

HIGH BAY PASSIVE INFRARED OCCUPANCY SENSORS

HB3X0-LX SERIES

Integrated occupancy sensor and lens device



Lens choices for mounting between 20-40 feet



Line or low voltage

Easy mounting with snap-in mounting hardware

DESCRIPTION

The HB3x0B-Lx PIR occupancy sensors are designed for automatic lighting control in warehouses and other indoor high bay spaces. They are modular and are made up of two parts, a Power Module (HB3x0-B) and a Lens (HBLx), sold separately. The HB300-B-Lx is also sold in prepackaged combinations. The lenses are specifically engineered to provide reliable coverage from a wide range of mounting heights.

The Power Module consists of a sensor module and attached Back Box with a ½" threaded nipple for attaching to junction boxes and conduit hubs, and to the end of fixtures. The sensor can also be surface mounted to a fixture without the Back Box.

turned on. When motion is no longer detected for the duration of the time delay setting, the relay opens and the lighting load is turned off. The sensor's sensitivity and time delay settings are factory preset at "normal" and 15 minutes, respectively, which are suitable for most high bay applications.

DIFFERENT COVERAGE PATTERNS

Three lens choices are available, to provide coverage for different applications, facilitating sensor use at various mounting heights and locations. Sensitivity and time delay adjustments are set using DIP switches located behind the lens.

OPERATION

The HB3x0B-Lx series occupancy sensor is designed to mount directly to an industrial T5 or T8 light fixture and control the load in the fixture. It can be wired to control all ballasts in the fixture, or to control half of the ballasts to provide high/low lighting control. When motion is detected within the sensor's coverage area, the relay in the sensor closes, and lighting loads are automatically

APPLICATIONS

The high bay occupancy sensor is an innovative product engineered specifically for indoor locations. The product is ideal for a range of high bay applications, such as warehouses, distribution centers, gymnasiums, and other high bay indoor spaces. An optional HB Extender Module provides additional mounting flexibility.

FEATURES

- LED indicator of occupancy detection for easy verification of coverage
- Easy front access to DIP switches for time and sensitivity adjustments
- Easy mounting using knockout at end of fluorescent high bay luminaire
- Hardware choices for adjustability or static mount
- Multi-cell, multi-tier Fresnel lenses
- Durable materials for optimal performance in challenging indoor high bay settings
- Asymmetric and 360° coverage lens choices
- Zero crossing circuitry reduces stress on relay and extends sensor life
- Detection signature analysis eliminates false triggers; provides immunity to RFI and EMI
- ASIC technology reduces components and enhances reliability
- Pulse Count Processing eliminates false offs without reducing sensitivity
- Recyclable

