

Zone Occupancy Sensor

Figure 1: Zone Occupancy Sensor



The zone occupancy sensor works with applications and zones having intermittent occupancy during the occupied mode. The sensor transmits a signal to a building automation system upon detection of movement in the coverage area. Movement is detected by Passive Infrared (PIR) sensing technology contained within the zone occupancy sensor. Since the sensor must detect movement from an occupant, careful consideration must be taken regarding sensor placement.

The sensor is compatible with Trane VAV and VariTrac® controllers. The sensor provides isolated single-pole, double-throw (SPDT) relay contact outputs to signal the VariTrac® or VariTrac controller. The zone occupancy sensor has a multi-cell, multi-tier lens with a maximum field of view of 360°. The maximum coverage area of the sensor is 1200 square feet with a maximum radius of 22 feet from the sensor when mounted at 8 feet above the floor. Please visit trane.com or contact a local Trane representative for more information.

Features

- Ceiling Mounted PIR Sensing
- SPDT Isolated Relay Contacts
- 0–360° Field of View
- 1200 square feet Coverage Area and 22 feet Radius
- Time Delays of 30 seconds, 10, 20, and 30 minutes
- Maximum and Minimum Sensitivity

Table 1: Sensor Specifications

Power Supply	24 VAC or 24 VDC, ± 10%
Maximum VA Load	0.88 VA @ 24 VAC, 0.72 VA @ 24 VDC
Isolated Relay Rating	1 A @ 24 VAC or 24 VDC
Operating Temperature	32 to 131°F (0 to 55°C)
Storage Temperature	-22 to 176°F (-30 to 80°C)
Humidity Range	0 to 95% non-condensing
Effective Coverage Area	1200 sq ft
Effective Coverage Radius	22 feet
Housing Material	ABS Plastic
Dimensions	3.56" dia. x 1.9" deep (90.5 mm x 48.2 mm) Protrudes 0.36" (9 mm) from ceiling when mounted.

Placement of the Sensor

Careful considerations must be taken when locating the sensor in a zone. Normally, the approximate coverage with a sensor mounted at a height of 8 feet for an occupant walking is 22 feet radius. For an occupant at a workstation (hand motion) the approximate coverage is 12 feet radius. The effective coverage distance may be slightly less than the maximum sensing distance, depending upon obstacles such as furniture or partitions.

When the height of the sensor is less than 8 feet, the effective range of the sensor will decrease and the sensitivity to smaller motions will increase. Conversely, when height is greater than eight feet, the effective range of the sensor will increase and the sensitivity to smaller motions will decrease. At heights of more than 12–14 feet, the sensitivity of the sensor will be significantly reduced.

Masking

Masking is a method to eliminate the coverage area for applications not requiring the full field of view of 360°. An insert (mask) is supplied with each sensor and is not needed if full area coverage is desired. Simply cut the mask for the desired coverage area.

Sensor Settings

The sensor is factory-defaulted with a time delay of 30 minutes, a maximum sensitivity and a normal override. By changing the DIP switch settings located on the sensor, the time delay can be configured for 30 seconds, 10 minutes, and 20 minutes, the sensitivity can be set for minimum and the override can be activated in the event of failure. See installation instructions for details.

Figure 2: Effective Coverage Area

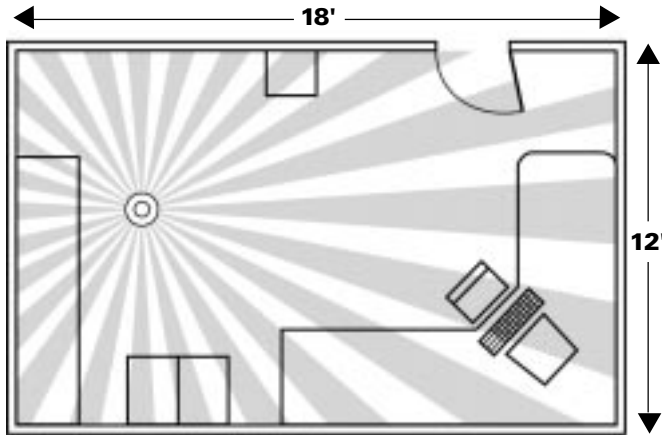
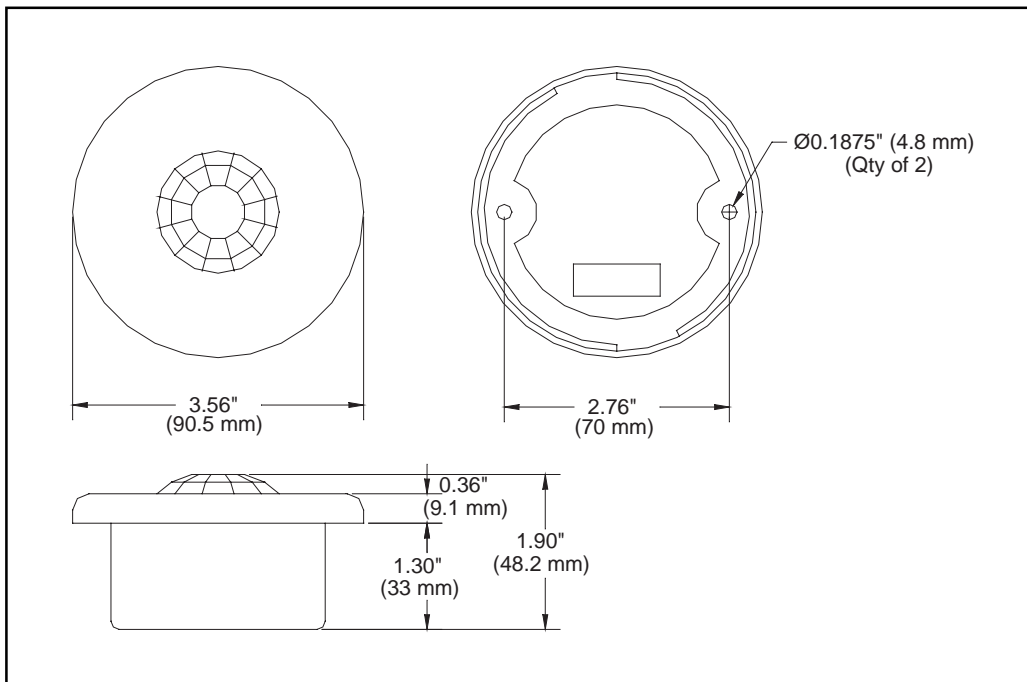


Figure 3: Dimensional Data



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