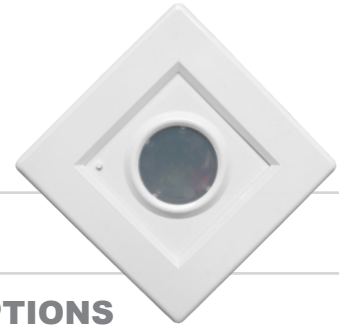
sensorswitch®

RMR PC



ON/OFF PHOTOCELL SENSOR
RECESSED MOUNT • LINE VOLTAGE

SPECIFICATIONS

FEATURES
- Auto Set-Point Calibration Mode
- Compatible w/ LEDs, Electronic & Magnetic Ballasts, CFLs, & Incandescents
- Self-Contained Relay, No Power Pack Needed
- Digital Set-Point Control
- Interchangeable Hot & Load Wires, Impossible to Wire in Reverse
- Push-Button Programmable
- Adjustable Transition Delays
- 100 hr Lamp Burn-in Timer
- Green LED Indicator

PHYSICAL SPECS
SIZE 4.40" Square (11.18 cm)
WEIGHT 6 oz
MOUNTING 4" x 4" square junction box with or without two-gang mudring
COLOR White

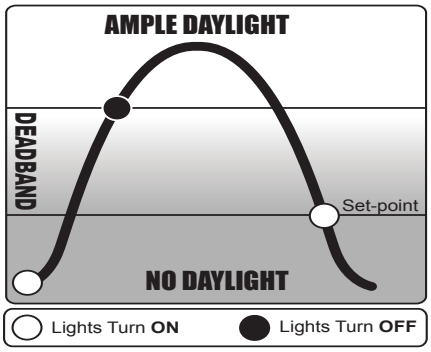
ELECTRICAL SPECS
MAXIMUM LOAD
800 W @ 120 VAC
1200 W @ 277 VAC
1500 W @ 347 VAC
5A @ 208 VAC
5A @ 240 VAC
5A @ 480 VAC
MINIMUM LOAD None
MOTOR LOAD 1/4 HP
FREQUENCY 50/60 Hz

ENVIRONMENTAL SPECS
OPERATING TEMP
14º to 160º F (-10º to 71º C)
RELATIVE HUMIDITY
20 to 90% non-condensing
SILICONE FREE
ROHS COMPLIANT

CSA LISTED
TITLE 24
ASSEMBLED in U.S.A.
5 YEAR WARRANTY

OVERVIEW
The **RMR PC Series** of On/Off Photocell sensors provides intelligent control of lighting for daylight harvesting applications. Ideal for public spaces with windows like vestibules, corridors, or bathrooms; the sensors work by monitoring daylight conditions in a room, then controlling the lighting so as to insure that adequate lighting levels are maintained. The **RMR PC** has on/off lighting control; turning off the lights when sufficient daylight is present and turning them on when additional lighting is necessary. The **RMR PC** Series sensors are line powered and can switch loads directly without the need for a power pack. Mounting is simple as the **RMR PC** housing is specifically designed to recess mount into standard 4" x 4" junction boxes. To add dimming control to the on/off control provided by the **RMR PC**, see the data sheet on the **RMR PC ADC** sensor.

OPERATION
The lights turn on when the space's overall light level drops below a programmable threshold called a set-point. The lights turn off when light is above the set-point plus a 10 to 20% safety factor and deadband. The safety factor will prevent the system from cycling when the light level is very near the set-point. The deadband is the level of light contributed by the artificial lights being controlled. This level is tracked so if the lighting conditions change (for example a lamp burns out) the point at which the lights turn off is adapted accordingly. If the photocell is looking up at skylights and can not view the lights being controlled, there is no deadband and the sensor is said to be working open loop. There is also an adaptive 5-25 minute delay before the photocell turns the lights off to prevent the system from cycling on a cloudy day.



DUAL ZONE (DZ) OPTION
With the DZ option, a second independent relay is provided to control an additional zone of lighting according to one of two operational modes. The default mode, referred to as *Duo* operation, is ideal for A/B (also called inboard/outboard) switching applications as it determines the necessary on/off combination of the zones in order to maintain adequate lighting. The alternate mode uses a relative set-point for the second zone that is a selected percentage higher than the primary zone's set-point. This mode accounts for the fact that daylight contribution diminishes as the distance from the source (windows) increases. Called *percentage* operation, this second mode is ideal for classrooms with individually controlled parallel rows of lights. A single shared set-point is used by both modes and can be user programmed or automatically determined by the sensor itself.

Note: The DZ option is not available with the 208/240 VAC (208) or the 480 VAC option (480). These options requires both relays to simultaneously switch in order to control the two phases of the load together. The DZ option switches the two relays independently.

