

TYPICAL APPLICATIONS

- Inboard/Outboard Switching
- Restrooms w/Stalls (Light & Fan)
- Classrooms w/2 Switches
- Storage Rooms with Shelving

FEATURES

- Patented Dual Technology with PIR/Microphonics™ Detection
- Two Self-Contained Relays, no Power Pack needed
- 2 Time Delays (1 each pole), 30 sec. to 20 minutes
- No Minimum Load Requirements
- Push-Button Programmable
- Green LED Activity Indicator
- 100 Hr. Lamp Burn-in Timer Mode

DAYLIGHTING OPTIONS

- Inhibit Photocell (-P)
- Dual Zone Photocell (-DZ)

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: 8 Ounces
- Sensor Color: White
- Mounting: 1/2 inch knockout
- Relative Humidity: 20 to 90% non-condensing
- Operating Temp: 14° to 160° F
(-10° to 71° C)
- Storage Temp: -14° to 160° F
(-26° to 71° C)
- Load Rating: Per Pole (1 Phase only)
120 VAC @ 800 W
277 VAC @ 1200 W
347 VAC @ 1500 W
- 1/4 HP Motor Load
- Frequency: 50/60 Hz
(Timers are 1.2 times for 50 Hz)
- 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 -4° F (-20° C)

CMRB-PDT-10-2P Series w/ Enhanced Daylighting Control Options!



The *CMRB-PDT-10-2P Series* is an Extended Range Dual Technology occupancy sensor that is capable of controlling 2 Line Voltage Loads. The *CMRB-PDT-10-2P* incorporates the industry's leading passive infrared (PIR) technology with Microphonics™ for awesome detection in areas with or without obstructions. At a 9 foot height, this sensor views 24 to 28 feet in all directions. Capable of being mounted to pendant or surface mounted fixtures utilizing the 1/2" knockouts, the *CMRB-PDT-2P* is powered from line voltage and switches loads directly without the need of a Power Pack. This sensor is also perfect for large restrooms with stalls where the lights and exhaust fan are controlled independently. In cold damp environments, use the *CMRB-PDT-2P-10-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, two separate self-contained relays switch the loads "On". The sensor is line powered and can switch a large range of line voltages. Each pole has an internal timer, factory set at 10 minutes, which keep the lights "On" during brief periods of no activity. These timers are each programmable at 2.5 minute increments from 30 seconds to 20 minutes, and are reset every time occupancy is re-detected. This state-of-the-art design requires no manual field adjustments.

DAYLIGHTING CONTROL OPTIONS (-P & -DZ)

This series offers an *Inhibit Photocell (-P)* option of both poles separately for spaces with abundant natural light. Ideal for Automatic Bi-Level Lighting Control in public areas with windows like vestibules, corridors, or bathrooms; the -P option can inhibit the lights from turning on if there is sufficient daylight available. Once the lights are needed and turn on, however, they stay on until the occupancy sensor timer expires. In this option the set-point for each pole is independently programmable.

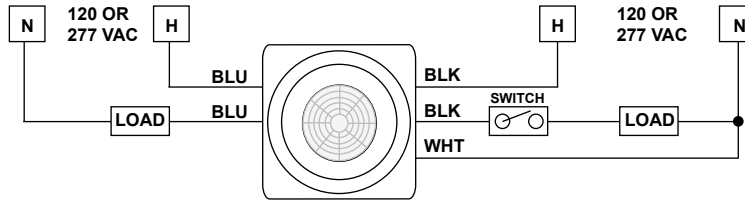
For more advanced daylighting control over both poles this series offers the *Dual Zone Photocell (-DZ)* option. Its default mode, referred to as "Duo" operation, is ideal for A/B (also called inboard/outboard) switching applications as it determines the necessary On/Off combination of the two poles in order to maintain adequate lighting. An alternate mode uses a relative set-point for the second pole that is a percentage of the first pole's set-point. This mode is ideal for classrooms with individually controlled parallel rows of lights. A single shared set-point is used by both modes and is user programmed or can be automatically determined by the sensor itself.

Model Numbering System: CMRB-PDT-10-2P-[DAYLIGHTING CONTROL]-[VOLTAGE]-[TEMP/HUMIDITY]

MODEL #	DAYLIGHTING CONTROL	VOLTAGE	TEMP/HUMIDITY
CMRB-PDT-10-2P	Blank = No Photocell -P = Inhibit Photocell -DZ = Dual Zone Photocell	Blank = 120-277 VAC -3 = 347 VAC	Blank = 14° to 160° F -LT = -4° to 160° F
FB-1	Mounting Bracket for Deep Fixtures		

TYPICAL WIRING DIAGRAM (DO NOT WIRE HOT)

The sensor uses Sensor Switch's patented "either/or wiring"; Black to Hot and Black to Load for the first feed, and Blue to Hot and Blue to Load for the second feed. The White wire connects to neutral. The sensor may be wired before or after local toggle switches. If only one feed, connect one of the Black and one of the Blue wires to the feed, and the respective Black and Blue wires to the loads. **Note:** Black wires are replaced with Red wires for 347 VAC (One Phase Only).



