INSTALLATION INSTRUCTIONS
E-HLD Series

Document	LPN00353X0001A0_A	Date	2016-07-06
Created By:	TMT	ECO#	006289

e-conolight®

CAUTIONS

IMPORTANT SAFEGUARDS

When using electrical equipment, basic safety precautions should always be followed including the following:

READ AND FOLLOW ALL SAFETY INSTRUCTIONS

1. **DANGER**- Risk of shock- Disconnect power before installation.
   ***DANGER** – Risque de choc – Couper l'alimentation avant l'installation.*
2. This luminaire must be installed in accordance with the NEC or your local electrical code. If you are not familiar with these codes and requirements, consult a qualified electrician.
   Ce produit doit être installé conformément à NEC ou votre code électrique local. Si vous n'êtes pas familier avec ces codes et ces exigences, veuillez contacter un électricien qualifié.
3. MIN. 90°C SUPPLY CONDUCTORS.
   LES FILS D'ALIMENTATION 90°C MIN.
4. To prevent wiring damage or abrasion, do not expose wiring to edges of sheet metal or other sharp objects.

SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE

CHAIN SUSPENSION

1. Insert the supplied wire hangers through the slotted holes on the top of the fixture and pass the ends of the hangers through the round holes on the ends of the fixture (See **Figure 1**). To prevent wire hangers from disconnecting from the fixture, pinch the ends of the wire hangers shut.
2. Attach the s-hook on the end of one of the supplied hanging chains to one of the wire hangers. Pinch the s-hook closed to prevent accidental disconnection from the wire hanger. Repeat with second chain at other end of the fixture.
3. Attach opposite ends of the chains to mounting surface. Make sure mounting surface and customer supplied hardware can support the weight of the fixture.
4. Remove screw from top of fixture near silver wiring access cover. Slide wiring access cover towards screw hole and then lift to remove. Remove 1/2" knockout in wiring cover. See **Figure 2.**
5. **Cord Kit:**
   Insert leads of cord through hole in wiring access cover and snap strain relief into cover

   Conduit:
   Insert leads from conduit through hole in wiring access cover. Secure conduit to cover with conduit nut on opposite side of the cover.
6. See Electrical Connections for wiring.
7. Replace wiring access cover by reversing sequence used to remove it. Make sure both ends of cover are engaged with the top of the wiring chamber. Secure cover in place using screw removed in Step 4.

ELECTRICAL CONNECTIONS

Fixture is equipped with universal volt driver 120-277V (ie. 120V, 208V, 240V or 277V)

PHASE TO NEUTRAL WIRING 120/277V

1. Connect supply ground to fixture ground (green) lead.
2. Connect supply common to fixture neutral (white) lead.
3. Connect supply Vin to fixture hot (black) lead.

Tuck all wires carefully into wiring chamber ensuring that no wires are pinched.

PHASE TO PHASE WIRING 208/240V

1. Connect supply ground to fixture ground (green) lead.
2. Connect supply L1 (Hot) to fixture neutral (white) lead.
3. Connect supply L2 (Hot) to fixture hot (black) lead.

Tuck all wires carefully into wiring chamber ensuring that no wires are pinched.

DIMMING

1. Grey and violet leads are for 0-10V dimming systems. Cap off if not used.

FIGURE 1

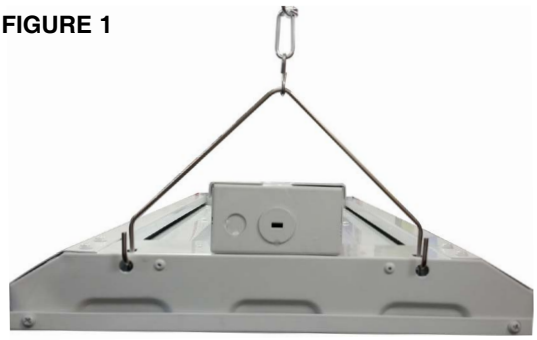
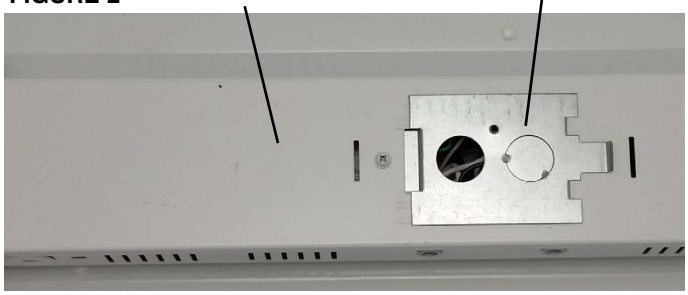


