

HIGH BAY PASSIVE INFRARED OCCUPANCY SENSOR

HB3X0 AND HB3X0C SERIES



PRODUCT OVERVIEW

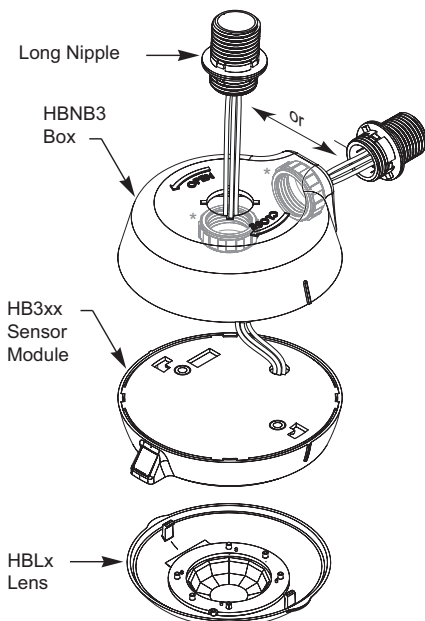
The HB3x0 series occupancy sensors are designed for automatic lighting control in high bay applications. All models contain a passive infrared (PIR) sensor.

Sensitivity and time delay adjustments are set using DIP switches located on the sensor module. Each HB3x0 series sensor module accepts one of four interchangeable lenses, which provide different types of coverage for specific applications.

Sensors provide On/Off switching based on occupancy within a space.

The HB340 model is intended for surface mounting and does not come with Back Box (HBNB3), while all other models do. The Cold location models are ideal for indoor cold environments.

The HB3x0-B can be attached either directly to the fixture surface via the two screw holes provided in the Power Module or using the HBNB3 back box and chase nipple. The Extender Module (HBEM3) allows attaching the sensor to the side of the fixture in a number of configurations using provided chase nipples.



MODELS

HB300-B	low voltage
HB300C-B (for cold environments)	low voltage
HB330-B	208/240V
HB340-B	347/480V
HB340 (Surface Mount)	347/480V
HB350C-B (for cold environments)	120/277V

SPECIFICATIONS & FEATURES

HB330-B, HB340, HB340-B, HB350c-B: Line voltage for direct connection to load
 HB300, HB300C-B: Low voltage for connection to BZ-50, BZ-150, BZ-200, or BZ-250 power pack

Power consumption for line voltage models:
 HB330-B, HB340, HB340-B: 0.34W
 HB350C-B: 0.36W

Power consumption for low voltage models:
 HB300-B, HB300C-B: 7mA @ 24VDC

Snap-in mounting hardware

Easy mounting using knockout at end of fluorescent high bay luminaire

Hardware choices for adjustability or static mount

Operating Temperature: 32°F to 158°F (0°C to 70°C)

Operating Temperature for cold environment models: -40°F to 131°F (-40°C to 55°C)

Operating Humidity: 5% to 95%, non-condensing

Indoor use only

Weight: 6.4 oz (181 g)

UL and cUL listed

Five year warranty

LENSES

Four interchangeable lenses (HBL1, HBL2, HBL3, HBL7)

Asymmetric 2-way and 360° lenses

Lens choices for mounting between 8 and 40 feet, aisleway and open area lenses (lens required for operation)

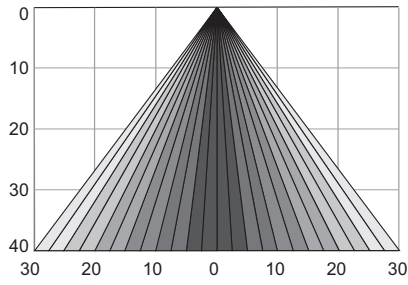
MATERIALS

ABS, flame retardant
 Impact resistant
 Recyclable
 Meets materials restrictions of RoHS

