

**OVERVIEW**

The **SBOR PC Series** of on/off outdoor rated photocell sensors provides intelligent control of lighting for daylight harvesting applications. Designed to mount directly through a 1/2" knockout (7/8" hole) on a light fixture or pole, the sensors work by monitoring daylight conditions, then controlling connected lighting so as to insure that adequate lighting levels are maintained. The **SBOR PC** provides on/off style photocell control; turning off the lights when sufficient daylight is present and turning them on when additional lighting is necessary. The **SBOR PC Series** sensors are line powered and can switch loads directly without the need for a power pack.

**FEATURES**

- Auto Set-Point Calibration Mode
- Compatible w/ LEDs, Electronic & Magnetic Ballasts, CFLs, & Incandescents
- Self-Contained Relay(s), 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

**SPECIFICATIONS**

Size:	3.35" H x 4.40" W x 4.00" D (8.51 cm x 11.18 cm x 10.16 cm)
Weight:	9 oz
Mounting:	1/2" knockout (7/8" hole)
Color:	White, Black, Dark Bronze
Maximum Load/Pole:	(Relay) 800 W @ 120VAC, 1200 W @ 277VAC, 1500 W @ 347VAC, 5A @ 208 VAC, 5A @ 240 VAC, 5A @ 480 VAC
Minimum Load:	None
Motor Load:	1/4 HP
Frequency:	50/60 Hz

ROHS Compliant, IP66 Rated



Sensor Switch™

**SBOR PC**  
Outdoor Pole/ Fixture Mount  
Photocell Sensor



**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.



ORDERING INFORMATION

SBOR PC			Example: SBOR PC DZ BK		
Series	Dual Zone	Voltage	Body/Bracket	Color	
SBOR PC Outdoor Pole/ Fixture Mount Photocell Sensor	[blank] Single Zone DZ Dual Zone <sup>1</sup>	[blank] 120-277 VAC HVOLT 347-480 VAC	[blank] Short extension, low back EB1 Short extension, high back EB2 Long extension, low back EB3 Long extension, high back EB4 Mid extension, low back EB5 Mid extension, high back	WH	White
				BK	Black
				BZ	Dark Bronze

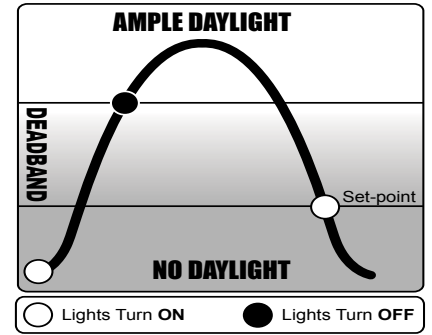
1) Not available with HVOLT option

## OPERATION

The lights turn on when the 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 DZ 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 can not view the lights being controlled (for example if it is pointing up), 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, called percentage mode, uses a relative set-point for the second zone that is a selected percentage higher than the primary zone's set-point. A single shared set-point is used by both modes and can be user programmed or automatically determined by the sensor itself.



## 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 area is properly lit by design, however, if this is not the case the set-point may be easily adjusted. 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.

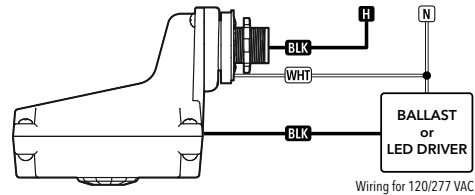
### DIGITAL SET-POINT CONTROL

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 lower heights. Typically, light levels at the sensor are 3 to 5 times less than a work surface. For example, if 50 fc is desired at a 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)

### WIRING TO SINGLE PHASE POWER (120/277/347 VAC)

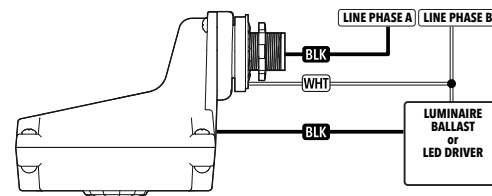
- BLACK\* 120/277 VAC Input  
(RED wire for 347 VAC - requires HVOLT option)
- BLACK\* Switched Line Voltage Output to Luminaire  
(RED wire for 347 VAC - requires HVOLT option)
- WHITE Neutral
- VIOLET (w/ D option) Low Voltage Dim Output (0-10 VDC)
- PINK\*\* (w/ D option) Low Voltage Common



Wiring for 120/277 VAC

### WIRING TO 2-PHASE POWER (208/240/480 VAC)\*

- BLACK\* 208/240 VAC Phase A Input  
(RED wire for 480 VAC - requires HVOLT option)
- BLACK\* Switched Line Voltage Output to Luminaire  
(RED wire for 480 VAC - requires HVOLT option)
- WHITE Phase B of 208/240/480 VAC Input



\*Safety Note: only one line phase is being switched

## INSTALLATION

- Sensor has a 1/2" chase nipple that enables mounting through a knockout/hole in a junction box, fixture, or pole
- When mounting to a pole, a 7/8" unthreaded hole should be located 12" below luminaire and should be accessible via an adjacent or opposite side hand hole

