



# HB High Bay Occupancy Sensors

Modular design with mix and match control and power modules

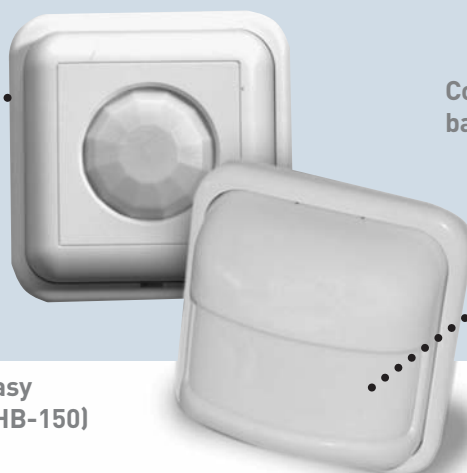
Can mount directly on to industrial lighting fixture or electrical enclosures

Terminal wiring for easy installation (HB-100, HB-150)

Compatible with all electronic ballasts

5 lens options: aisleway; 2 low bay 360°; high bay 360°; conveyor coverage

Built in light level sensor (-D models)



PROJECT

LOCATION/TYPE

## Product Overview

### Description

The HB high bay occupancy sensors are designed to control lighting in high mount areas including warehouse aisleways, open spaces and conveyor areas. The sensors turn lights on and off based on occupancy and install directly to industrial T8 or T5 fixtures or to electrical junction boxes. Their specially designed lenses provide reliable coverage from a wide range of mounting heights.

### Operation

The HB sensors utilize passive infrared technology to sense occupancy. Detection occurs when the HB senses the difference between infrared energy from a human body in motion and the background space. Lighting automatically turns on when occupancy is detected. After a user-specified length of time when no occupancy is detected, lighting automatically switches off. A built-in light level sensor holds lights off when natural light levels are above the pre-set level (-D models).

## Features

- Modular design with mix and match control and power modules
- Can mount directly on to industrial lighting fixtures or electrical enclosures
- Time delay adjustable 30 sec to 30 min
- ASIC technology reduces components and enhances reliability
- Pulse Count Processing eliminates false offs without reducing sensitivity
- Detection Signature Analysis eliminates false triggers; provides immunity to RFI and EMI
- Light Level option available

### Modular Design

The HB sensors are modular and are made up of two parts, a line or low voltage power module (HB-100, HB-150, HB-150-NB, HB-480R2, HB-480R2-NB) and a control module (HB-1, HB-2, HB-3, HB-4, HB-5). Modularity ensures the ability of getting exactly the right control and coverage needed. Also, it makes it possible for fixture manufacturers to install the power module directly on to the fixture, leaving the control modules for field installation.

### Application

The variety of lens options, choice of line or low voltage operation and modularity give the HB sensors the flexibility to work in a variety of high mount applications including warehouses, high bays and any other high ceiling areas. Furthermore, the choice of line or low voltage models provides the most convenient and suitable control solution for each high mount installation.

- Utilizes Watt Stopper Zero Crossing Circuitry (HB-150, HB-150-NB, HB-480R2, HB-480R2-NB), which reduces stress on the relay resulting in increased sensor life
- Terminal style wiring makes installation quick and eliminates the need for wire nuts (HB-100, HB-150)
- LED indicator of occupancy detection
- Compatible with all electronic ballasts and PL lamp ballasts
- For safety, there is no leakage to load in off mode



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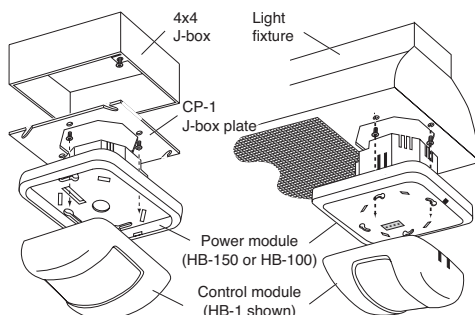
# HB Technical Information

## Specifications

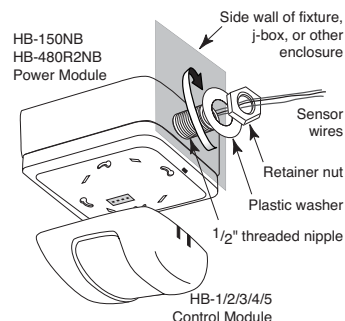
- HB-150, HB-150-NB: 120/277 single phase, or 208/240 2-phase, 60 Hz  
HB-480R2, HB-480R2-NB: 347/480 VAC, 60 Hz  
HB-100: 24 VDC
- Time delay adjustable 30 sec to 30 min
- Light level option adjustment from 10 fc-200 fc
- Dimensions HB-XXX with control module: 1.97" x 2.05" x 2.36" (50mm x 52mm x 60mm) L x W x D
- Dimensions HB-XXX-NB with control module: 3.24" x 3.18" x 2.75" (82mm x 82mm x 69mm) L x W x D
- UL and CUL listed; Five year warranty