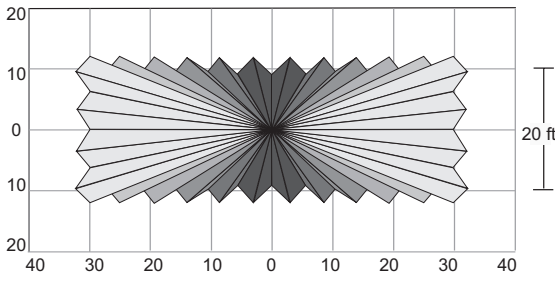
FACTORY DEFAULTS

Time Delay:	15 minutes
Sensitivity:	Medium

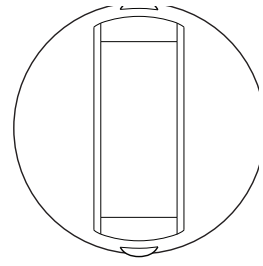
COVERAGE



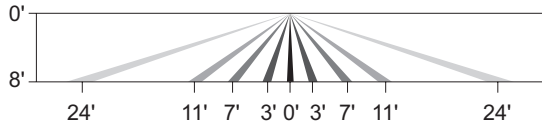
HBL1 side coverage pattern



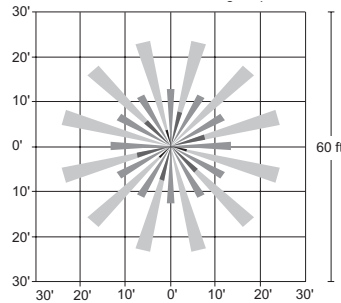
HBL1 top coverage pattern



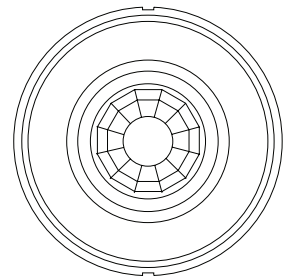
HBL1 Aisleway Lens



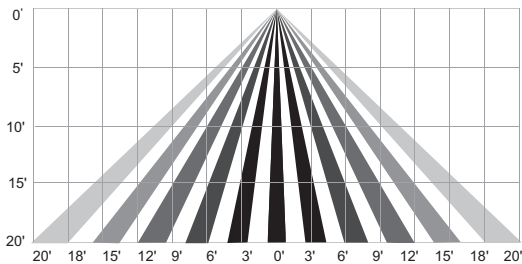
HBL2 side coverage pattern



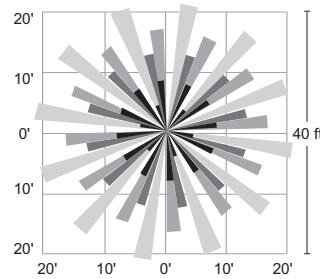
HBL2 top coverage pattern



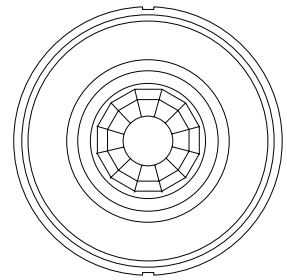
HBL2 Low Bay Lens



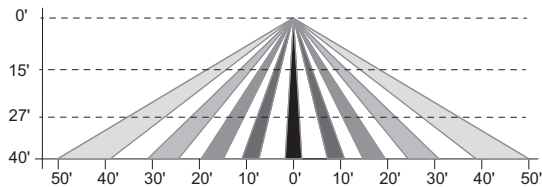
HBL3 side coverage pattern



