

### Features

- Location . . . . . Indoor
- Function . . . . . Occupancy and Light Sensor
- Type . . . . . Ceiling
- Coverage . . . . . 360°
- Coverage Area . . . . 450 Sq. ft.
- Ceiling Height . . . . 8 ft.
- Time Delay . . . . . 30 sec – 30 min
- Lux Level . . . . . 20 – 2000 Lux
- Sensitivity . . . . . Max – Min
- Connection. . . . .Wired
- Drive . . . . . Relay
- Dimming . . . . . No

### Dual mode sensors

Dual mode sensors are a combination of occupancy and vacancy sensors. The load can be turned ON either automatically by occupancy detection or manually by means of an external switch. Turning off is always automatic upon vacancy as detected based on a user settable time delay. This mode is typically used in conjunction with two/three way switches in stairs.

### Description

The ITCHCW-WR1 / ITFHCW-WR1 is a 360° motion activated Occupancy and Light control sensor. The design is based on Passive infrared motion sensors technology and when implemented will significantly reduce the energy consumption for the end user. The sensor operates by detecting the movement of the infrared heat emitted from the body of an occupant in a given area of coverage or field of view. When it detects the presence of people, it will automatically turns on the light in the given area so the occupants will have adequate light to perform their work. The lights will be automatically turned OFF when the presence of occupants are no longer detected or when the combination of light (both external or natural light plus the installed lighting) exceeds the preset light level for the area provided the area is still

occupied. By automatically turning ON and turning OFF lights the user will be able to save significant



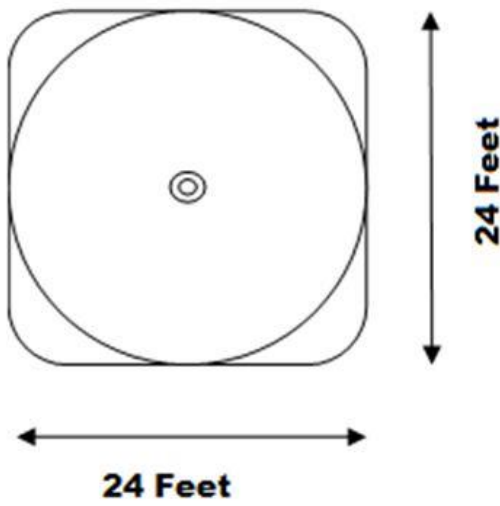
amount of energy (up to 60% depends on the usage pattern). This product is suitable for Indoor use only. This product is ideal for use in conference rooms, Cabins, Large halls, indoor alleyways or aisles and cafeteria.

### Operation

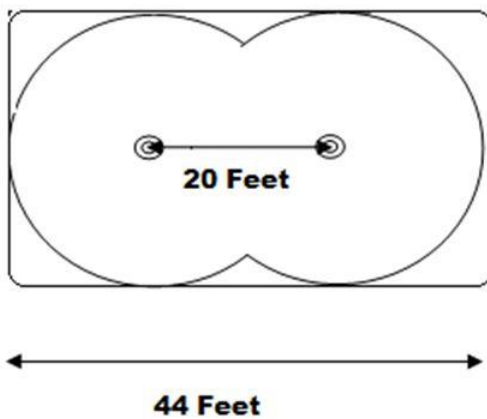
The Occupancy sensor works by detecting the movement of infrared radiation emitted by humans. Whenever an occupant crosses the field of view of the Fresnel lens mounted in front of the IR sensor, the IR sensor detects a change in the energy received and assumes the area is occupied and turns on the lights automatically. As long as the sensor detects movement, it will maintain the lights in the ON position. When the movement is no longer detected, the sensor turns OFF the light after a preset delay. The light sensor will maintain the illumination in the room at a preset level as long as there is movement detected by the occupancy sensor. The sensor constantly measures the light level in the room, which includes the artificial light from the fixtures and the natural light coming from outside. The combination of both lights and the presence of humans in the area is used to maintain the light levels at a pre-set level by controlling (turning ON or OFF) the artificial fixtures.

