



# WT Ultrasonic Occupancy Sensor

*Ultrasonic technology with 32 KHz frequency*

*Utilizes advanced, omni-directional, Doppler technology*

*Advanced Signal Processing automatically adjusts detection threshold*



*User-adjustable DIP switch time delay and sensitivity settings*

*600, 1100, 2200 sq ft and hallway coverages available*

*Isolated relay allows sensor to interface with building control systems*

## Product Overview

### Description

The Watt Stopper WT sensors are advanced ultrasonic occupancy sensors with a 32 KHz frequency. The sensors are available in several models to control lighting in a wide variety of applications.

### Operation

The 24 VDC ultrasonic sensors utilize advanced, omni-directional, Doppler technology. When an ultrasonic sensor detects movement in a controlled area, it switches lighting on through a Watt Stopper power or auxiliary pack. The sensor controls the power pack through low voltage wiring. Once the area is vacated and the time delay has elapsed, lighting systems automatically switch off.

### Advanced Signal Processing

The sensors use The Watt Stopper's Advanced Signal Processing (ASP). ASP filters out moving air noise by checking for small cyclical changes found in turbulent air. This helps to eliminate false ON problems found in sensors without ASP.

### Applications

WT sensors offer excellent control of lighting for many areas of a building. The sensors are designed to effectively control offices, restrooms, storage areas, and open office areas and can control large partitioned office spaces when configured in zone patterns. The WT can be used with Watt Stopper AS-100 Automatic Control Switches to achieve manual-on/auto-off function when auto-on is not desired. The WT sensors' superior performance and ease of installation will provide fast paybacks and many years of energy savings.

## Features

- Advanced Signal Processing Circuitry helps to eliminate false ONs
- Utilizes advanced, omni-directional, Doppler technology for reliable occupancy detection
- Angled transmitter and receiver pairs help optimize sensitivity while eliminating unwanted detection from ceiling air movement
- Coverage ranges from 600 to 2200 square feet and 90 linear feet (for hallways)
- Isolated relay can interface with HVAC, EMS, or with an additional lighting load
- DIP switch adjustable time delay and sensitivity
- LED indicates occupancy detection





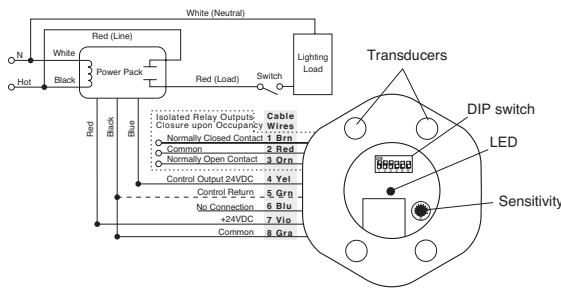
# WT Technical Information

## Specifications

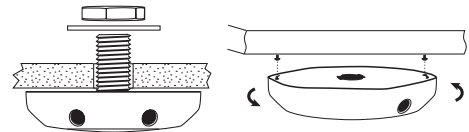
- Solid state, crystal-controlled (32.768 kHz ± 0.002%)
- Omni-directional transmission (360° coverage)
- Temperature and humidity resistant 32 kHz receivers
- Digital DIP switch time delay (15 seconds to 30 minutes)
- Isolated relay with N/O and N/C outputs; rated for 1 Amp @ 30 VDC/VAC
- Units per power pack: WT-605: up to 4 (B), up to 5 (BZ). WT-600: up to 3 (B), up to 4 (BZ). WT-1105, WT-2205, WT-2255: up to 3 (B), up to 5 (BZ). WT-1100, WT-2200, WT-2250: up to 2 (B), up to 3 (BZ).
- Dimensions: 4.8" diameter x 1.5" (122mm x 38mm)
- UL and CUL listed; Five year warranty

## Wiring, Installation & Placement

### Wiring & Controls

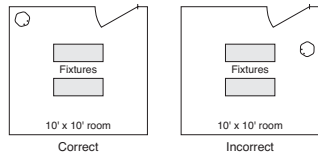


### Installation



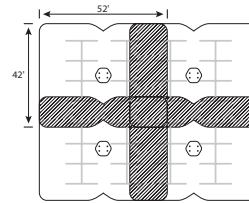
Attached to a vibration-free surface. Mount the sensors with the receivers facing the area of coverage. Note: Place 4' away from supply ducts, 6' from horizontal discharge ducts, and 6" from power packs.

### Enclosed Office 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.

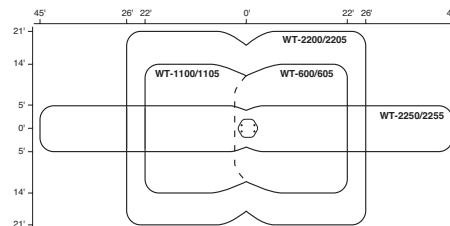
### Open Office Placement



For open office spaces, the WT-2200 is typically used because of its 360° coverage and capability to bounce ultrasound off of partitions, walls, floors and other reflecting objects. A typical layout place the sensors so they control the area in zones that overlap.

## Coverage & Settings

### Coverage



Coverages shown represent half-step walking motion. Actual coverages can vary for each application depending on the shape and use of space and the obstacles present.

### DIP Switch Settings

◆ = factory preset  
● = ON - = OFF

Time Delay	1	2	3	4	5	6
16 minutes	-	-	-	-	●	◆
18 minutes	-	-	-	-	●	-
20 minutes	-	-	-	-	●	-
15 seconds	●	-	-	-	-	-
2 minutes	-	●	-	-	-	-
4 minutes	-	-	●	-	-	-
6 minutes	-	-	-	●	-	-
8 minutes	-	-	-	-	●	-
10 minutes	-	-	-	-	-	●
12 minutes	-	-	-	-	-	●
14 minutes	-	-	-	-	-	●
22 minutes	-	●	●	●	●	-
24 minutes	-	-	-	-	●	-
26 minutes	-	-	-	-	●	-
28 minutes	-	-	-	-	●	-
30 minutes	-	-	-	-	●	-
Output Disable	-	-	-	-	-	-
Override	-	-	-	-	-	●

## Ordering Information

Catalog No.	Description	Voltage	Current	Coverage
WT-605	Ultrasonic ceiling sensor	24 VDC	27 mA	600 sq ft; 360°
WT-600	Ultrasonic ceiling sensor w/ isolated relay	24 VDC	37 mA	600 sq ft; 360°
WT-1105	Ultrasonic ceiling sensor	24 VDC	30 mA	1100 sq ft; 360°
WT-1100	Ultrasonic ceiling sensor w/ isolated relay	24 VDC	40 mA	1100 sq ft; 360°
WT-2205	Ultrasonic ceiling sensor	24 VDC	30 mA	2200 sq ft; 360°
WT-2200	Ultrasonic ceiling sensor w/ isolated relay	24 VDC	40 mA	2200 sq ft; 360°
WT-2255	Ultrasonic hallway sensor	24 VDC	30 mA	90 linear ft; 360°
WT-2250	Ultrasonic hallway sensor w/ isolated relay	24 VDC	40 mA	90 linear ft; 360°

All units are white and use Watt Stopper power packs. Current consumption can be slightly higher when only one sensor per power pack is used.