



STANDARD RANGE 360° SENSOR FIXTURE MOUNT BOX • LINE VOLTAGE • DUAL TECHNOLOGY (PDT)

SPECIFICATIONS

FEATURES

- 100% Digital PIR Detection, Excellent RF Immunity
- 360° Coverage Pattern
- Patented Dual Technology with PIR / Microphonics Detection
- Self-Contained Relay, No Power Pack Needed
- No Minimum Load Requirements
- Interchangeable Hot & Load Wires, Impossible to Wire Backwards
- Push-Button Programmable Adjustable Time Delays
- No Field Calibration or Sensitivity Adjustments Required
- Convenient Test Mode
- 100 hr Lamp Burn-in Timer
- Green LED Indicator

LAMPMAXIMIZER® TECHNOLOGY

- Protects Lamp Life while Maximizing Energy Savings
- Minimum On Timer (15 min default)
- Occ. Time Delay (10 min default)
- LampMaximizer+ Mode - Optimizes Lamp Life & Energy Savings (disabled by default)
- Switch Counter (in 1000's)
- Total Lamp On Time (in khrs)

PHYSICAL / MATERIAL SPECS

SIZE 3.63" H x 3.63" W x 1.50" D
(9.22 cm x 9.22 cm x 3.81 cm)

WEIGHT 6 oz

MOUNTING 1/2" knockout

COLOR White

OPERATING TEMP 14° to 160° F (-10° to 71° C)

STORAGE TEMP -14° to 160° F (-26° to 71° C)

RELATIVE HUMIDITY 20 to 90% non-condensing

SILICONE FREE

ROHS COMPLIANT

ELECTRICAL SPECS

MAXIMUM LOAD
800 W @ 120 VAC
1200 W @ 277 VAC
1500 W @ 347 VAC

MINIMUM LOAD None

MOTOR LOAD 1/4 HP

FREQUENCY 50/60 Hz

DIMMING LOAD Sinks < 20mA;
~40 Ballasts @ .5mA each

OVERVIEW

The **CMRB PDT 9** Series occupancy sensors combine the industry's leading Passive Infrared (PIR) technology with Microphonics™ for excellent detection in areas with and without obstructions. Capable of being mounted to pendant or surface mounted fixtures utilizing a 1/2" knockout, the **CMRB PDT 9** runs on line voltage and switches loads directly without the need of a power pack.

SENSOR OPERATION

Sensors with Passive Dual Technology (PDT) first see motion using 100% digital Passive Infrared (PIR) detection 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 registering only noises typical of human activity. When occupancy is detected, a self-contained relay switches the lighting on. If needed, a 10 second grace period also allows the lights to be voice reactivated after shutting off. This sensor is line powered, switches line voltage, and requires no field calibration or sensitivity adjustments.

LAMPMAXIMIZER®

This sensor also contains patent pending LampMaximizer technology that allows users to aggressively target energy savings while still protecting lamp life. A minimum on timer, factory set at 15 minutes, helps preserve lamp life by eliminating all lamp cycles shorter than lamp warranties specify.

A standard occupancy time delay is also present that ensures lights turn off (assuming minimum on timer has elapsed) if no occupancy is detected. This timer is factory set at 10 minutes to promote energy savings, but is adjustable between 30 seconds and 20 minutes. These adjustments can be done manually, through the unit's push-button, or automatically every two weeks through an advanced mode, called LampMaximizer+, that determines the optimum time delay in order to maximize both lamp life and energy savings. Additionally, this sensor maintains statistics on total lamp on time and number of cycles.

OPTIONS

OCCUPANCY CONTROLLED DIMMING (D)

- Provides dimming output to control 0-10 VDC dimmable ballasts
- Provides a second occupancy time-out period that enables the lights to go to a dim setting before turning off
- Adjustable max/min dim setting

PHOTOCELL (P)

- Auto set-point calibration
- Two selectable modes of operation
- On/Off mode: Photocell has full control during periods of occupancy
- Inhibit mode: Photocell can prevent lights from turning on if adequate daylight is available, but cannot turn lights off

PHOTOCELL w/ DIMMING (ADC)

- Photocell within sensor maintains total room light level by controlling levels of 0-10 VDC dimmable ballasts
- Photocell also has full on/off control during periods of occupancy
- Provides a second occupancy time-out period that enables the lights to go to a dim setting before turning off

Note: LampMaximizer+ features not available with ADC option

347 VAC (347)

- Allows sensor to be powered from and switch 347 VAC

LOW TEMP/HIGH HUMIDITY (LT)

- Sensor is corrosion resistant to moisture
- Operates down to -4° F (-20° C)



ORDERING INFO CMRB PDT 9 [DIMMING/PHOTOCELL] [VOLTAGE] [TEMP/HUMIDITY]