## Coverage Area

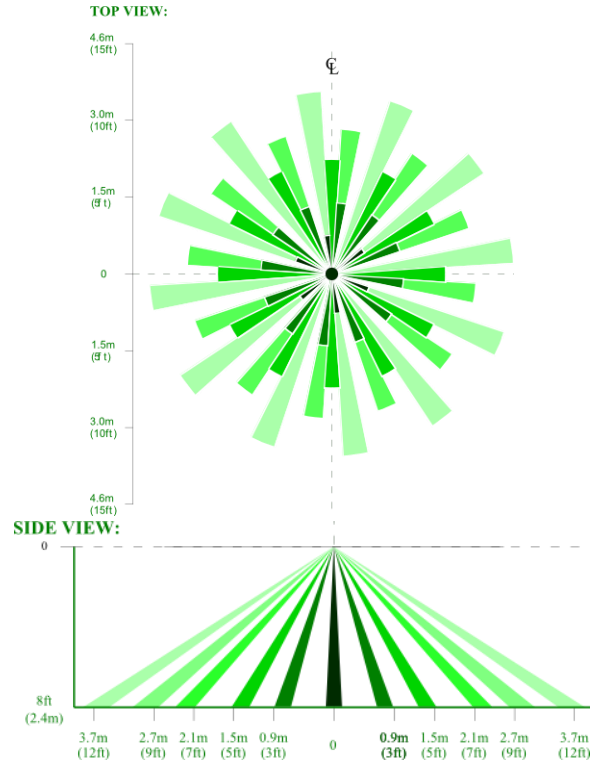
The ITCHCW-WR1 / ITFHCW-WR1 has a circular sensing coverage area with a 24 feet diameter (450 Sq. feet) and a sensing angle of 360°, when installed at a height of 8 feet. Sensitivity can be adjusted to detect minor movements over a distance of 12 feet from the sensor. These sensors can be used individually or can be ganged together to increase the coverage area.



Standard installation



Parallel installation



## Electrical specifications

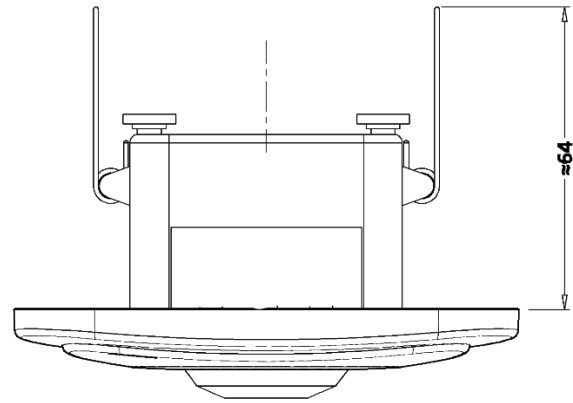
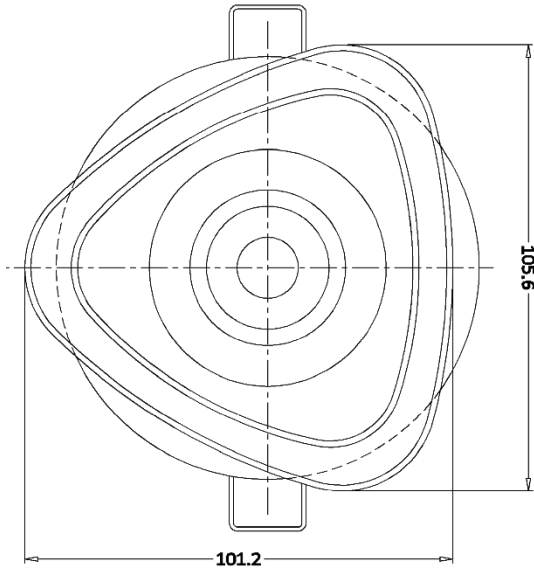
Supply voltage	85 – 265 VAC
Frequency	50/60 Hz
Resistive Load @110V	900 W
Resistive Load @220 V	1800 W
Inductive Load @110V	400 W
Inductive Load @220 V	800 W
Min load	No load

## Environmental Specifications

Storage Temperature Range	0°C to 50°C
Relative Humidity	20% to 90% (non-condensing)

