

# HIGH/LOW BAY PASSIVE INFRARED OCCUPANCY SENSOR | HBP-100 SERIES

Compact line voltage sensor with integral lens for all high bay applications

360° coverage from 15'-40'; lens covers 100' diameter area from 40' height; rotatable snap-on aisleway masking

Adjustable time delay and hold-off daylighting level



FSIR-100

HBP-111

HBP-112

HBP-111 adjustable via handheld wireless configuration tool

120, 277, 347V, 60Hz or 230V, single phase, 50Hz operation

cULus listed snap-in mounting hardware



## Description

The HBP Series High Bay Passive Infrared (PIR) Occupancy Sensors provide automatic control of individual LED and fluorescent lighting fixtures in warehouses and other indoor high and low bay spaces. The lens is engineered to provide reliable coverage from a wide range of mounting heights (15' to 40'), and coverage can be masked for aisleway applications using a snap-on accessory (included). A hold-off daylighting feature keeps lighting off when the ambient light level is above the selected threshold. Time delay and light level settings can be adjusted via function-specific trimpots. The HBP-111 can also be adjusted remotely using a wireless configuration tool.

## Operation

Line voltage HBP sensors are designed to mount directly to a lighting fixture, and can be wired to control some or all of the drivers or ballasts. When the sensor detects motion, the relay closes, and the connected loads are automatically 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 time delay and hold-off light level are factory preset at 15 minutes and 300 footcandles, respectively, suitable for most high bay applications.

## Features

- LED indicator of occupancy detection for easy verification of coverage
- Convenient access to trimpots for adjusting Time Delay and Light Level settings
- Flexible mounting options
- Multi-cell, multi-tier Fresnel lens
- Durable materials for optimal performance in challenging indoor high bay settings
- Zero crossing circuitry reduces stress on relay and extends sensor life
- Detection signature analysis eliminates false triggers; provides immunity to RFI and EMI
- Pulse Count Processing eliminates false offs without reducing sensitivity
- The product meets the materials restrictions of RoHS

## Wireless Remote Configuration Tool

Initial setup and subsequent sensor adjustments of the HBP-111 may be made using a handheld configuration tool (FSIR-100). This tool simplifies adjustment of parameters including sensitivity, time delay and hold-off level with maximum granularity. The FSIR-100 is also used to enable or disable advanced features, including burn-in mode, walk-through mode, visual alert and service mode. The wireless tool stores up to five sensor parameter profiles to speed configuration of multiple sensors.

## Hold-off Daylighting

The hold-off daylighting light level feature provides additional energy savings. Once the lights turn off after the time delay has elapsed, this feature holds lighting off upon new occupancy if there is sufficient ambient light available.

## Applications

The high bay occupancy sensor is ideal for applications in warehouses, distribution centers, gymnasiums, and other high and low bay indoor spaces. The optional HBP-EM1 Extender Module provides additional mounting flexibility.

PROJECT

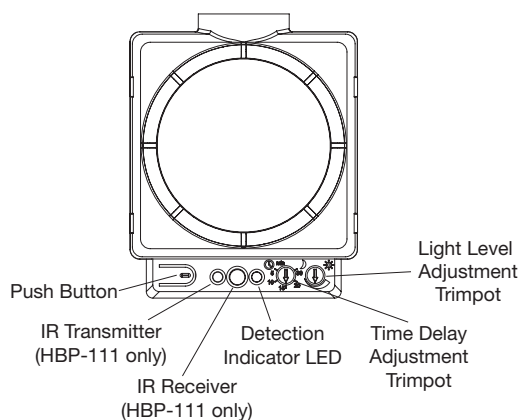
LOCATION/  
TYPE

## Specifications

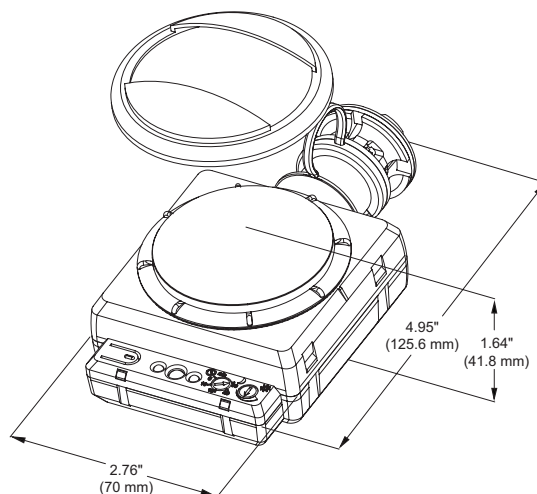
- HBP-111/112 load ratings:
  - 120VAC, 60Hz: 0-1000VA, 1/4hp
  - 230VAC, 50/60Hz: 0-1000VA
  - 277VAC, 60Hz: 0-1200VA, 1/4hp
  - 347VAC, 60Hz: 0-1500VA, 1/4hp
- Compatible load types: Tungsten, electronic and magnetic ballasts, fluorescent and LED
- Time delay (5, 10, 15, 20, 30 min. via trimpot; 1-30 min. via FSIR-100; default 15 min.)
- Hold-off light level (1-300fc; default 300fc; disable hold-off light level via FSIR-100)
- Sensitivity (max, med, low via trimpot or FSIR-100; default max)
- Pushbutton functions: manual mode, test mode, service mode, fail-on mode, fail-off mode, factory default; HBP-111 only: burn-in mode, walk-through mode, visual alert, service mode
- Operating conditions: Temperature 32-158°F (0-70°C); Humidity 5-95%, non-condensing
- Indoor use only
- Materials: ABS, flame retardant, impact resistant
- Five year warranty

