

PRODUCT OVERVIEW

Sensor Switch introduces its RDT Wireless occupancy sensor and switch. The **CM PDT xx WR** is a wireless, battery operated ceiling sensor that incorporates both Passive Infrared (PIR) and Sensor Switch's patented Microphonics™ dual technology making this sensor ideal for rooms where line of site is obstructed. The battery powered sensor has an estimated battery life of 10 years (at default settings).

The **SPODMR WR** is a stylish, easy to install, and simple to use Wall Switch for use with synched **CM PDT xx WR** occupancy sensors or other RDT dimming interface modules, kinetic switches, or plug-load controllers. Designed to replace a standard wall toggle switch, the **SPODMR WR** wires to the standard wiring already present in the wall switch box. Once wired, a few button pushes will synch the switch to desired RDT devices.

OPERATION — The **CM PDT xx WR** sensors have Passive Dual Technology (PDT), first seeing motion using 100% digital Passive Infrared (PIR) detection and then engaging Microphonics™ to hear sounds that indicate continued occupancy. When occupancy is detected, a wireless signal is transmitted to compatible wireless receiver/relay devices that switch the lighting load on.

The **SPODMR WR** wireless switch contains a line-voltage relay and communicates wirelessly with one or more synched sensors as well as other switches. The relay has a user adjustable time delay (30 seconds - 30 minutes) that counts down after the synched sensor detects occupancy and transmits that status to the switch. The switch then closes its relay and turns the lights ON. It also resets its timer and begins a new countdown. If the timer within the Switch expires, the relay will be opened to turn lights OFF. Multiple sensors or RDT devices may be synched with the RDT Switch.

The **SPODMR WR** is also ideal for three-way applications. Since multiple RDT devices can be paired, simply add a second wall switch to provide quick and easy switching from multiple locations.

KEY FEATURES

CM xx WR:

- RDT 902 MHz Compliant
- 10 Year Battery Life (at defaults)
- 360° Coverage Pattern
- Patented Dual Technology with PIR / Microphonics Detection
- Push-Button Programmable
- Adjustable Time Delays
- No Field Calibration or Sensitivity Adjustments Required
- Green LED Indicator
- Push-Button Pairing with Compatible Devices
- Retrofit Applications

SPODMR WR:

- 100% wireless operation w/ synched CM xx WR, RDT, Plug-Load controller, and/or RDT dimming interface module
- 2 Green LED Indicators
- Line power and load wires are interchangeable - impossible to wire backwards (patented)
- Compatible w/ LEDs, Electronic & Magnetic Ballasts, CFLs, & Incandescents
- Push-Button Programmable
- Adjustable Time Delays
- Matching wallplate included
- Retrofit Applications

WIRELESS SENSOR & SWITCH



WIRELESS BATTERY POWERED
CEILING MOUNT SENSOR



WIRELESS INFRARED (PIR) OR DUAL TECH (PDT)

WIRELESS WALL SWITCH

OPTIONS

CM xx WR Only:

PASSIVE DUAL TECHNOLOGY (PDT)

Ideal for rooms with obstructions - e.g. bathrooms with stalls and open office cubicle areas

- Incorporates PIR and Microphonics (patented)
- Utilizes Automatic Gain Control (AGC) to self-adapt the sensor to its environment
- 100% passive detection, no potential for interference with other building systems

SPODMR WR Only:

COLOR

Available in 5 colors

- White, Ivory, Gray, Light Almond, and Black

WIRELESS RANGE GUIDELINES

Line of Sight: 98.43 ft (30 m); e.g. corridor
Plasterboard / Dry Wood: 98.43 ft (30 m), max 5 walls
Concrete Walls / Ceiling: 32.81 ft (10 m), max 1 wall/ceiling

SPECIFICATIONS

CM xx WR:

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

BATTERY TYPE: AA Lithium (1.5V)

EXPECTED BATTERY LIFE: ~10 years (at factory defaults)

SPODMR WR:

SIZE: 2.74" H x 1.68" W x 1.63" D
6.96 cm x 4.27 cm x 4.14 cm
(not including ground strap)