FIGURE 2



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OCCUPANCY SENSOR ACCESSORY

1. Remove two screws holding wiring chamber cover in place and remove wiring chamber cover. Set cover and screws aside to reinstall later. See **Figure 2** for location of wiring chamber cover.
2. Remove one 1/2" knockout on one end of the fixture.
3. Mount the sensor by passing the threaded nipple through the 1/2" knockout opening and secure sensor in place with conduit nut.
4. Make the following wire connections:
   - Connect the voltage supply lead to the black wire from the sensor.
   - Connect the neutral supply lead to the white wire from the sensor.
   - Connect the black wire from the driver to the red wire from the sensor.
5. Replace wiring chamber cover and secure in place with the two screws removed in Step 1.
6. Adjust sensor settings and choose lens using instructions included with occupancy sensor.

PENDANT MOUNTING ACCESSORY

1. Remove screw from top of fixture near silver wiring access cover. Slide wiring access cover towards screw hole and then lift to remove. Discard screw and wiring access cover.
2. Attach end of 1/2" threaded suspension conduit to pendant box, using one conduit locknut on the inside of the box and one conduit locknut on the outside of the box. Conduit and locknuts supplied by others.
3. Attach pendant box to wiring chamber on top of fixture using the four bolts provided. Place a lock washer followed by a flat washer underneath the head of each bolt. See **Figure 3.**
4. Make wire splices inside pendant box as detailed in Electrical Connections section.
5. Once the electrical connections are made, complete enclosure of the pendant box using the supplied face plates and screws. Insert each face plate into slot on the top of the wiring chamber and then attach the plates to the pendant box using supplied screws. See

WIRE GUARD ACCESSORY

Figure 4.

1. Position wireguard on face of fixture.
2. Clip four retention brackets onto wire guard at locations to align with holes in sides of fixture. See **Figure 5.**
3. Pass supplied screws through holes in the retention brackets. Thread screws into holes in walls of fixture and tighten.

FCC NOTICE

CAUTION: Changes or modifications not expressly approved could void your authority to use this equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.
CAN ICES-003 (A)/NMB-003 (A)

FIGURE 3

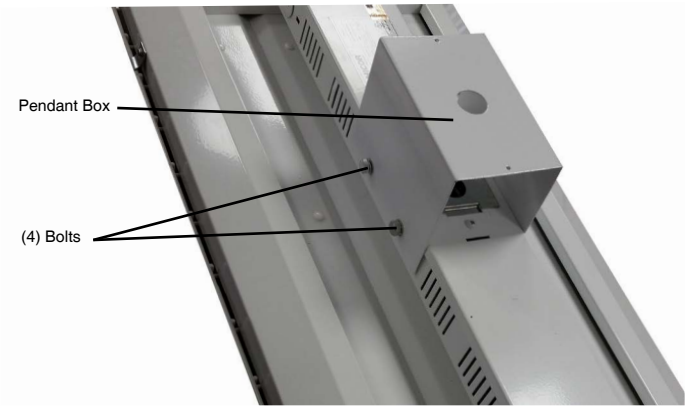


FIGURE 4

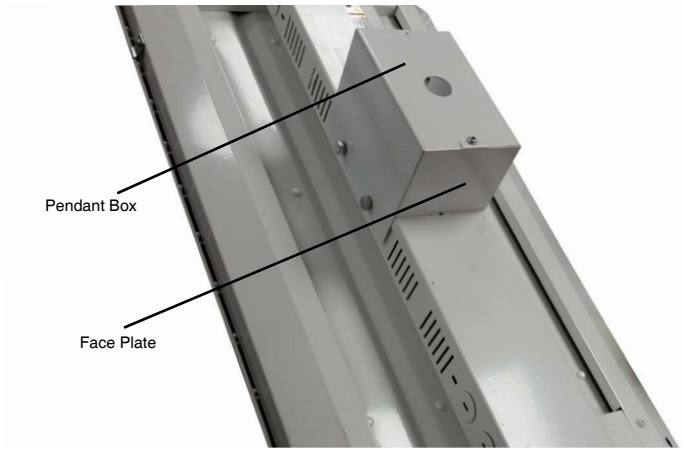
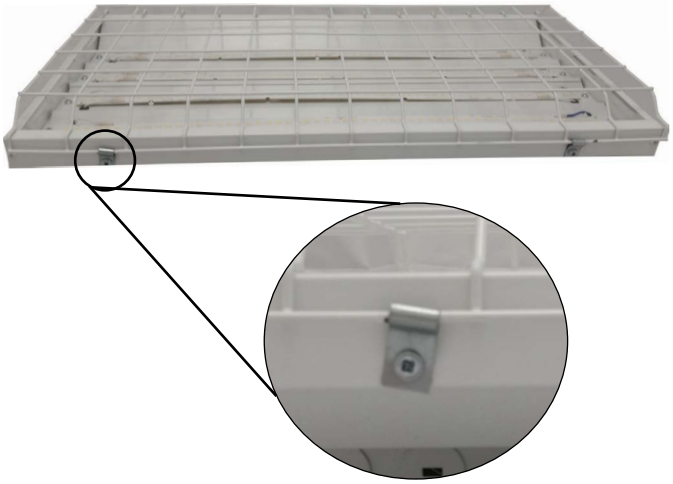