PROJECT

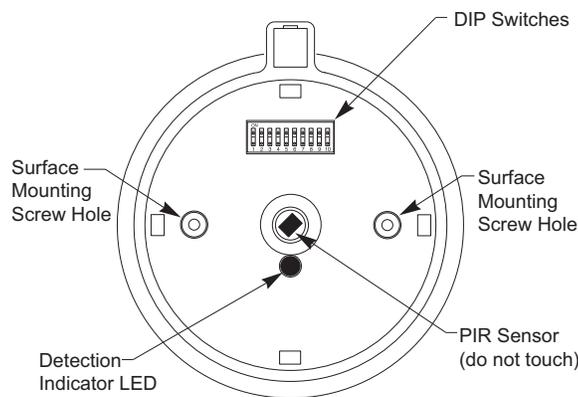
LOCATION/
TYPE

SPECIFICATIONS

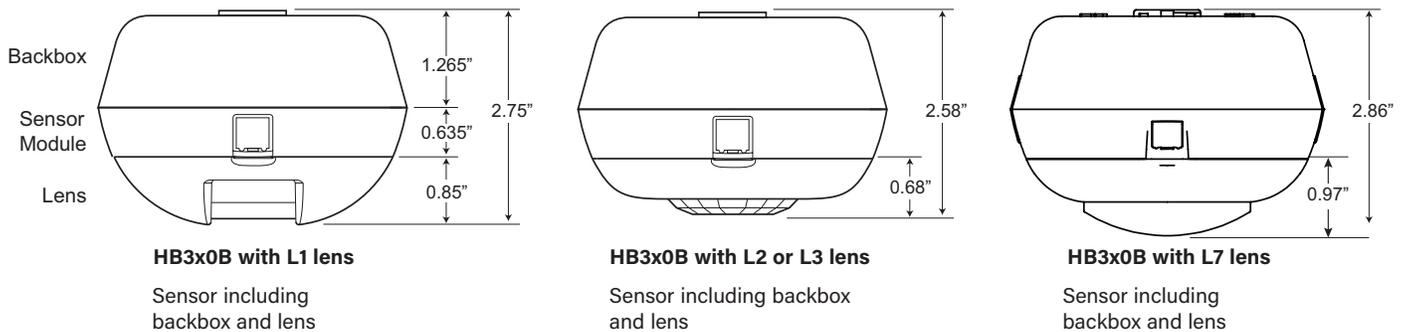
- HB300-B:
 - 11mA @ 24 VDC, Requires Power Pack
 - See Power Pack details for Load Ratings
- HB330-B:
 - 5 AMP Ballast, @ 208/240 VAC
- HB340-B:
 - 5 AMP Ballast, @ 347/480 VAC
- Adjustable time delay (15 seconds - 30 minutes; factory preset at 15 minutes)
- Operating conditions: Temperature 32-158°F (0-70°C); Humidity 20-90%, non-condensing
- Indoor use only
- Materials: ABS, flame retardant, UV resistant, impact resistant
- Five year warranty
- UL and cUL listed

SENSOR COMPONENTS & DIMENSIONS

Sensor Controls

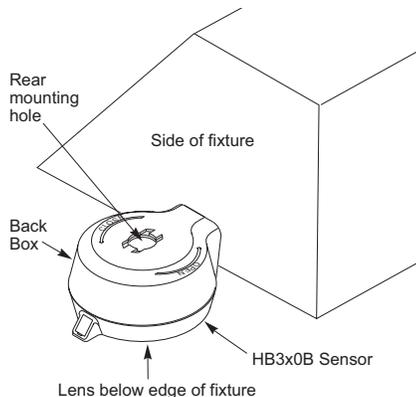


Dimensions



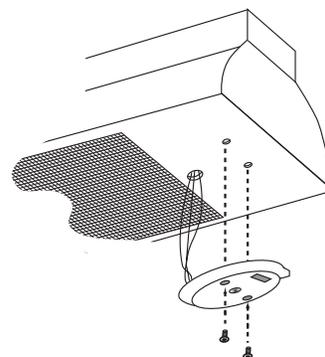
MOUNTING & INSTALLATION

Direct Mounting to Fixture



The sensor should be positioned below the fixture edge and away from fluorescent lamps so that lamp heat does not affect the sensor.

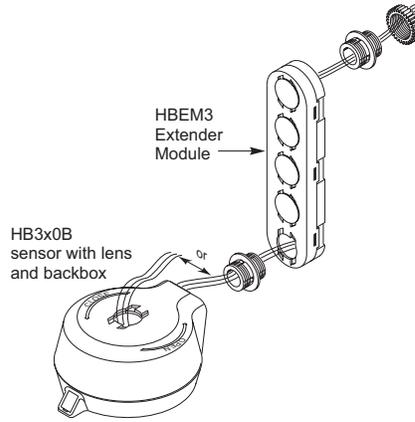
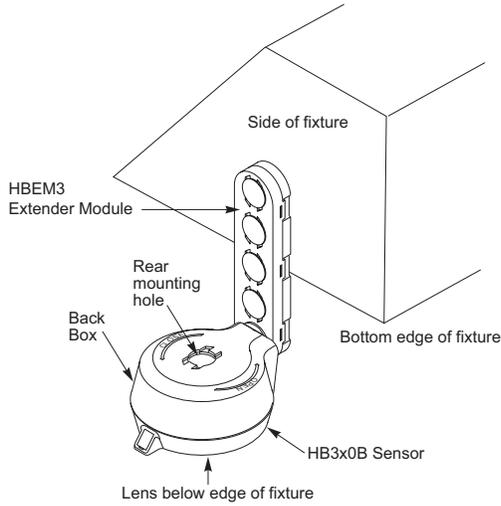
Surface Mount



