



RDT™ WIRELESS

SPECIFICATIONS

SIZE: 4.5" Diameter (11.56 cm)
2.39" Deep (6.07 cm)

WEIGHT: 6 oz

MOUNTING: Ceiling Surface

3.5" Octagon Box
Single Gang Handy Box

COLOR: White

SILICONE FREE / ROHS COMPLIANT

WIRELESS FREQUENCY: 902 MHz (RDT™)

OPERATING TEMP

Standard: -4° to 122° F (-20° to 50° C)

Dual Tech (PDT): 25° to 122° F (-4° to 50° C)

RELATIVE HUMIDITY:

20 to 75% non-condensing

EXPECTED BATTERY LIFE:

~10 years (at factory defaults)

BATTERY TYPE: AA Lithium 1.5V, 3000 mAh

Note: Using replacement batteries with capacity of <3000 mAh will result in shorter battery life.

MODEL NUMBERS

CM 9 WR: Passive Infrared (PIR) Detection - Small Motion 360°

CM 10 WR: Passive Infrared (PIR) Detection - Large Motion 360°

CM PDT 9 WR: Dual Tech (PIR + Microphonics™) Detection - Small Motion 360°

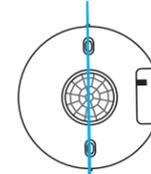
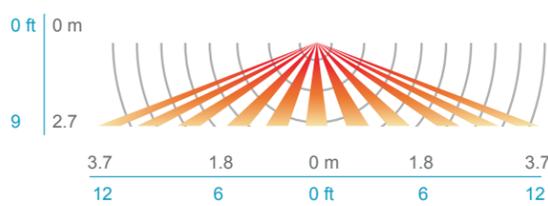
CM PDT 10 WR: Dual Tech (PIR + Microphonics™) Detection - Large Motion 360°

COVERAGE PATTERNS

SMALL MOTION 360° (model #s: CM 9 WR / CM PDT 9 WR)

- Small motion (e.g. hand movements) and large motion detection in a 360° coverage pattern around sensor
- 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
- Passive Dual Technology (also called Microphonics™) provides overlapping detection of sounds from human activity over the complete PIR coverage area. Advanced filtering is utilized to prevent non-occupant noises from keeping the lights on.

SIDE VIEW



Note: Sensor's screw axis is aligned with a long detection segment

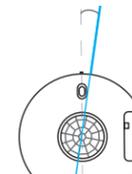
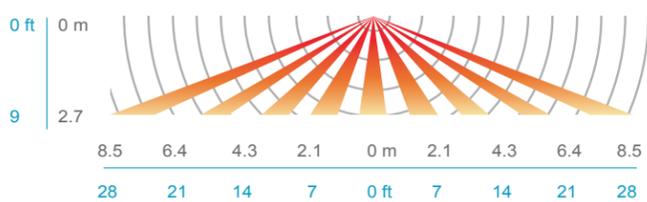
TOP VIEW



LARGE MOTION 360° (model #s: CM 10 WR / CM PDT 10 WR)

- Large motion (e.g. walking) detection in a 360° coverage pattern around sensor
- Provides 24 ft (7.32 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
- Passive Dual Technology (also called Microphonics™) provides overlapping detection of sounds from human activity over the complete PIR coverage area. Advanced filtering is utilized to prevent non-occupant noises from keeping the lights on.

SIDE VIEW



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

TOP VIEW

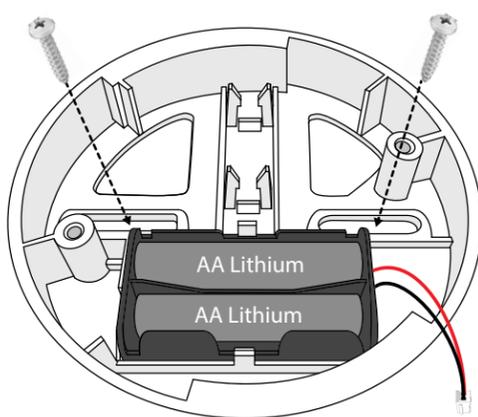


Note: Avoid locating a Dual Tech sensor in close proximity to the switch, as the sound of the relay could trigger the sensor back on. If the load always cycles immediately back on after turning off, the problem can be remedied by: 1) moving the sensor further from the **SPODMR WR**, or 2) setting the Occupancy Time Delay to value 14, which will disable the microphone.

