Sensor Switch™

Lighting Controls
Product Catalog
It’s not just smarter. It’s easier.

Acuity Controls is advanced lighting controls technology, service and support from a single expert source. We offer one of the industry’s most extensive product portfolios for indoor and outdoor applications, single rooms to campuses to municipalities. Our product solutions include occupancy and photosensors, panels, switches, fixture-level and wireless controls.
<table>
<thead>
<tr>
<th>Page</th>
<th>Section</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>38</td>
<td>DAYLIGHTING CONTROL SENSORS</td>
<td>Ceiling Mount, Recessed Mount, Fixture Mount, Fixture Mount Interchangeable Lens</td>
</tr>
<tr>
<td>60</td>
<td>POWER PACKS</td>
<td></td>
</tr>
<tr>
<td>75</td>
<td>SPECIALTY PRODUCTS</td>
<td>Data Logging Monitoring System, Wire Guards, Masking Labels, Ballast Discriminator</td>
</tr>
<tr>
<td>81</td>
<td>WIRING DIAGRAMS</td>
<td></td>
</tr>
<tr>
<td>94</td>
<td>INDEX</td>
<td></td>
</tr>
</tbody>
</table>
Performance You Can Count On!

- Our Passive Dual Technology (PIR/Microphonics™) looks and listens for occupants ensuring reliable detection
- Reversible line and load wires make Sensor Switch products easy to install
- Reliable-circuit protection tested for over 400,000 switching cycles
- Continuous coverage patterns for a breadth of applications meeting your every need
- 5-year limited product warranty
- Sensor Switch products aid in ensuring buildings meet applicable energy codes (Title 24, ASHRAE and IECC)

The Sensor Switch product line from Acuity Controls provides an innovative, high quality and cost-effective controls solution for every application. Our occupancy sensors and photocell products are easy to install and easy to use.
BENEFITS

Energy Savings
The Sensor Switch offering of occupancy and daylight sensors are designed to optimize energy savings and enable sustainability. Our broad product offering provides solutions for applications requiring energy code compliance. Using innovative detection technologies that maximize energy savings we save you more!

Reliable Performance
Sensor Switch is a leader in lighting control innovation, continuously developing technologies to enhance performance of our occupancy sensors and photocells providing trusted quality and reliability. We offer a broad selection of occupancy and daylight sensors to meet every application.

Ease of Installation
Sensor Switch products are easy to install due to our patented features; reversible line and load wires (Miswire Protection), simple push button programming and our Convertible Neutral for Wall Switches! These powerful features save install time and eliminate extra costs on the job site!
INNOVATING SENSOR TECHNOLOGY

Sensor Switch is dedicated to providing innovative sensor technologies for applications requiring compliance to energy codes.

MICROPHONICS™

Microphonics technology utilizes a microphone inside the sensor to “hear” sounds indicating occupancy. This technology is perfect for rooms with obstructions where traditional PIR sensors cannot “see” the room occupant. Microphonics is superior as it provides better detection performance, requires less power, and does not transmit sound waves into the space, eliminating potential for interference.

MISWIRE PROTECTION

Sensor Switch developed reversible line and load connections resulting in products that are impossible to wire backwards. This patented feature eliminates potential jobsite delays due to miswiring.

CONVERTIBLE NEUTRAL

This is patent-pending technology allows a Sensor Switch Wall Switch occupancy sensor (WSX & WSD) to convert from a no neutral connection to a neutral and ground connection in seconds! If your application requires the use of a neutral connection, simply remove the ground link and wire per code, making installation quick and easy. One sensor does it all!

SELF-CALIBRATING DAYLIGHT CONTROLS

All photocontrols have an automatic set-point calibration mode regardless of time-of-day or daylight conditions improving installation time!
The Encyclopedia of Sensor Switch

SENSORPEDIA

This guide is intended to assist with choosing the appropriate Sensor Switch occupancy sensor for your space and application.

Each character or group of characters in a Sensor Switch model number indicates a specific feature or option for that particular sensor. The sections of this guide describe the choices available for each of the feature categories.

By dividing up any Sensor Switch occupancy sensor model number into the parts described in this guide, the sensor’s full functionality can be determined. This guide will also better enable you to build your own model numbers by choosing from each category the features and options your project requires.
The product model numbers (i.e., CM 9) provide details on the particular product; such as, mounting type, power information, lens type etc. By understanding the product naming convention this will help you select the product that is correct for your application.

The example below shows the categories that make up the model number **CMR PDT 10 P**.

**PRODUCT NAMING CONVENTION GUIDE**
Sensor Switch occupancy sensors come in a variety of different enclosure styles that are both functional and attractive while still being easy to install. The enclosure style for most sensors is indicated by the first few letters in their model number.

### Wall Switch
**WSX, WSX NL**
- **Physical Specs (not including mounting strap):**
  - H: 2.74" (6.96 cm)
  - W: 1.68" (4.27 cm)
  - D: 1.63" (4.14 cm)
  - Weight: 5 oz
- **Mounting:** Single Gang Switch Box
- **Color:** White, Gray, Black, Red, Ivory, Light Almond

**WSD, SSD**
- **Physical Specs (not including mounting strap):**
  - H: 2.74" (6.96 cm)
  - W: 1.68" (4.27 cm)
  - D: 1.63" (4.14 cm)
  - Weight: 5 oz
- **Mounting:** Single Gang Switch Box
- **Color:** White, Gray, Black, Red, Ivory, Light Almond

*Not available for all enclosures

### Wireless Wall Switch
**SPODMR WR**
- **Physical Specs (not including mounting strap):**
  - H: 2.74" (6.96 cm)
  - W: 1.68" (4.27 cm)
  - D: 1.63" (4.14 cm)
  - Weight: 5 oz
- **Mounting:** Single Gang Switch Box
- **Color:** White, Gray, Black, Ivory, Light Almond

### Large Area Wall Switch
**LWS, LWSH**
- **Physical Specs (not including mounting strap):**
  - H: 4.96" (12.60 cm)
  - W: 3.10" (7.87 cm)
  - D: 1.70" (4.32 cm)
  - Weight: 7 oz
- **Mounting:** Single Gang Switch Box
- **Color:** White, Ivory

*Available in White and Ivory only.
**Wireless Ceiling Mount**
**CM XX WR**

Physical Specs:
- Diameter: 4.55" (11.56 cm)
- Depth: 2.39" (6.07 cm)
- Weight: 6 oz
- Mounting: Ceiling Surface, 3.5" Octagon Box, Single Gang Handy Box
- Color: White

**Recessed Ceiling Mount**
**RM**

Physical Specs:
- Width: 4.60" (square) (11.68 cm)
- Weight: 6 oz
- Mounting: 4 x 4 square junction box with or without two-gang mudring; directly to ceiling tile through 2.65" (6.7 cm) square opening
- Color: White

**Wall / Corner Mount**
**WV, HW**

Physical Specs:
- H: 4.96" (12.60 cm)
- W: 3.10" (7.87 cm)
- D: 1.70" (4.32 cm)
- Weight: 7 oz
- Mounting: Single Gang Handy Box
- Color: White, Ivory

---

2 **WVR** is the Line Voltage Enclosure of the WV
3 **HWR** is the Line Voltage Enclosure of the HW

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**Ceiling Mount**
**CM**

Physical Specs:
- Diameter: 4.55" (11.56 cm)
- Depth: 1.55" (3.94 cm)
- Weight: 6 oz
- Mounting: Ceiling Tile Surface (Low Voltage), 3.5" Octagon Box, Single Gang Handy Box
- Color: White

**Wall / Corner Mount**
**WVR, HWR**

Physical Specs:
- H: 3.00" (7.62 cm)
- W: 3.60" (9.14 cm)
- D: 1.75" (4.45 cm)
- Weight: 4 oz
- Mounting: Directly to Corner or to Ceiling using WV BR Bracket
- Color: White
**Fixture Mount Interchangeable Lens Enclosures**

**LSXR**

Physical Specs:
- **H:** 3.75" (9.50 cm)
- **W:** 2.50" (6.40 cm)
- **D:** 4.00" (10.20 cm)
- **Weight:** 6 oz
- **Mounting:** 1/2" Knockout (7/8" hole)
- **Color:** White

**Fixture Mount Single Lens Enclosure (Indoor)**

**CMB, HMB**

Physical Specs:
- **H:** 3.63" (9.22 cm)
- **W:** 3.63" (9.22 cm)
- **D:** 1.50" (3.81 cm)
- **Weight:** 6 oz
- **Mounting:** 1/2" Knockout in Fixture or Junction Box
- **Color:** White

**Fixture Mounting Bracket (Indoor)**

**FB3**

Physical Specs:
- **H:** 5.00" (12.70 cm)
- **W:** 2.00" (5.08 cm)
- **D:** 1.35" (3.43 cm)
- **Weight:** 2.52 oz each (excluding nuts)
- **Mounting:** 1/2" Knockout in Fixture or Junction Box
- **Color:** White

**Fixture/Pole Mount Single Lens Enclosure (Outdoor / Wet Location)**

**SBO**

Physical Specs:
- **H:** 3.35" (8.51 cm) or 4.68" (12.40 cm)
- **W:** 4.40" (11.18 cm)
- **D:** 4.00" (10.16 cm)
- **Weight:** 9 oz
- **Mounting:** 1/2" Knockout (7/8" hole)
- **Color:** White, Black, Dark Bronze
**Embedded Small Box (Indoor)**

**SB**

Physical Specs:
- **H:** 3.40" (8.64 cm)
- **W:** 3.40" (8.64 cm)
- **D:** 1.40" (3.56 cm)
- **Weight:** 6 oz
- **Mounting:** Required Hole Size
  - 1.125" Material Thickness
  - Max 0.25"

**Color:** White, Black

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**Embedded Small Box (Outdoor)**

**SBG**

Physical Specs:
- **H:** 3.35" (8.51 cm)
- **W:** 4.40" (11.18 cm)
- **D:** 4.00" (10.16 cm)
- **Weight:** 9 oz
- **Mounting:** 1/2" Knockout (7/8" hole)

**Color:** White, Black

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**Snap-Fit (Indoor)**

**SF, SFD**

Physical Specs:
- **H:** 2.25" (5.72 cm)
- **W:** 1.38" (3.51 cm)
- **D:** 0.82" (2.08 cm)
- **Weight:** 4 oz

**Mounting:** Snaps into 2-3/16" H x 1-5/16" W x 1" D cavity in fixture

**Color:** White

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**Snap-Fit (Outdoor / Wet Location)**

**SFOD, SFOR**

Physical Specs:
- **H:** 2.25" (5.71 cm)
- **W:** 1.38" (3.51 cm)
- **D:** 0.82" (2.08 cm)
- **Weight:** 4 oz

**Mounting:** Snaps into 2-3/16" H x 1-5/16" W x 1" D cavity in fixture

**Color:** White, Black

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**Embedded Micro Enclosure (Indoor)**

**MSD, ES**

Physical Specs:
- **H:** 1.34" (3.40 cm)
- **W:** 2.60" (6.65 cm)
- **D:** 1.18" (2.99 cm)
- **Weight:** 3 oz

**Mounting:** Required Hole Size
  - 1.125" Material Thickness
  - Max 0.25"

**Color:** White

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**Embedded Micro Enclosure (Outdoor / Wet Location)**

**MSOD**

Physical Specs:
- **H:** 1.34" (3.40 cm)
- **W:** 2.60" (6.65 cm)
- **D:** 1.18" (2.99 cm)
- **Weight:** 3 oz

**Mounting:** Required Hole Size
  - 1.125" Material Thickness
  - Max 0.25"

**Color:** White, Black
This category specifies how a sensor is powered, as well as its switching capabilities. By default, sensors are powered by low voltage and require a power pack to switch a circuit; therefore, no special characters need to be added to the model number.

In contrast, line voltage sensors are powered by and can switch line voltage without a power pack. Line voltage model numbers have the letter “R” inserted with the enclosure designation (e.g., CMR).

### Line Voltage
- Sensors contain line voltage switching relays
- Ideal for retrofit applications with concrete or inaccessible ceilings
- Interchangeable line & load wires (Sensor Switch patented)
- Impossible to wire backwards
- Sensors capable of switching two poles independently are indicated by adding 2P to the model number (e.g., CMR 6 2P)
- Sensors capable of simultaneously switching two phases (e.g., 208, 240, or 480 VAC) are indicated by adding 208 or 480 to the model number (e.g., CMR 6 480)

### Low Voltage
- Powered via power pack or other low voltage source
- Used with a power pack to enable complete 20 Amp circuits to be switched
- Enables multiple sensors to be used together to cover space
- Allows sensor mounting without a junction box and utilizes convenient low voltage wiring (e.g., CM 6 2P)

### Wireless / Battery
- Wireless sensor is powered by a lithium battery (e.g., CM 9 WR); Ideal for renovation applications that are difficult to wire through the walls
- 10 year battery life (at default sensor settings)
- AA Lithium (1.5V) Battery
- Wireless communicates to wireless wall switch (e.g., SPODMR WR)
This category specifies the detection technologies employed by Sensor Switch. There are two types of detection technologies, Passive Infrared and Passive Dual Technology. All sensors utilize PIR technology by default.

