sensorswitch®

CMR PDT 10

EXTENDED RANGE 360º SENSOR
CEILING MOUNT • LINE VOLTAGE • DUAL TECHNOLOGY (PDT)

SPECIFICATIONS

FEATURES
100% Digital PIR Detection,
Excellent RF Immunity
360º 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 defatult)
- 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 4.55" Dia. (11.56 cm)
1.55" Deep (3.94 cm)
WEIGHT 6 oz
MOUNTING 3.5" Octagon Box
Single Gang Handy Box
COLOR White
OPERATING TEMP
14º to 160º F (-10º to 71º C)
STORAGE TEMP
-14º to 160º F (-26º to 71º 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
Classrooms and larger spaces are conveniently controlled by the **CMR PDT 10** Series Extended Range occupancy sensor. Even when classrooms are filled with shelving, hanging projects, or lab benches; the **CMR PDT 10** provides total coverage. When mounted at 9 ft (2.74 m) this sensor provides line of sight PIR detection up to 28 ft (8.53 m) in all directions and combines overlapping Microphonics™ for detection around obstructions. These attractive ceiling mount sensors are perfect for large restrooms and are an ideal solution for retrofitting classrooms with concrete ceilings. Additionally, the **CMR PDT 10** Series is line powered, therefore it requires no external power packs.

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 can not 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 -4º F (-20ºC)

c UL us LISTED
TITLE 24
MADE in U.S.A.
5 YEAR WARRANTY

ORDERING INFO

CMR PDT 10 [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

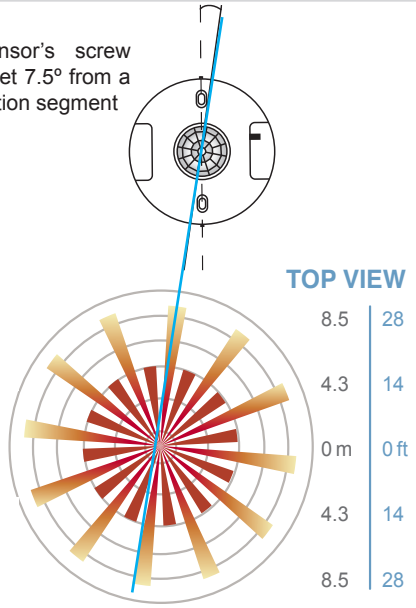
TEMP/HUMIDITY
Blank = Standard
LT = Low Temp

COVERAGE PATTERN

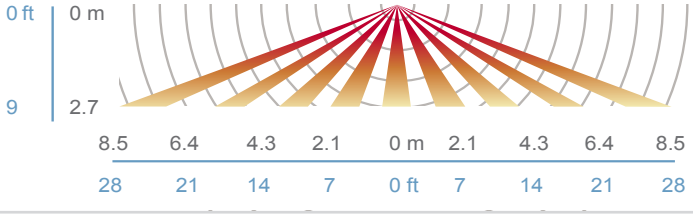
10 EXTENDED RANGE 360° LENS WITH MICROPHONICS™

- Best choice for large motion detection (e.g. walking)
- Viewing angle of 67° in a 360° conical shaped pattern
- Provides 28 ft (8.53 m) radial coverage when mounted to standard 9 ft (2.74 m) ceiling
- 7 to 15 ft (2.13 to 4.57 m) mounting heights provide 16 to 36 ft (4.88 to 10.97 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.

Note: Sensor's screw axis is offset 7.5° from a long detection segment



SIDE 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

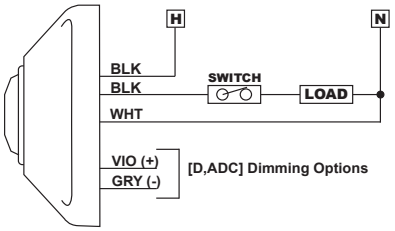
DIMMING OPTIONS (D, ADC)

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

INITIAL POWER UP

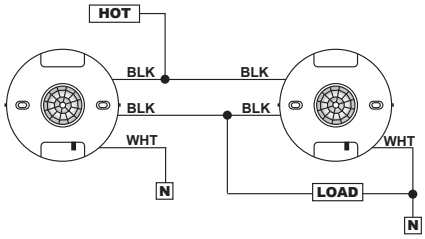
The sensor's relay is shipped in a latched closed position so the lights will come on upon initial power-up. If the lights do not immediately turn on (initial installation only) the latching relay opened during shipment and will close within 30 secs.

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



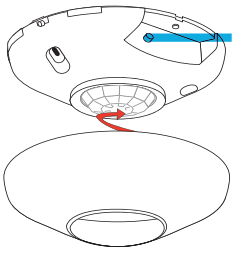
SENSORS IN PARALLEL

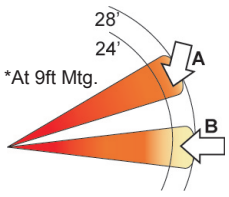
Sensors may be wired in parallel; however, the maximum load ratings stay the same. Do not wire sensors with P or ADC option in parallel.



INSTALLATION

- Sensor's mounting holes align with 3.5" octagon or single gang handy box (screws not provided).
- Sensor will detect motions crossing segments more effectively than motions parallel to beams.
- For optimal detection, position sensor such that segments are crossed upon entrance and unable to view outside the space.
- For maximum Microphonics™ sensitivity avoid locating sensor near HVAC air diffusers.





A: When walking across beam, detection will occur at approximately 28 ft (8.53 m)
B: When walking into beam, detection will occur at approximately 24 ft (7.32 m)

PROGRAMMING

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

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TS-CMR-009A

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