INSTALLATION INSTRUCTIONS

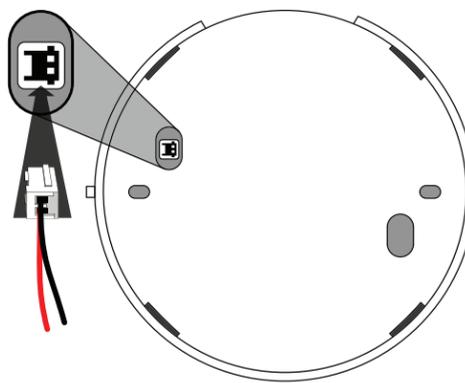
1. Screw battery extension ring to ceiling using included pointed tip screws (qty 2)

2. Install batteries (qty 2)

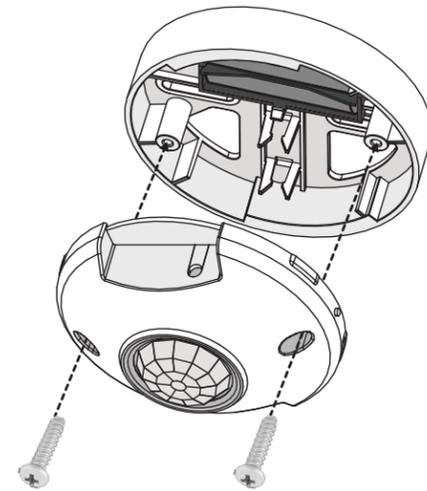


Note: A low battery status warning is indicated by paired SPODMR WR switches/load controllers. See switch instructions for details.

3. Plug battery connector cable into back of sensor



4. Screw sensor to battery extension ring using included flat tipped screws (qty 2)

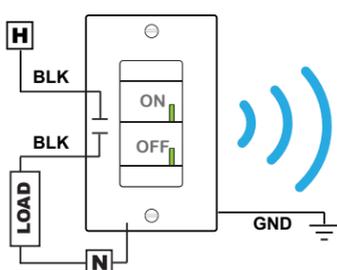


Note: Install decorative sensor lid by pushing up and rotating clockwise.

EXAMPLE APPLICATION DIAGRAM

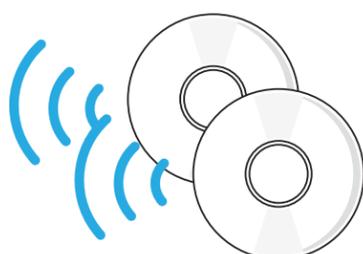
Line Powered Wireless Switch & Load Controller

(Model #: SPODMR WR)



Battery Powered Wireless Sensor(s)

(Model #: CM xx WR)