### Passive Infrared Technology (PIR)

- PIR sensors detect changes in the infrared energy given off by occupants as they move within the field-of-view of the sensor.
- The sensor “sees” the heat given off by the human body as it moves in and out of the beams, and triggers the occupancy mode.
- The sensors are fine-tuned to detect small motions even at great distances, while still preventing false trips.
- All Sensor Switch sensors have PIR technology.

### Passive Dual Technology (PDT)

- PDT is the combination of two detection technologies, PIR and Microphonics™.
- The sensor will first “see” motion using Passive Infrared, and then engages the Microphonics™ to “hear” sounds that indicate continued occupancy.
- Patented by Sensor Switch, Passive Dual Technology using PIR and Microphonics is superior to alternatively used ultrasonic technology:
  - Better and more reliable occupancy detection performance.
  - Requires less power.
  - Does not transmit sound waves into the space, eliminating potential for interference.
- The PDT suffix after the enclosure model number adds Microphonics™ detection to the sensor.
It is important to select a lens type with a PIR coverage pattern that accommodates the space’s area requirements, but also its application. The following pages diagram the PIR coverage pattern of each lens style and describe the applications for which they are best suited.

### Wall Switch Lens

- **WSX**
  - Small motion (e.g., hand movements) detection up to 20 ft (6.10 m), ~625 sq ft
  - Large motion (e.g., walking) detection greater than 36 ft (10.97 m), ~2025 sq ft
  - Wall-to-Wall coverage

### Wall Switch Lens

- **WSD**
  - Small motion (e.g., hand movements) detection up to 20 ft (6.10 m)
  - Large motion (e.g., walking) detection up to 50 ft (15.24 m)
  - Wall-to-Wall coverage

### Large Area Wall Switch Lens

- **LWS**
  - Small motion (e.g., hand movements) detection up to 40 ft (12.19 m)
  - Wall-to-Wall coverage
  - 30 to 48 in (76.20 to 121.92 cm) high mounting

### Large Area High Mount Wall Switch Lens

- **LWSH**
  - Small motion (e.g., hand movements) detection up to 40 ft (12.19 m)
  - Wall-to-Wall coverage
  - 48 to 84 in (121.92 to 213.36 cm) high mounting
High Bay 360° Lens
- Best choice for 15 to 45 ft (4.57 to 13.72 m) mounting heights
- 15 to 20 ft (4.57 to 6.10 m) radial coverage overlaps area lit by a typical high bay fixture
- Excellent detection of large motion (e.g., walking) up to a 35 ft (10.76 m) mounting height
- Excellent detection of extra large motion (e.g., forklifts) up to a 45 ft (13.72 m) mounting height

Mini-Low Bay 360° Lens
- Recommended for walking motion detection from mounting heights between 8 ft (2.44 m) and 20 ft (6.10 m)
- Initial detection of walking motion along sensor axes at distances of 2x the mounting height up to 15 ft (4.57 m) and 1.75x up to 20 ft (6.10 m)
- Provides 12 ft (3.66 m) radial detection of small motion when mounted at 9 ft (2.74 m)
- Initial detection will occur earlier when walking across sensor’s field of view than walking directly at sensor

Small Motion / Standard Range 360° Lens
- Best choice for small motion (e.g., hand movements) detection
- Viewing angle of 56° in a 360° conical shaped pattern
- 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

Large Motion / Extended Range 360° Lens
- Best choice for large motion (e.g., walking) detection
- Viewing angle of 67° in a 360° conical shaped pattern
- 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

Bi-Directional Hallway Lens
- Best choice for large motion (e.g., walking) detection
- Viewing angle of 67° for hallway applications
- Provides 28 ft (8.53 m) of 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) hallway coverage
**End-of-Hallway Lens**
- Large motion (e.g., walking) detection up to 130 ft (39.62 m)
- Designed for 7 ft (2.13 m) high mounting at end of hall

**Wide View 120° Lens**
- Small motion (e.g., hand movements) detection up to 40 ft (12.19 m)
- Large motion (e.g., walking) detection up to 70 ft (21.34 m)
- Designed for 8 to 10 ft (2.44 to 3.05 m) high mounting in room corner

**Universal 360° Lens**
- Provides excellent detection of large motion (e.g., walking) when mounted between 15 to 40 ft (4.57 to 12.19 m)
- 15 to 20 ft (4.57 to 6.10 m) radial coverage overlaps area lit by a typical high bay fixture
- Recommended for fixtures that have a 1:1 spacing to mounting height ratio or less (e.g., fixtures 30’ on center or less @ a 30’ mounting height).

**High Bay Bi-Directional Aisleway Lens**
- Provides 50° bi-directional and 10° wide coverage pattern
- 1.2x mounting height equals approximate detection range in either direction
- Typical 40 ft (12.19 m) mounting detects 50 ft (15.24 m) in either direction
The previous sections of this guide define the portion of the model number referred to as a sensor’s series number. Following this series number, there may be additional characters in the model number that define the optional features included on the sensor. This section describes each option and its model number character suffix.

The datasheet for each sensor series lists its available options.

<table>
<thead>
<tr>
<th>Options</th>
<th>Model Number Character Suffix</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2P AO &amp; 2P AOP</strong></td>
<td><strong>2P AO &amp; 2P AOP</strong></td>
</tr>
<tr>
<td>Alternating Off Relays</td>
<td></td>
</tr>
<tr>
<td>• Sequence of operation where both relays close during periods of occupancy, but only one opens during vacancy</td>
<td></td>
</tr>
<tr>
<td>• The relay left closed alternates in order to promote even lamp wear</td>
<td></td>
</tr>
<tr>
<td>• 2P AOP version also includes switching photocontrol</td>
<td></td>
</tr>
<tr>
<td><strong>2P-SZ</strong></td>
<td><strong>2P SZ</strong></td>
</tr>
<tr>
<td>Single Pole Switching Photocontrol</td>
<td></td>
</tr>
<tr>
<td>• Occupancy controls one pole only</td>
<td></td>
</tr>
<tr>
<td>• Switching photocontrol controls other pole</td>
<td></td>
</tr>
<tr>
<td><strong>347</strong></td>
<td><strong>347</strong></td>
</tr>
<tr>
<td><strong>347 VAC</strong></td>
<td><strong>347 VAC</strong></td>
</tr>
<tr>
<td>• Allows sensor to be powered by and switch 347 VAC</td>
<td></td>
</tr>
<tr>
<td>• Used primarily in Canada</td>
<td></td>
</tr>
<tr>
<td><strong>ADC</strong></td>
<td><strong>ADC</strong></td>
</tr>
<tr>
<td>Photocontrol w/ Auto Dimming</td>
<td></td>
</tr>
<tr>
<td>• Photocontrol within sensor maintains total room light level by controlling levels of 0-10 VDC dimmable ballasts</td>
<td></td>
</tr>
<tr>
<td>• Photocontrol also has full on/off control during periods of occupancy</td>
<td></td>
</tr>
<tr>
<td>• Provides a second occupancy time-out period that enables the lights to go to a dim setting before turning off</td>
<td></td>
</tr>
<tr>
<td><strong>ANL</strong></td>
<td><strong>ANL</strong></td>
</tr>
<tr>
<td>Combination Dimming &amp; Switching Photocontrol w/ High/Low Occupancy Operation</td>
<td></td>
</tr>
<tr>
<td>• Provides maximum energy savings by first dimming down, then switching off, lighting during periods of sufficient daylight contribution from windows or skylights</td>
<td></td>
</tr>
<tr>
<td>• During unoccupied periods without sufficient daylight lights are dropped to low dim setting, insuring minimum light levels are maintained at night</td>
<td></td>
</tr>
<tr>
<td>• Controls 0-10V dimmable fluorescent ballasts and LED drivers</td>
<td></td>
</tr>
<tr>
<td><strong>D</strong></td>
<td><strong>D</strong></td>
</tr>
<tr>
<td>Occupancy Controlled Dimming</td>
<td></td>
</tr>
<tr>
<td>• Provides dimming output to control 0-10 VDC dimmable ballasts</td>
<td></td>
</tr>
<tr>
<td>• Provides a second occupancy time-out period that enables the lights to go to a dim setting before turning off</td>
<td></td>
</tr>
<tr>
<td>• Adjustable max/min dim setting</td>
<td></td>
</tr>
<tr>
<td>• When using multiple low voltage sensors, only one sensor per zone needs to have dimming output</td>
<td></td>
</tr>
<tr>
<td><strong>DZ</strong></td>
<td><strong>DZ</strong></td>
</tr>
<tr>
<td>Dual Zone Photocontrol</td>
<td></td>
</tr>
<tr>
<td>• Provides more advanced daylighting control for 2-Pole line voltage occupancy sensors</td>
<td></td>
</tr>
<tr>
<td>• Single shared set-point is used for both poles</td>
<td></td>
</tr>
<tr>
<td><strong>Stepped Dimming (DUO) Mode</strong></td>
<td></td>
</tr>
<tr>
<td>• Ideal for A/B (also called inboard/outboard) switching applications</td>
<td></td>
</tr>
<tr>
<td>• Determines the necessary on/off combination of the two poles in order to maintain adequate lighting</td>
<td></td>
</tr>
<tr>
<td><strong>Percentage Offset (Dual Zone) Mode</strong></td>
<td></td>
</tr>
<tr>
<td>• Ideal for classrooms with individually controlled parallel rows of lights</td>
<td></td>
</tr>
<tr>
<td>• Uses a relative set-point for the second pole, which is a percentage of the first pole’s set-point</td>
<td></td>
</tr>
<tr>
<td><strong>HL</strong></td>
<td><strong>HL</strong></td>
</tr>
<tr>
<td>High/Low Occupancy Operation</td>
<td></td>
</tr>
<tr>
<td>• Provides high/low control of a 0-10V dimmable fixture</td>
<td></td>
</tr>
<tr>
<td>• Lights are reduced to an energy saving minimum dim level after expiration of occupancy time delay</td>
<td></td>
</tr>
<tr>
<td>• If relay is wired, lights will switch off after a second time delay</td>
<td></td>
</tr>
<tr>
<td><strong>HVOLT</strong></td>
<td><strong>HVOLT</strong></td>
</tr>
<tr>
<td>347-480 VAC</td>
<td></td>
</tr>
<tr>
<td>• Allows sensor to be powered by and switch 347 through 480 VAC</td>
<td></td>
</tr>
<tr>
<td>• Used primarily in Fixture Mount Sensors</td>
<td></td>
</tr>
<tr>
<td>• Used only in Single Pole Devices</td>
<td></td>
</tr>
<tr>
<td><strong>LT</strong></td>
<td><strong>LT</strong></td>
</tr>
<tr>
<td>Low Temperature / High Humidity</td>
<td></td>
</tr>
<tr>
<td>• During manufacturing, the circuit board goes through a conformal coating process, making it corrosion resistant from moisture</td>
<td></td>
</tr>
<tr>
<td>• Enables operating temperatures down to -40°F (-40°C) for PIR sensors and -4°F (-20°C) for PDT sensors</td>
<td></td>
</tr>
<tr>
<td>• Ideal for cold storage applications or bath/shower rooms with condensing steam</td>
<td></td>
</tr>
<tr>
<td><strong>P</strong></td>
<td><strong>P</strong></td>
</tr>
<tr>
<td>Photocontrol</td>
<td></td>
</tr>
<tr>
<td>• Features auto set-point calibration</td>
<td></td>
</tr>
<tr>
<td>• Fully digital, all settings in foot-candles</td>
<td></td>
</tr>
<tr>
<td><strong>On/Off mode</strong></td>
<td></td>
</tr>
<tr>
<td>• Photocontrol has full control during periods of occupancy</td>
<td></td>
</tr>
<tr>
<td>• Recommended for public areas, such as vestibules, corridors, or restrooms</td>
<td></td>
</tr>
<tr>
<td><strong>Inhibit mode</strong></td>
<td></td>
</tr>
<tr>
<td>• Photocontrol can prevent lights from turning on if adequate daylight is available, but cannot turn lights off</td>
<td></td>
</tr>
<tr>
<td>• Recommended for areas where people work (private and open offices)</td>
<td></td>
</tr>
<tr>
<td><strong>R</strong></td>
<td><strong>R</strong></td>
</tr>
<tr>
<td>Isolated Low Voltage Relay</td>
<td></td>
</tr>
<tr>
<td>• Enables low voltage sensors to interface with a building management system</td>
<td></td>
</tr>
<tr>
<td>• Provides dry contact closure via an SPDT, 1 Amp, 40 Volt relay</td>
<td></td>
</tr>
<tr>
<td>• The relay is energized when ALL connected sensors register unoccupied</td>
<td></td>
</tr>
<tr>
<td>• When using multiple sensors, only one sensor per zone needs to have a relay</td>
<td></td>
</tr>
<tr>
<td><strong>Note:</strong> Sensor must have power at all times for the relay to function.</td>
<td></td>
</tr>
</tbody>
</table>
**Overview**

The WSX Family of wall switch occupancy sensors provides simple and cost-effective solutions for commercial and residential lighting control applications. All WSX Family sensors have a stylish low profile appearance, soft-click buttons, and provide small motion detection up to 20 ft (6.10 m), making them perfect for private offices, private rest rooms, closets, copy rooms, or any other small enclosed space. Additionally, all WSX Family sensors have a patent pending wiring method that enables them to function either with or without a neutral connection. WSX units come pre-configured for wiring without a neutral; however, if connection to neutral is required by code, contractors can convert the unit in seconds.

