

TYPICAL APPLICATIONS

- Daylight Harvesting
- Combination On/Off Switching & Continuous Dimming of a 0-10 VDC Dimmable Ballast

FEATURES

- Self-contained Relay, no Power Pack needed
- Digitally Programmable via simple push-button commands
- Dimming sinks up to 20 mA
- No Minimum Load Requirements
- Green LED Activity Indicator
- 100 Hour Lamp Burn-in Timer Mode

AVAILABLE OPTIONS

- 347 VAC (-3)
- Low Temp/Hi Humidity (-LT)

SPECIFICATIONS

- Size: CMRB: 3 5/8" x 3 5/8" x 1 1/4" (9.2 cm x 9.2 cm x 3.175 cm)
CMR: 4.55" Dia., 1.55" Deep (11.56 cm Dia., 3.94 cm Deep)
- Weight: 5 Oz (CMRB), 5 Oz (CMR)
- Sensor Color: White
- CMRB Mounting: 1/2 inch knockout
- CMR Mounting: Round Fixture Box or Single Gang Handy 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)
- Load Rating:
800 W @ 120 VAC
1200 W @ 277 VAC
1500 W @ 347 VAC
- 1/4 HP Motor Load
- Frequency: 50/60 Hz
- UL, CUL, and Title 24 Compliant
- 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 -40° F (-40° C)

CMR-PC-ADC CMRB-PC-ADC

w/ Auto Set-Point
Programming!



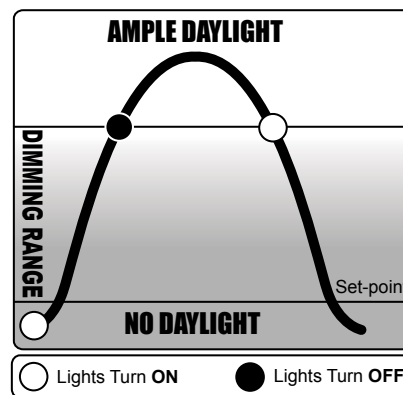
The *CMR(B)-PC-ADC Series* combines the CMR(B)-PC On/Off Photocell sensor with the CMR(B)-ADC Automatic Dimming Control sensor to provide the industry's most intelligent control of lighting for daylight harvesting applications. Ideal for public spaces with windows like vestibules, corridors, or bathrooms; 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 *CMR(B)-PC-ADC Series* sensors are line powered and can switch loads directly without the need for a Power Pack. The CMR version sensors are ceiling mounted, while the CMRB versions are specifically designed to mount on the end of a linear fluorescent fixture.

LIGHT LEVEL SET-POINT

The sensor functions by comparing the amount of daylight available with a defined acceptable lighting level. This threshold is called the "set-point" and 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 takes light readings at different dim settings and then 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.

DAYLIGHT HARVESTING OPERATION

When no daylight is available, the sensor allows the dimmable ballast to operate at its full bright level (10 VDC). As daylight increases and begins to contribute to the overall light level of the room, the Automatic Dimming Control (-ADC) feature starts dimming the ballast proportionally. When sufficient daylight is present to maintain the set-point without any contribution from the lights, the sensor will switch off the ballast completely. The lights will remain off until the daylight level drops below the set-point. At this point, the lights will be turned on with the ballast set at its full dim level. As the daylight levels fall further, the -ADC feature will again take control of the ballast; reducing the dim level (increasing the brightness) in order to achieve the necessary light level. At the point when all daylight contribution is gone, the ballast will be back at its full bright level. To make the series of adjustments unnoticeable to room occupants, a 10 to 20% safety factor is maintained to prevent the system from cycling when the light level is very near the set-point. There is also a 20 minute delay before the sensor switches the lights off to prevent the system from cycling on a cloudy day.