WEIGHT: 5 oz

MOUNTING: Single gang switch box

ELECTRICAL Specs

SPODMR WR:

MAXIMUM LOAD:
800 W @ 120 VAC / 1200 W @ 277 VAC
(Fluorescent/Tungsten)
360 W @ 120 VAC / 830 W @ 277 VAC (LED)
1A @ 24 VAC/VDC

MINIMUM LOAD: None

MOTOR LOAD: 1/4 HP

LOAD FREQUENCY: 50/60 Hz

ENVIRONMENTAL Specs

OPERATING TEMP

CM xx WR: -4° to 122° F (-20° to 50° C)

CM PDT xx WR: 25° to 122° F (-4° to 50° C)

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

RELATIVE HUMIDITY

20 to 90% non-condensing

SILICONE FREE

ROHS COMPLIANT

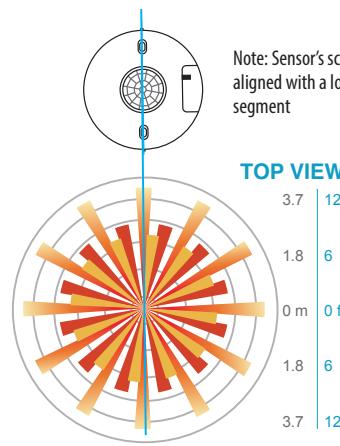
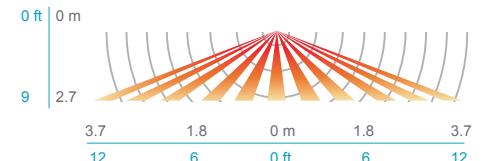
WIRELESS FREQUENCY: 902 MHz (RDT™)

COVERAGE PATTERNS

STANDARD RANGE 360° (model #: 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
- Units with -PDT (Passive Dual Technology) option (also called Microphonics™) provide 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

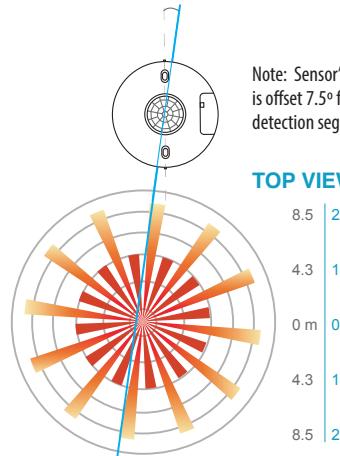
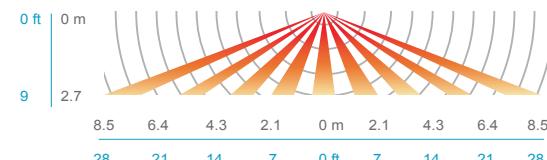


Note: Sensor's screw axis is aligned with a long detection segment

EXTENDED RANGE 360° (model #: CM 10 WR / CM PDT 10 WR)

- Large motion (e.g. walking) detection in a 360° coverage pattern around sensor
- 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
- Units with -PDT (Passive Dual Technology) option (also called Microphonics™) provide 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

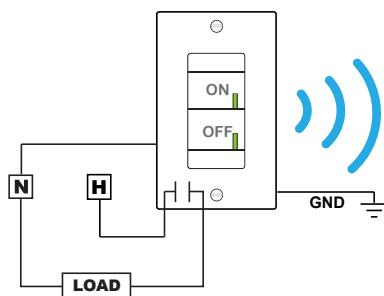


Note: Sensor's screw axis is offset 7.5° from a long detection segment

EXAMPLE APPLICATION DIAGRAMS

Note: All devices must be RDT™ Wireless compliant

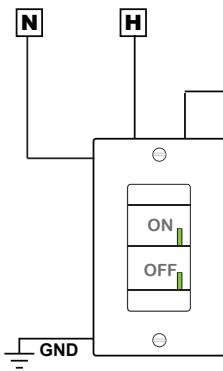
**Line Powered Wireless Switch & Load Controller
(SPODMR WR)**