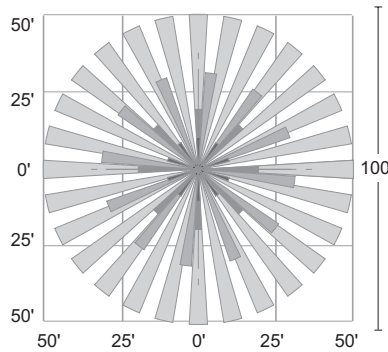
HBL3 top coverage pattern



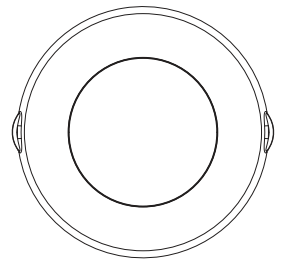
HBL3 Mid Bay Lens



HBL7 side coverage pattern

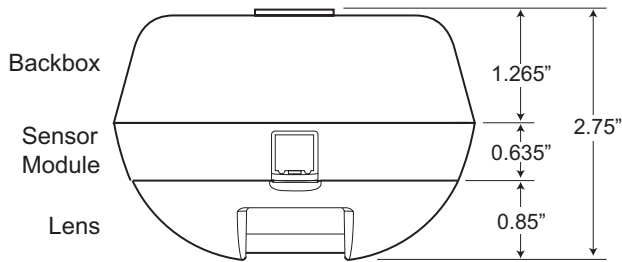


HBL7 top coverage pattern

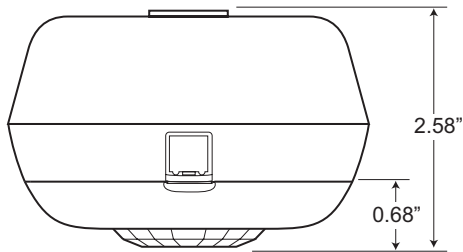


HBL7 High Bay Lens

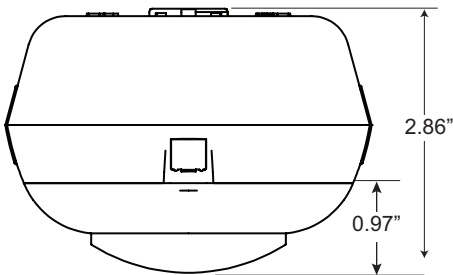
DIMENSIONS AND CONTROLS



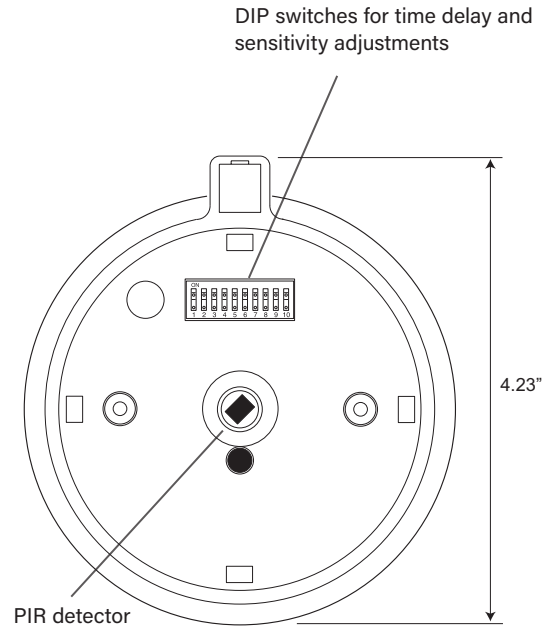
Dimensions of HB3x0 sensor module with back box and HBL1 lens module.



Dimensions of HB3x0 sensor module with back box and HBL2 or HBL3 lens module.



Dimensions of HB3x0 sensor module with back box and HBL7 lens module.