OPTIONS

347 VAC (347)
- Allows sensor to be powered from and switch 347 VAC

208 / 240 VAC (208)
- Allows sensor to be powered from and switch 208/240 VAC two phase loads

480 VAC (480)
- Allows sensor to be powered from and switch 480 VAC two phase loads

LOW TEMP/HIGH HUMIDITY (LT)
- Sensor electronics are coated for corrosion resistance
- Operates down to -40º F/C

ORDERING INFO

RMR PC [DUAL ZONE] [VOLTAGE] [TEMP/HUMIDITY]

DUAL ZONE*	VOLTAGE	TEMP/HUMIDITY
Blank = Single Zone	Blank = 120/277 VAC	Blank = Standard
DZ = Dual Zone	347 = 347 VAC	LT = Low Temp
	208 = 208/240 VAC	
	480 = 480 VAC	

*Not available with 208 or 480 option

AUTOMATIC SET-POINT CALIBRATION

LIGHT LEVEL SET-POINT

The sensor functions by comparing the amount of daylight available with a defined acceptable lighting level. This threshold, called the set-point, is utilized in all daylight harvesting lighting control decisions. The sensor can find its optimum set-point via the **Automatic Set-Point Programming** mode. In this mode, the sensor sets the minimum light level to be the amount contributed by the artificial lights being controlled. It is assumed that the space is properly lit by design, however, if this is not the case the set-point may be easily adjusted to the occupant's preferences. All modes and settings are entered digitally via a push button sequence. Once programmed, the exact value of the set-point (in foot candles) can be read out from the sensor via a series of LED flashes.

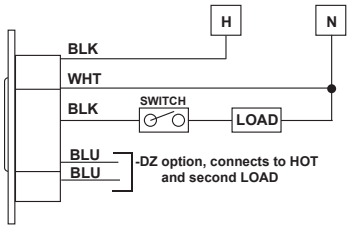
DIGITAL SET-POINT CONTROL

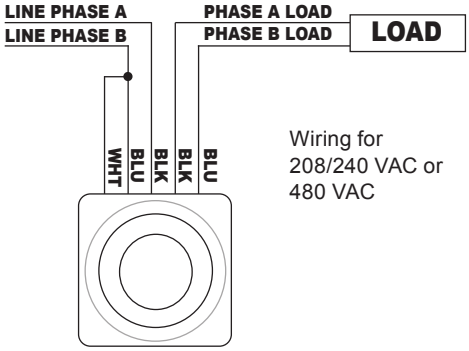
Each sensor contains a microcontroller that enables the user to engage the Automatic Set-Point Programming mode or to manually set / adjust the set-point. The manual process involves calculating and inputting the exact foot-candle value of the desired set-point into the sensor. It is important to note that the set-point is the light level required at the face of the sensor and that this value will be much different than the level required at a work surface. Typically, light levels at the ceiling are 3 to 5 times less than the work surface. For example, if 50 fc is desired at the work surface, the sensor should be set at 10 fc. For best results, measure the levels at both locations using a foot-candle meter before programming the set-point.

WIRING (DO NOT WIRE HOT)

The sensor uses Sensor Switch's patented reversible wiring; black to hot and black to load (DZ, 208, and 480 options add a pair of blue wires for the second zone or phase). For 120/277, and 347 VAC the white wire connects to neutral. Alternatively, for 208 and 480 VAC versions the white wire connects to either the phase 1 or phase 2 line input. Black wires are replaced with Red wires for 347 VAC.

Wiring for 120/277 and 347 VAC



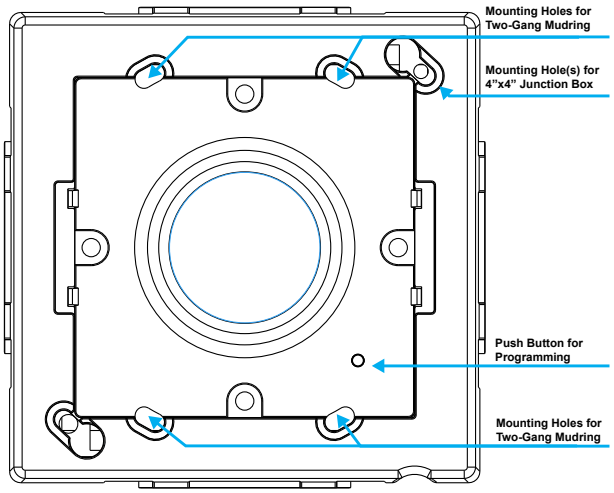


Wiring for 208/240 VAC or 480 VAC

Note: Once installed, the sensor may take a few minutes to become active. Additionally, there is a 45 second delay before switching from off to on (this delay is 55 seconds when connected to 50 Hz).

INSTALLATION

- The Recessed Mount enclosure is designed to fit inside a 4" square junction box* (minimum box depth 2.125") with or without a two-gang mud ring.



PROGRAMMING

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

WARNING

Fire Hazard Caution: Maximum Lamps 1500 Watts, Type 347 VAC.
Attention: Risque d'incendie : Pauissance Maximales Des Lampes 1500 Watts, Type 347 VAC.
Warning: The units are intended to be installed by a qualified person with properly rated branch circuit protectors as per applicable local and national regulations (CEC, NEC).

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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.

TS-RMR-018B

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