LOW TEMPERATURE PASSIVE INFRARED OCCUPANCY SENSOR

CB-100

PIR occupancy sensor for areas of extreme low temperature

Watertight enclosure prevents moisture and dust from affecting detection

Isolated relay contact for use with HVAC or other control systems

Choice of three coverage patterns

Convenient DIP switch adjustments of time delay and sensitivity

Ideal for cold storage rooms, freezers and outdoor locations

DESCRIPTION

The CB-100 passive infrared (PIR) occupancy sensor was engineered for installation in cold and damp conditions including the outdoors. It uses electronic components to allow for reliable operation in extreme temperature and environmental conditions.

OPERATION

The CB-100 operates on 24 VDC and controls lighting through Wattstopper power packs. It is equipped with a swivel mount bracket for convenient installation. The unit detects occupancy and turns lighting on when it senses a change in infrared heat radiated within the controlled area. After the area is vacated and after a user-adjustable time delay, lighting automatically turns off.

COLD APPLICATION ENGINEERING

Specifically designed for low temperature applications, the CB-100 features a gasketed, watertight enclosure which prevents moisture and dust from entering the sensor and affecting occupancy detection. By operating in areas as low as -40° F, the CB-100 saves energy in areas that would not typically be suited for occupancy based control.

APPLICATIONS

The CB-100 has been manufactured for the specification of lighting control in low temperature areas. With this sensor, areas such as cold storage rooms, freezers, and unconditioned spaces subject to extreme low temperatures can receive the same reliable lighting control and energy savings as other building areas. Using the isolated relay contact to interface with HVAC, EMS or other building control systems will also increase savings.

FEATURES

- Operates in areas with temperatures as low as -40°F
- Gasketed, watertight enclosure prevents moisture and dust from entering the sensor and affecting occupancy detection
- Choice of three different coverage patterns depending on needs of the application
- Swivel mount bracket for convenient installation
- Red LED indicates occupancy detection
- Convenient DIP switch adjustable digital time delay of 15 seconds, 5 minutes or 10 minutes
- DIP switch adjustable sensitivity has 4 settings ranging from minimum to maximum
- Isolated relay can interface with HVAC, EMS systems, monitoring systems, or with an additional lighting load

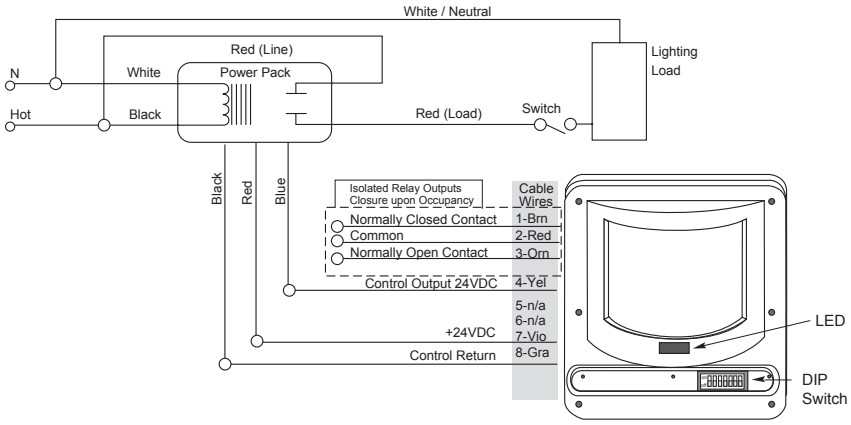
PROJECT		LOCATION/ TYPE	

SPECIFICATIONS

- Dual-element, temperature compensated pyroelectric sensor
- Temperature range: -40°F (-40°C) to +95°F (+35°C) (The CB-100 can function at temperatures greater than 95°F but coverage may be reduced)
- Isolated relay with N/O and N/C outputs; rated for 1 Amp at 24 VDC/VAC
- Digital time delay settings of 15 seconds, 5 minutes, or 10 minutes
- Units per BZ power pack: up to 7
- Dimensions: 3.94" x 3.74" x 2.36" (100mm x 95mm x 60mm) L x W x D
- Compatible with Wattstopper PLUS Sensor Interface Module (EN-SIM-AI/SPS-GB2-BK). See sensor installation instructions for performance considerations.
- UL and cUL listed
- Five year warranty

WIRING, MOUNTING & SETTINGS

Wiring Diagram



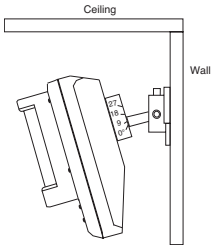
DIP Switch Settings

Sensitivity	1	2	
Maximum	–	–	◀
Med High	–	●	
Med Low	●	–	
Minimum	●	●	

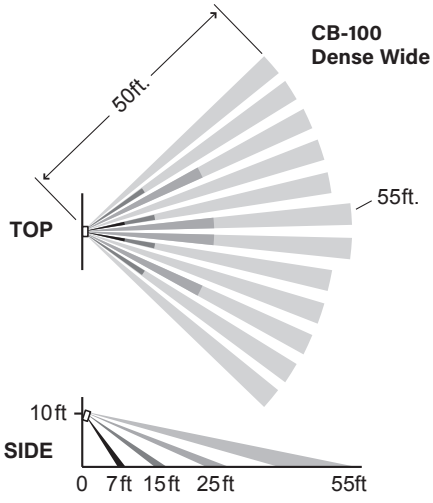
● = ON – = OFF
◀= factory preset

Time Delay	3	4	
10 minutes	–	–	◀
5 minutes	–	●	
15 seconds	●	●	

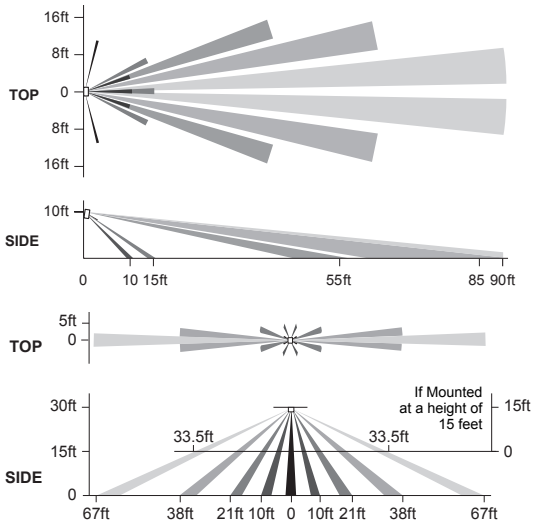
Wall Mounting



COVERAGE



CB-100
Dense Wide Angle Coverage



CB-100-1
Long Range Coverage

CB-100-3
Two-sided Aisleway Coverage

ORDERING INFORMATION

Catalog #		Voltage	Current	Coverage
☐	CB-100	24 VDC	20 mA	up to 2000 ft² (185.8m²)
☐	CB-100-1	24 VDC	20 mA	up to 90 linear ft (27.4m)
☐	CB-100-3	24 VDC	20 mA	up to 120 linear ft (36.6m)

Units are beige and use Wattstopper power packs.

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