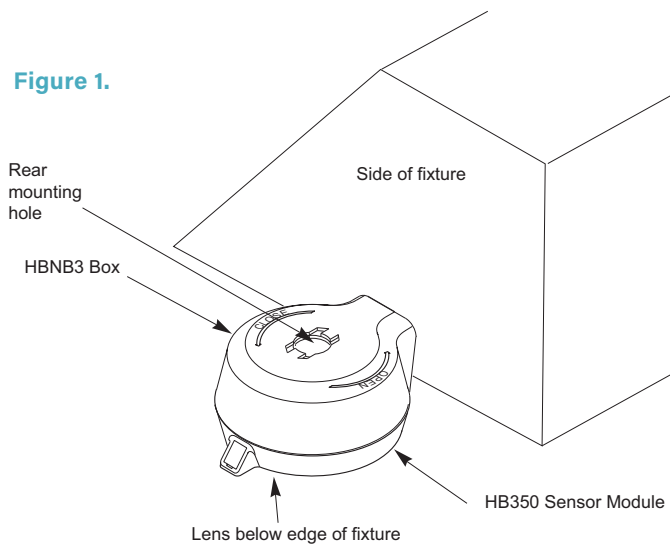
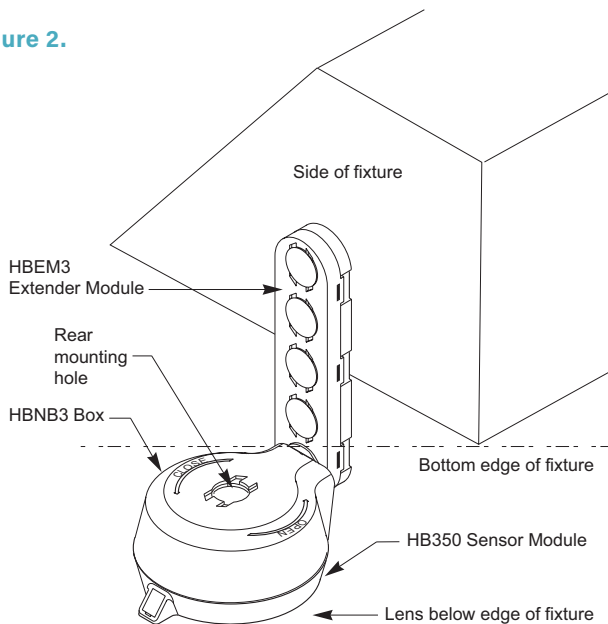
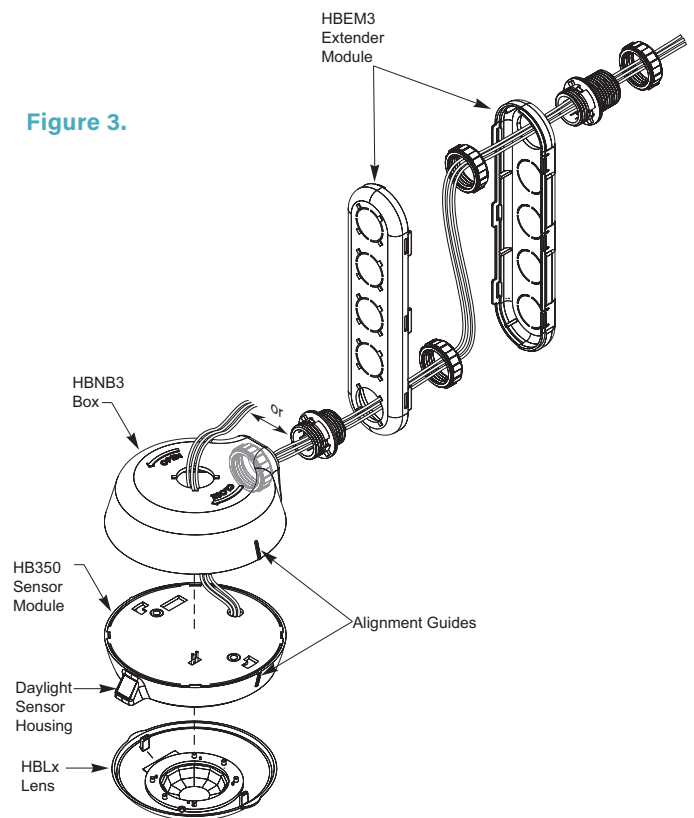


For HB340 model (without backbox), add 0.635" (sensor module) to dimensions of specific lens.

INSTALLING AND MOUNTING INSTRUCTIONS

1. Select a mounting configuration that ensures the sensor is positioned below the fixture edge and away from fluorescent lamps so that lamp heat does not affect the sensor. The sensor can either be directly mounted to the fixture housing (Figure 1) or to the extender module (HBEM3) (Figure 2). The latter enables offset mounting so sensor is positioned at or below the plane of the lamps.
2. Thread wires through extender module's chase nipples and into fixture for connection. Snap the extender module's sides together to protect wires. The short chase nipple snaps into sensor module while longer chase nipple snaps into any metal fixture or connection box with a standard 1/2 inch knockout. The caps on the extender