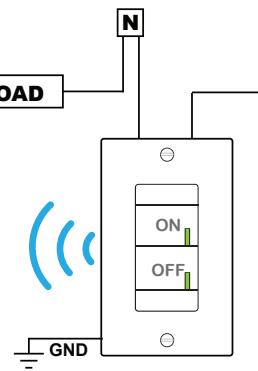
**Battery Powered Wireless Sensor
(CM xx WR)**



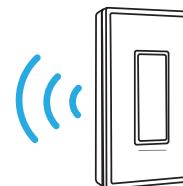
**Battery Powered Wireless Sensor(s)
(Model #: CM xx WR)**



**Line Powered Wireless Switch & Load Controller
(Model #: SPODMR WR)**



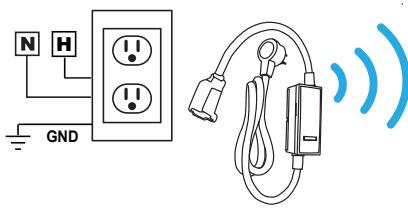
**Line Powered Wireless Switch
(Model #: SPODMR WR)**



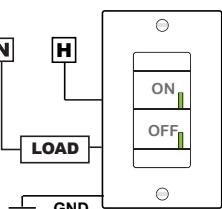
**Energy Harvesting Wireless Switch
(Model #: XCR 1PWH)**

*Notes: Load is only switched by one SPODMR WR device. 2nd unit is only used as a secondary manual switch and therefore does not require connection to the load.

**Line Powered Wireless Receiver / Plug Controller
(Model #: XCR PSM)**



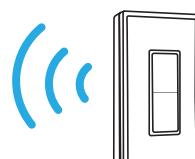
**Line Powered Wireless Switch
(Model #: SPODMR WR)**



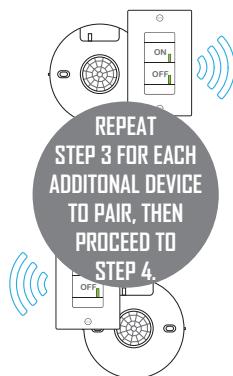
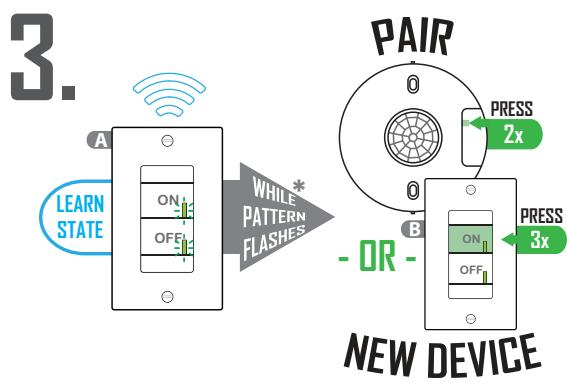
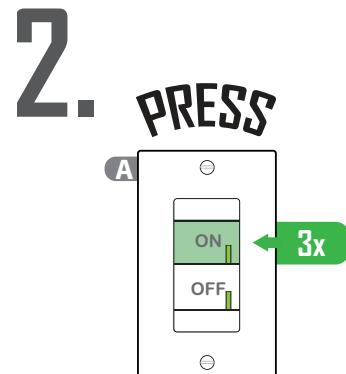
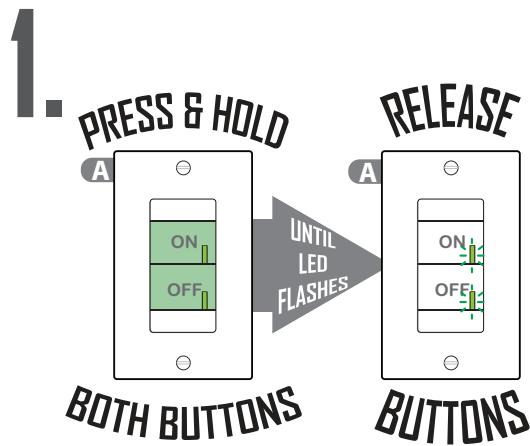
**Battery Powered Wireless Sensor
(Model #: CM xx WR)**