HB340 has no back box, for surface mounting to bottom of fixture. Back box can also be removed from other models

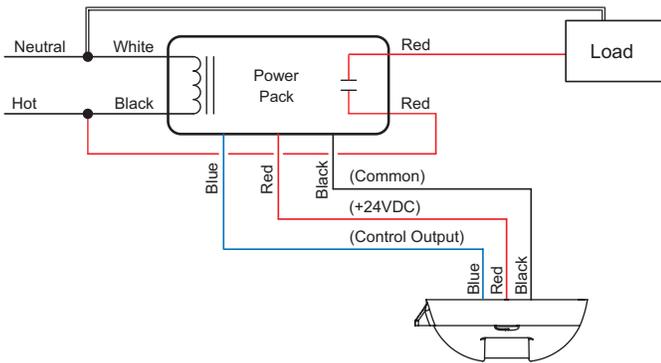
MOUNTING & INSTALLATION CONTINUED

Mounting Using the Extender Module

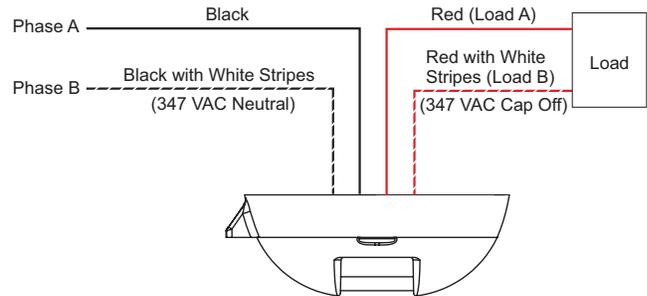


WIRING & CONNECTIONS

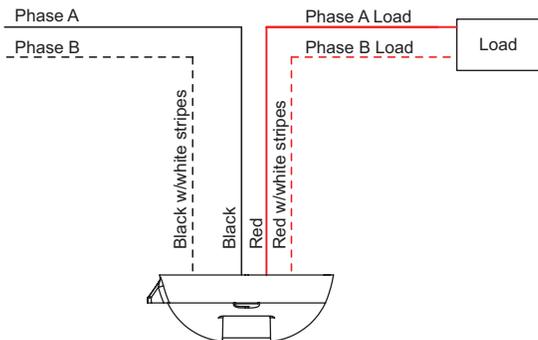
HB300 wiring



HB340 wiring

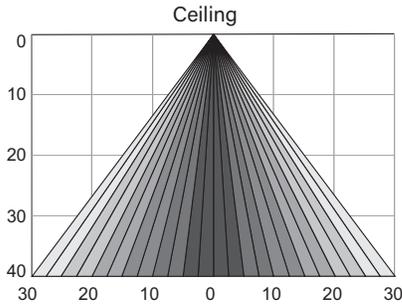


HB330 wiring

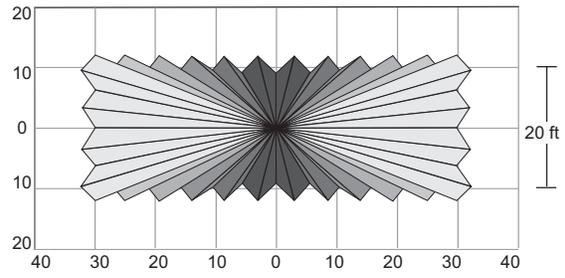


COVERAGE

Lens Choices

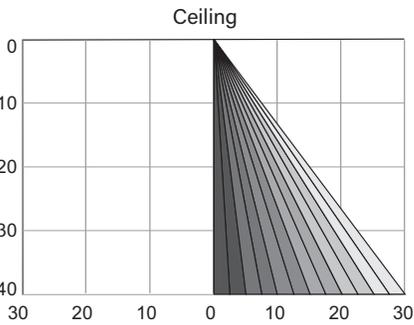


HBL1 side coverage pattern

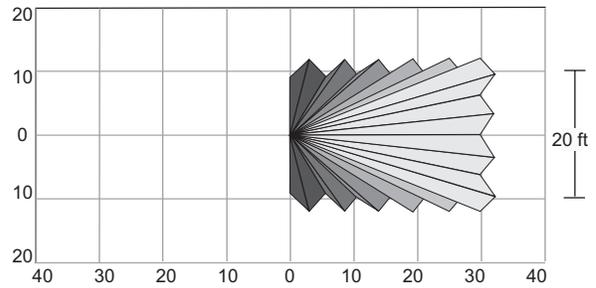


HBL1 top coverage pattern