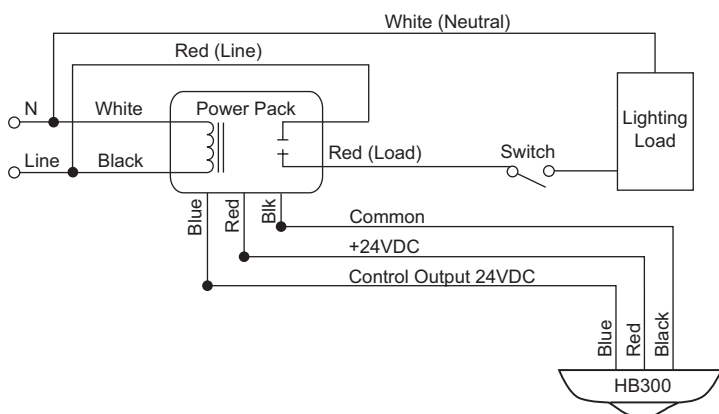
3. Determine if angular adjustment accessory (HBAA1 or HBAA2) is required.
4. Assemble all necessary mounting accessories and attach them to sensor module, ensuring that flying leads from power module are accessible.
5. Feed sensor leads through knockout to line voltage and load wires for the unit's application. Conceal all bare wire, and confirm all connections are secure.
6. Attach lens as shown in assembly drawing (Figure 3).

Figure 1.

Figure 2.

Figure 3.


WIRING DIAGRAMS

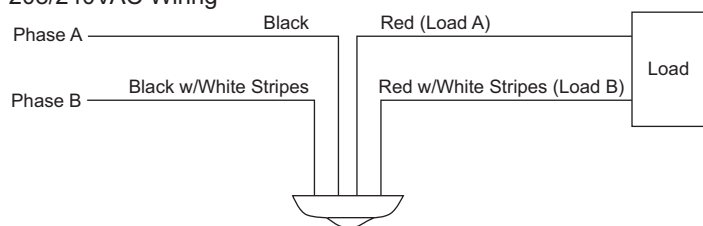
HB300

BZ-50, BZ-150, BZ-200, or BZ-250 Power pack may be used.



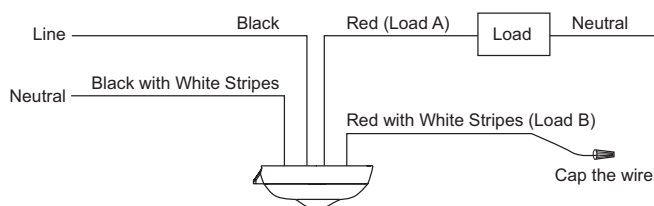
HB330

208/240VAC Wiring

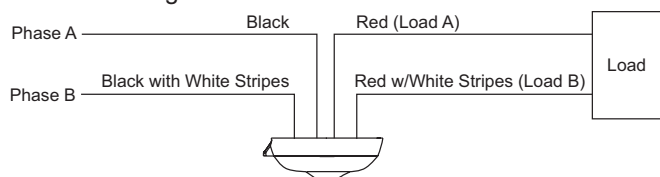


HB340

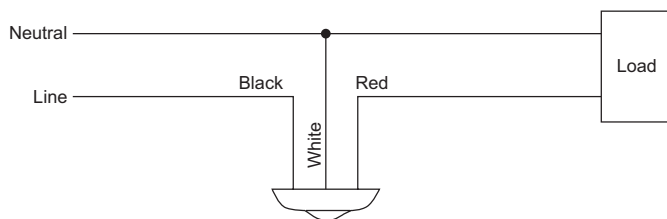
347VAC Wiring



480VAC Wiring



HB350C



SEQUENCE OF OPERATION

The HB3x0 series occupancy sensor is designed to mount to a light fixture and control the load in the fixture based on occupancy. 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 sensor signals a relay to close, and lighting loads turn on automatically. 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 100% and 15 minutes, respectively, which are suitable for most high bay applications. However, the values can be easily adjusted for specific applications using the DIP switches on the sensor module. Refer to the Installation Instructions for changing factory preset values, and for important start up instructions.

