

TYPICAL APPLICATIONS

- Classrooms
- Restrooms with Stalls
- Library Study Carrels & Stacks

FEATURES

- Patented Dual Technology with PIR/Microphonics™ Detection
- Interfaces w/G.E. RR-7 Relay
- Communicates with Other Sensors
- Time Delay: 30 sec. to 20 minutes, selectable in 2.5 min. increments
- Green LED Indicator
- 100 Hr. Burn-in Timer Mode

AVAILABLE OPTIONS

- 2nd Relay Control (-2P)
- Isolated Low Voltage Relay (-R)
- Low Temp/Hi Humidity (-LT)

SPECIFICATIONS

- Size: Circular, 4.55" Dia., 1.55" Deep (11.56 cm Dia., 3.94 cm Deep)
- Sensor Weight: 5 Ounces
- Sensor Color: White
- Mounting: Ceiling Tile Surface, Round Fixture or Junction Box
- 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)
- Operating Voltage: 24 VAC (half wave rectified)
- Max. Pulsing Current: 4 Amps
- Max. # of Remote Sensors: 6
- UL and CUL Listed
- 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)

CM-PDT-10-RR7 Series

Programmable Edition!



The *CM-PDT-10-RR7 Series* Passive Dual Technology sensor is designed to interface directly with the G.E. RR-7 Relay and is ideal for classrooms and larger spaces. Even when filled with shelving, hanging projects, or lab benches; the *CM-PDT-10-RR7* provides total coverage! 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. When comparing small motion detection, the *CM-PDT-10-RR7* far out performs other "2,000 SF Dual Tech" sensors. The *CM-PDT-10-RR7* is also ideal in lower ceiling height applications. Multiple *CM-PDT-10-RR7s* may be used together or in combination with other low voltage sensors to customize coverage for large or irregularly shaped spaces.

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. 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. System power is provided by a Class II 24 VAC transformer.

INTERFACE TO THE G.E. RR-7 RELAY

The G.E. RR-7 relay interfaces to the sensor via a 3-wire parallel connection to the local (SPDT "Momentary" type) switch. No wires from the sensor to the transformer are required; an advantage considering most transformers are typically located in a centralized panel and not easily accessible. Upon occupancy, the sensor pulses the wire to the "On" switch terminal causing the RR-7 relay to turn on the lights. Once the sensor time delay expires, it pulses the wire to the "Off" switch terminal causing the RR-7 relay to turn off the lights. The local switch can also pulse on and off the relay. For example, a room is occupied with the lights on and the occupant leaves and pulses the switch off. The sensor later times out and sends a redundant "Off" pulse. Then, when an occupant enters the sensor pulses lights on. However, if the occupant re-enters prior to the sensor timing out, the lights would remain off until the manual switch was pulsed on.

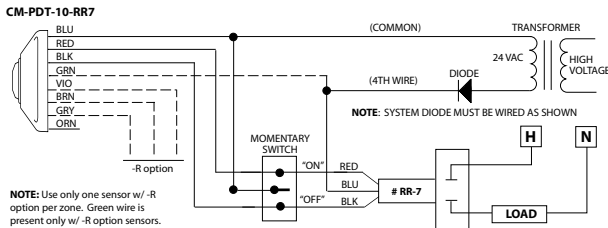
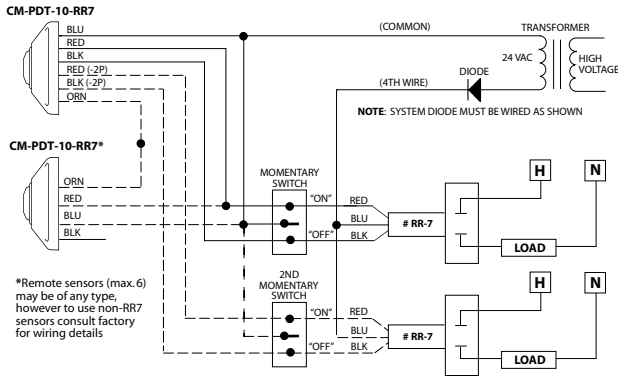
INTERNAL LOW VOLTAGE RELAY OPTION (CM-PDT-10-RR7-R)