The HBL1 is designed to detect walking motion when mounted at 40' above the floor. When mounted at 40', in optimal conditions, the lens has a 60' linear detection range.

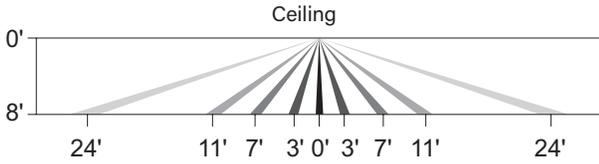


HBL1M side coverage pattern



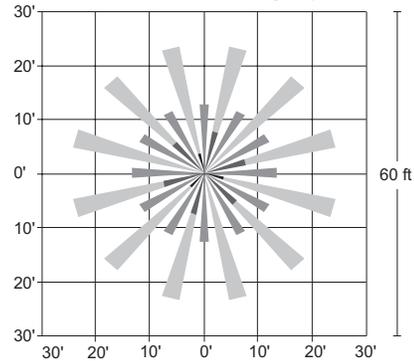
HBL1M top coverage pattern

Identical to the HBL1, the HBL1M comes with opaque adhesive tape applied to the interior of the lens, cutting off 1/2 of the coverage pattern. This customized coverage is ideal for the beginning of aisle ways where cross traffic could be an issue.

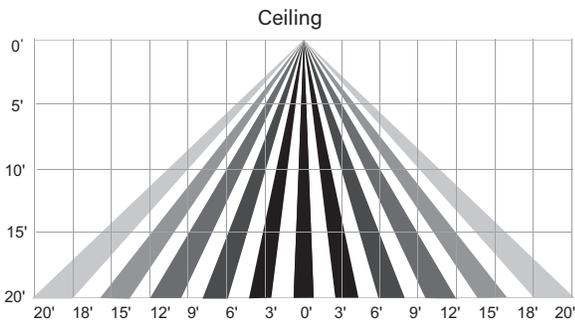


HBL2 side coverage pattern

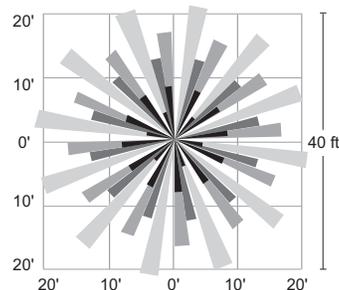
For low bay applications, the HBL2 pattern spreads over a 48' diameter area at a height of 8'.