ORDERING INFORMATION

Catalog #	Master Pack Details					Inner Pack Details				
	Master Pack Quantity	Case dimensions (inches)			Weight (pounds)	Inner Pack Quantity	Case dimensions (inches)			Weight (pounds)
		Length	Width	Height			Length	Width	Height	
HB300-B	50	21.2	17.5	15.7	20	N/A	N/A	N/A	N/A	N/A
HB300C-B	50	21.2	17.5	15.7	20	N/A	N/A	N/A	N/A	N/A
HB3330-B	50	21.2	17.5	15.7	22.2	N/A	N/A	N/A	N/A	N/A
HB340	100	21.2	17.5	15.7	30.5	50	20.6	8.35	15.3	14.5
HB340-B	50	21.2	17.5	15.7	22.4	N/A	N/A	N/A	N/A	N/A
HB350C-B	50	21.2	17.5	15.7	22.4	N/A	N/A	N/A	N/A	N/A
HBEM3	180	21.4	17.9	16.3	30.5	90	20.6	17.1	7.6	13.8
HBAA-1	500	21.2	14.6	17.4	21.5	10 (in a bag)	10	7.1	0.35	0.41
HBNB3	100	21.2	17.6	15.9	16	50	20.6	8.3	15.3	8
BZ-50	40	12.6	8.7	12.6	16.1	10	12.2	4	6.1	3.8

Catalog #	Description	Voltage	
<input type="checkbox"/> HB300-B	High Bay Low Voltage Sensor w/ Back Box, No Lens	24 VDC*	
<input type="checkbox"/> HB300C-B	High Bay Low Voltage Sensor w/ Back Box, for Cold Environments, No Lens	24 VDC*	
<input type="checkbox"/> HB330-B	High Bay Line Voltage Sensor w/ Back Box, No Lens	208/240 VAC	5 A ballast @ 240 VAC
<input type="checkbox"/> HB340	High Bay Line Voltage Sensor, No Back Box, No Lens	347/480 VAC	5 A ballast @ 347/480 VAC
<input type="checkbox"/> HB340-B	High Bay Line Voltage Sensor w/ Back Box, No Lens	347/480 VAC	5 A ballast @ 347/480 VAC
<input type="checkbox"/> HB350C-B	High Bay Line Voltage Sensor w/ Back Box for Cold Environments, No Lens	120/277 VAC	0-800W ballast/tungsten @ 120 VAC, 60Hz; 0-1200W ballast @ 277 VAC, 60Hz 1/6 hp @ 120 VAC
<input type="checkbox"/> HBEM3	High Bay Extender Module		
<input type="checkbox"/> HBAA-1	HB Angle Fitting		
<input type="checkbox"/> HBNB3	HB Nipple Mounting Back Box (included with all models except HB340)		
<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 Sensor w/ Back Box, and L1 lens	24 VDC*	
<input type="checkbox"/> HB300B-L3	High Bay Low Voltage Sensor w/ Back Box, and L3 lens	24 VDC*	
<input type="checkbox"/> HB300B-L7	High Bay Low Voltage Sensor w/ Back Box, and L7 lens	24 VDC*	
<input type="checkbox"/> HB340B-L1	High Bay Line Voltage Sensor w/ Back Box, and L1 lens	347/480 VAC	5 A ballast @ 347/480 VAC
<input type="checkbox"/> HB340B-L3	High Bay Line Voltage Sensor w/ Back Box, and L3 lens	347/480 VAC	5 A ballast @ 347/480 VAC
<input type="checkbox"/> HB340B-L7	High Bay Line Voltage Sensor w/ Back Box, and L7 lens	347/480 VAC	5 A ballast @ 347/480 VAC

All sensors are white.

* HB300 and HB300C Low voltage models require a BZ series power pack.

Please refer to the HBLx Series Lens Module datasheet for lens information. Compatible with all standard lenses and extender module. Bulk packaged products are shipped without individual boxes or installation instructions. Information supplied above is subject to change.

Harmonization code: 8538908080. Country of origin: China.

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