**Energy Harvesting Wireless Switch
(Model #: XCR 1PWH)**

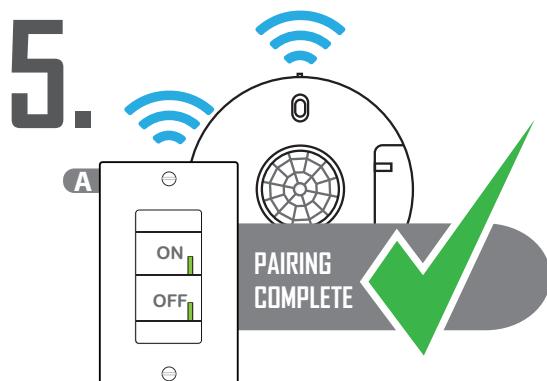
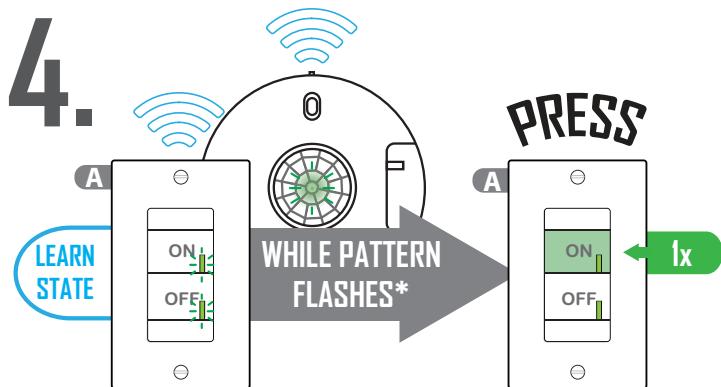


PAIRING INSTRUCTIONS



PLEASE NOTE:

WHILE IN THE LEARN STATE, THE LEDs PATTERN FLASH*.
 DEVICES EXIT THE LEARN STATE 2 MINS AFTER LAST DEVICE PAIRED OR LEFT INACTIVE. RETURN TO STEP 1 IN SUCH CASES.



***NOTE:** LED flash pattern is as follows - LEDs rapid flash together, pause, slow flash 1x for each learned (paired) device, wait 2 seconds, and then repeat. (e.g., for 4 paired devices the LEDs would rapid flash, pause, slow flash 4x, pause, then repeat). A double rapid flash indicates a paired device may be at the limit of the wireless range.

CM xx WR OPERATIONAL SETTINGS

Use push-button on side of sensor to change settings.

* Denotes factory setting

**Applies to Dual Technology (-PDT) sensors only

Teach

Transmits sensor ID to facilitate pairing with other devices.

Step 1. Press and release button 2 times

Step 2. LED will rapid flash when transmitting

Note: Sensor resumes normal operation after one transmission is sent

Heartbeat Settings

Frequency that the sensor will transmit status information.

Step 1. Press and release button 3 times

Step 2. LED will flash back current setting

Step 3. To change setting, press button the number of increments of the new setting from below list:

1 - 30 sec 2 - 2.5 min 3 - 5.0 min*

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

Microphone On Time**

Duration that the microphone will stay on after the last occupancy transmission.

Step 1. Press and release button 4 times

Step 2. LED will flash current setting

Step 3. To change setting, press button the number of increments of the new setting from below list:

1 - 45 sec	4 - 7.75 min	7 - 15.25 min
2 - 2.75 min	5 - 10.25 min*	
3 - 5.25 min	6 - 12.75 min	

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

Microphone Setback Time**

Duration the microphone stays on without sensor ever detecting motion via PIR.

Step 1. Press and release button 5 times

Step 2. LED will flash current setting

Step 3. To change setting, press button the number of increments of the new setting from below list:

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)

Test Mode

Temporarily sets heartbeat time to 5 sec and flashes LED whenever occupancy is detected.

