

# PASSIVE INFRARED CEILING SENSOR

WPIR



## DESCRIPTION

Wattstopper's WPIR Sensor is a versatile ceiling-mount sensor that utilizes the latest passive infrared (PIR) technology to turn lights on and off based on occupancy. The WPIR controls lighting in a wide variety of applications, but is especially adept at controlling small spaces with well-defined coverage.

## OPERATION

The WPIR Ceiling Sensor utilizes the latest PIR technology to detect the difference between the infrared energy from a person in motion and the background space within the controlled area. When occupancy is detected, this 24 VDC sensor turns lighting or HVAC systems on through a Wattstopper power pack controlled through low voltage wiring. When occupants leave the area, lighting is switched off after the user-adjustable time delay has elapsed.

## FRESNEL LENS AND COVERAGE

The WPIR is equipped with a multi-element Fresnel lens that allows the sensor to efficiently collect infrared energy and provides optical gain over a defined field of view. The profile of each groove facet is determined by computer simulation to produce the sharpest images possible from a distant object. The use of a 30-segment lens allows overlapping coverage within the defined field of view. The coverage is partially determined by the view available to the sensor. Mounted to a wall, the WPIR will produce a completely different viewing pattern. Zone 4 and 5 (see diagram on back) are then capable of sensing up to 45 feet.

## APPLICATIONS

The WPIR can effectively cover small offices, utility areas or computer rooms. Additional applications include racquetball courts, garage areas, library aisleways and storage rooms.

## FEATURES

- ASIC technology enhances reliability and provides immunity to RFI and EMI
- Uses the latest PIR technology to reliably control lighting in a variety of applications
- User-adjustable time delay of 30 seconds to 30 minutes
- Alternate viewing patterns depending on mounting choice
- Optional on override through logic key/on bypass
- Incorporated daylight filter prevents short-wavelength infrared waves, such as those emitted by the sun, from affecting WPIR
- Multi-element Fresnel lens allows the sensor to efficiently collect infrared energy and provide optical gain over a defined field of view
- LED indicates occupancy detection

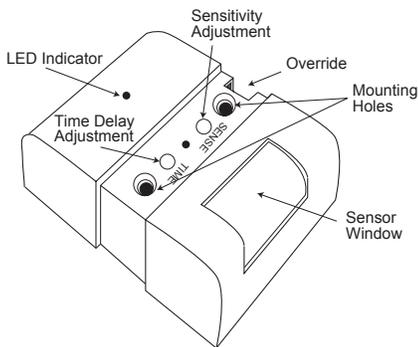
PROJECT		LOCATION/ TYPE	
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## SPECIFICATIONS

- Dual-element, temperature compensated pyroelectric sensor
- Adjustable time delay: 30 seconds to 30 minutes
- Poly IR4 lens, optical filter material
- Control output: 100mA maximum
- Max. units per BZ power pack: 10
- Dimensions: 2.5" x 2.5" x 1.14" (64mm x 64mm x 29mm) W x L x D
- UL and cUL listed
- Five year warranty

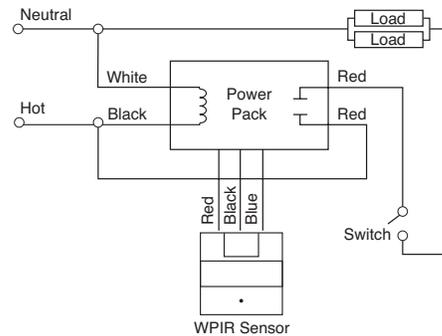
## WIRING & CONTROLS

### Product Controls



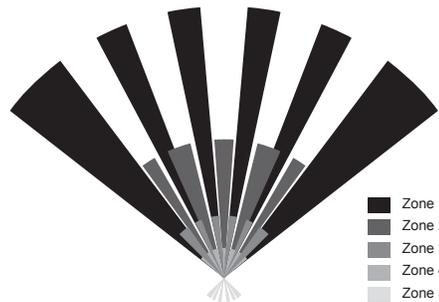
Factory preset 30-minute time delay for maximum sensitivity

### Wiring Diagram

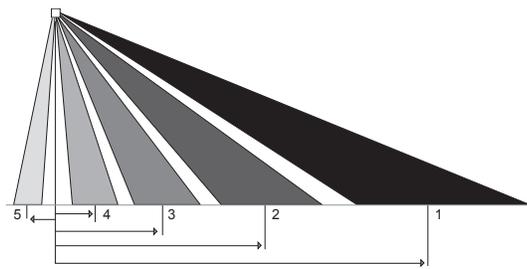


## COVERAGE & PLACEMENT

### Coverage Pattern

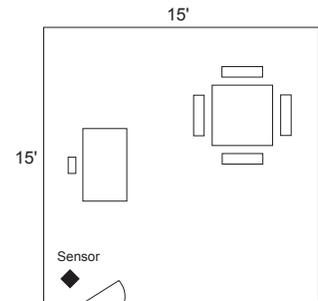


Horizontal Pattern for Ceiling Mount



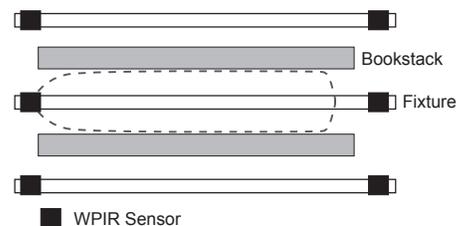
Vertical Pattern for Ceiling Mount

### Typical Office Placement



For an enclosed office, the WPIR should be placed in the corner of the room so that it will detect occupants as they enter the room. For the aisleway between bookstacks, the WPIR should be placed at the end of each bookstack to detect occupancy upon entrance to the aisle way from either direction. For longer bookstacks, two or more WPIRs can be used.

### Aisleway Library Bookstack Placement



Ceiling Height	Detection Zones				
	Zone 5	Zone 4	Zone 3	Zone 2	Zone 1
8'	-1	1	4	8	15
10'	-1.5	1.5	5	10	19
12'	-2	2	6	12	23
15'	-2.5	2.5	8	15	29
20'	-3	3	10	18	36
25'	-4	4	12	23	45
*8'	50	40	25	15	5

\* Wall mounted Horizontally

## ORDERING INFORMATION

Catalog #	Voltage	Current	Coverage
WPIR	24 VDC	14 mA	300 ft <sup>2</sup> (27.9 m <sup>2</sup> )

All units are white and use Wattstopper power packs.

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