## Components & Dimensions

### Sensor Controls

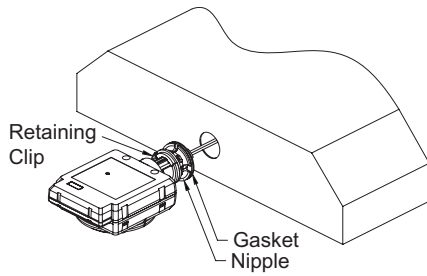


### Dimensions



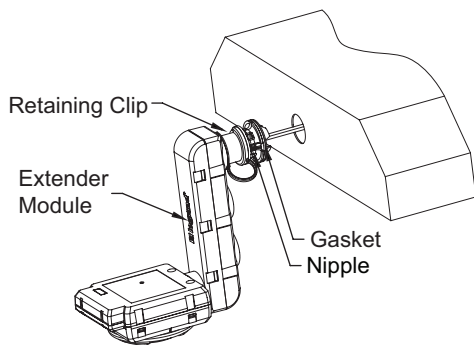
## Mounting & Installation

### Direct Mounting to Side of Fixture



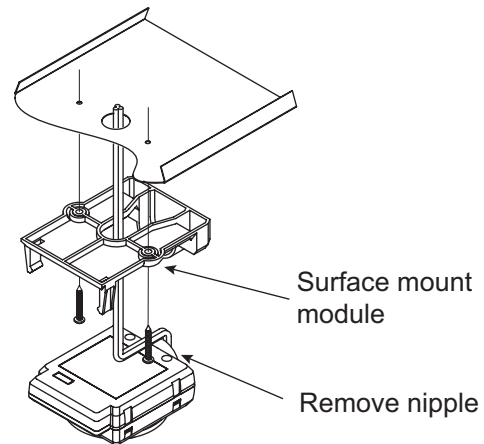
The sensor should be positioned so that heat radiating from the fixture does not affect its performance.

### Mounting Below Fixture



The EM1 Extender Module positions the sensor below the fixture.

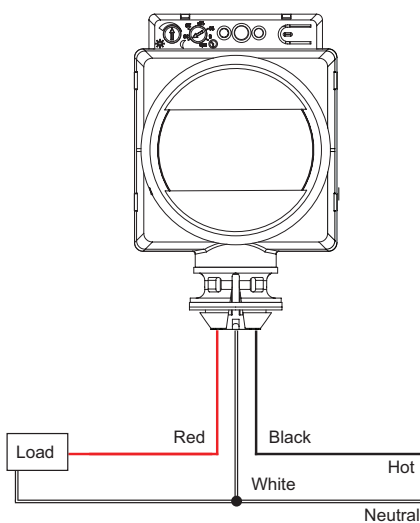
### Mounting to Bottom of Fixture



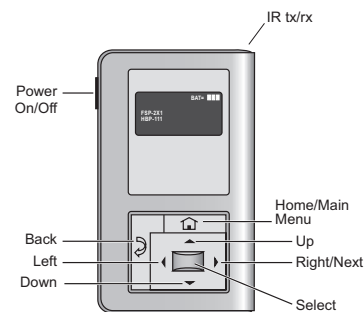
The SM1 Surface Mount Module includes clips to hold the sensor to the bottom of the fixture.