To **Enter** test mode:

Step 1. Press and release button 6 times

Step 2. Wait until LED begins to flash back

Step 3. Press and release button twice

To **Exit** test mode:

Step 1. Press and release button 6 times

Step 2. Wait until LED begins to flash back

Step 3. Press and release button once

Notes:

1. Test mode expires automatically after 10 min

2. Paired SPODMR WR units will also enter and exit Test Mode simultaneously with sensor

3. Dual Technology disabled while in Test Mode

Reset

Returns unit to original factory settings.

Step 1. Press and release button 9 times

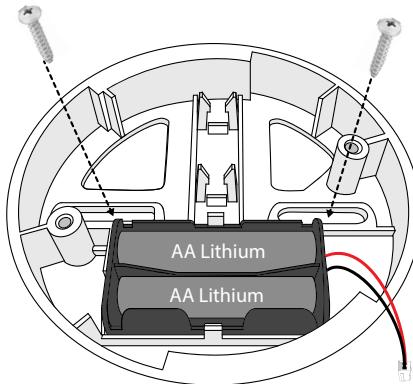
Step 2. LED will flash once

Step 3. Press and release button 2 times

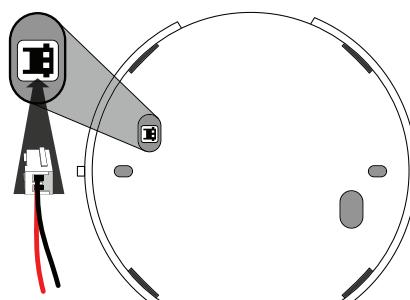
Step 4. LED will flash back twice (repeats 3 times, then exits and resets)

INSTALLATION INSTRUCTIONS

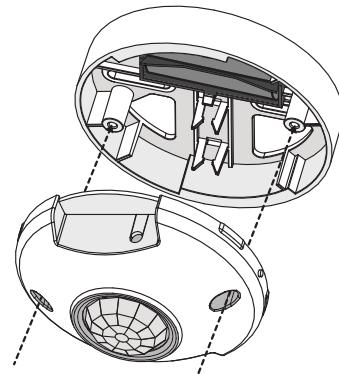
1. Screw battery extension ring to ceiling using included pointed tip screws (qty 2)



2. Plug battery connector into back of sensor



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



SPODMR WR OPERATIONAL SETTINGS

Use ON/OFF buttons on switch to change settings; * denotes factory setting.

Occupancy Time Delay

Duration the unit's relay will remain closed after the last occupied transmission is received. Note, there must be at least one paired sensor for the unit to switch off automatically.

Step 1. Press and hold both buttons for 3 seconds

Step 2. Press ON button 2 times

Step 3. LED will flash back current setting

Step 4. To change setting, press ON button the number of times corresponding to the new setting below:

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

(times do not include additional 5 sec buffer period)

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

Learn Mode (Pairing Mode)

The operational state when the unit is accepting teach broadcasts from remote devices. Once received, the remote device will be added to the unit's list of learned (paired) devices.

Step 1. Press and hold both buttons for 3 seconds

Step 2. Press ON button 3 times

Notes:

1. While in learn mode, the unit will rapid flash then slow blink the number of learned devices, and repeat.
2. Device stays in learn mode for 2 minutes after last device was learned, or until ON button is pressed.

Unlearn (Unpair)

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

Step 1. Press and hold both buttons for 3 seconds

Step 2. Press 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.

Sequence of Operation

Selection of Auto On, Manual On, or Predictive operating modes.

Step 1. Press and hold both buttons for 3 seconds

Step 2. Press ON button 5 times

Step 3. LED will flash back current setting

Step 4. To change setting, press ON button the number of times corresponding to the new setting below:

1 - Auto On: Unit will turn on when an occupancy message is received from a paired sensor.

2 - Manual On/Vacancy: Unit will only turn on when ON button is pressed. After occupancy time delay expires, there is an additional 10 second grace period during which detected occupancy will turn the unit back on.

3 - Predictive Mode*: Auto On operation; however, if OFF button is pressed the unit will stay off and will not revert to Auto On from occupancy until the occupancy time delay has expired.

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

Reset / Unlearn All

Returns unit to original factory settings and/or unlearn all currently paired remote devices.

