

OS-550/OS-550T

Low Voltage Occupancy Sensor



OVERVIEW

The OS-550/OS-550T is a low voltage occupancy sensor designed to signal the occupancy status for area lighting, or HVAC control, for energy efficient building management. The sensor is operated by 24VAC/DC power supply from an IR-TEC power pack, or building management system, and provides a dry contact signal for control of the connected lighting or HVAC equipment.

A cutting edge dual element pyroelectric infrared sensor and unique Fresnel lens are employed to provide superior occupancy sensing capability. When the sensor detects an occupant's presence, the relay contact output will be engaged until the OFF delay time expires. If the sensor is applied to control the operation of HVAC systems, the ON delay can be enabled to prohibit short-cycle restarting or unwanted load activation. Both ON and OFF delays can be easily selected through jumper pin positioning.

In addition to the standard features of OS-550, the OS-550T further provides high/low temperature setbacks to help HVAC system maintaining room temperature within the range during vacant period. The sensor can be installed on the wall, corner or ceiling with a multi-directional mounting bracket provided with the sensor.

FEATURES

- Cutting edge dual element infrared sensor
- 24VAC/DC low voltage power operation
- Form C dry contact relay output
- Multi-directional mounting bracket included
- Temperature compensation sensitivity
- Superior RFI and EMI immunity
- Walk test and sensing status LED indicator
- Easy programmable ON and OFF delays
- Available for wall/corner/ceiling mount
- High/low temperature setbacks*

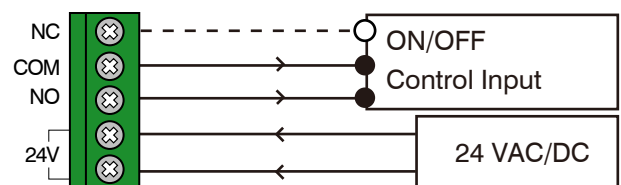
*Only available with OS-550T

APPLICATION

- Light Control
- HVAC Control
- Building Management

The OS-550/OS-550T can be used to control area lighting, or HVAC, with an IR-TEC power pack or in conjunction with a building management system. Various control modes can be achieved by different wiring connections. Basic wiring diagrams are included. Consult with an IR-TEC team member if a more complex wiring diagram is required.

WIRING DIAGRAM



OS-550/OS-550T

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SENSOR OPERATION

The sensor will enter a warm-up period when power is first applied and then operate as described below.

A. Standby mode

The sensor will enter into standby mode after the warm-up period expires.

Note: The LED will flash if any jumper head is not properly placed on the pin.

B. ON delay mode

If the ON delay is enabled, the sensor will enter this mode when it first detects the presence of an occupant. Any further motion detected during the ON delay mode will NOT reset the timer.

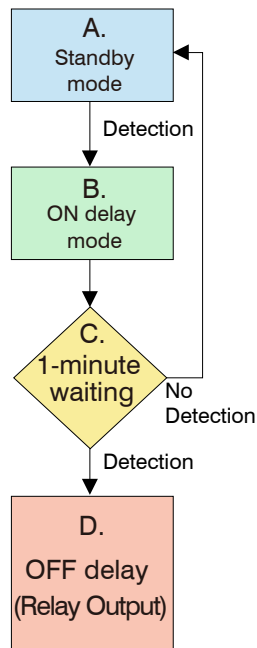
C. 1-minute waiting

When the ON delay expires, the sensor will enter into the 1-minute waiting period. If no motion is detected within this time period, the sensor will return to standby mode. If motion is detected within this time period, the sensor will engage the relay contact and enter into OFF delay mode.

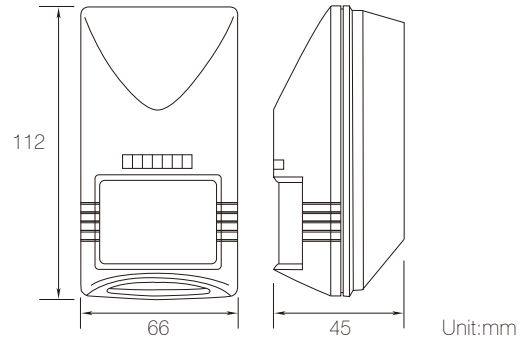
D. OFF delay mode

The OFF delay is the time period that the sensor will hold its relay contact engaged. Every motion detected during this time period will reset the timer. The sensor will return to standby mode if no further motion is detected during this time period and the relay will be disengaged.

Note: The OS-550T will automatically activate its output when room temperature exceeds the high/low setback range.

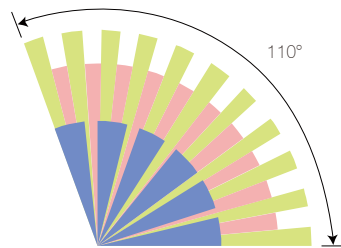


DIMENSIONS

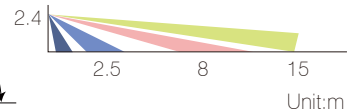


DETECTION PATTERN

Top View



Side View



SPECIFICATIONS

Power supply	24 ± 2 VAC/DC
Current drain	7mA @ 24VAC
Sensor output	Form C, NO: 5A, NC: 3A resistive
Detection range	110°, 15m @ 25°C (50 ft. @ 77°F)
Detectable speed	0.1~3m/sec (0.3~10 ft./sec)
Mounting height	1.8~3.6m (6~12 ft.)
Delay time (ON)	0/10"/30"/1'/5'/10' selectable
Delay time (OFF)	10"/1'/5'/10'/20'/30' selectable
High-temp setback	30/28/26°C (86/82/79°F) selectable
Low-temp setback	15/13/11°C (59/55/52°F) selectable
RFI immunity	Ave. 20V/m (10~1000MHz)
Humidity	Max. 95% RH
Temperature	-20°C~50°C (-4°F~122°F)
Dimensions	112 x 66 x 45mm (4.4" x 2.6" x 1.8")