DIMMING / PHOTOCELL CHOOSE ONE ONLY

- Blank = None
- D = Occupancy Controlled Dimming
- P = Photocell
- ADC = Photocell w/ Dimming

VOLTAGE

- Blank = 120/277 VAC
- 347 = 347 VAC

TEMP/HUMIDITY

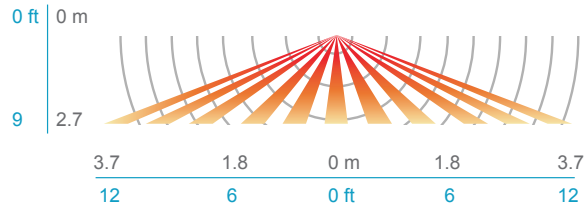
- Blank = Standard
- LT = Low Temp

COVERAGE PATTERN

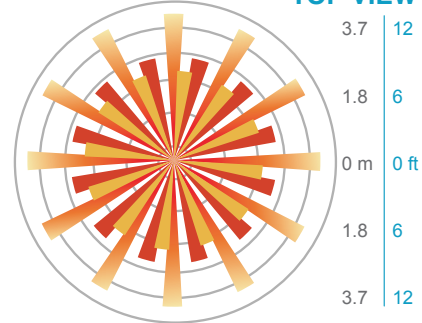
9 STANDARD RANGE 360° LENS W/ MICROPHONICS™

- Best choice for small motion (e.g. hand movements) detection
- Viewing angle of 56° in a 360° conical shaped pattern
- Provides 12 ft (3.66 m) radial coverage when mounted to standard 9 ft (2.74 m) ceiling
- 8 to 15 ft (2.44 to 4.57 m) mounting heights provide 10 to 20 ft (3.05 to 6.10 m) radial coverage
- Microphonics™ provides overlapping detection of human activity over the complete PIR coverage area. Advanced filtering is also utilized to prevent non-occupant noises from keeping the lights on.

SIDE VIEW



TOP VIEW



WIRING (DO NOT WIRE HOT)

STANDARD WIRING

- BLACK*** - Line Input
 - BLACK*** - Load Output
 - WHITE** - Neutral
- *BLACK wires can be reversed

347 VAC OPTION (347)

Black wires are replaced w/ Red wires

DIMMING OPTIONS (D, ADC)

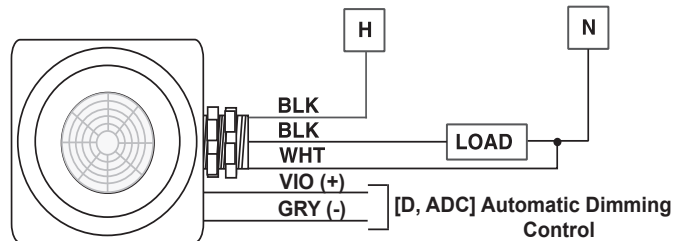
VIOLET - Connect to Violet control wire from 0-10 VDC dimmable ballast

GRAY - Connect to Gray common wire from ballast

INITIAL POWER UP

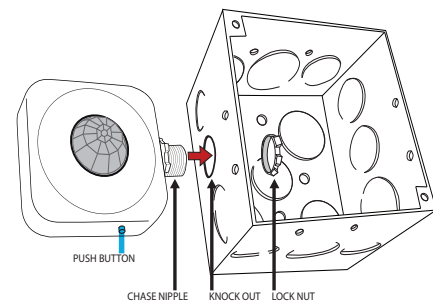
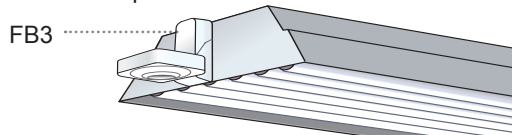
The sensor's relay is shipped in a latched closed position so the lights will come on upon initial power-up. If the lights do not immediately turn on (initial installation only) the latching relay opened during shipment and will close within 30 secs.

Note: If the sensor loses power, the internal relay will latch to on.



INSTALLATION

- The Fixture Mount Box enclosure has an extended chase nipple that is used to mount the sensor through a 1/2" knockout hole to a fixture or junction box.
- Sensor will detect motions crossing segments more effectively than motions parallel to beams.
- If the sensor's field-of-view is partially blocked by the fixture housing, the FB3 Fixture Bracket (not included) can be used to lower the sensor down to a level where its view is not impaired.



PROGRAMMING

Refer to instruction card IC7.001 for default settings and directions on programming the sensor via the push-button.

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WARRANTY: Sensor Switch, Inc. warrants these products to be free of defects in manufacture and workmanship for a period of 60 months. Sensor Switch, Inc., upon prompt notice of such defect, will, at its option, provide a Returned Material Authorization number and repair or replace returned 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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