HBL2 top coverage pattern

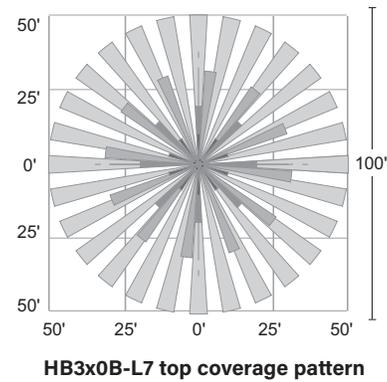
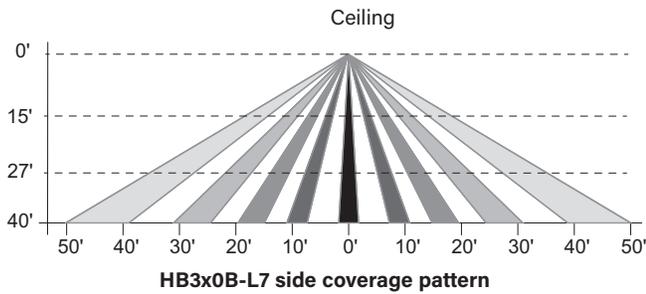


HB3x0B-L3 side coverage pattern



HB3x0B-L3 top coverage pattern

For mid bay applications, the HBL3 pattern spreads over a 40' diameter area at a height of 20'.



For high bay applications, the HBL7 is designed for mounting at heights between 20' to 40', with a coverage area up to 100' in diameter when mounted at 40'.

ORDERING INFORMATION

Catalog #	Description	Voltage	Coverage Area
<input type="checkbox"/> HB300-B	High Bay Low Voltage Occupancy Sensor w/ Backbox	11mA @ 24VDC*	
<input type="checkbox"/> HB330-B	High Bay Line Voltage Occupancy Sensor w/ Backbox	208/240 VAC	
<input type="checkbox"/> HB340	High Bay Line Voltage Occupancy Sensor, no Backbox (for surface mount)	347/480 VAC	
<input type="checkbox"/> HB340-B	High Bay Line Voltage Occupancy Sensor w/ Backbox	347/480 VAC	
<input type="checkbox"/> HBL1	Lens for HB3x0 sensors		Coverage @ 40' height: 60' x 20'
<input type="checkbox"/> HBL1M	Lens for HB3x0 sensors		Coverage @ 40' height: 30' x 20'
<input type="checkbox"/> HBL2	Lens for HB3x0 sensors		Coverage @ 8' height: 48' in diameter
<input type="checkbox"/> HBL3	Lens for HB3x0 sensors		Coverage @ 20' height: 40' in diameter
<input type="checkbox"/> HBL7	Lens for HB3x0 sensors		Coverage @ 40' height: 100' in diameter
<input type="checkbox"/> HBEM3	High Bay Extender Module		
<input type="checkbox"/> HBAA-1	HB Angle Fitting		
<input type="checkbox"/> BZ-50	Power Pack Note: BZ-150, BZ-200, or BZ-250 may also be used	120/277 VAC, 230/240 VAC (Single Phase), 50/60Hz	20 A ballast and tungsten or 1 hp motor
Prepackaged Sensor/Lens Combinations			
<input type="checkbox"/> HB300B-L1	High Bay Low Voltage Occupancy Sensor w/ Lens & Backbox	11mA @ 24VDC*	Coverage @ 40' height: 60' x 20'
<input type="checkbox"/> HB300B-L3	High Bay Low Voltage Occupancy Sensor w/ Lens & Backbox	11mA @ 24VDC*	Coverage @ 20' height: 40' in diameter
<input type="checkbox"/> HB300B-L7	High Bay Low Voltage Occupancy Sensor w/ Lens & Backbox	11mA @ 24VDC*	Coverage @ 40' height: 100' in diameter

All sensors are white.

* HB300 Low voltage models require a BZ series power pack.

25882r3 Rev 06/2024