

CI-12, CI-24 Sensor for HVAC, BAS

- ◆ Ceiling mount PIR occupancy sensor
- ◆ 12 VDC, 24 VAC or 24 VDC operation
- ◆ 360°, 1200 sq ft coverage
- ◆ Interfaces directly with EMS or HVAC system through an internal isolated relay
- ◆ Low-profile design
- ◆ DIP switch adjustable sensitivity, time and override
- ◆ High immunity to RFI and EMI
- ◆ UL and CUL listed; Five year warranty



INTEC's CI-12 and CI-24 ceiling mount passive infrared occupancy sensors reduce energy waste in unoccupied building spaces by communicating occupancy to EMS and HVAC systems.

System Information

Operation

The CI-12 and CI-24 occupancy sensors integrate with building control systems via an internal isolated relay. The isolated relay has normally open and normally closed outputs and is rated for 1 Amp at 24 VAC/VDC. The CI-12 connects directly to 12 VDC building control systems and the CI-24 connects to 24 VAC or 24 VDC building control systems. Power pack use is not necessary. The sensors provide a normally open or closed contact to the building control system when occupancy is detected within the controlled area. When occupancy is detected, the sensor signals a building control system which then either turns devices on, such as heating or air conditioning, or increases their levels. Likewise, when the controlled area is vacated, the building control system will reduce airflow and fan speed or turn devices off. The affected building spaces are determined by the preprogramming of the BAS.

Features

The CI sensors feature a user-adjustable time delay which functions through a highly accurate digital timer. The time delay is programmed with a DIP switch and can be set from 30 seconds to 30 minutes. Two levels of sensitivity (minimum or maximum) are also selectable through the DIP switch. The CI-12 and CI-24 are equipped with a four-level patented Fresnel lens for superior desktop occupancy detection. Coverage for the sensors can reach 1200 square feet using the Extended Range lens and 500 square feet using the High Density lens (circular pattern) for walking motion. For typical desktop level activity coverage can reach up to 300 square feet.

Applications & Specifications

The CI-12 and CI-24 offer a new and easy way to reduce energy consumption and its related costs in a large variety of building spaces. By working directly with a Building Automation System, the cost of purchasing power packs and the cost of labor for power pack installation is eliminated. Furthermore, the sensors' low unit cost and reduction in energy consumption result in fast paybacks.

- ◆ Dual-element, temperature compensated pyroelectric sensor
- ◆ Operates at 12 VDC (CI-12); 24 VAC or 24 VDC (CI-24)
- ◆ ASIC technology reduces components and enhances reliability
- ◆ Pulse Count Processing eliminates false offs without reducing sensitivity
- ◆ Detection Signature Analysis eliminates false triggers; provides immunity to RFI and EMI
- ◆ Digital time delay adjustment from 30 seconds to 30 minutes
- ◆ Red LED indicates occupancy detection
- ◆ 3.3" diameter x 2.2" deep (85mm x 56mm), extends approximately 0.36" from ceiling
- ◆ Multi-level Fresnel lens for superior desktop detection

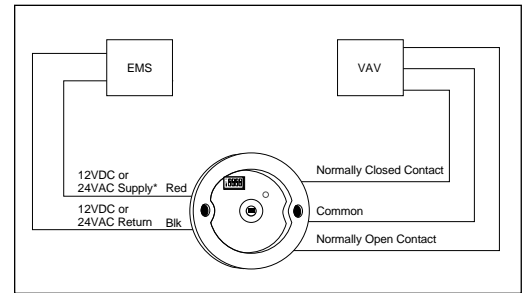
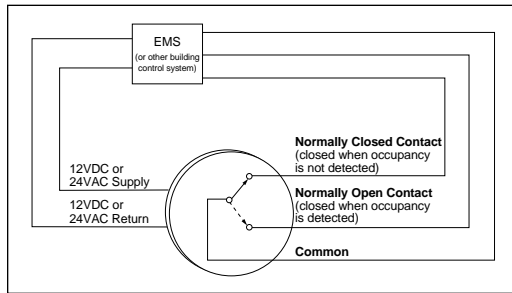
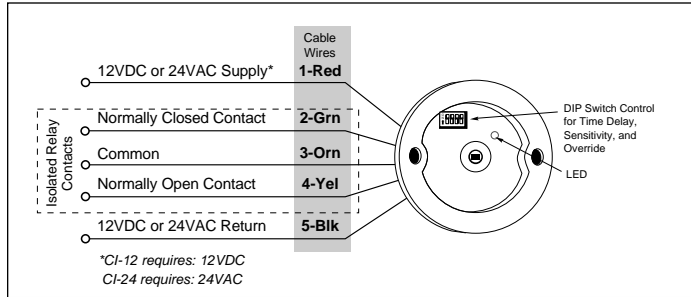
CI-12, CI-24 Technical Information