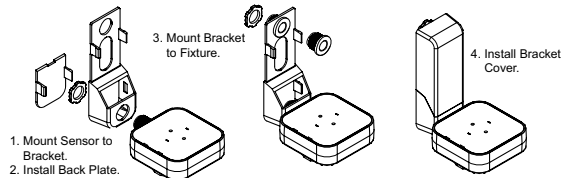
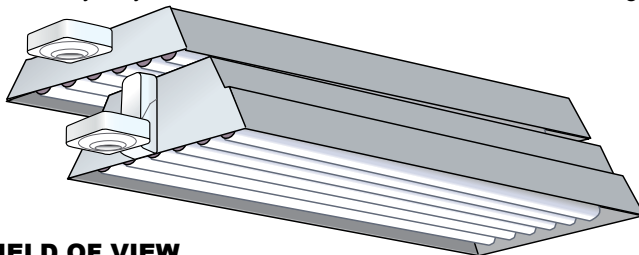
3 MINUTE WARM-UP

INITIAL POWER UP

When power is applied to the sensor, the relay is designed to be in a latched closed position, and the lights should come on. After a 1-3 minute warm-up period, the sensor becomes functional and begins to "time out". **If the Lights Do Not Immediately Turn On (Initial Installation Only)** the latching relay is in the open position. When the 1-3 minute warm-up is over the sensor will correct itself and close the relay.

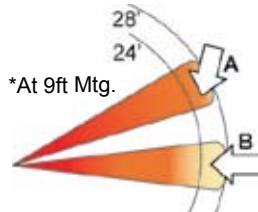
TYPICAL MOUNTING

The CMRB-PDT-10-2P mounts in an half-inch knockout hole on the side of the fixture. If the sensor's field-of-view is partially blocked by the fixture housing, use the FB-1 Fixture Bracket as shown. **Note:** Heat producing sources controlled by the sensor must not be in the view pattern of the sensor. Symptom: Sensor cycles or appears to continually stay "On". Solution: Move sensor or mask lens segments that view the source.



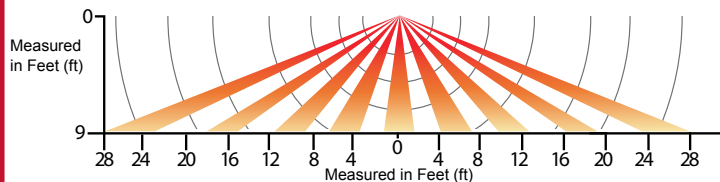
FIELD OF VIEW

The CMRB-PDT-10-2P'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.

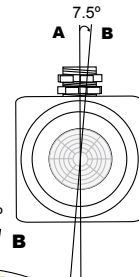


- A:** When walking into beam, detection will occur at approximately 24 feet.
B: When walking across beam, detection will occur at approximately 28 feet.

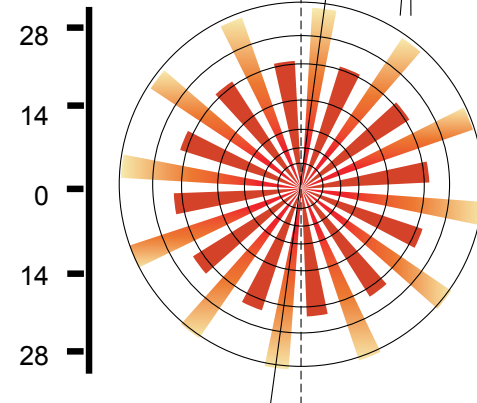
SIDE VIEW



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



WARRANTY: Sensor Switch, Inc. warrants these products to be free of defects in manufacture and workmanship for a period of sixty months. Sensor Switch, Inc., upon prompt notice of such defect will, at its option, provide a Returned Material Authorization number and a replacement product.

LIMITATIONS AND EXCLUSIONS: This Warranty is in full lieu of all other representation and expressed and implied warranties (including the implied warranties of merchantability and fitness for use) and under no circumstances shall Sensor Switch, Inc. be liable for any incidental or consequential property damages or losses.

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