WIRELESS RANGE GUIDELINES

Line of Sight: >100 ft (31 m); e.g. corridor

Plasterboard / Dry Wood: 98 ft (30 m), max 5 walls

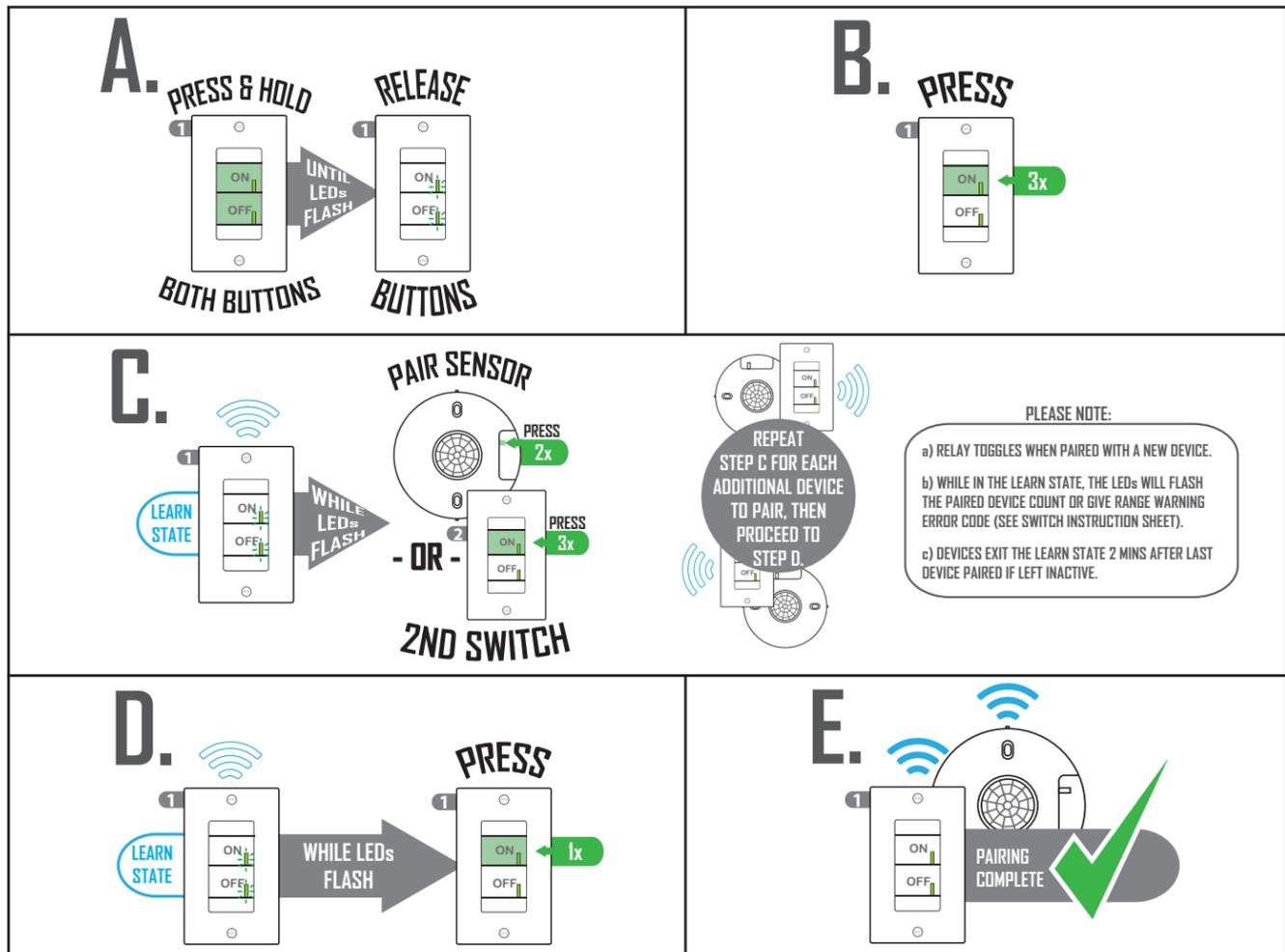
Concrete Walls / Ceiling: 32 ft (10 m), max 1 wall/ceiling

Scan QR code to access video demonstrations:



<http://bit.ly/1aszSqd>

PAIRING INSTRUCTIONS



Note: For LED Status Indicators & Error Codes, refer to the **SPODMR WR** instruction sheet.

SETUP INSTRUCTIONS

The following five procedures should be reviewed completely prior to setting up wireless sensors for use with **SPODMR WR** series wireless switch units. Note that some procedures involve using the push-button on the side of the sensor and some involve using the push-buttons on the wall switch. If setting up sensors for use with a different device, consult the installation guide for that device for pairing, setting the time delay, and setting the operational mode.

* Denotes factory setting

Switch Learn Mode (Pairing Mode) - see diagrams A-D above

The operational state when a switch unit will accept teach broadcasts from remote devices (e.g. sensors). Once received, the remote device will be added to the switch unit's list of learned (paired) devices.

- Step 1.** Press and hold both switch buttons for 3 seconds (i.e. until button LEDs start flashing together). See **Diagram A** above.
- Step 2.** Press switch's ON button 3 times (**Diagram B** above). Switch will now be in "learn mode"

Notes:

1. While in *Switch Learn Mode*, the switch unit's LEDs will rapid flash then slow blink the number of learned devices, and repeat (**Diagram C** above). See switch instruction sheet for more details regarding device count blinkout.
2. The unit will stay in *Switch Learn Mode* for 2 minutes after last device was learned, or until ON button is pressed (**Diagram D** above).
3. Each time a new device is learned by (e.g. paired with) the switch, the switch will toggle its relay. Wait a minimum of 4 seconds before pairing another device.