All WSX Family sensors utilize 100% digital Passive Infrared (PIR) detection. Dual Technology (PDT option) versions add Microphonics™ detection and are recommended for offices and rooms with obstructions. Additional versions include units with dual relays - perfect for bi-level applications, and units with an integrated night light - perfect for restrooms and residential applications.

**Features**

- Passive Dual Technology (PDT) utilizes PIR/Microphonics™ detection
- Miswire protection, reversible line & load connections
- Convertible neutral
- Digital PIR detection - excellent RF immunity
- Ruggedized assembly, vandal resistant lens standard
- 100% passive detection, no potential for interference with other building systems
- Fully meets NEC 2011 Section 404.2C neutral requirements - no current leakage to ground when connected to neutral
- Compatible with LEDs, electronic & magnetic ballasts, CFLs, & incandescents
- Photocell standard (disabled by default)
- Push-button programmable without removing cover plate - adjustable time delays & operating modes
- White LED status Indicator

**Specifications**

<table>
<thead>
<tr>
<th>PHYSICAL</th>
<th>ELECTRICAL</th>
<th>ENVIRONMENTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIZE: 2.74&quot; H x 1.68&quot; W x 1.63&quot; D (6.96 cm x 4.27 cm x 4.14 cm) (not including ground strap)</td>
<td>MAXIMUM LOAD/POLE (RELAY): 800 W @ 120 VAC 1200 W @ 277 VAC 1500 W @ 347 VAC</td>
<td>OPERATING TEMP: Standard: 14° to 122°F (-10° to 50°C) LT Option (PIR): -4° to 122°F (-20° to 50°C) LT Option (PDT): -40° to 122°F (-40° to 50°C)</td>
</tr>
<tr>
<td>WEIGHT: 5 oz</td>
<td>MINIMUM LOAD: None</td>
<td>RELATIVE HUMIDITY: Standard: 20 to 75% non-condensing LT Option (PIR): 20 to 90% non-condensing (electronics coated for corrosion resistance)</td>
</tr>
<tr>
<td>MOUNTING: Single gang switch box</td>
<td>MOTOR LOAD: 1/4 Hp</td>
<td>ROHS COMPLIANT</td>
</tr>
<tr>
<td>MOUNTING HEIGHT: 30-48&quot; (76.2-121.9 cm)</td>
<td>FREQUENCY: 50/60 Hz</td>
<td></td>
</tr>
<tr>
<td></td>
<td>WIRING DIAGRAM(S): See Figure # 1, 2, 3, 4 on Page B2</td>
<td></td>
</tr>
</tbody>
</table>

**Coverage Pattern**

- Small motion (e.g., hand movements) detection up to 20 ft (6.10 m), ~625 sq ft
- Large motion (e.g., walking) detection greater than 36 ft (10.97 m), ~2025 sq ft
- Wall-to-Wall coverage
- Passive Dual Technology (Microphonics™) provides overlapping detection of human activity over the complete PIR coverage area; advanced filtering is utilized to prevent non-occupant noises from keeping the lights on
## OPTION INFORMATION

<table>
<thead>
<tr>
<th>347 Voltage</th>
<th>2P Dual Relay</th>
<th>NL Night Light</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allows sensor to be powered from and switch 347 VAC</td>
<td>Ideal for bi-level switched rooms or restroom with light &amp; fan</td>
<td>Ideal for bathrooms (hotel/hospital) or residential applications</td>
</tr>
<tr>
<td>Cover plate for 347 VAC sensors included</td>
<td>Includes two isolated relays, Pole 1 defaulted to Auto On, Pole 2 to Vacancy</td>
<td>Ultra low power White LED night light (24/7 operation)</td>
</tr>
</tbody>
</table>

### LT Low Temp/High Humidity
- Required for cold/humid areas
- Sensor electronics are coated for corrosion resistance
- Operates down to -40°F/-20°C for PDT

### Specifications subject to change.

<table>
<thead>
<tr>
<th>Series</th>
<th>Operating mode ¹</th>
<th>Voltage</th>
<th>Color</th>
<th>Temp/Humidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>WSX</td>
<td>Passive Infrared (PIR)</td>
<td>(blank) Auto-On (default) or Vacancy</td>
<td>(blank) 347</td>
<td>WH White</td>
</tr>
<tr>
<td>WSX PDT</td>
<td>Dual Technology (PIR/Microphonics™)</td>
<td>SA Vacancy (default) or Auto-On</td>
<td>347</td>
<td>IV Ivory</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VA Vacancy only</td>
<td></td>
<td>GY Gray</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>AL Light Almond</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>BK Black</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>RD Red</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>LT Low Temp/High Humidity</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Standard</td>
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</table>

### Dual Relay

<table>
<thead>
<tr>
<th>Series</th>
<th>Operating mode ¹</th>
<th>Voltage</th>
<th>Color</th>
<th>Temp/Humidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>WSX 2P</td>
<td>Passive Infrared (PIR)</td>
<td>Pole 1 Auto-On Pole 2 Vacancy (default)</td>
<td>(blank) 347</td>
<td>WH White</td>
</tr>
<tr>
<td>WSX PDT 2P</td>
<td>Dual Technology (PIR/Microphonics™)</td>
<td>2SA Both Poles Vacancy (default) or Auto-On</td>
<td>347</td>
<td>IV Ivory</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2VA Both Poles Vacancy only</td>
<td></td>
<td>GY Gray</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td>AL Light Almond</td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td>BK Black</td>
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<tr>
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<td></td>
<td></td>
<td></td>
<td>RD Red</td>
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<tr>
<td></td>
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<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Standard</td>
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</tbody>
</table>

### Night Light

<table>
<thead>
<tr>
<th>Series</th>
<th>Voltage</th>
<th>Color</th>
<th>Temp/Humidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>WSX NL</td>
<td>120/277 VAC</td>
<td>WH White</td>
<td>(blank) Standard</td>
</tr>
<tr>
<td>WSX PDT NL</td>
<td>347</td>
<td>IV Ivory</td>
<td>LT Low Temp/High Humidity</td>
</tr>
<tr>
<td>WSX 2P NL</td>
<td>277 VAC</td>
<td>GY Gray</td>
<td></td>
</tr>
<tr>
<td>WSX PDT 2P NL</td>
<td>347</td>
<td>AL Light Almond</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>BK Black</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>RD Red</td>
<td></td>
</tr>
</tbody>
</table>

### Notes
1. Operating modes reprogrammable via push-button except for VA version
2. Wall plates included in white or ivory only for 347 VAC units
3. Matching wall plate provided for 120/277 VAC units
4. Units factory set to Vacancy (Manual On) Operating mode
WALL SWITCH CONTROLS

PRODUCT SELECTION GUIDE

WSD FAMILY

Overview
The WSD wall switch sensor is a reliable workhorse with powerful Passive Infrared (PIR) detection technology as well as optional Passive Dual Technology. This line of wall switch sensors are perfect for private offices, copy rooms, closets, or any small enclosed space without obstructions. All of Sensor Switch’s wall switch occupancy sensors are easy to install, and simple to use. Additionally, the WSD sensor has several On Modes and Switch Modes that can be programmed using the front push-button. For rooms with obstructions, the Dual Technology WSD PDT Series sensor is recommended. Additionally, all WSD Family sensors have a patent pending wiring method that enables them to function either with or without a neutral connection. WSD units come pre-configured for wiring without a neutral; however, if connection to neutral is required by code, contractors can convert the unit in seconds.

Features
- Passive Dual Technology (PDT) utilizes PIR/Microphonics™ detection
- Miswire protection, reversible line & load connections
- Convertible neutral
- Digital PIR detection - excellent RF immunity
- Small motion detection to 20 ft
- Self-grounding mounting strap
- Photocell control standard (disabled by default)
- Compatible w/ LEDs, electronic & magnetic ballasts, CFLs, & incandescents
- Push-button programmable without removing cover plate - adjustable time delays & operating modes
- Green LED status Indicator

ADDITIONAL INFORMATION
For additional product information, visit www.acuitycontrols.com.

SPECIFICATIONS

<table>
<thead>
<tr>
<th>PHYSICAL</th>
<th>ELECTRICAL</th>
<th>ENVIRONMENTAL</th>
</tr>
</thead>
</table>
| 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) | MAXIMUM LOAD/POLE (RELAY): 800 W @ 120 VAC  1200 W @ 277 VAC  1500 W @ 347 VAC | OPERATING TEMP:  
  - Standard: 14° to 122°F (-10° to 50°C)  
  - LT Option (PIR): -40° to 122°F (-40° to 50°C)  
  - LT Option (PDT): -4° to 122°F (-20° to 50°C) |
| WEIGHT: 5 oz | MINIMUM LOAD: None | RELATIVE HUMIDITY:  
  - Standard: 20 to 75% non-condensing  
  - LT Option: 20 to 90% non-condensing  
  (electronics coated for corrosion resistance) |
| MOUNTING: Single gang switch box | MOTOR LOAD: 1/4 Hp | ROHS COMPLIANT |
| MOUNTING HEIGHT: 30-48” (76.2-121.9 cm) | FREQUENCY: 50/60 Hz | |
| WIRING DIAGRAM(S): See Figure # 1, 2, 3, 4 on Page 82 |

ADDITIONAL INFORMATION
For additional product information, visit www.acuitycontrols.com.

COVERAGE PATTERN

Wall Switch Lens
- Small motion (e.g., hand movements) detection up to 20 ft (6.10 m)
- Large motion (e.g., walking) detection up to 50 ft (15.24 m)
- Wall-to-Wall coverage
### SINGLE RELAY

<table>
<thead>
<tr>
<th>Series</th>
<th>Operating mode</th>
<th>Voltage</th>
<th>Color</th>
<th>Temp/Humidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>WSD</td>
<td>Auto-On (default) or Vacancy</td>
<td>120/277 VAC</td>
<td>WH</td>
<td>Standard</td>
</tr>
<tr>
<td>WSD PDT</td>
<td>Vacancy (default) or Auto-On</td>
<td>347 VAC</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### LT Low Temp/High Humidity
- Required for cold/humid areas
- Sensor electronics are coated for corrosion resistance
- Operates down to -40°F (-40°C)

#### Notes
1. Operating modes reprogrammable via push-button except for VA version
2. Wall plates included in white or ivory only for 347 VAC units
3. Matching wall plate provided for 120/277 VAC units

### DUAL RELAY

<table>
<thead>
<tr>
<th>Series</th>
<th>Operating mode</th>
<th>Voltage</th>
<th>Color</th>
<th>Temp/Humidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>WSD 2P</td>
<td>Pole 1 Auto-On Pole 2 Vacancy (default)</td>
<td>120/277 VAC</td>
<td>WH</td>
<td>Standard</td>
</tr>
<tr>
<td>WSD PDT 2P</td>
<td>Both Poles Vacancy (default) or Auto-On</td>
<td>347 VAC</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Notes
1. Operating modes reprogrammable via push-button except for VA version
2. Wall plates included in white or ivory only for 347 VAC units
3. Matching wall plate provided for 120/277 VAC units

### 347 Voltage
- Allows sensor to be powered from and switch 347 VAC
- Cover plate for 347 VAC sensors included

### 2P Dual Relay
- Ideal for bi-level switched rooms or restroom with light & fan
- Includes two isolated relays, Pole 1 defaulted to Auto On, Pole 2 to Vacancy
- Enables separate time delay per pole - programmed via each pole’s push-button
- UL Listed to switch different loads per pole - e.g. 277 VAC lights on Pole 1 and 120 VAC fan on Pole 2

#### Example: WSD PDT WH

---

**Notes**

1. Operating modes reprogrammable via push-button except for VA version
2. Wall plates included in white or ivory only for 347 VAC units
3. Matching wall plate provided for 120/277 VAC units
SSD
Wall Switch Sensor

Overview
The SSD is a cost effective wall switch sensor with powerful Passive Infrared (PIR) detection technology. The wall switch sensor is easy to install and simple to use. It is ideal for private offices, copy rooms, closets, or any small enclosed space without obstructions. A user programmable time delay ensures that once the room is vacated the sensor will time out and turn off the lights.

Sensor Operation
SSD sensors detect changes in the Passive Infrared (PIR) energy given off by occupants as they move within the field-of-view. Once occupancy is detected, an internal relay switches on the connected lighting load. In an SSD VA (Vacancy/Manual On) sensor, the unit’s push button must first be pressed to initiate the lights on. After the lights are turned on, an internal timer keeps them on during brief periods of inactivity. Once the time delay has expired, lights are turned off automatically. The default time delay is 10 minutes - chosen in order to maximize energy savings while preventing false-offs. This timer is programmable from 30 seconds to 30 minutes, and is reset every time occupancy is re-detected. Patented LampMaximizer® technology is also present in these sensors, providing an additional minimum on time (disabled by default) to be utilized if desired.