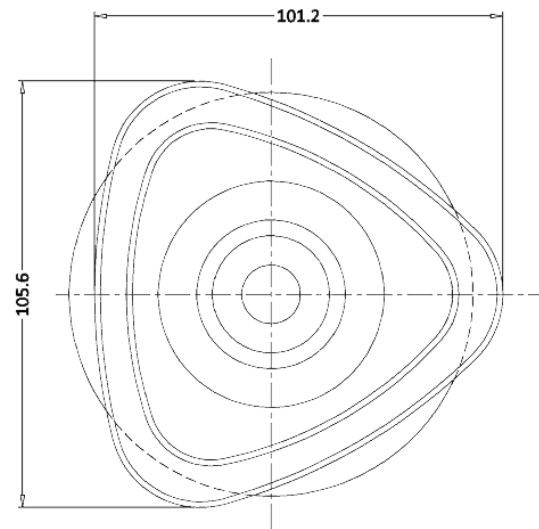
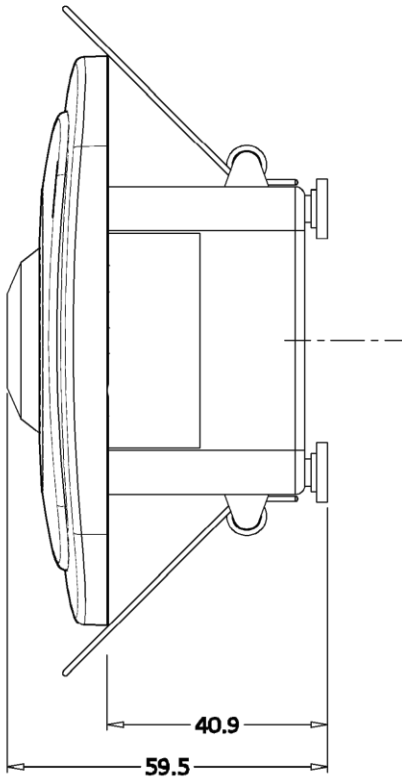
## Mechanical Drawing

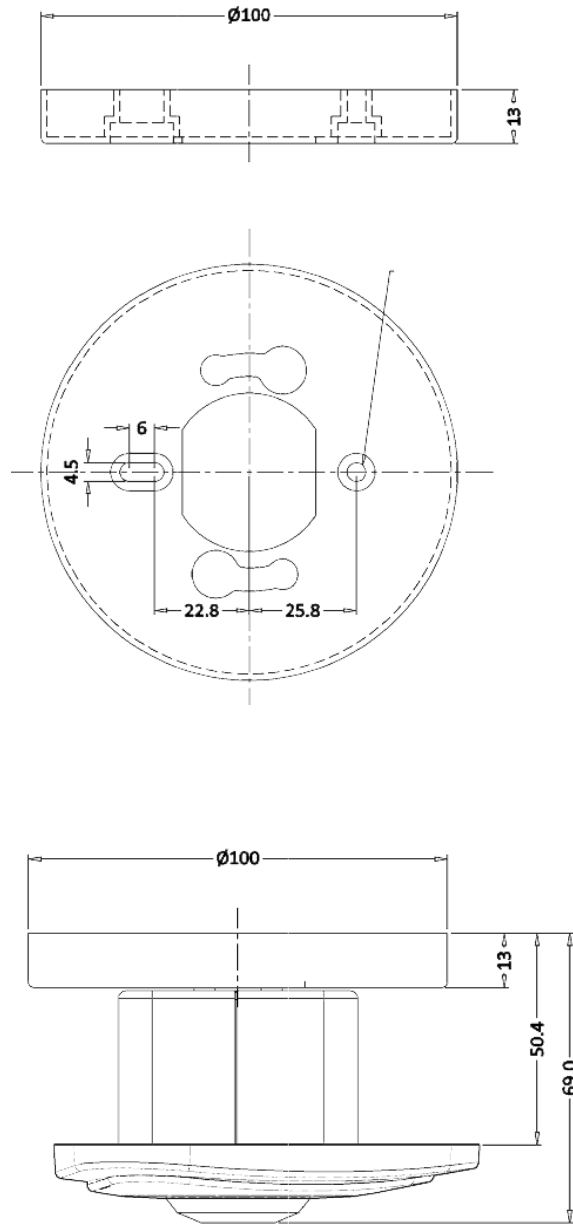
### Type 1 (ITFHCW-WR1)



SPRING POSITION IN LOADING TIME

### Type 2 (ITCHCW-WR1)





## Supporting Documents

Review the following documents before installation. It will help you understand the sensor and fully exploit its capabilities

- 1) Ceiling Sensor Installation
- 2) Manual Set up
- 3) Function definition and description
- 4) Troubleshooting
- 5) Daylight Harvesting

## Wiring Diagram