Sensor Teach Mode - see diagram C above

The operational state of a sensor when it will transmit its sensor ID to facilitate pairing with other devices.

- Step 1.** While switch is in *Switch Learn Mode*, press and release sensor button 2 times (**Diagram C** above)
- Step 2.** The sensor's LED will rapid flash when transmitting

Note:

1. Sensor resumes normal operation after one transmission is sent.
2. Use this procedure to unpair a sensor when a switch is in *Unlearn* mode.

Operational Modes

Selection of Auto-On, Manual-On, or Predictive w/ Expiration operating modes.

- Step 1.** Press and hold both switch buttons for 3 seconds (i.e. until button LEDs start flashing together)
- Step 2.** Press switch's ON button 5 times
- Step 3.** LED will begin flashing current setting (see selections 1-3 below)
- Step 4.** To change setting, press switch's ON button the number of times corresponding to the new desired setting from the below choices:

- 1 - Auto-On:**
Load will automatically turn on when occupied and off when vacant. Pressing OFF will turn the load off and disable occupancy detection until ON is pressed.
- 2 - Manual-On/Vacancy (*default for -SA option units):**
Sensor functions as a vacancy detector, turning load off after occupancy is no longer detected. Load must be turned on manually by pressing ON button each time the room is entered. After the sensor times out, there is a 10 second grace period in which detection of occupancy will automatically turn the load back on.
- 3 - Predictive Mode w/ Expiration (*default for non-SA units):**
Load will automatically turn on when occupied and off when vacant. Load can be overridden to off by pressing OFF button. The load will remain off if the room remains occupied. However, after the room becomes vacant, the switch will revert back to automatic on/off operation after *Occupancy Time Delay* expires.

- Step 5.** Switch's LED will flash back current setting (repeats 3 times, then exits)



Occupancy Time Delay

The length of time a paired **SPODMR WR** switch's relay will remain closed after the last occupied transmission from a sensor has been received. For **PIR** sensors, the *Occupancy Time Delay* can be set from the sensor (see below steps) or the switch (see **SPODMR WR** instruction sheet).

For **Dual Tech** sensors, the *Occupancy Time Delay* must be set from the sensor (see below steps) and only **after it is paired** with the **SPODMR WR** switch.

- Step 1.** Press and release sensor button 4 times
- Step 2.** LED will begin flashing current setting (see selections 1-13 below)
- Step 3.** To change setting, press sensor button the number of times corresponding to the new desired setting from the below choices:

1 - 30 sec	5 - 10.0 min*	9 - 20.0 min	13 - 30.0 min
2 - 2.5 min	6 - 12.5 min	10 - 22.5 min	
3 - 5.0 min	7 - 15.0 min	11 - 25.0 min	
4 - 7.5 min	8 - 17.5 min	12 - 27.5 min	

- Step 4.** LED will flash back new setting (repeats 3 times, then exits)

Notes: The sensor *Heartbeat Setting* will automatically be adjusted to match this setting if under 5 minutes, and be set to 5 minutes for any higher setting.



Sensor Test Mode

Temporarily sets the *Occupancy Time Delay* on the sensor and any paired switches to 10 seconds. Sensor LED flashes every 5 seconds indicating if PIR occupancy was detected.

To **Enter (Exit)** test mode:

- Step 1.** Press and release sensor button 6 times
- Step 2.** Wait until LED begins to flash back
- Step 3.** Press and release sensor button twice to Enter test mode (or once to Exit test mode)

Notes:

1. *Sensor Test Mode* expires automatically after 10 min.
2. Dual Technology (Microphone) detections while in *Sensor Test Mode* will not reset 10 second time delay.
3. While in *Sensor Test Mode*, the sensor *Heartbeat Setting* will be 5 seconds.

ADDITIONAL SETTINGS & MODES



Heartbeat Settings

Frequency that the sensor will transmit status information.