Features
• Miswire protection, reversible line & load connections
• PIR detection - excellent RF immunity
• Small motion detection to 20 ft
• Self-grounding mounting strap
• No neutral connection required
• No minimum load and no current leakage to load
• Compatible w/ Electronic & Magnetic Ballasts, CFLs, & Incandescents
• Push-button programmable without removing cover plate - adjustable time delays & operating modes
• Integrated LampMaximizer® minimum on time (patented) provides increased
• Fluorescent lamp life - disabled by default
• Non-volatile settings memory
• Green LED status Indicator

Specifications
- Miswire protection, reversible line & load connections
- PIR detection - excellent RF immunity
- Small motion detection to 20 ft
- Self-grounding mounting strap
- No neutral connection required
- No minimum load and no current leakage to load
- Compatible w/ Electronic & Magnetic Ballasts, CFLs, & Incandescents
- Push-button programmable without removing cover plate - adjustable time delays & operating modes
- Integrated LampMaximizer® minimum on time (patented) provides increased
- Fluorescent lamp life - disabled by default
- Non-volatile settings memory
- Green LED status Indicator

Additional Information
For additional product information, visit www.acuitycontrols.com.

Specifications
<table>
<thead>
<tr>
<th>Physical</th>
<th>Electrical</th>
<th>Environmental</th>
</tr>
</thead>
<tbody>
<tr>
<td>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)</td>
<td>MAXIMUM LOAD: 800 W @ 120 VAC 1200 W @ 277 VAC Fluorescent/Incandescent loads only</td>
<td>OPERATING TEMP: 14º to 122º F (-10º to 50º C)</td>
</tr>
<tr>
<td>WEIGHT: 5 oz</td>
<td>MINIMUM LOAD: None</td>
<td>RELATIVE HUMIDITY: 20 to 75% non-condensing</td>
</tr>
<tr>
<td>MOUNTING: Single Gang Switch Box</td>
<td>MOTOR LOAD: 1/4 HP</td>
<td>ROHS COMPLIANT</td>
</tr>
<tr>
<td>MOUNTING HEIGHT: 30-48 in (76.2-121.9 cm)</td>
<td>FREQUENCY: 50/60 Hz (timers are 1.2x for 50 Hz)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>WIRING DIAGRAM(S): See Figure # 5 on Page 83</td>
<td></td>
</tr>
</tbody>
</table>

Coverage Pattern
Wall Switch Lens
- Small motion (e.g., hand movements) detection up to 20 ft (6.10 m)
- Large motion (e.g., walking) detection up to 50 ft (15.24 m)
- Wall-to-Wall coverage

Ordering Information
<table>
<thead>
<tr>
<th>Series</th>
<th>Operating Mode</th>
<th>Voltage</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSD</td>
<td>Passive Infrared (PIR)</td>
<td>(blank) 120/277 VAC</td>
<td>WH White</td>
</tr>
<tr>
<td>SA</td>
<td>Vacancy (default) or Auto On</td>
<td>(blank) 120 VAC only</td>
<td>IV Ivory</td>
</tr>
<tr>
<td>VA</td>
<td>Vacancy only</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Example: SSD WH

Notes:
1. Operating Modes reprogrammable via push-button except for VA version
2. Cover Plate Not Included
**Overview**

The WSD LV Series is a low voltage wall switch occupancy sensor that is stylish, easy to install, and simple to use. Ideal for private offices, copy rooms, closets, or any small enclosed space without obstructions, the WSD LV uses the industry’s best Passive Infrared (PIR) technology to achieve excellent small motion detection up to 20 ft. A user programmable time delay ensures that once the room is vacated the sensor will time out and turn off the lights. WSD LV sensors also have additional On Modes and Switch Modes that are all fully programmable using the front push button. For rooms with obstructions the WSD PDT LV should be considered.

**Sensor Operation**

The sensor detects changes in the infrared energy given off by occupants as they move within the field-of-view. When occupancy is detected, a self-contained relay switches the connected lighting load on. The sensor is line powered and can switch a range of line voltages. An internal timer, factory set at 10 minutes, keeps the lights on during brief periods of inactivity. This timer is push-button programmable from 30 seconds to 20 minutes, and is reset every time occupancy is re-detected. This state-of-the-art design requires no field calibration or sensitivity adjustments.

**Features**

- PIR Occupancy Detection - excellent RF immunity
- Small Motion Detection up to 20 ft (6.10m)
- 30 sec to 20 min Time Delay
- Push-Button Programmable
- Green LED status indicator

**OPERATIONAL MODES**

**On Modes (Default)**

Automatic On - The sensor automatically turns the lights on when the sensor detects occupancy.

Reduced Turn-On - The sensor is set to initially only detect large motions, effectively ignoring any reflected PIR signals while still sensing occupants when they enter the room. Once on, the sensor returns to maximum sensitivity.

**Switch Modes (Default)**

Predictive Off - Pressing the switch overrides the lights off and temporarily disables the occupancy detection. After an exit time delay (default 10 seconds) the occupancy detection reactivates and monitors for an additional grace period time (default 5 seconds). If no occupancy is detected during this period, the sensor will revert to Automatic On operation. If occupancy is detected, the sensor will remain in Permanent Off mode requiring the switch to be pressed again in order to restore the sensor to Automatic On.

Permanent Off - Pressing the push-button switch will turn the lights off. The lights will remain off regardless of occupancy until the switch is pressed again, restoring the sensor to Automatic On mode.

Switch Disable - Prevents user from manually turning off the lights via the push-button.

**ADDITIONAL INFORMATION**

For additional product information, visit www.acuitycontrols.com.

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>PHYSICAL</th>
<th>ELECTRICAL</th>
<th>ENVIRONMENTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIZE: 2.74&quot;H x 1.68&quot;W x 1.63&quot;D (6.96cm x 4.27cm x 4.14cm)</td>
<td>MAXIMUM LOAD: 800 W @ 120VAC 1200 W @ 277VAC 1500 W @ 347VAC</td>
<td>OPERATING TEMP: 14° to 160° F (10° to 71° C)</td>
</tr>
<tr>
<td>WEIGHT: 5 oz</td>
<td>MINIMUM LOAD: None</td>
<td>STORAGE TEMP: -14° to 160° F (-26° to 71° C)</td>
</tr>
<tr>
<td>MOUNTING: Single Gang Switch Box</td>
<td>MOTOR LOAD: 1/4 HP</td>
<td>RELATIVE HUMIDITY: 20 to 90% non-condensing</td>
</tr>
<tr>
<td>MOUNTING HEIGHT: 30-48 in (76.2 - 121.9 cm)</td>
<td>FREQUENCY: 50/60 Hz</td>
<td>ROHS COMPLIANT</td>
</tr>
<tr>
<td>COLORS: White, Ivory, Gray, Lt. Almond, Black</td>
<td>WIRING DIAGRAM(S): See Figure # 7 on Page 83</td>
<td></td>
</tr>
</tbody>
</table>

**COVERAGE PATTERN**

**Wall Switch Lens**

- Small motion (e.g., hand movements) detection up to 20 ft (6.10 m)
- Large motion (e.g., walking) detection up to 50 ft (15.24 m)
- Wall-to-Wall coverage
- Passive Dual Technology (Microphonics™) provides overlapping detection of human activity over the complete PIR coverage area; advanced filtering is utilized to prevent non-occupant noises from keeping the lights on for 30 seconds to 20 minutes, and is reset every time occupancy is re-detected. This state-of-the-art design requires no field calibration or sensitivity adjustments.

**OPTION INFORMATION**

**R** Low Voltage Relay

- Enables sensors to interface with other systems (e.g. BMS, lighting panels)
- Provides dry contact closure via a SPDT, 1 amp, 30 volt relay (resistive loads only)

**LT** Low Temp/High Humidity

- Required for cold/humid areas
- Sensor electronics are coated for corrosion resistance
- Operates down to -40°F/-26°C for PDT

**PRODUCT SELECTION GUIDE WALL SWITCH CONTROLS**

---

**ORDERING INFORMATION**

<table>
<thead>
<tr>
<th>Series</th>
<th>Relay</th>
<th>Color</th>
<th>Temp/Humidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>WSD LV</td>
<td>(blank)</td>
<td>WH</td>
<td>Standard</td>
</tr>
<tr>
<td>WSD PDT LV</td>
<td>R Low Voltage Relay</td>
<td>IV</td>
<td>LT Low Temp/High Humidity</td>
</tr>
</tbody>
</table>

Example: WSD LV R WH LT

---

For additional product information, visit www.acuitycontrols.com.
LWS(H)
Large Area Wall Switch Sensor

Overview
Large Area Wall Switch sensors are ideal products to use when retrofitting classrooms, large storage centers or open spaces where a coverage pattern larger than a decorator sensor’s is needed, and where installing a low voltage systems is cost prohibitive. The LWS Series sensors surface mount at standard switch height, while the LWSH Series sensors surface mount from 4 to 7 ft (1.22 to 2.13 m). All styles are available with either Passive Infrared (PIR) detection or Dual Technology (PIR/Microphonics™) detection for rooms with obstructions. The LWS and LWSH Series are line powered and available with one or two poles.

Features
- Miswire protection, reversible line & load connections
- Small Motion detection up to 40 ft (12.19 m)
- Self-Contained Relay(s), No Power Pack(s) Required
- 3-Way & 4-Way Switching Compatible
- No Minimum Load
- Adjustable Time Delay
- Green LED status Indicator

LWS
• Small motion (e.g., hand movements) detection up to 40 ft (12.19 m)
• Wall-to-Wall coverage
• 30 to 48 in (76.20 to 121.92 cm)
• High mounting
• Passive Dual Technology (Microphonics™) provides overlapping detection of human activity over the complete PIR coverage area; advanced filtering is utilized to prevent non-occupant noises from keeping the lights on

LWSH
• Small motion (e.g., hand movements) detection up to 40 ft (12.19 m)
• Wall-to-Wall coverage
• 48 to 84 in (121.92 to 213.36 cm)
• High mounting
• Passive Dual Technology (Microphonics™) provides overlapping detection of human activity over the complete PIR coverage area; advanced filtering is utilized to prevent non-occupant noises from keeping the lights on
### Specifications

<table>
<thead>
<tr>
<th>Physical</th>
<th>Electrical</th>
<th>Environmental</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENCLOSURE: Surface Mount</td>
<td>MAX LOAD / POLE: (1 Phase Only)</td>
<td>OPERATING TEMP:</td>
</tr>
<tr>
<td>SIZE: 4.96&quot;H x 3.10&quot;W x 1.70&quot;D (12.60 cm x 7.87 cm x 4.32 cm)</td>
<td>13 Amps @ 120-347 VAC</td>
<td>14° to 85° F (10° to 29° C)</td>
</tr>
<tr>
<td>WEIGHT: 7 oz</td>
<td>FREQUENCY: 50/60 Hz</td>
<td>STORAGE TEMP:</td>
</tr>
<tr>
<td>MOUNTING: Single Gang Switch Box</td>
<td>Timers are 1.2 x for 50 Hz</td>
<td>-14° to 160° F (-26° to 71° C)</td>
</tr>
<tr>
<td>MOUNTING HEIGHT:</td>
<td>MOTOR LOAD: 1/4 HP each pole</td>
<td>RELATIVE HUMIDITY:</td>
</tr>
<tr>
<td>LWS: 30-48&quot; (76.2-121.92 cm)</td>
<td>WIRING DIAGRAM(S): See Figure # 15 &amp; 16 on Page 86</td>
<td>20 to 90% non-condensing</td>
</tr>
<tr>
<td>LWSH: 48-84&quot; (121.92-213.36 cm)</td>
<td></td>
<td>ROHS COMPLIANT</td>
</tr>
<tr>
<td>COLOR: White, Ivory</td>
<td></td>
<td>(non-Photocontrol versions)</td>
</tr>
</tbody>
</table>

### Additional Information

- For additional product information, visit [www.acuitycontrols.com](http://www.acuitycontrols.com).

### Ordering Information

<table>
<thead>
<tr>
<th>Series</th>
<th># of Poles</th>
<th>Voltage</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>LWS</td>
<td>1-Pole</td>
<td>120/277 VAC</td>
<td>WH</td>
</tr>
<tr>
<td>LWS PDT</td>
<td>2-Pole</td>
<td>347 VAC</td>
<td>IV</td>
</tr>
<tr>
<td>LWSPX I/W</td>
<td></td>
<td>120/277 VAC</td>
<td>WH</td>
</tr>
<tr>
<td>LWSPX3 I/W</td>
<td></td>
<td>347 VAC</td>
<td>IV</td>
</tr>
</tbody>
</table>

### Option Information

- 347 Voltage
  - Allows sensor to be powered and switch 347 VAC

### Optional Wall Plates

For additional product information, visit [www.acuitycontrols.com](http://www.acuitycontrols.com).

The WS BPX plate comes with the 2-pole models. Others can be ordered separately.
Overview
The Push-Button SwitchPod (SPODM) Series of low voltage wall stations interface with Sensor Switch occupancy sensors and power packs in order to implement a wide range of single and bi-level switching applications. These switch devices provide an elegant and cost-effective way of deploying bi-level lighting control that meet energy and building codes without having to source special sensors or power packs.

SwitchPods are all single gang decorator style devices available as single or dual switch units. Versions are also available that work in 3-way applications and/or have a 0-10 VDC dimming output. Units defaulted to dual manual-on operation are also available. For digital solutions to bi-level lighting applications, nLight Enabled wall stations (WallPods), power packs, and sensors are necessary.