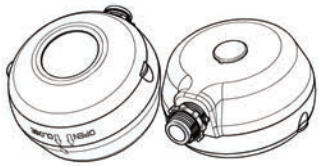
FIGURE 5



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).

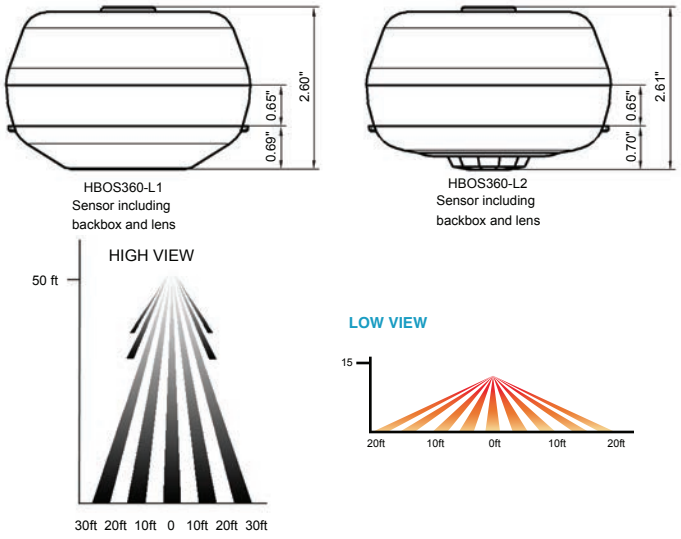


Figure 1

◆ 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

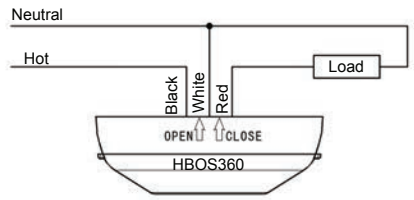
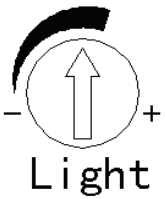


Figure 2

◆ 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)

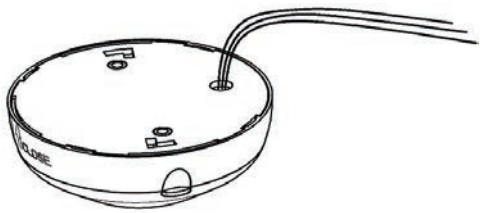


Figure 3

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.

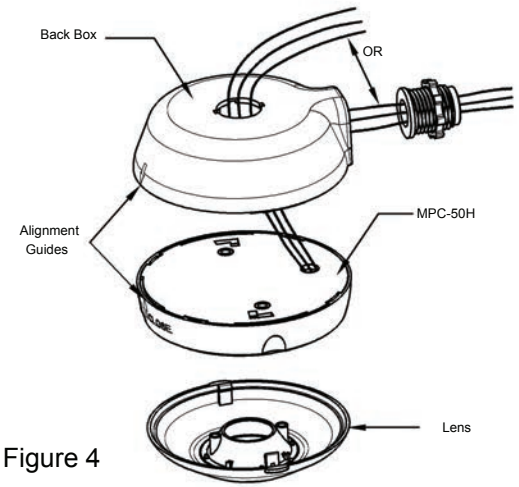
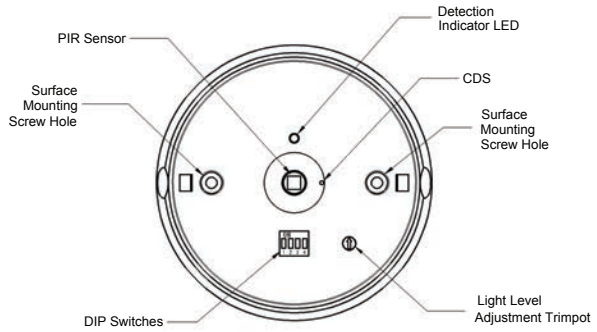


Figure 4

◆ 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.

MAXCOR™

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