## Wiring & IR Remote

### Wiring Diagram



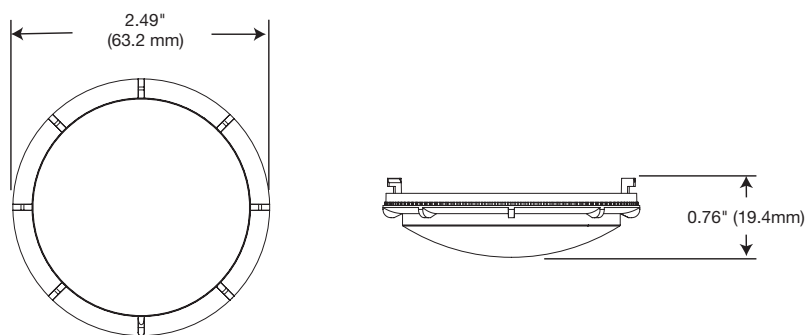
### FSIR-100 Remote Configuration Tool



The FSIR-100 works with the IR-enabled HBP-111 to enable remote setup and adjustment of control parameters to speed building commissioning and simplify maintenance.

## Lens Dimensions

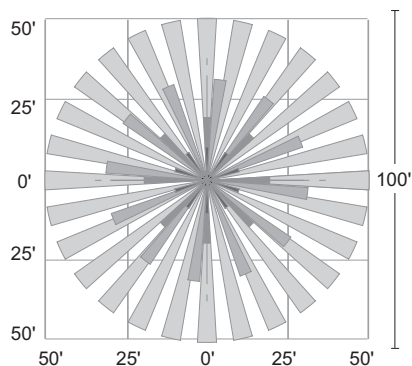
### HBP-L7 Lens (included with sensor)



## Coverage

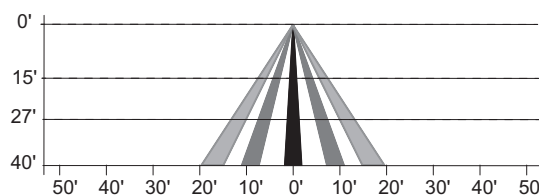
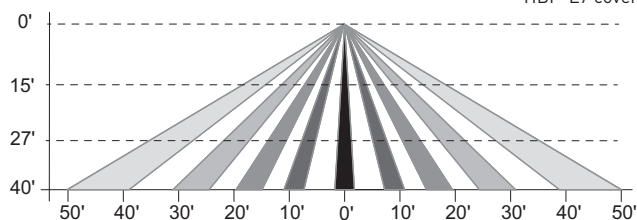
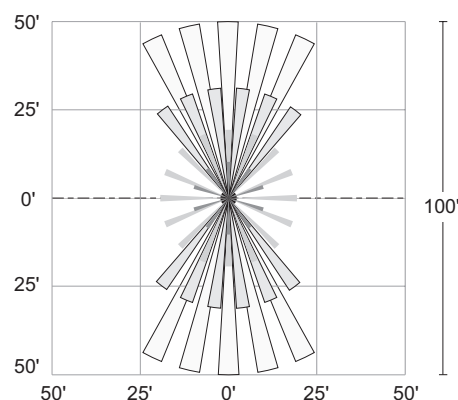
### Coverage Patterns

The HBP-L7 lens covers a 100' diameter area when mounted at a height of 40'.



HBP-L7 coverage patterns, top views

HBP-L7 coverage with masking ring attached



HBP-L7 coverage patterns, side views

## Ordering Information

Catalog #	Color	Description	Voltage
<input type="checkbox"/> HBP-111-L7	White	High/low bay PIR sensor with IR remote capability	120/230(1P,L-N)/277/347 VAC
<input type="checkbox"/> HBP-112-L7	White	High/low bay PIR sensor, no IR capability	120/230(1P,L-N)/277/347 VAC
<input type="checkbox"/> HBP-EM1	White	High/low bay extender module	
<input type="checkbox"/> HBP-SM1	White	High/low bay surface mount module	
<input type="checkbox"/> HBP-L7	White	Spare L7 lens for HBP-111 or HBP-112	
<input type="checkbox"/> FSIR-100	White	Remote handheld configuration tool	(3) 1.5V AAA alkaline batteries
<input type="checkbox"/> HBP-111-L7-OEM	White	HBP-111-L7	120/230(1P, L-N)/277/347 VAC
<input type="checkbox"/> HBP-111-L7-EM1-OEM	White	HBP-111-L7 and HBP-EM1	120/230(1P, L-N)/277/347 VAC
<input type="checkbox"/> HBP-111-L7-SM1-OEM	White	HBP-111-L7 and HBP-SM1	120/230(1P, L-N)/277/347 VAC
<input type="checkbox"/> HBP-112-L7-OEM	White	HBP-112-L7	120/230(1P, L-N)/277/347 VAC
<input type="checkbox"/> HBP-112-L7-EM1-OEM	White	HBP-112-L7 and HBP-EM1	120/230(1P, L-N)/277/347 VAC
<input type="checkbox"/> HBP-112-L7-SM1-OEM	White	HBP-112-L7 and HBP-SM1	120/230(1P, L-N)/277/347 VAC

-OEM products are bulk packed without individual boxes or installation instructions.