Features
- Used with standard occupancy sensors for manual-on applications
- Alternative usage as override switch for auto-on applications
- Single gang decorator style enclosure with 1 or 2 on/off switches
- Finger-touch control
- Programmable without removing switch plate
- Optional dual manual-on operation
- 3X option enables unit for multi-way configurations (i.e., 3-way, 4-way, etc.)
- Optional 0-10 VDC dimming control

**ADDENDUM INFORMATION**
For additional product information, visit www.acuitycontrols.com.

<table>
<thead>
<tr>
<th>PHYSICAL</th>
<th>SPECIFICATIONS</th>
<th>ENVIRONMENTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIZE: 2.74&quot; H x 1.68&quot; W x 1.63&quot; D (6.96 cm x 4.27 cm x 4.14 cm) (not including ground strap)</td>
<td>OPERATING VOLTAGE: 12-24 VAC/VDC</td>
<td>OPERATING TEMP: Standard: 14° to 122°F (10° to 50°C) LT Option: -40° to 122°F (-40° to 50°C)</td>
</tr>
<tr>
<td>WEIGHT: 2 oz</td>
<td>CURRENT DRAW: 5 mA</td>
<td>RELATIVE HUMIDITY: Standard: 20 to 75% non-condensing LT Option: 20 to 90% non-condensing</td>
</tr>
<tr>
<td>MOUNTING: Single gang switch box or low voltage ring</td>
<td>DIMMING LOAD: 0-10 VDC, Sinks &lt; 20 mA; ~40 Ballasts / Drivers @ 0.5 mA each</td>
<td>ROHS COMPLIANT</td>
</tr>
</tbody>
</table>

**ORDERING INFORMATION**
Specifications subject to change.

<table>
<thead>
<tr>
<th>Series</th>
<th>Dimming¹</th>
<th># of Switches/Default on Operation</th>
<th>Multi-way²</th>
<th>Color</th>
<th>Temp/Humidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPODM</td>
<td>(blank)</td>
<td>1 Switch/Auto On</td>
<td>(blank)</td>
<td>WH</td>
<td>Standard</td>
</tr>
<tr>
<td>D</td>
<td>None</td>
<td>1 Switch/Manual On</td>
<td>3X</td>
<td>White</td>
<td>LT Low Temp/ High Humidity</td>
</tr>
<tr>
<td></td>
<td>Dimming Operation (0-10VDC)</td>
<td>2 Switches (Switch 1 Manual/Switch 2 Auto)</td>
<td>Multi-way (e.g. 3-way)</td>
<td>IV</td>
<td>LT Low Temp/ High Humidity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 Switches (both Manual)</td>
<td></td>
<td>GY</td>
<td>LT Low Temp/ High Humidity</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>¹ Not available with 2 switch (2P) versions</td>
</tr>
</tbody>
</table>

Example: SPODM WH
Overview
The PTS 60 and PTS 720 Series preset timer switches provide a simple to use and simple to apply lighting control alternative to wall switch occupancy sensors. These elegant decorator style wall stations each provide six preset countdown timer selections as well as an on/off push button. The PTS 60 and PTS 720 units are powered from 120/277 VAC (optional 347 VAC) and are intended to switch a line voltage lighting load or small motor load (see specifications). Additionally, the PTS 60 and PTS 720 can be applied without requiring a neutral wiring connection, making them ideal for retrofit applications.

Features
- Miswire protection, reversible line & load connections
- No neutral connection required
- No minimum load requirement
- Self-contained relay
- Fixed or adjustable preset times
- Optional audible timeout warning at 45, 30, and 15 sec
- Optional flicker timeout warning at 2 and 1 min
- Continuous led flash for last 30 sec of button’s time setting
- Green LED time indicators

Specifications
- **PTS Preset Timer Switch**
  - Time Scale: 60 min. max
  - Voltage: 120/277 VAC
  - Color: (blank)
  - Temp/Humidity: Standard

Example: PTS 60 WH

Additional Information
For additional product information, visit www.acuitycontrols.com.

<table>
<thead>
<tr>
<th>PHYSICAL</th>
<th>SPECIFICATIONS</th>
<th>ENVIRONMENTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>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)</td>
<td>MAXIMUM LOAD: 800 W @ 120 VAC, 1200 W @ 277 VAC, 1500 W @ 347 VAC</td>
<td>OPERATING TEMP: Standard: 14°F to 122°F (-10°C to 50°C), LT Option: -40°F to 122°F (-40°C to 50°C)</td>
</tr>
<tr>
<td>WEIGHT: 5 oz</td>
<td>MINIMUM LOAD: None</td>
<td>RELATIVE HUMIDITY: Standard: 20 to 75% non-condensing, LT Option: 20 to 90% non-condensing</td>
</tr>
<tr>
<td>MOUNTING: Single Gang Switch Box</td>
<td>MOTOR LOAD: 1/4 HP</td>
<td>ROHS COMPLIANT</td>
</tr>
<tr>
<td>FREQUENCY: 50/60 Hz</td>
<td>WIRING DIAGRAM(S): See Figure # 6 on Page 83</td>
<td></td>
</tr>
</tbody>
</table>

ORDERING INFORMATION
Specifications subject to change.

<table>
<thead>
<tr>
<th>Series</th>
<th>Time Scale</th>
<th>Voltage</th>
<th>Color</th>
<th>Temp/Humidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTS</td>
<td>Preset Timer Switch</td>
<td>60 60 min. max</td>
<td>(blank) 120/277 VAC</td>
<td>WH White</td>
</tr>
<tr>
<td></td>
<td></td>
<td>720 720 min. max</td>
<td>347 347 VAC</td>
<td>IV Ivory</td>
</tr>
</tbody>
</table>

ROHS COMPLIANT

Notes
1. Load specifications for fluorescent and incandescent lighting only
2. See data sheet for LED specifications
Overview
Sensor Switch’s CM (PDT) xx WR Series of wireless occupancy sensors provide both Passive Infrared (PIR) and Microphonics™ Dual Technology detection options. These battery operated sensors (with an estimated 10 year battery life) utilize RDT Wireless technology. They are designed to work with the SPODMR WR Series wall switch or other RDT Wireless devices to control a space’s lighting.

Features
- Passive Dual Technology (PDT) utilizes PIR/Microphonics™ detection
- 100% wireless operation
- RDT™ 902 MHz compliant
- 10-year battery life (at defaults)
- 360° coverage pattern
- Digital PIR detection - excellent RF immunity
- Simple push-button pairing

Specifications
- Passive Dual Technology (PDT) utilizes PIR/Microphonics™ detection
- 100% wireless operation
- RDT™ 902 MHz compliant
- 10-year battery life (at defaults)
- 360° coverage pattern
- Digital PIR detection - excellent RF immunity
- Simple push-button pairing

Coverage Pattern
Small Motion / Standard Range 360° Lens
- Best choice for small motion (e.g. hand movements) detection
- 360° conical shaped pattern
- Provides ~12 ft (3.66 m) radial coverage (~500 ft²) 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
- Passive Dual Technology (Microphonics™) provides overlapping detection of human activity over the complete PIR coverage area; advanced filtering is utilized to prevent non-occupant noises from keeping the lights on

Large Motion / Extended Range 360° Lens
- Best choice for large motion detection (e.g. walking)
- 360° conical shaped pattern
- Provides ~24 ft (7.32 m) radial coverage (~2000 ft²) when mounted at 9 ft (2.74 m)
- 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
- Detection range improves when walking across beams compared to into beams
- Passive Dual Technology (Microphonics™) provides overlapping detection of human activity over the complete PIR coverage area; advanced filtering is utilized to prevent non-occupant noises from keeping the lights on

Additional Information
For additional product information, visit www.acuitycontrols.com.

Specifications
- PHYSICAL
  - 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)

- ENVIRONMENTAL
  - 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)
  - RELATIVE HUMIDITY:
    - Standard: 20 to 90% non-condensing

Example: CM PDT 9 WR

Ordering Information
Series | Detection | Coverage | Wireless Technology
--- | --- | --- | ---
CM | Ceiling mount sensor | (blank) | Passive Infrared (PIR) | 9 | Small motion 360° | WR | RDT™ Wireless
PDT | Dual Tech (PIR/Microphonics™) | 10 | Large motion 360°
Overview
The SPODMR WR is a stylish, easy to install, and simple to use wall switch for use with paired CM (PDT) xx WR occupancy sensors or other RDT™ Wireless relay modules, kinetic switches, or plug-load controllers. Once wired, a few button pushes is all it takes to pair the switch to the desired sensors.

Features
- Miswire protection, reversible line & load connections
- Neutral wire required-no current leakage to load
- Adjustable time delays
- Auto-On or Manual-On modes
- Simple push-button pairing
- 2 Green LED status Indicators

Ordering Information
Series: SPODMR WR
Operating Mode: (blank) Auto on SA Manual on
Color: WH White IV Ivory GY Gray AL Light Almond BK Black
Kit: (blank) None K1 Includes CM 9 WR K2 Includes CM 10 WR K3 Includes CM PDT 9 WR K4 Includes CM PDT 10 WR

Example: SPODMR WR WH

Specifications
- Physical: 2.74" H x 1.68" W x 1.63" D (6.96 cm x 4.27 cm x 4.14 cm)
- Weight: 5 oz
- Mounting: Single gang switch box

- Electrical:
  - Maximum Load:
    - 800 W @ 120 VAC/1200 W @ 277 VAC (Fluorescent/Incandescent)
    - See data sheet for LED specs
    - 1A @ 24 VAC/VDC
  - Minimum Load: None
  - Motor Load: 1/4HP
  - Load Frequency: 50/60 Hz
  - WIRING DIAGRAM(S): See Figure # 1 on Page 82

- Environmental:
  - Operating Temp: (-20° to 50° C)
  - Relative Humidity: 20-75% non-condensing
  - Wireless Frequency: 902 MHz (RDT™)
  - RoHS Compliant

Notes
1. Load specifications for fluorescent and incandescent lighting only
2. See data sheet for LED specifications

Additional Information
For additional product information, visit www.acuitycontrols.com.
Ceiling mount sensors are offered in a multitude of configurations which address many applications. Lens options include large motion extended range, small motion standard range and bi-directional for hallways. Available in low voltage and line voltage models, these sensors are capable of covering an entire private office or small room by themselves. Multiple low voltage sensors can also work together to supply the ideal solution for oddly shaped rooms or large open office areas. A line voltage sensor provides one relay for a single-level control, while the 2-pole version provides a second relay for an additional level of control. For rooms with obstructions, these sensors are also offered with Dual Technology, which adds Microphonics™ detection to the Passive Infrared (PIR) detection.

### Features (All)
- 30 sec to 30 min time delay
- Digital PIR detection - excellent RF immunity
- Push-button programmable
- Minimum On-Timer (LampMaximizer™)
- Convenient test mode
- Green LED status Indicator

### Features (Line voltage)
- Self-contained relay(s)
- No minimum load
- Miswire protection, reversible line & load connections

### Specifications

<table>
<thead>
<tr>
<th>Physical</th>
<th>Electrical - Low Voltage</th>
<th>Electrical - Line Voltage</th>
<th>Environmental</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size: 4 55(^{\text{a}}) diameter (11.56 cm) 1.55(^{\text{a}}) deep (3.94 cm)</td>
<td>Operating Voltage: 12-24 VAC/VDC</td>
<td>Load Rating: 800 W @ 120 VAC</td>
<td>Operating Temp: 14(^{\circ}) to 160(^{\circ}) F (-10(^{\circ}) to 71(^{\circ}) C)</td>
</tr>
<tr>
<td>Weight: 6 oz</td>
<td>Recommended Power Pack: PP20</td>
<td>1200 W @ 277 VAC</td>
<td>Storage Temp: -14(^{\circ}) to 160(^{\circ}) F (-26(^{\circ}) to 71(^{\circ}) C)</td>
</tr>
<tr>
<td>Mounting: 3.5(^{\circ}) octagon box, or single gang handy box</td>
<td>Current Draw: Standard, 4 mA w/ R option, 16 mA</td>
<td>1500 W @ 347 VAC</td>
<td>Relative Humidity: 20 to 90% non-condensing</td>
</tr>
<tr>
<td>Color: Matte White</td>
<td>Wiring Diagram(s): See Figure # 8 on Page 84</td>
<td>Frequency: 50/60 Hz</td>
<td>ROHS Compliant</td>
</tr>
<tr>
<td>Operating Vol: 4-36 VDC</td>
<td></td>
<td>Wiring Diagram(s): See Figure # 9 &amp; 10 on Page 84</td>
<td></td>
</tr>
<tr>
<td>Load Rating: 800 W @ 120 VAC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1200 W @ 277 VAC</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1500 W @ 347 VAC</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Option Information

**R** Low Voltage Relay
- Enables sensors to interface with other systems (e.g. BMS, lighting panels)
- Provides dry contact closure via a SPDT, 1 amp, 30 volt relay (resistive loads only)

**P** Photocontrol
- Auto set-point calibration
- On/off mode: Full on/off control of lighting during periods of occupancy with adequate daylight
- Inhibit mode: Prevents lights from turning on if adequate daylight is available, but does not turn lights off
- 2-pole units operate in inhibit mode only

**ADC** Automatic Dimming Control
- Photocell within sensor maintains total room light level by controlling levels of 0-10 VDC dimmable ballasts/drivers
- Photocell also has full on/off control during periods of occupancy
- Provides a second occupancy time-out period that enables lights to go to a dim setting before turning off

**DZ** Dual Zone Photocontrol
- Provides more advanced control than P option
- DUO operation: Determines necessary on/off combination of poles in inboard/outboard applications
- Percentage offset operation: Uses relative set-point for second pole in dual zone applications