- Step 1.** Press and release sensor button 3 times
- Step 2.** LED will begin flashing current setting (see selections 1-3 below)
- Step 3.** To change setting, press sensor button the number of times corresponding to the new desired setting from the below choices:

1 - 30 sec	2 - 2.5 min	3 - 5.0 min*
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- Step 4.** LED will flash back new setting (repeats 3 times, then exits)

Notes:

1. It is recommended that the *Heartbeat Setting* be left alone as it will automatically adjust if necessary with the *Occupancy Time Delay*.
2. A *Heartbeat Setting* set shorter than 5 min will reduce battery life.
3. If the *Occupancy Time Delay* is set to 10 minutes with a 5 minute sensor *Heartbeat Setting*, the "actual" time it will take for the sensor to turn the lights off after leaving a space is between 10 and 15 minutes, depending on how long after the last heartbeat transmission the space was vacated.



Microphone Enable/Disable (Dual Tech versions only)

- Step 1.** Press and release sensor button 7 times
- Step 2.** LED will begin flashing current setting (see selections 1-2 below)
- Step 3.** To change setting, press sensor button the number of times corresponding to the new desired setting from the below choices:

- 1 - Disable
- 2 - Enable*

- Step 4.** LED will flash back new setting (repeats 3 times, then exits)



Unlearn (Unpair)

When a teach broadcast is received by a switch from a remote device, it is removed from the unit's list of learned (paired) devices.

- Step 1.** Press and hold both switch buttons for 3 seconds (i.e. until button LEDs start flashing together)
- Step 2.** Press switch's ON button 4 times

Notes:

1. While in *Unlearn Mode*, the unit will rapid flash then slow blink the number of learned devices, and repeat.
2. Unit stays in *Unlearn Mode* for 2 minutes, or until **one** device is unlearned. Press sensor button 2 times to unlearn (unpair).
3. Each time a new device is unlearned by (e.g. unpaired with) the switch, the switch will toggle its relay.



Microphone Setback Time (Dual Tech versions only)

Maximum duration that only microphone detections (without any PIR detections) will keep the lights on.

- Step 1.** Press and release sensor button 5 times
- Step 2.** LED will begin flashing current setting (see selections 1-5 below)
- Step 3.** To change setting, press sensor button the number of times corresponding to the new desired setting from the below choices:

1 - 15 min	3 - 45 min	5 - Infinite
2 - 30 min	4 - 1 hr*	

- Step 4.** LED will flash back new setting (repeats 3 times, then exits)



Sensor Reset

Returns sensor to original factory settings.

- Step 1.** Press and release sensor button 9 times
- Step 2.** LED will flash once
- Step 3.** Press and release button 2 times
- Step 4.** LED will flash back twice (repeats 3 times, then exits and resets)



Switch Diagnostic / Reset / Unlearn All

Provides options to reset and/or unlearn currently paired remote devices. Also provides total paired and inactive device count information.

- Step 1.** Press and hold both switch buttons for 3 seconds (i.e. until button LEDs start flashing together)
- Step 2.** Press switch's ON button 9 times
- Step 3.** LED will begin flashing current setting (see selections 1-8 below)
- Step 4.** To change setting, press switch's ON button the number of times corresponding to the new desired setting from the below choices:

- 1 - Do nothing*
- 2 - Reset settings to factory default and unlearn all
- 4 - Unlearn all paired devices
- 5 - Reset settings to factory defaults (without unlearning devices)
- 6 - Learned Device Count
- 7 - Inactive Sensor Count (Paired sensors that have stopped transmitting)
- 8 - Unlearn All Inactive Sensors

- Step 5.** LEDs will flash back current setting (repeats 3 times, then exits)



Switch Status LED Operation

Controls the normal operation of the button's LEDs on the switch unit.

- Step 1.** Press and hold both switch buttons for 3 seconds (i.e. until button LEDs start flashing together)
- Step 2.** Press switch's ON button 11 times
- Step 3.** LED will begin flashing current setting (see selections 1-2 below)
- Step 4.** To change setting, press switch's ON button the number of times corresponding to the new desired setting from the below choices:

- 1 - LEDs enabled* (indicates current status of relay)
- 2 - LEDs disabled

- Step 5.** LED will flash back current setting (repeats 3 times, then exits)

Note: In disabled mode, LEDs will still flash when button is pushed, device is in *Learn* or *Unlearn* mode, or device is flashing back a setting or error code.