Step 1. Press and hold both buttons for 3 seconds

Step 2. Press ON button 9 times

Step 3. LED will flash back current setting

Step 4. To change setting, press ON button the number of times corresponding to the new setting below:

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)

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

Status LED Operation

Controls whether or not a button's LED remains on when the button is not being pressed.

Step 1. Press and hold both buttons for 3 seconds

Step 2. Press ON button 11 times

Step 3. LED will flash back current setting

Step 4. To change setting, press ON button the number of times corresponding to the new setting below:

1 - LEDs enabled*

2 - LEDs disabled (unless button is pressed, device is in learn or unlearn mode, or device is flashing back current setting)

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

Test Mode

Temporarily sets the occupancy timeout to 10 secs to enable quick operation and walk testing.

Step 1. Press and hold both buttons for 3 seconds

Step 2. Press ON button 12 times

Step 3. LED will flash back current setting

Step 4. To change setting, press ON button the number of times corresponding to the new setting below:

1 - Disabled*

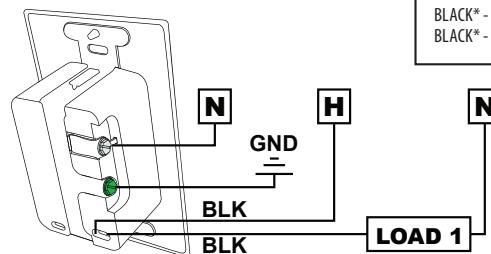
2 - Enabled

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

SPODMR WR WIRING & INSTALLATION

Installation:

1. Turn off power to switch box at the circuit breaker.
2. Unscrew GREEN screw and connect Ground wire. Tighten screw on the wire.
3. Unscrew SILVER screw on switch and connect Neutral wire. Tighten screw on the wire.
4. Connect one BLACK wire to Line Input. Use a wire nut to secure connection.
5. Connect second BLACK wire to Load Output. Use a wire nut to secure connection.
6. Turn power back on to switch box.



WIRE COLOR KEY

120/277 VAC WIRING

BLACK* - Line Input BLACK* - Load Output } *BLACK wires can be reversed

ORDERING LOGIC

(example: CM PDT 9 WR)

Series	Lens	WR	Photocell	Packaging
CM Passive Infrared	9 Standard Range 360°	WR Wireless	Blank Standard	Blank Standard
CM PDT Dual Technology	10 Extended Range 360°		P Photocell	

(example: SPODMR WR WH)

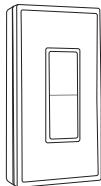
Series	Operating Mode	Voltage	Color	Packaging
SPODMR WR Wireless Wall Switch	Blank Auto-On (default)	Blank 120/277 VAC	WH White	Blank Standard
	SA Manual-On		IV Ivory	

KIT OPTION

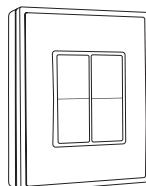
(example: SPODMR WR WH K1)

Series	Color	Kit Option	Packaging
SPODMR WR Wireless Wall Switch	WH White	K1 Incl. CM 9 WR	Blank Standard
	IV Ivory	K2 Incl. CM 10 WR	
	GY Gray	K3 Incl. CM PDT 9 WR	
	AL Lt. Almond	K4 Incl. CM PDT 10 WR	
	BK Black		

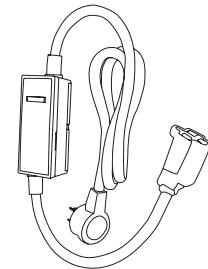
COMPATIBLE RDT ROCKER SWITCHES & PLUG-LOAD CONTROLLER



Rocker Switch
902MHz
Model: XCR 1PWH
CI Code: *220UP4



Dual Rocker Switch
902MHz
Model: XCR 2PWH
CI Code: *220W90



Plug-Load Controller
902MHz
Model: XCR PSM
CI Code: *222GFW



COMPATIBLE xCella Wireless™ REMOTE MODULE

PRODUCT OVERVIEW

The xCella Remote Module is a wireless load controller to give you control right where you need it. This intelligent relay with a simple multi function button programmer comes in several versions with contact inputs and outputs. The xCella Remote Module comes as either a switching or a 0-10V dimming relay with optional dry contact inputs and/or dry contact outputs.