**LT** Low Temp/High Humidity
- Sensor electronics are coated for corrosion resistance
- Operates down to -40\(^{\circ}\)F (-4\(^{\circ}\)C for PDT)

**D** Occupancy Controlled Dimming
- Provides dimming output to control 0-10 VDC dimmable ballasts/drivers
- Provides a second occupancy time-out period that enables lights to go to a dim setting before turning off
- Sinks <20mA; ~40 ballast/drivers
- Adjustable max/min dim setting

**347** 347 Voltage
- Allows sensor to be powered and switch 347 VAC
PRODUCT INFORMATION

Ceiling Mount Sensors

12                      6                  0 ft    6          12
3.7                    1.8                0 m   1.8          3.7

SIDE VIEW
0 ft
9
0 m
2.7
28          21          14          7           0 ft       7          14         21          28
8.5         6.4          4.3        2.1         0 m     2.1        4.3        6.4         8.5

TOP VIEW
15
4.6
0 m
6
0 ft
3
30
0 m
13.7
45

High Bay 360° Lens
- Best choice for 15 to 45 ft (4.57 to 13.72 m) mounting heights
- 15 to 20 ft (4.57 to 6.10 m) radial coverage overlaps area lit by a typical high bay fixture
- Excellent detection of large motion (e.g., walking) up to a 35 ft (10.76 m) mounting height
- Excellent detection of extra large motion (e.g., forklifts) up to a 45 ft (13.72 m) mounting height

Low View

Small Motion / Standard Range 360° Lens
- Best choice for small motion (e.g., hand movements) detection
- Viewing angle of 56º in a 360º conical shaped pattern
- 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

Side View
0 ft
9
0 m
2.7
3.7
15
6
0 ft
6
0 m
1.8
3.7

Top View
12
6
0 ft
6
0 m
1.8
3.7

Large Motion / Extended Range 360° Lens
- Best choice for large motion (e.g., walking) detection
- Viewing angle of 67º in a 360º conical shaped pattern
- 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

Bi-Directional Hallway Lens
- Best choice for large motion (e.g., walking) detection
- Viewing angle of 67º for hallway applications
- Provides 28 ft (8.53 m) of 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) hallway coverage

High View
# KEY SPECS

<table>
<thead>
<tr>
<th>SERIES</th>
<th>COVERAGE PATTERN</th>
<th>DETECTION</th>
<th>POWER TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM 6</td>
<td>High Bay 360° Lens</td>
<td>PIR</td>
<td>Low 12-24</td>
</tr>
<tr>
<td>CM 9</td>
<td>Small Motion/Standard Range 360° 9 Lens</td>
<td>PIR</td>
<td>Low 12-24</td>
</tr>
<tr>
<td>CM PDT 9</td>
<td>Small Motion/Standard Range 360° 9 Lens</td>
<td>Dual technology (PDT)</td>
<td>Low 12-24</td>
</tr>
<tr>
<td>CM 10</td>
<td>Large Motion/Extended Range 360° 10 Lens</td>
<td>PIR</td>
<td>Low 12-24</td>
</tr>
<tr>
<td>CM PDT 10</td>
<td>Large Motion/Extended Range 360° 10 Lens</td>
<td>Dual technology (PDT)</td>
<td>Low 12-24</td>
</tr>
<tr>
<td>CM 11</td>
<td>Bi-Directional Hallway Lens</td>
<td>PIR</td>
<td>Low 12-24</td>
</tr>
<tr>
<td>CM PDT 11</td>
<td>Bi-Directional Hallway Lens</td>
<td>Dual technology (PDT)</td>
<td>Low 12-24</td>
</tr>
<tr>
<td>CMR 6</td>
<td>High Bay 360° Lens</td>
<td>PIR</td>
<td>Line 120/277</td>
</tr>
<tr>
<td>CMR 9</td>
<td>Small Motion/Standard Range 360° 9 Lens</td>
<td>PIR</td>
<td>Line 120/277</td>
</tr>
<tr>
<td>CMR PDT 9</td>
<td>Small Motion/Standard Range 360° 9 Lens</td>
<td>Dual technology (PDT)</td>
<td>Line 120/277</td>
</tr>
<tr>
<td>CMR 10</td>
<td>Large Motion/Extended Range 360° 10 Lens</td>
<td>PIR</td>
<td>Line 120/277</td>
</tr>
<tr>
<td>CMR PDT 10</td>
<td>Large Motion/Extended Range 360° 10 Lens</td>
<td>Dual technology (PDT)</td>
<td>Line 120/277</td>
</tr>
<tr>
<td>CMR 6P</td>
<td>High Bay 360° Lens</td>
<td>PIR</td>
<td>Line 120/277</td>
</tr>
<tr>
<td>CMR 9P</td>
<td>Small Motion/Standard Range 360° 9 Lens</td>
<td>PIR</td>
<td>Line 120/277</td>
</tr>
<tr>
<td>CMR PDT 9P</td>
<td>Small Motion/Standard Range 360° 9 Lens</td>
<td>Dual technology (PDT)</td>
<td>Line 120/277</td>
</tr>
<tr>
<td>CMR 10P</td>
<td>Large Motion/Extended Range 360° 10 Lens</td>
<td>PIR</td>
<td>Line 120/277</td>
</tr>
<tr>
<td>CMR PDT 10P</td>
<td>Large Motion/Extended Range 360° 10 Lens</td>
<td>Dual technology (PDT)</td>
<td>Line 120/277</td>
</tr>
</tbody>
</table>

### LOW VOLTAGE

- Specifications subject to change.

#### Example: CM 9 R P LT

<table>
<thead>
<tr>
<th>SERIES</th>
<th>RELAY</th>
<th>DIMMING/PHOTOCONTROL</th>
<th>TEMP/HUMIDITY</th>
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<tbody>
<tr>
<td>CM 6</td>
<td>(blank)</td>
<td>None</td>
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<tr>
<td>CM 9</td>
<td>R</td>
<td>Low Voltage Relay</td>
<td>Standard</td>
</tr>
<tr>
<td>CM PDT 9</td>
<td></td>
<td></td>
<td>Low Temp/High Humidity</td>
</tr>
<tr>
<td>CM 10</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>CM PDT 10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CM 11</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CM PDT 11</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### LINE VOLTAGE

- Specifications subject to change.

#### Example: CMR 9 P 347 LT

<table>
<thead>
<tr>
<th>SERIES</th>
<th>DIMMING/PHOTOCONTROL</th>
<th>VOLTAGE</th>
<th>TEMP/HUMIDITY</th>
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<tbody>
<tr>
<td>CMR 6</td>
<td>(blank)</td>
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<td>Standard</td>
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<tr>
<td>CMR 9</td>
<td>D</td>
<td>347</td>
<td>Low Temp/High Humidity</td>
</tr>
<tr>
<td>CMR PDT 9</td>
<td></td>
<td>347 VAC</td>
<td></td>
</tr>
<tr>
<td>CMR 10</td>
<td>ADC</td>
<td>347 VAC</td>
<td></td>
</tr>
<tr>
<td>CMR PDT 10</td>
<td></td>
<td>347 VAC</td>
<td></td>
</tr>
</tbody>
</table>

### 2-POLE, LINE VOLTAGE

- Specifications subject to change.

#### Example: CMR 9 2P DZ LT

<table>
<thead>
<tr>
<th>SERIES</th>
<th>DIMMING/PHOTOCONTROL</th>
<th>VOLTAGE</th>
<th>TEMP/HUMIDITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMR 6P</td>
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<td>(blank)</td>
<td>Standard</td>
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<tr>
<td>CMR 9P</td>
<td>P</td>
<td>347</td>
<td>Low Temp/High Humidity</td>
</tr>
<tr>
<td>CMR PDT 9P</td>
<td></td>
<td>347</td>
<td></td>
</tr>
<tr>
<td>CMR 10P</td>
<td>DZ</td>
<td>347</td>
<td></td>
</tr>
<tr>
<td>CMR PDT 10P</td>
<td></td>
<td>347</td>
<td></td>
</tr>
</tbody>
</table>
CEOING MOUNT DAYLIGHT CONTROLS
Switching & Dimming Sensors

Overview
On/off Photocontrol and dimming sensors provide intelligent control of lighting for indoor daylight applications. Ideal for spaces with windows, such as vestibules, corridors, classrooms or offices, the sensors work by monitoring daylight conditions in a room, then controlling the lighting to ensure that adequate lighting levels are maintained.

Low voltage sensors are powered with 12-24 VAC/VDC. On/off Photocontrol sensors operate with a power pack (Model # PP20), enabling complete 20 Amp circuits to be controlled. Dimming Photocontrol sensors are capable of controlling any 0-10 VDC dimmable ballast or driver. Line voltage versions are also available that integrate a line switching relay and/or power off the line.

Features
• Works as stand-alone unit or with occupancy sensors
• Auto set-point calibration
• Push-button programmable
• 100 hr. lamp burn-in timer
• Fully digital control
• Green LED status Indicator

SOLUTION TYPES

Automatic On/Off Switching

Automatic Dimming Control

Combination On/Off & Dimming Control

SPECIFICATIONS

<table>
<thead>
<tr>
<th>PHYSICAL</th>
<th>ELECTRICAL - LOW VOLTAGE</th>
<th>ELECTRICAL - LINE VOLTAGE</th>
<th>ENVIRONMENTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIZE: 4.55&quot; diameter (11.56 cm) 1.55&quot; deep (3.94 cm) WEIGHT: 6 oz MOUNTING: 3.5&quot; octagon box, or single gang handy box COLOR: White</td>
<td>OPERATING VOLTAGE: 12-24 VAC/VDC RECOMMENDED POWER PACK: PP20 CURRENT DRAW: Standard, 4 mA DIMMING LOAD: Sinks up to 20 mA or 40 ballasts/drivers @ 5 mA each (0-10 VDC dimmable ballasts/drivers only) WIRING DIAGRAM(S): See Figure # 22 - 28 on Page 88 - 89</td>
<td>LOAD RATING: Maximum: 800 W @ 120 VAC 1500 W @ 277 VAC MOTOR LOAD: 1/4 HP DIMMING LOAD: Sinks up to 20 mA or 40 ballasts/drivers @ 5 mA each (0-10 VDC dimmable ballasts/drivers only) WIRING DIAGRAM(S): See Figure # 22 - 28 on Page 88 - 89</td>
<td>OPERATING TEMP: 14º to 160º F (–10º to 71º C) STORAGE TEMP: –14º to 160º F (–26º to 71º C) RELATIVE HUMIDITY: 20 to 90% non-condensing ROHS COMPLIANT</td>
</tr>
</tbody>
</table>
**OPTION INFORMATION**

**DZ**  
- Dual Zone  
  - Provide second output that can control an additional zone of lighting  

Stepped Dimming (Duo) Operation (PC Only)  
- Ideal for A/B (also called inboard/outboard) switching applications  
- Determines the necessary on/off combination of the two poles in order to maintain adequate lighting  

Percentage Offset Operation  
- Ideal for classrooms with individually controlled parallel rows of lights  
- PC sensors use a relative set-point for the second pole that is a percentage of the first pole’s set-point  
- ADC sensors enable control of an additional 0-10 VDC dimmable ballast or driver at a selected level (voltage) higher than that of the primary zone  

**347 VAC**  
- Allows sensor to be powered from and switch 347 VAC  

**LT**  
- Low Temp/High Humidity  
  - Sensor electronics are coated for corrosion resistance  
  - Operates down to -40°F/C  

---

**KEY SPECS**

<table>
<thead>
<tr>
<th>SERIES</th>
<th>ENCLOSEMENT</th>
<th>CONTROL TYPE</th>
<th>POWER TYPE [VDC/VAC]</th>
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</thead>
<tbody>
<tr>
<td>CM PC</td>
<td>Ceiling mount</td>
<td>On/off</td>
<td>Low 12-24</td>
</tr>
<tr>
<td>CM ADC</td>
<td>Ceiling mount</td>
<td>Dimming</td>
<td>Low 12-24</td>
</tr>
<tr>
<td>CM PC ADC</td>
<td>Ceiling mount</td>
<td>On/off &amp; dimming</td>
<td>Low 12-24</td>
</tr>
<tr>
<td>CMR PC</td>
<td>Ceiling mount</td>
<td>On/off</td>
<td>Line 120/277</td>
</tr>
<tr>
<td>CMR ADC</td>
<td>Ceiling mount</td>
<td>Dimming</td>
<td>Line 120/277</td>
</tr>
<tr>
<td>CMR PC ADC</td>
<td>Ceiling mount</td>
<td>On/off &amp; dimming</td>
<td>Line 120/277</td>
</tr>
</tbody>
</table>

---

**LOW VOLTAGE**

<table>
<thead>
<tr>
<th>Series</th>
<th>Dual Zone</th>
<th>Temp/Humidity</th>
<th>Example: CM PC DZ LT</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM PC</td>
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<td>(blank)</td>
<td></td>
</tr>
<tr>
<td>CM ADC</td>
<td>Single Zone</td>
<td>LT</td>
<td></td>
</tr>
<tr>
<td>CM PC ADC</td>
<td>DZ</td>
<td>LT</td>
<td></td>
</tr>
</tbody>
</table>

**LINE VOLTAGE**

<table>
<thead>
<tr>
<th>Series</th>
<th>Dual Zone</th>
<th>Voltage</th>
<th>Temp/Humidity</th>
<th>Example: CMR PC DZ LT</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMR PC</td>
<td>(blank)</td>
<td>120/277 VAC</td>
<td>(blank)</td>
<td></td>
</tr>
<tr>
<td>CMR ADC</td>
<td>None</td>
<td>208 VAC</td>
<td>LT</td>
<td></td>
</tr>
<tr>
<td>CMR PC ADC</td>
<td>DZ</td>
<td>347 VAC</td>
<td>LT</td>
<td></td>
</tr>
</tbody>
</table>

**Notes**  
1. 480 and 208 option not available w/dual zone (DZ)  
2. CMR PC Only
Overview
Recessed mount sensors offer the reliable functionality of the standard ceiling mount with an architectural aesthetic. Recessed mount sensors are designed to fit inside a standard junction box making installation quick and easy. Lens options include large motion extended range and small motion standard range. Available in low voltage and line voltage models, these sensors are capable of covering an entire private office or small room by themselves. Multiple low voltage sensors can also work together to supply the ideal solution for oddly shaped rooms or large open office areas. A line voltage sensor provides one relay for a single-level control, while the 2-pole version provides a second relay for an additional level of control. For rooms with obstructions, these sensors are also offered with Dual Technology, which adds Microphonics™ detection to the Passive Infrared (PIR) detection.

