

## OVERVIEW

The CM-PC series of On/Off Photocell sensors 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 CM-PC is used for On/Off lighting control; turning off the lights when sufficient natural light is present and turning them on when additional lighting is necessary. Additionally with the Dual Zone (-DZ) option, a second set of customized control outputs is provided. All CM-PC sensors can be used alone or as part of an occupancy sensor system. The sensors are powered with 12 to 24 VAC/VDC and typically operate with a PP-20 or MP-20 Power Pack; enabling complete 20 Amp circuits to be controlled. To add dimming control to the On/Off switching provided by the CM-PC, see the Technical Data Sheet on the CM-PC-ADC sensor. With optional flash programming via the Sensor Switch VLP mobile device application, the user can easily change time delay, on mode and photocontrol settings.

## FEATURES

- Full On/Off Switching of Lighting
- Works as Stand Alone Unit or with Occupancy Sensor System
- Capable of finding optimum set-point
- Digital Set-Point Control
- Programmable via simple push-button commands
- Outputs to Power Pack or Lighting Control System via SPDT Relay
- 100 Hour Lamp Burn-in Timer Mode

## Warranty

Five-year limited warranty. Complete warranty terms located at:

[www.acuitybrands.com/CustomerResources/Terms\\_and\\_conditions.aspx](http://www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx)

**Note:** Actual performance may differ as a result of end-user environment and application.

Specifications subject to change without notice

# sensorswitch®

## CM PC

### On/Off Photocell Sensor



## ORDERING INFORMATION

CM PC				Example: CM PC DZ			
CM PC							
Series		Dual Zone		Visible Light Programming		Temp/Humidity	
CM PC	On/Off Photocell Sensor Ceiling Mount, Low Voltage	[blank] DZ	Single Zone Dual Zone	[blank] VLP <sup>1</sup>	None Visible Light Programming	[blank] LT	Standard Low Temp/ High Humidity

### Notes

1. Not available with DZ option

## 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 preference. 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

### WIRING INSTRUCTIONS

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

#### STANDARD CM-PC

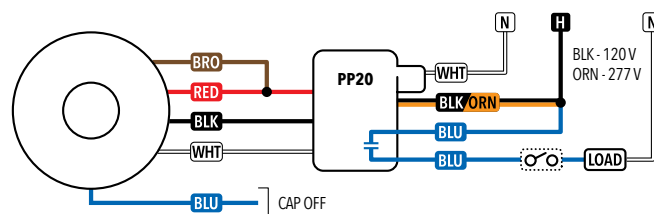
WHITE - Outputs high VAC/VDC (from Brown wire) when sensor calls for Lights "On" (eg. the room is Dark)

BLUE - Outputs high VAC/VDC (from Brown wire) when sensor calls for Lights "Off" (eg. adequate daylight light is present)

RED - 12 to 24 VAC/VDC

BLACK - Common

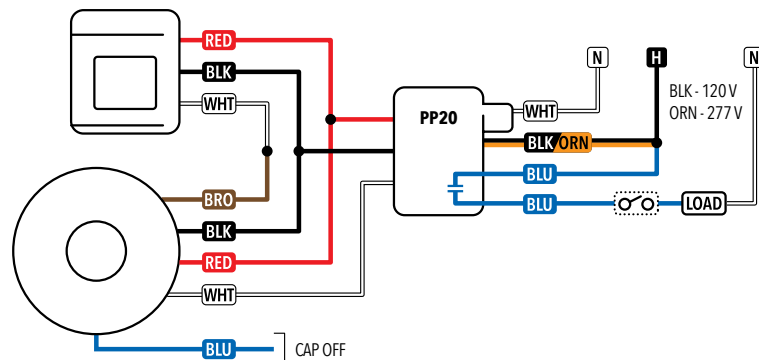
BRN - Connect to Low Voltage Control input (Red wire on a Power Pack, White wire on an occupancy sensor)



#### DUAL ZONE OPTION (CM-PC-DZ)

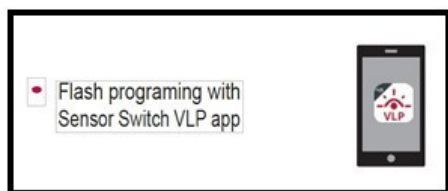
BLUE wire will output high DC when sensor calls for Lights "On" for Zone 2.

(Note: With the -DZ option the SPDT Relay is no longer present and the White wire will output only DC)



#### WIRING TOGETHER WITH OCCUPANCY SENSORS

Wire upstream occupancy sensor White wire to sensor Brown wire. When the space is unoccupied, the lights stay off regardless of daylight levels. However when occupied, the photocell sensor will control the lights according to daylight level and set-point.



SPECIFICATIONS

Electrical	Input Ratings	Class 2 Input 24V max, 4mA Class 2 Input 24V max, 16mA (-R Option)
	Relay Type	Electrically held
	Low Voltage Output Ratings	0-10VDC, Sinks <20mA
	Standards/ Ratings	Energy Management Equipment, UL916 (E167435)
Mechanical	Dimensions	4.55"W x 1.55"D (116mm x 40mm)
	Mounting	Single-Gang or Octagonal Box, Surface Mount
	Color	White
	Finish	Matte
Connection Type		Low Voltage Leads
Environmental	Warrantied Operating Temperature	Standard: 14°F to 185°F (-10°C to 85°C) LT option: -4°F to 185°F (-20°C to 85°C)
	Relative Humidity	Up to 90%, Non-Condensing
	Environment	Indoor
	Standards/ Ratings	RoHS