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

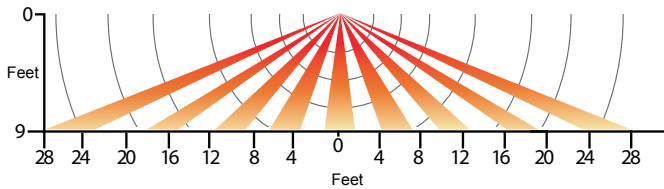
MODEL #	DESCRIPTION	TEMPERATURE	OP. VOLTAGE	CURRENT
CM-PDT-10-RR7	RR-7 Compatible Low Voltage PDT Ceiling Mount Sensor	14° to 160° F	24 VAC (half wave rectified)	12 mA (rms)
Add suffix:				
-2P	2nd Relay Control			
-R	SPDT Relay, 1 Amp			31 mA (rms)
-LT	Low Temp/High Humidity	-4° to 160° F		



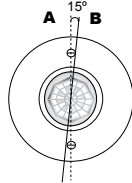
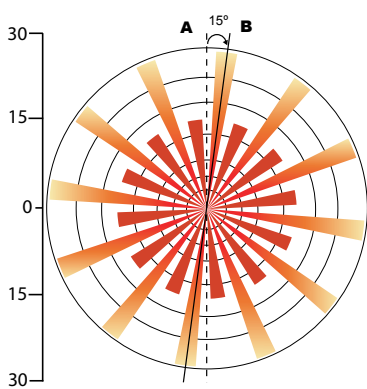
FIELD OF VIEW

The CM-PDT-10-RR7's dome lens provides a maximum viewing angle of 67° in a complete 360° conical pattern.

SIDE VIEW



TOP VIEW



Note: For maximum distance rotate the sensor clockwise so that the screw axis(A) is positioned 15° off the entrance axis(B).

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

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



WIRING INSTRUCTIONS

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

STANDARD CM-10-RR7

BLUE – Common (non Diode leg of transformer)

RED – Pulse On (two present for -2P units)

BLACK – Pulse Off (two present for -2P units)

ORANGE – Signal to/from Remote Sensors (cap off if not used)

CONTROL OF TWO RELAYS SEPARATELY (CM-PDT-10-RR7-2P)

The “-2P” option provides additional “Pulse On” and “Pulse Off” wires to connect to a 2nd relay for A/B switching applications. This allows for two local momentary switches to override each relay independently. For example, when a room is first occupied, both relays will pulse On. If the occupant desires one level Off, they can pulse the respective switch Off. If a single pole (non -2P) sensor's “On” or “Off” wires were connected to multiple switches, then all switches would work both relays together and lose the independent control.

LOW VOLTAGE RELAY OPTION WIRING

GRAY / BROWN – Connected during Occupied state

VIOLET / BROWN – Connected during Unoccupied state

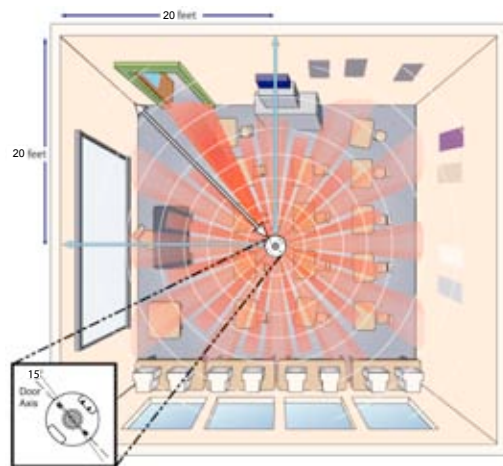
GREEN – Wire to transformer

Note: Sensor must be powered from both legs of the transformer therefore a “4th wire” is required.

TYPICAL CLASSROOM w/ 9' CEILING

1. Locate sensor 28 feet from entrance door. This would typically be 20 feet in both directions.
2. Rotate sensor so that mounting screws line up looking into corner of room.
3. Maximum beam distance will then line up with the door entrance at 28 feet.

Location Guide	
Ceiling Height	Dist In and Over
8 Ft.	17 Ft.
9 Ft.	20 Ft.
10 Ft.	22 Ft.



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.

sensor switch

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