Features (All)
- 30 sec to 30 min time delay
- Digital PIR detection - excellent RF immunity
- Push-button programmable
- Minimum On-Timer (LampMaximizer™)
- Convenient test mode
- Green LED Status Indicator

Features (Line voltage)
- Miswire protection, reversible line & load connections
- Self-contained relay(s)
- No minimum load

Small Motion / Standard Range 360° Lens
- Best choice for small motion (e.g., hand movements) detection
- Viewing angle of 56° in a 360° conical shaped pattern
- 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
- Passive Dual Technology (Microphonics™) provides overlapping detection of human activity over the complete PIR coverage area; advanced filtering is utilized to prevent non-occupant noises from keeping the lights on

Large Motion / Extended Range 360° Lens
- Best choice for large motion (e.g., walking) detection
- Viewing angle of 67° in a 360° conical shaped pattern
- 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
- Passive Dual Technology (Microphonics™) provides overlapping detection of human activity over the complete PIR coverage area; advanced filtering is utilized to prevent non-occupant noises from keeping the lights on

ADDITIONAL INFORMATION
For additional product information, visit www.acuitycontrols.com.

SPECIFICATIONS

<table>
<thead>
<tr>
<th>PHYSICAL</th>
<th>ELECTRICAL - LOW VOLTAGE</th>
<th>ELECTRICAL - LINE VOLTAGE</th>
<th>ENVIRONMENTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIZE: 4.40” square (11.18 cm)</td>
<td>OPERATING VOLTAGE: 12-24 VAC/VDC</td>
<td>LOAD RATING: 800 W @ 120 VAC</td>
<td>OPERATING TEMP: 14° to 160°F (-10° to 71°C)</td>
</tr>
<tr>
<td>WEIGHT: 6 oz</td>
<td>RECOMMENDED POWER PACK: PP20</td>
<td>1200 W @ 277 VAC</td>
<td>STORAGE TEMP: -14° to 160°F (-26° to 71°C)</td>
</tr>
<tr>
<td>MOUNTING: 4 x 4 square junction box with or without two-gang mudring; directly to ceiling tile through 2.65 (6.7 cm) square opening</td>
<td>CURRENT DRAW: Standard, 4 mA w/ R option, 16 mA</td>
<td>1500 W @ 347 VAC</td>
<td>RELATIVE HUMIDITY: 20 to 90% non-condensing</td>
</tr>
<tr>
<td>COLOR: White</td>
<td>WIRING DIAGRAM(S): See Figure # 8 on Page 84</td>
<td>MOTOR LOAD: 1/4 HP</td>
<td>ROHS COMPLIANT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FREQUENCY: 50/60 Hz</td>
<td></td>
</tr>
</tbody>
</table>
### Low Voltage Relay
- Enables sensors to interface with other systems (e.g. BMS, lighting panels)
- Provides dry contact closure via a SPDT, 1 amp, 30 volt relay (resistive loads only)

### Photocontrol
- Auto set-point calibration
- On/off mode: Full on/off control of lighting during periods of occupancy with adequate daylight
- Inhibit mode: Prevents lights from turning on if adequate daylight is available, but does not turn lights off
- 2-pole units operate in inhibit mode only

### Automatic Dimming Control
- Photocontrol within sensor maintains total room light level by controlling levels of 0-10 VDC dimmable ballasts/drivers
- Photocontrol also has full on/off control during periods of occupancy
- Provides a second occupancy time-out period that enables lights to go a dim setting before turning off

### Dual Zone Photocontrol
- Provides more advanced control than Photocontrol option
- DUO operation: Determines necessary on/off combination of poles in inboard/outboard applications
- Percentage offset operation: Uses relative set-point for second pole in dual zone applications

### Low Temp/High Humidity
- Sensor electronics are coated for corrosion resistance
- Operates down to -40°F (-4°C) for PDT

### Dual Zone Photocontrol
- Provides more advanced control than Photocontrol option
- DUO operation: Determines necessary on/off combination of poles in inboard/outboard applications
- Percentage offset operation: Uses relative set-point for second pole in dual zone applications

### Occupancy Controlled Dimming
- Provides dimming output to control 0-10 VDC dimmable ballasts/drivers
- Provides a second occupancy time-out period that enables lights to go to a dim setting before turning off
- Sinks <20mA; ~40 ballast/drivers
- Adjustable max/min dim setting

### 347 Voltage
- Allows sensor to be powered and switch 347 VAC

### Key Specs

<table>
<thead>
<tr>
<th>SERIES</th>
<th>COVERAGE PATTERN</th>
<th>DETECTION</th>
<th>POWER TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>RM 9</td>
<td>Small Motion/Standard Range 360° 9 Lens</td>
<td>PIR</td>
<td>Low 12-24</td>
</tr>
<tr>
<td>RM PDT 9</td>
<td>Small Motion/Standard Range 360° 9 Lens</td>
<td>Dual technology (PDT)</td>
<td>Low 12-24</td>
</tr>
<tr>
<td>RM 10</td>
<td>Large Motion/Extended Range 360° 10 Lens</td>
<td>PIR</td>
<td>Low 12-24</td>
</tr>
<tr>
<td>RM PDT 10</td>
<td>Large Motion/Extended Range 360° 10 Lens</td>
<td>Dual technology (PDT)</td>
<td>Low 12-24</td>
</tr>
<tr>
<td>RMR 9</td>
<td>Small Motion/Standard Range 360° 9 Lens</td>
<td>PIR</td>
<td>Line 120/277</td>
</tr>
<tr>
<td>RMR PDT 9</td>
<td>Small Motion/Standard Range 360° 9 Lens</td>
<td>Dual technology (PDT)</td>
<td>Line 120/277</td>
</tr>
<tr>
<td>RMR 10</td>
<td>Large Motion/Extended Range 360° 10 Lens</td>
<td>PIR</td>
<td>Line 120/277</td>
</tr>
<tr>
<td>RMR PDT 10</td>
<td>Large Motion/Extended Range 360° 10 Lens</td>
<td>Dual technology (PDT)</td>
<td>Line 120/277</td>
</tr>
<tr>
<td>RMR 9 2P</td>
<td>Small Motion/Standard Range 360° 9 Lens</td>
<td>PIR</td>
<td>Line 120/277</td>
</tr>
<tr>
<td>RMR PDT 9 2P</td>
<td>Small Motion/Standard Range 360° 9 Lens</td>
<td>Dual technology (PDT)</td>
<td>Line 120/277</td>
</tr>
<tr>
<td>RMR 10 2P</td>
<td>Large Motion/Extended Range 360° 10 Lens</td>
<td>PIR</td>
<td>Line 120/277</td>
</tr>
<tr>
<td>RMR PDT 10 2P</td>
<td>Large Motion/Extended Range 360° 10 Lens</td>
<td>Dual technology (PDT)</td>
<td>Line 120/277</td>
</tr>
</tbody>
</table>

### Example Specifications
- **Low Voltage**: RM 9 R P LT
- **Line Voltage**: RMR 9 P 347 LT
- **2-Pole Line Voltage**: RMR 9 2P DZ LT
Overview
On/off Photocontrol and dimming sensors provide intelligent control of lighting for indoor daylight applications. Ideal for spaces with windows, such as vestibules, corridors, classrooms or offices, the sensors work by monitoring daylight conditions in a room, then controlling the lighting to ensure that adequate lighting levels are maintained.

Low voltage sensors are powered with 12-24 VAC/VDC. On/off Photocontrol sensors operate with a power pack (Model # PP20), enabling complete 20 Amp circuits to be controlled. Dimming Photocontrol sensors are capable of controlling any 0-10 VDC dimmable ballast or driver. Line voltage versions are also available that integrate a line switching relay and/or power off the line.

Features
- Works as stand-alone unit or with occupancy sensors
- Auto set-point calibration
- Push-button programmable
- 100 hr. lamp burn-in timer
- Fully digital control
- Green LED status Indicator

SOLVED TYPES

PC  Automatic On/Off Switching
ADC  Automatic Dimming Control
PCADC  Combination On/Off & Dimming Control

SPECIFICATIONS

<table>
<thead>
<tr>
<th>PHYSICAL</th>
<th>ELECTRICAL - LOW VOLTAGE</th>
<th>ELECTRICAL - LINE VOLTAGE</th>
<th>ENVIRONMENTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIZE: 4.40&quot; square (11.18 cm)</td>
<td>OPERATING VOLTAGE: 12-24 VAC/VDC</td>
<td>LOAD RATING:</td>
<td>OPERATING TEMP: 14° to 160°F (-10° to 71°C)</td>
</tr>
<tr>
<td>WEIGHT: 6 oz</td>
<td>RECOMMENDED POWER PACK: PP20</td>
<td>800 W @ 120 VAC</td>
<td>STORAGE TEMP: -14° to 160° F (-26° to 71°C)</td>
</tr>
<tr>
<td>MOUNTING: 4 x 4 square junction box with or without two-gang mudring; directly to ceiling tile through 2.65 (6.7 cm) square opening</td>
<td>CURRENT DRAW: Standard, 4 mA</td>
<td>1500 W @ 277 VAC</td>
<td>RELATIVE HUMIDITY: 20 to 90% non-condensing</td>
</tr>
<tr>
<td>COLOR: White</td>
<td>DIMMING LOAD: Sinks up to 20 mA or 40 ballasts/drivers @ 5 mA each (0-10 VDC dimmable ballasts/drivers only)</td>
<td>MOTOR LOAD: 1/4 HP</td>
<td>ROHS COMPLIANT</td>
</tr>
<tr>
<td></td>
<td>WIRING DIAGRAM(S): See Figure # 22 - 28 on Page 88 - 89</td>
<td>DIMMING LOAD: Sinks up to 20 mA or 40 ballasts/drivers @ 5 mA each (0-10 VDC dimmable ballasts/drivers only)</td>
<td></td>
</tr>
</tbody>
</table>
**PRODUCT SELECTION GUIDE**

**DUAL ZONE**

- Provides second output that can control an additional zone of lighting

**Stepped Dimming (Duo) Operation (PC Only)**

- Ideal for A/B (also called inboard/outboard) switching applications
- Determines the necessary on/off combination of the two poles in order to maintain adequate lighting

**Percentage Offset Operation**

- Ideal for classrooms with individually controlled parallel rows of lights
- PC sensors use a relative set-point for the second pole that is a percentage of the first pole’s set-point
- ADC sensors enable control of an additional 0-10 VDC dimmable ballast or driver at a selected level (voltage) higher than that of the primary zone

**347 VAC**

- Allows sensor to be powered from and switch 347 VAC

**LOW VOLTAGE**

<table>
<thead>
<tr>
<th>Series</th>
<th>Dual Zone</th>
<th>Temp/Humidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>RM PC</td>
<td>(blank)</td>
<td>(blank)</td>
</tr>
<tr>
<td>RM ADC</td>
<td>DZ</td>
<td>LT</td>
</tr>
<tr>
<td>RM PC ADC</td>
<td>DZ</td>
<td>LT</td>
</tr>
</tbody>
</table>

**LINE VOLTAGE**

<table>
<thead>
<tr>
<th>Series</th>
<th>Dual Zone</th>
<th>Voltage</th>
<th>Temp/Humidity</th>
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</thead>
<tbody>
<tr>
<td>RMR PC</td>
<td>(blank)</td>
<td>347 VAC</td>
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<tr>
<td>RMR ADC</td>
<td>DZ</td>
<td>120/277 VAC</td>
<td>Standard</td>
</tr>
<tr>
<td>RMR PC ADC</td>
<td>DZ</td>
<td>347 VAC</td>
<td>Low Temp/High Humidity</td>
</tr>
</tbody>
</table>

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**OPTION INFORMATION**

**CUL**

**LOW TEMPERATURE/HIGH HUMIDITY**

- Sensor electronics are coated for corrosion resistance
- Operates down to -40°F/C