Ordering Information

Catalog No.	Voltage	Current	Coverage* (see below)
CI-12	12 VDC; Extended Range Lens	28 mA	up to 1200 sq ft; 360°
CI-12-1	12 VDC; High Density/Reduced Range Lens	28 mA	up to 500 sq ft; 360°
CI-24	24 VAC or 24 VDC; Extended Range Lens	37 mA	up to 1200 sq ft; 360°
CI-24-1	24 VAC or 24 VDC; High Density/Reduced Range Lens	37 mA	up to 500 sq ft; 360°

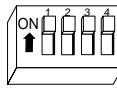
All units are white

Wiring Diagrams



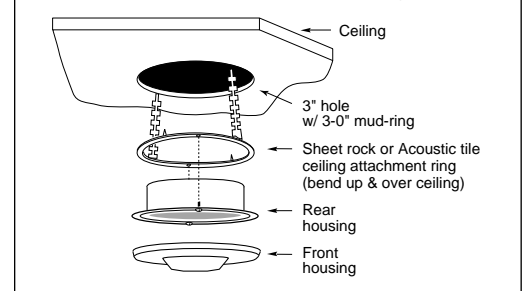
DIP Switch Settings & Mounting

DIP Switch #	1	2	3	4
Time Delays				
30 seconds	X	X		
10 minutes	X	O		
20 minutes	O	X		
30 minutes	O	O		
Sensitivity				
Minimum				O
Maximum			X	
Override				
Normal				O
Override			X	



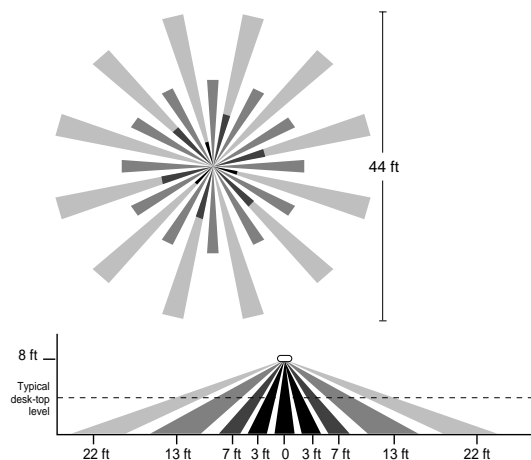
X=on O=off

CI-12 and CI-24 Mounting

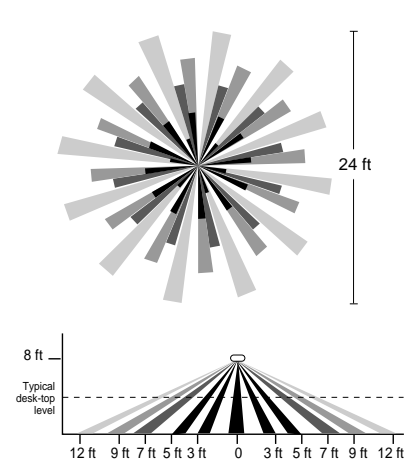


Coverage

Extended Range Lens (Standard)
CI-12, CI-24



High Density/Reduced Range Lens
CI-12-1, CI-24-1



* Coverage shown is maximum and represents coverage for half-step walking motion. Under ideal conditions, with no barriers or obstacles, coverage for half-step walking motion can reach up to 1200 sq ft using the Extended Range lens and up to 500 sq ft using the High Density lens. For typical desktop level of activity, coverage can reach up to 300 sq ft using the High Density lens.