sensorswitch

EXTENDED RANGE SENSOR - FIXTURE MOUNT, LOW VOLTAGE, PIR/MICROPHONICS™ (PDT)

TYPICAL APPLICATIONS

- Restrooms w/ Stalls
- Storage Rooms w/ Shelving
- Classrooms

FEATURES

- Patented Dual Technology with PIR/Microphonics™ Detection
- Communicates with Other Sensors
- Time Delay: 30 sec. to 20 minutes, selectable in 2.5 min increments
- Push-Button Programmable
- Green LED Indicator
- 100 Hr. Lamp Burn-in Timer Mode

AVAILABLE OPTIONS

- Isolated Low Voltage Relay (-R)
- On/Off Photocell (-P)
- Auto Dimming Cntl. Photocell (-ADC)
- Low Temp/Hi Humidity (-LT)

SPECIFICATIONS

- Size: 3.625" x 3.625" x 1.5" Deep (9.2 cm x 9.2 cm x 3.8 cm Deep)
- Sensor Weight: 7 Ounces
- Sensor Color: White
- Mounting: 1/2 inch knockout
- Relative Humidity: 20 to 90% non-condensing
- Operating Temp: 14º to 160º F (-10° to 71° C)
- Storage Temp: -14º to 160º F (-26° to 71° C)
- UL, CUL, and Title 24 Compliant
- 5 Year Warranty
- Made in U.S.A.

LOW TEMP/HI HUMIDITY(-LT)

- Conformally coated Circuit Board is corrosion resistant from moisture
- Operates down to -4º F(-20º C)

CMB-PDT-10 SERIES

w/ Enhanced Daylighting Control Options!

The *CMB-PDT-10 Series* occupancy sensor mounts directly to a 1/2 inch knockout in a fixture or junction box and provides patented PIR/Microphonics™ (PDT) detection over a range of 50 feet. When mounted at 9 feet this sensor provides line of sight PIR detection up to 28 feet in a circular pattern and combines overlapping Microphonics™ for detection around obstructions. The *CMB-PDT-10* is ideal for large storage rooms or classrooms where surface mounting a sensor (see CM-PDT-10) is not practical. For freezer or high humidity applications, use the "-LT" version.

SENSOR OPERATIONS

Sensors with Passive Dual Technology (PDT) first "See" motion using Passive Infrared (PIR) and then engage Microphonics™ to "Hear" sounds that indicate continued occupancy. This patented technology uses Automatic Gain Control (AGC) to dynamically self adapt a sensor to its environment by filtering out constant background noise and detecting only noises typical of human activity. When occupancy is detected, a DC output goes high and can drive up to 200 mA of connected load. The sensor is powered with 12 to 24 VAC/VDC and typically operates with a PP-20 or MP-20 Power Pack; enabling complete 20 Amp circuits to be controlled. An internal timer, factory set at 10 minutes, keeps the lights "On" during brief periods of no activity. This timer is selectable at 2.5 minute increments from 30 seconds to 20 minutes, and is reset every time occupancy is re-detected.

DAYLIGHTING CONTROL OPTIONS (-P & -ADC)

For spaces with abundant natural light from windows or skylights, this series offers an On/Off Photocell (-P) option and an Automatic Dimming Control (-ADC) Photocell option. The -P option is ideal for public areas like vestibules, corridors, or restrooms; while the -ADC option is perfect for classrooms and private offices. As the daylight levels change in the room, both options insure that an adequate light level is maintained according to a programmable set-point value. The -P option provides two modes of operation; one simply inhibits the lights from turning on, while the other has full On/Off control of the lights. The -ADC option allows the sensor to control a dimmable ballast. It also provides a secondary dim time-out that enables the lights to go to a dim setting after one time-out and then turn fully off after a second time-out. For more detailed information on these daylighting control features, see the CM-PC-ADC Technical Data Sheet. **Note:** If both the -P and the -ADC options are selected the "Inhibit" mode of the -P option is not available.

INTERNAL LOW VOLTAGE RELAY OPTION (CMB-PDT-10-R)

To enable a sensor to interface with a building management system, the -R option provides dry contact closure via a SPDT, 1 Amp, 40 Volt relay. The relay coil is energized and changes state when ALL connected sensors register "Unoccupied". When using multiple sensors, only one sensor per zone needs to have a relay.
Note: Sensor must have power at all times for the relay to function .