FEATURES

- Quick and easy installation
- Optional dry contact inputs for occupancy sensors
- Optional photocell input
- Optional dry contact output
- Cost effective
- 900 MHz ISM band frequency
- 90 ft max. indoor range

ORDERING INFORMATION

Remote Module single pole relay
Model: XCR RM RL1 SNI
CI Code: *221AXN

Remote Module single pole 0-10V dimming relay
Model: XCR RM RL1 DNI
CI Code: *220HXL



Specifications

Dimensions: 2.53" W x 3.38" H x 1.83" D (not including 1/2" chase nipple)
Power: 120/277VAC
Relay: 30A 277VAC ballast
20A 120V incandescent
1.5hp at 120VAC
3hp at 277VAC

Max. Humidity: 10 to 90% non-condensing
Ambient Temperature: 32 to 104° F (0 to 40° C)
Protocol: RDT
TX Power Max.: 10mW
Certifications: FCC ID: SZV-STM300U
IC: 5713A-STM300U

COMPLIANCE INFORMATION

SPODMR WR: FCC: VR8-SSIINTR002
IC: 7791A-SSIINTR002

CM xx WR: FCC: VR8-SSIINTR003
IC: 7791A-SSIINTR003

These devices comply with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The intentional radiator is identical in all variants of the apparatus.

CAUTION: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

CAN RSS-Gen/CNR-Gen:

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada.

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada.

Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.



TITLE 24

ASSEMBLED in U.S.A.

5 YEAR WARRANTY

WARRANTY

5-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

AcuityBrands

Expanding the boundaries of lighting™

READ AND FOLLOW ALL SAFETY INSTRUCTIONS!

SAVE THESE INSTRUCTIONS AND DELIVER TO OWNER AFTER INSTALLATION

- To reduce the risk of death, personal injury or property damage from fire, electric shock, falling parts, cuts/abrasions, and other hazards please read all warnings and instructions included with and on the fixture box and all fixture labels.
- Before installing, servicing, or performing routine maintenance upon this equipment, follow these general precautions.
- Installation and service should be performed by a qualified licensed electrician.
- Maintenance should be performed by qualified person(s) familiar with the products' construction and operation and any hazards involved. Regular maintenance programs are recommended.
- **DO NOT INSTALL DAMAGED PRODUCT!** This product has been properly packed so that no parts should have been damaged during transit. Inspect to confirm. Any part damaged or broken during or after assembly should be replaced.



CAUTION: RISK OF PRODUCT DAMAGE

- ✓ Electrostatic Discharge (ESD): ESD can damage product(s). Personal grounding equipment should be worn during all installation or servicing of the unit.
- ✓ Do not touch individual electrical components, as this can cause ESD and affect product performance.
- ✓ Do not stretch or use cable sets that are too short or are of insufficient length.
- ✓ Do not tamper with contacts.
- ✓ Do not modify the product.
- ✓ Do not change or alter internal wiring or installation circuitry.
- ✓ Do not use product for anything other than its intended use.



WARNING - RISK OF ELECTRIC SHOCK

- ✓ Disconnect or turn off power before installation or servicing.
- ✓ Verify that supply voltage is correct by comparing it with the product information.
- ✓ Make all electrical and grounded connections in accordance with the National Electrical Code (NEC) and any applicable local code requirements.
- ✓ All wiring connections should be capped with UL approved recognized wire connectors.
- ✓ All unused connector openings must be capped.



WARNING - RISK OF BURN or FIRE

- ✓ Do not exceed maximum wattage, ratings, or published operation conditions of product.
- ✓ Do not overload.
- ✓ Follow all manufacturer's warnings, recommendations and restrictions to ensure proper operation of product.



CAUTION - RISK OF INJURY

- ✓ Wear gloves and safety glasses at all times when installing, servicing or performing maintenance.