

# W Series Ultrasonic Ceiling Sensors

Turns lights on and off based on occupancy to reduce energy costs

Adjustable time delay from 15 seconds to 15 minutes



Hallway and 500, 1000 and 2000 square foot coverage available

Ideal for open office areas, conference rooms and restrooms

Advanced Signal Processing (ASP) circuitry automatically adjusts detection threshold

Automatic or manual-on operation when used with a BZ-150 Power Pack

PROJECT
LOCATION/TYPE

## Product Overview

### Description

WattStopper's W Series Ultrasonic Ceiling Sensors are versatile motion detectors that control lighting in a wide variety of applications. W Series Sensors can be used individually or as part of an integrated system of WattStopper lighting control products.

### Operation

The 24 VDC W Series Sensors utilize advanced omni-directional, ultrasonic technology to sense occupancy. When movement is detected in a controlled area, the W Series Sensors will switch lights on via low-voltage wiring through to a WattStopper power or auxiliary pack. Once the area is vacated and the user-adjustable time delay (15 seconds to 15 minutes) has elapsed, lighting systems automatically switch off.

### Manual-on Option

To comply with code or for additional control options, W Series Sensors can be used with a BZ-150 power pack for manual-on/auto-off control. If this option is selected, occupants utilize a low-voltage momentary wall switch to turn on lights. Lights automatically turn off after the area is vacated and the user-adjustable time delay has elapsed.

### Applications

Ultrasonic sensors effectively control offices, restrooms, utility areas, open office spaces and warehouses. The W-500A is perfect for offices, conference rooms, restrooms and other areas up to 500 square feet. The W-1000A fits in larger spaces, such as storage areas. The W-2000A is ideal for open office areas or large warehouses and can control partitioned open office spaces when configured in highly versatile zone patterns. The W-2000H reliably covers hallways with walls.

## Features

- ASP circuitry helps to eliminate false on
- Utilizes advanced omni-directional, ultrasonic technology for reliable occupancy detection
- Omni-directional transmission provides 360° of coverage
- Time delay adjustable from 15 seconds to 15 minutes
- 500, 1000, 2000-square foot and hallway coverage available to fit needs of specific applications
- Optional on override by installing the Override Pin provided with the sensor
- LED indicates occupancy detection
- Qualifies for ARRA-funded public works projects



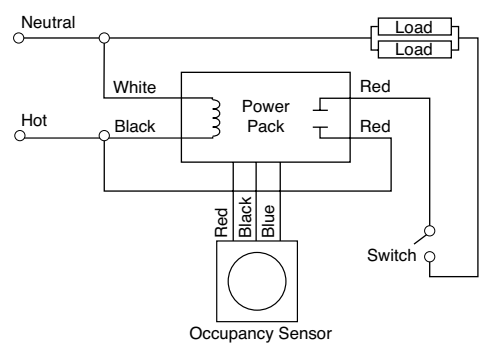
# Specifications

- Solid state, crystal-controlled (25 kHz ± 0.005%)
- Temperature and humidity-resistant 25 kHz receivers: W-500A contains one receiver, other models contain two receivers
- Adjustable time delay: 15 seconds to 15 minutes

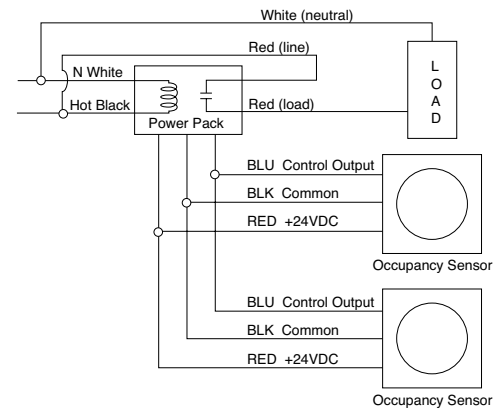
- Mounting options: ceiling tile, 4" sq. junction box
- Max. units per power pack: B = seven; BZ = nine
- Dimensions: 4.5" x 4.5" x 1.25" (115mm x 115mm x 32mm) W x L x D
- UL listed
- Five year warranty

# Wiring

## Standard Wiring Diagram

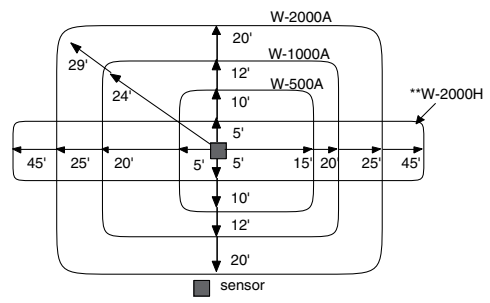


## Multiple Sensor Wiring Diagram



# Coverage, Installation & Placement

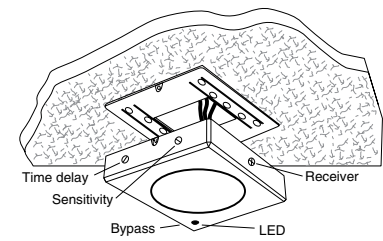
## Coverage Pattern



Coverage shown represent half-step walking motion. Actual coverage can vary for each application depending on the shape and the use of space and the obstacles present. Coverage may be reduced if product is mounted greater than 12 feet high.

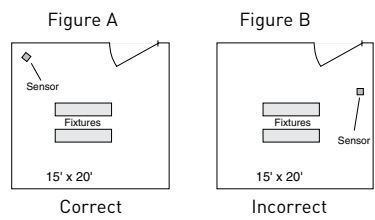
The W-2000H drawing is not drawn to scale. Coverage is 10' x 90' in a hallway; enclosed spaces enhance coverage.

## Installation



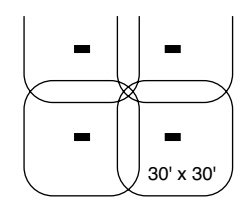
Attach sensor to a vibration-free surface. Mount the sensors with the receivers facing the area of coverage. Note: Ultrasonic sensors should be placed 4' away from supply ducts, 6' from horizontal discharge ducts, and 6" from power packs.

## Enclosed Office Sensor Placement



For enclosed spaces, place sensors as in Figure A. Sensors placed as in Figure B may see out the door and cause false triggers.

## Open Office Sensor Placement



A typical layout for an open office space would be to place W-2000A sensors so they control zones that overlap. For partitioned spaces, a typical zone is about 25' x 25' with an overlap on the coverage that senses motion up to 30' x 30'.

# Ordering Information

Catalog No.	Voltage	Current	Coverage
<input type="checkbox"/> W-500A <input type="checkbox"/> W-500A-U	24 VDC	16 mA	360°; 500 ft <sup>2</sup> (46.5 m <sup>2</sup> )
<input type="checkbox"/> W-1000A <input type="checkbox"/> W-1000A-U	24 VDC	16 mA	360°; 1000 ft <sup>2</sup> (92.9 m <sup>2</sup> )
<input type="checkbox"/> W-2000A <input type="checkbox"/> W-2000A-U	24 VDC	16 mA	360°; 2000 ft <sup>2</sup> (185.8 m <sup>2</sup> )
<input type="checkbox"/> W-2000H <input type="checkbox"/> W-2000H-U	24 VDC	16 mA	360°; 90 linear ft (27.4 m)**

All units are white and use WattStopper power packs.  
 \*\*Coverage for an enclosed hallway is 10' x 90' (see pattern above).  
 -U = ARRA compliant. Product produced in the U.S.