CATALOG INFORMATION

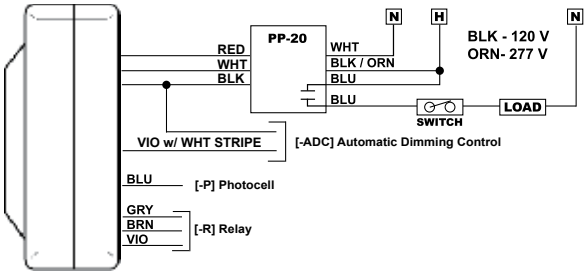
MODEL #	DESCRIPTION	TEMPERATURE	OP. VOLTAGE	CURRENT
CMB-PDT-10	Dual Technology Fixture Mount Sensor	14° to 160° F	12 to 24 VAC/VDC	4 mA
Add suffix				
-R	SPDT Relay, 1 Amp			16 mA
-P	On/Off Photocell			4 mA
-RP	Relay & On/Off Photocell			16 mA
-ADC	Automatic Dimming Control Photocell			4 mA
-LT	Low Temp/High Humidity	-4° to 160° F		

WIRING INSTRUCTIONS

Wire lead connections are Class II, 18 to 22 AWG.

STANDARD CMB-PDT-10

RED - 12 to 24 VAC/VDC
BLACK - Common
WHITE - Output (HI DC for Occupancy)



Do Not Wire Hot

RELAY OPTION (-R)

GRAY / BROWN - Connected during Occupied state
VIOLET / BROWN - Connected during Unoccupied state
Note: Relay is energized during Unoccupied state

PHOTOCELL OPTION (-P)

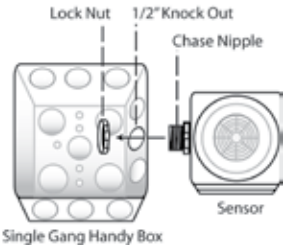
BLUE - Photocell output (High: Occupied & Low Light)
Use Blue wire from sensor in place of White wire. For multi-level control, use 2 Power Packs and connect White to primary load and Blue to daylight load.

AUTOMATIC DIMMING CONTROL (-ADC)

VIOLET/WHITE striped - Connect to Violet wire from 0-10 VDC dimmable ballast. Also connect ballast Gray wire to sensor Black wire.

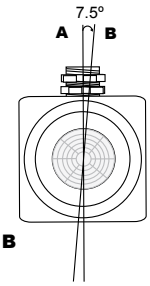
MOUNTING TO OPEN BEAM CEILINGS

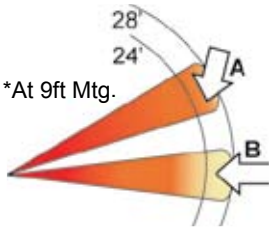
The *CMB-PDT-10* is easily mounted to a single gang handy or 1900 box by placing the half inch chase nipple through the half inch knockout. Then, the chase nipple is tightly secured by placing the lock nut on the chase nipple located inside of the box.



FIELD OF VIEW

The *CMB-PDT-10's* dome lens provides a maximum viewing angle of 67° in a complete 360° conical pattern. The Microphonics™ detects normal human activity up to 20 feet, but will detect greater distances in spaces with hard floors or very quiet rooms with little or no background noise. Place the sensor along the entrance door wall to prevent it from viewing out into the hallway. Avoid locating the sensor near HVAC air diffusers because the "noise" generated from air flow will decrease the sensitivity of the Microphonics™ sensor.

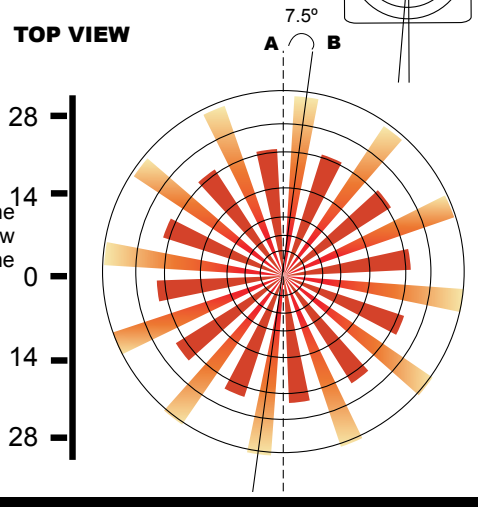




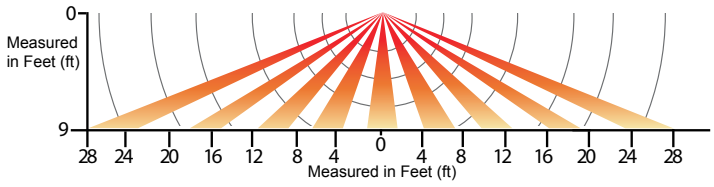
A: When walking across beam, detection will occur at approximately 28 feet.
B: When walking into beam, detection will occur at approximately 24 feet.

Note:
For maximum distance rotate the sensor clockwise so that the screw axis(A) is positioned 7.5° off the entrance axis(B).

TOP VIEW



SIDE VIEW



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