## Mounting

### HB-100 & HB-150 Mounting

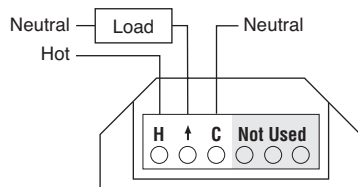


### HB-150-NB, HB-480R2-NB Mounting

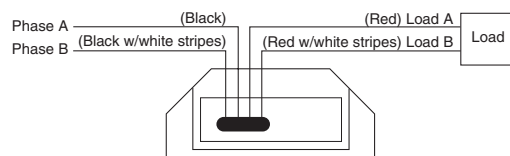


## Wiring & Connections

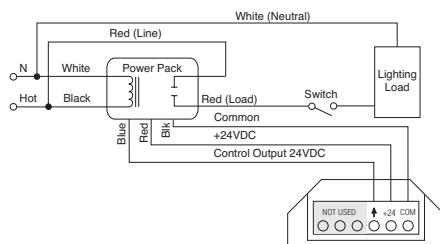
### HB-150 Line Voltage Wiring



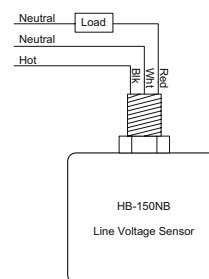
### HB-480R2 Wiring



### HB-100 Low Voltage Wiring

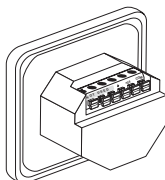


### HB-150-NB Wiring



## Power Modules

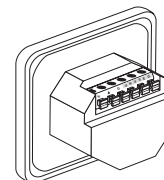
### HB-100 Low Voltage



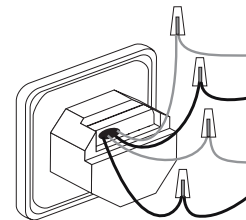
HB-150-NB and HB-480R2-NB Line Voltage (pre-wired with Nipple Bracket adapter)



### HB-150 Line Voltage



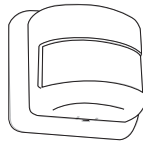
### HB-480R2 Line Voltage



# HB Technical Information

## Control Modules & Coverage

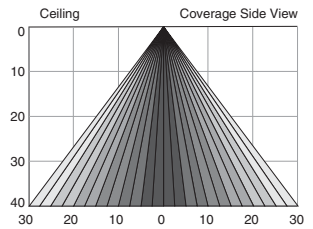
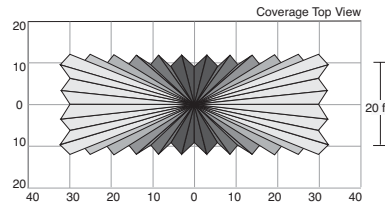
### HB-1



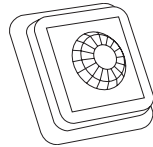
Typical mounting height: 20-40'

Optimal coverage: 60' linear x 20' width

Application: high bay aiseways



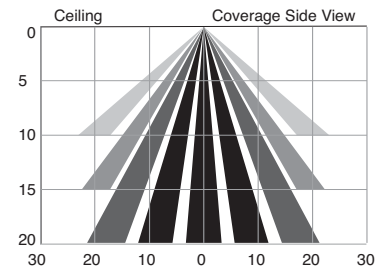
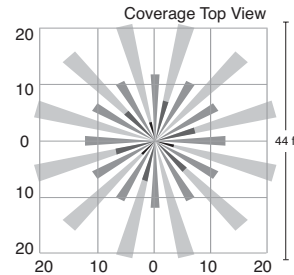
### HB-2



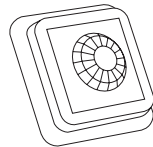
Typical mounting height: 10-20'

