) without the need for the included internal nut. The nut can be used for added security if necessary.

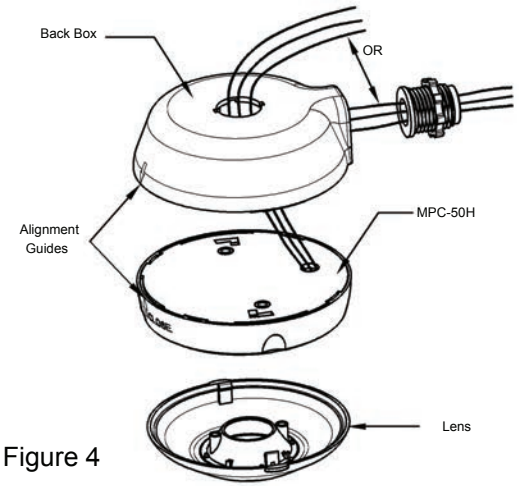
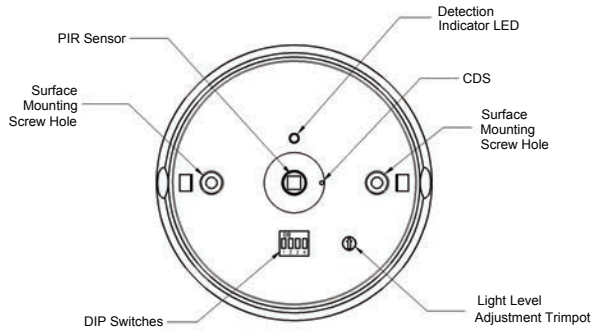


Figure 4

◆ SENSOR ADJUSTMENT



Note: There is a 60-second warm-up period when power is first applied, LED flashes

- If the sensor detects occupancy during warm-up, the time delay will increase.
- If no occupancy is detected during warm-up, the light turns OFF after the initial 60-second warm-up period.

The sensors are factory preset to allow for quick installation in most applications.After test is finished, adjust the potentiometer according to the ambient specification, such as sensitivity and time delay.

◆ DIP SWITCH SETTING

The HBOS360 has 4 DIP switches under the cover.They are used to set sensitivity and time delay feature settings.

Sensitivity	1
100%	↑
50%	↓ ◀

Time Delay	2	3	4
Test/15 Seconds	↓	↓	↓ ◀
5 Minutes	↓	↓	↑
10 Minutes	↓	↑	↓
15 Minutes	↓	↑	↑
20 Minutes	↑	↓	↓
25 Minutes	↑	↓	↑
30 Minutes	↑	↑	↓

↓=OFF ↑=ON ◀ Factory setting

Sensitivity setting: DIP switch 1

1. 50% - sensor’s coverage is smaller, just about half of the widest range.
2. 100% - the maximum range of HBOS360-L1 coverage is 2800 square feet, while for HBOS360-L2 coverage is 1200 square feet.

Time delay: DIP switch 2,3,4

The sensor will hold on the lights on as long as occupancy is detected. The time delay countdown starts when no motion is detected. After no motion is detected for the length of the time delay, the sensor will turn the lights off.

◆ TROUBLESHOOTING

Warning:Turn off the power at the circuit breaker before installing.

LED on power module does not blink:

Check sensor mounting place, verify the sensor can detect motion from human body. If not the LED will not flash.

LED flashes but lights do not turn ON:

1. Make sure the wire connections are correct. Red load wire leading to load light, and check the connection security.
2. Make sure that power to the sensor has been ON continuously for at least one minute. Wait for the warm-up period to end, and if LED flashes, and the load still has not turned on, then go to next step.
3. Cover the light sensor lens to simulate darkness. If the light turns ON, the light level setting needs to be adjusted. If set for minimum, more than 2fc of ambient light will cause the lights to be held OFF.
4. Check security of the light fixture.

Lights will not turn OFF:

1. If there is no motion from people or equipment in the sensor’s view but the LED flashes, look for any nearby source of infrared energy (heat) in motion, such as turbulent air from a heating or cooling supply.

- Mount the sensor so that it’s lens is below the edge of the fixture and does not directly view the lamps.
- Divert the air supply away from the sensor,or move the sensor.

2. Verify time delay set in switches 2-4.The time delay can be set from 15 seconds to 30 minutes. Ensure that the time delay is set to the desired delay and that there is no movement within the sensor’s view for that time period.
3. Check sensor wire connections, verify load and neutral wires are secure.

NICOR, Inc. 2200 Midtown Place NE, Albuquerque, NM 87107
www.nicorlighting.com P: 800.821.6283 F: 800.892.8393