Model Numbering System: [SERIES #]-[VOLTAGE]-[TEMP/HUMIDITY]

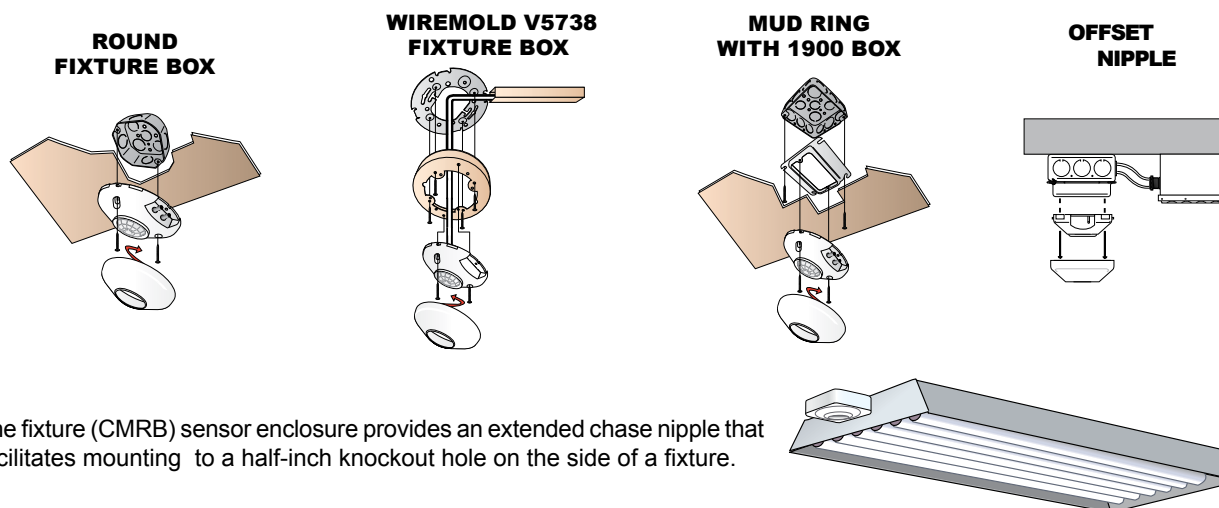
SERIES #	DESCRIPTION	VOLTAGE	TEMP/ HUMIDITY
CMR-PC-ADC	On/Off & Automatic Dimming Photocell Sensor - Ceiling Mount, Line Voltage	Blank = 120-277 VAC -3 = 347 VAC	Blank = 14° to 160°F LT = -40° to 160° F
CMRB-PC-ADC	On/Off & Automatic Dimming Photocell Sensor - Fixture Mount, Line Voltage		

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. To easily adjust the set-point after it has been initially programmed (via either the Automatic or Manual process) the *CMR(B)-PC-ADC* has an **Incremental control** feature that steps the brightness setting (voltage) up or down 10% (1 VDC) and adjusts the set-point accordingly.

INSTALLATION

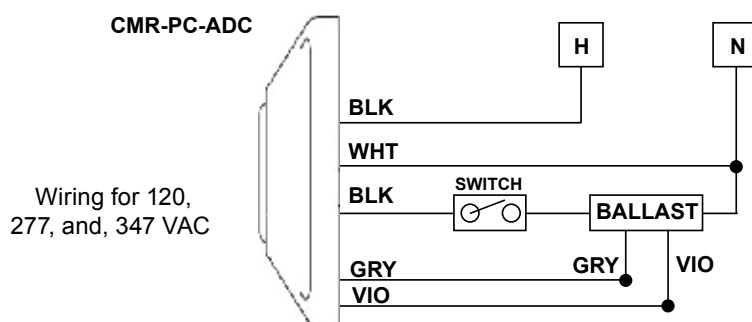
The ceiling (CMR) sensor enclosure accommodates mounting to a variety of junction boxes ranging in size from a single gang "Mud Ring" at a 3.28" spacing, up to a Round Fixture Box spacing of 3.5".



The fixture (CMRB) sensor enclosure provides an extended chase nipple that facilitates mounting to a half-inch knockout hole on the side of a fixture.

TYPICAL WIRING DIAGRAM (DO NOT WIRE HOT)

The sensor uses Sensor Switch's patented "either/or wiring"; Black to Hot and Black to Load. The White wire connects to neutral. Black wires are replaced with Red wires for 347 VAC. A Violet and Gray wire are present for a low voltage connection to the 0-10 VDC dimmable ballast.



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.).

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.

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