Optimal coverage: 44' diameter at 20' height; reduced coverage density

Application: low bay, open area



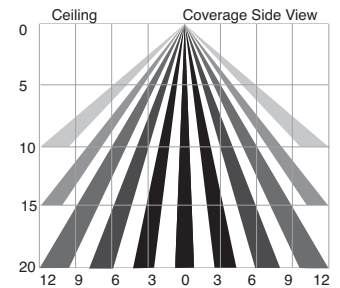
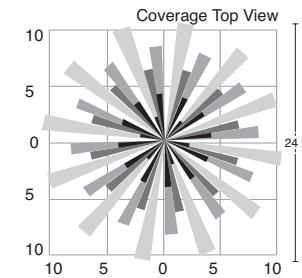
### HB-3



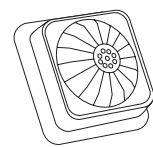
Typical mounting height: 10-30'

Optimal coverage: 24' diameter at 20' height; increased coverage density

Application: low bay, open area



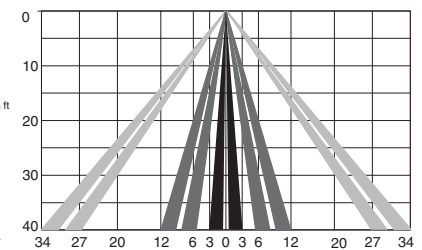
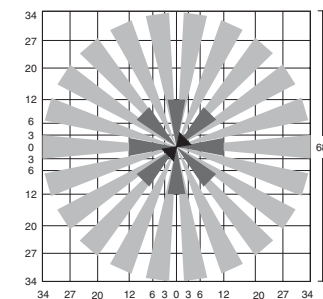
### HB-4



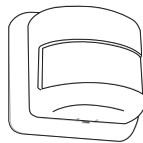
Typical mounting height: 20-45'

Optimal coverage: 68' diameter at 40' height

Application: high bay, open area



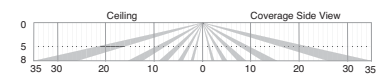
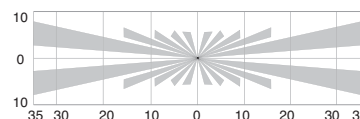
### HB-5



Typical mounting height: 8'

Optimal coverage: 70' linear x 20' width

Application: conveyors



Notes: We recommend that you talk with your Watt Stopper representative or technical support prior to specifying high bay sensors.

Take temperature at the coverage location into account, since warehouses can have high ambient temperatures that may affect detection and coverage.



# HB Ordering Information

## Ordering Information

Power Modules			
Catalog No.	Description	Voltage	Load Requirement
<input type="checkbox"/> HB-150-x*	HB-150 power module & HB control module	120 VAC, 60 Hz or 277 VAC, 60 Hz or 120 or 250 VAC	0-800 W Ballast & Tungsten or 0-1200 W Ballast or 1/6 hp
<input type="checkbox"/> HB-150-NB-x*	Same as HB-150-x, pre-assembled with NB-1 and flying leads for direct mounting		
<input type="checkbox"/> HB-480R2-x*	HB-480 power module & HB control module	347/480VAC, 60Hz	0-1200 W Ballast
<input type="checkbox"/> HB-480R2-NB-x*	Same as HB-480R2-x, pre-assembled with NB-1 and flying leads for direct mounting		
<input type="checkbox"/> HB-100-x*	HB-100 power module & HB control module	24 VDC	Current consumption up to 16 mA
* -X = 1 for HB-1, -2 for HB-2, -3 for HB-3, -4 for HB-4, -5 for HB-5			
Control Modules			
Catalog No.	Description		
<input type="checkbox"/> HB-1-D**	Aisleway lens: Max coverage 60' x 20' @ 40' height		
<input type="checkbox"/> HB-2	360° lens: Max coverage 40' dia @ 20' height		
<input type="checkbox"/> HB-3-D**	360° high density lens: Max coverage 24' dia @ 20' height		
<input type="checkbox"/> HB-4-D**	360° high mount lens: Max coverage 68' dia @ 40' height		
<input type="checkbox"/> HB-5	2-sided linear conveyor lens: Max coverage 70' x 20' @ 8' height		
** -D = unit has light level feature			
Accessories			
Catalog No.	Description		
<input type="checkbox"/> CP-1	J-box adapter plate for mounting HB sensor to 4"x4" junction box		
<input type="checkbox"/> NB-1	Adapter box for mounting HBs to light fixture, conduit fitting, junction box or other enclosure		
<input type="checkbox"/> MB-1	L-Plate industrial mounting bracket for HB sensors		
<input type="checkbox"/> MB-2	J-Plate HID mounting bracket for HB sensors		

Sensors are white