---

**PRODUCT INFORMATION**

**KEY SPECS**

<table>
<thead>
<tr>
<th>SERIES</th>
<th>ENCLOSURE</th>
<th>CONTROL TYPE</th>
<th>POWER TYPE (VDC/VAC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RM PC</td>
<td>Recessed mount</td>
<td>On/off</td>
<td>Low 12-24</td>
</tr>
<tr>
<td>RM ADC</td>
<td>Recessed mount</td>
<td>Dimming</td>
<td>Low 12-24</td>
</tr>
<tr>
<td>RM PC ADC</td>
<td>Recessed mount</td>
<td>On/off &amp; dimming</td>
<td>Low 12-24</td>
</tr>
<tr>
<td>RMR PC</td>
<td>Recessed mount</td>
<td>On/off</td>
<td>Line 120/277</td>
</tr>
<tr>
<td>RMR ADC</td>
<td>Recessed mount</td>
<td>Dimming</td>
<td>Line 120/277</td>
</tr>
<tr>
<td>RMR PC ADC</td>
<td>Recessed mount</td>
<td>On/off &amp; dimming</td>
<td>Line 120/277</td>
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**LINE VOLTAGE SERIES DUAL ZONE**

<table>
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<tr>
<th>Series</th>
<th>Dual Zone</th>
<th>Temp/Humidity</th>
</tr>
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<tbody>
<tr>
<td>RMR PC</td>
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<td>RMR ADC</td>
<td>DZ</td>
<td>LT</td>
</tr>
<tr>
<td>RMR PC ADC</td>
<td>DZ</td>
<td>LT</td>
</tr>
</tbody>
</table>

**Notes**

1. RMR PC Only
**Overview**

Fixture mount sensors provide passive infrared occupancy detection that overlap the areas lit by a luminaire. Fixture mount sensors are designed to mount directly to the end of a light fixture through an extended ½ inch chase nipple. Lens options include large motion extended range, small motion standard range, bi-directional for hallways and high bay. Low voltage sensors are used in conjunction with power packs, which contain a relay, and are ideal when multiple sensors are needed. Line voltage versions have an integrated relay making it an effective solution when controlling an entire circuit with a single sensor. Furthermore 2P (two pole) line voltage versions provide a second relay for an additional level of control. Options including PDT (Passive Dual Technology), integrated photocell, dimming control, low temp/humidity and 347 voltage are also available.

**Features (All)**

- 30 sec to 30 min time delay
- Digital PIR detection - excellent RF immunity
- Push-button programmable
- Minimum On-Timer (LampMaximator®)
- Convenient test mode
- Green LED status Indicator

**Features (Line voltage)**

- Miswire protection, reversible line & load connections
- Self-contained relay(s)
- No minimum load

---

**FIXTURE MOUNT SENSORS**

**PRODUCT INFORMATION**

**PHYSICAL**

- **Size:** 3.63” H x 3.63” W x 1.50” D (9.22 cm x 9.22 cm x 3.81 cm)
- **Weight:** 6 oz
- **Mounting:** .5” knockout
- **Color:** White

**ELECTRICAL - LOW VOLTAGE**

- **Operating Voltage:** 12-24 VAC/VDC
- **Recommended Power Pack:** PP20
- **Current Draw:** Standard, 4 mA w/ R option, 16 mA

**ELECTRICAL - LINE VOLTAGE**

- **Load Rating:**
  - 800 W @ 120 VAC
  - 1000 W @ 208 VAC
  - 1200 W @ 277 VAC
  - 1500 W @ 347 VAC
  - 2160 W @ 480 VAC
- **Motor Load:** 1/4 HP
- **Frequency:** 50/60 Hz

**ENVIRONMENTAL**

- **Operating Temp:** 14º to 160º F (-10º to 71º C)
- **Storage Temp:** -14º to 160º F (-26º to 71º C)
- **Relative Humidity:** 20 to 90% non-condensing
- **Rohs Compliant**

---

**AVAILABLE LENSES**

- **High Bay 360°**
- **Large Motion / Extended Range 360°**
- **High Bay End-of-Aisle**
- **Small Motion / Standard Range 360°**

---

**OPTION INFORMATION**

**Low Voltage Relay**

- Enables sensors to interface with other systems (e.g. BMS, lighting panels)
- Provides dry contact closure via a SPDT, 1 amp, 30 volt relay (resistive loads only)

**Photocontrol**

- Auto set-point calibration
- On/off mode: Full on/off control of lighting during periods of occupancy with adequate daylight
- Inhibit mode: Prevents lights from turning on if adequate daylight is available, but does not turn lights off
- 2-pole units operate in inhibit mode only

**Automatic Dimming Control**

- Photocell within sensor maintains total room light level by controlling levels of 0-10 VDC dimmable ballasts/drivers
- Photocell also has full on/off control during periods of occupancy
- Provides a second occupancy time-out period that enables lights to go to a dim setting before turning off

**Dual Zone Photocontrol**

- Provides more advanced control than P option
- DUO operation: Determines necessary on/off combination of poles in inboard/outboard applications
- Percentage offset operation: Uses relative set-point for second pole in dual zone applications

**Low Temp/High Humidity**

- Sensor electronics are coated for corrosion resistance
- Operates down to -40°F/C (-4°F/20°C for PDT)

**Occupancy Controlled Dimming**

- Provides dimming output to control 0-10 VDC dimmable ballasts/drivers
- Provides a second occupancy time-out period that enables lights to go to a dim setting before turning off
- Sinks <20mA; ~40 ballast/drivers
- Adjustable max/min dim setting

**347 Voltage**

- Allows sensor to be powered and switch 347 VAC
**Fixure Mount Sensors**

### PRODUCT SELECTION GUIDE

**PRODUCT INFORMATION**

**COVERAGE PATTERN**

#### High Bay 360° Lens

- Best choice for 15 to 45 ft (4.57 to 13.72 m) mounting heights
- 15 to 20 ft (4.57 to 6.10 m) radial coverage overlaps area lit by a typical high bay fixture
- Excellent detection of large motion (e.g., walking) up to a 35 ft (10.76 m) mounting height
- Excellent detection of extra large motion (e.g., forklifts) up to a 45 ft (13.72 m) mounting height

#### High Bay Bi-Directional Aisleway Lens

- Provides 50° bi-directional and 10° wide coverage pattern
- 1.2x mounting height equals approximate detection range in either direction
- Typical 40 ft (12.19 m) mounting detects 50 ft (15.24 m) in either direction

#### Large Motion / Extended Range 360° Lens

- Best choice for large motion (e.g., walking) detection
- Viewing angle of 67° in a 360° conical shaped pattern
- 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

#### High Bay End-of-Aisle

- Detects motion from the end of an aisle up to 110 ft (33.53 m) long
- Designed to mount 30 ft (9.14 m) high and 10 ft (3.05 m) back from end-of-aisle
- Sensors should always be applied in pairs facing each other from either end of an aisle

#### Small Motion / Standard Range 360° Lens

- Best choice for small motion (e.g., hand movements) detection
- Viewing angle of 56° in a 360° conical shaped pattern
- 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

---

**www.acuitycontrols.com / 45**
### Fixtures Mount Sensors

#### Low Voltage Specifications subject to change.

<table>
<thead>
<tr>
<th>Series</th>
<th>Relay</th>
<th>Dimming/Photocontrol</th>
<th>Voltage</th>
<th>Temp/Humidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMRB 9</td>
<td>(blank)</td>
<td>None</td>
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<td>Standard</td>
</tr>
<tr>
<td>CMRB PDT 9</td>
<td>R</td>
<td>Low Voltage Relay</td>
<td>D</td>
<td>Occupancy Controlled High/Low Dimming</td>
</tr>
<tr>
<td>CMRB 10</td>
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<td>P</td>
<td>Photocontrol</td>
</tr>
<tr>
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<td>ADC</td>
<td>Photocontrol with Dimming</td>
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#### Line Voltage Specifications subject to change.

<table>
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<th>Voltage</th>
<th>Temp/Humidity</th>
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<td>CMRB 6 208</td>
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<tr>
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</tr>
<tr>
<td>CMRB 50</td>
<td></td>
<td>120/277 VAC</td>
<td>Low Temp/High Humidity</td>
</tr>
<tr>
<td>CMRB 50 208</td>
<td></td>
<td>347</td>
<td>Low Temp/High Humidity</td>
</tr>
<tr>
<td>CMRB 50 480</td>
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<td>120/277 VAC</td>
<td>Low Temp/High Humidity</td>
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<tr>
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<td>347</td>
<td>Low Temp/High Humidity</td>
</tr>
<tr>
<td>HMRB 10 208</td>
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<td>347</td>
<td>Low Temp/High Humidity</td>
</tr>
<tr>
<td>HMRB 10 480</td>
<td></td>
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#### Line Voltage Specifications subject to change.

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<th>Dimming/Photocontrol (choose one only)</th>
<th>Voltage</th>
<th>Temp/Humidity</th>
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<tr>
<td>CMRB 9</td>
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<td>(blank)</td>
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</tr>
<tr>
<td>CMRB PDT 9</td>
<td></td>
<td>347</td>
<td>Low Temp/High Humidity</td>
</tr>
<tr>
<td>CMRB 10</td>
<td></td>
<td>120/277 VAC</td>
<td>Low Temp/High Humidity</td>
</tr>
<tr>
<td>CMRB PDT 10</td>
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<td>347</td>
<td>Low Temp/High Humidity</td>
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#### 2-Pole, Line Voltage Specifications subject to change.

<table>
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<tr>
<th>Series</th>
<th>Dimming/Photocontrol (choose one only)</th>
<th>Voltage</th>
<th>Temp/Humidity</th>
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</thead>
<tbody>
<tr>
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<td>(blank)</td>
<td>Standard</td>
</tr>
<tr>
<td>CMRB 50 2P</td>
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<tr>
<td>HMRB 10 2P</td>
<td></td>
<td>347</td>
<td>Low Temp/High Humidity</td>
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</table>

#### 2-Pole, Line Voltage Specifications subject to change.

<table>
<thead>
<tr>
<th>Series</th>
<th>Dimming/Photocontrol (choose one only)</th>
<th>Voltage</th>
<th>Temp/Humidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMRB 9 2P</td>
<td>(blank)</td>
<td>(blank)</td>
<td>Standard</td>
</tr>
<tr>
<td>CMRB PDT 9 2P</td>
<td></td>
<td>347</td>
<td>Low Temp/High Humidity</td>
</tr>
<tr>
<td>CMRB 10 2P</td>
<td></td>
<td>120/277 VAC</td>
<td>Low Temp/High Humidity</td>
</tr>
<tr>
<td>CMRB PDT 10 2P</td>
<td></td>
<td>347</td>
<td>Low Temp/High Humidity</td>
</tr>
</tbody>
</table>
Overview
On/off Photocontrol and dimming sensors provide intelligent control of lighting for indoor daylight applications. Ideal for spaces with windows, such as vestibules, corridors, classrooms or offices. The sensors work by monitoring daylight conditions in a room, then controlling the lighting to ensure that adequate lighting levels are maintained.

Low voltage sensors are powered with 12-24 VAC/VDC. On/off Photocontrol sensors operate with a power pack (Model # PP20), enabling complete 20 Amp circuits to be controlled. Dimming Photocontrol sensors are capable of controlling any 0-10 VDC dimmable ballast or driver. Line voltage versions are also available that integrate a line switching relay and/or power off the line.

Features
• Works as stand-alone unit or with occupancy sensors
• Auto set-point calibration
• Push-button programmable
• 100 hr. lamp burn-in timer
• Fully digital control
• Green LED status indicator

Specifications
<table>
<thead>
<tr>
<th>PHYSICAL</th>
<th>ELECTRICAL - LOW VOLTAGE</th>
<th>ELECTRICAL - LINE VOLTAGE</th>
<th>ENVIRONMENTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIZE: 3.63&quot; H x 3.63&quot; W x 1.50&quot; D (9.22 cm x 9.22 cm x 3.81 cm)</td>
<td>OPERATING VOLTAGE: 12-24 VAC/VDC</td>
<td>LOAD RATING: 800 W @ 120 VAC</td>
<td>OPERATING TEMP: 14° to 160°F (10° to 71°C)</td>
</tr>
<tr>
<td>WEIGHT: 6 oz</td>
<td>RECOMMENDED POWER PACK: PP20</td>
<td>1500 W @ 277 VAC</td>
<td>STORAGE TEMP: -14° to 160°F (-26° to 71°C)</td>
</tr>
<tr>
<td>MOUNTING: .5&quot; knockout</td>
<td>CURRENT DRAW: Standard, 4 mA</td>
<td>1500 W @ 347 VAC</td>
<td>RELATIVE HUMIDITY: 20 to 90% non-condensing</td>
</tr>
<tr>
<td>COLOR: White</td>
<td>DIMMING LOAD: Sinks up to 20 mA or 40 ballasts/drivers @ 5 mA each (0-10 VDC dimmable ballasts/drivers only)</td>
<td>MOTOR LOAD: 1/4 HP</td>
<td>ROHS COMPLIANT</td>
</tr>
<tr>
<td>WIRING DIAGRAM(S):</td>
<td>WIRING DIAGRAM(S): See Figure # 22 - 28 on Page 88 - 89</td>
<td>DIMMING LOAD: Sinks up to 20 mA or 40 ballasts/drivers @ 5 mA each (0-10 VDC dimmable ballasts/drivers only)</td>
<td></td>
</tr>
</tbody>
</table>
### OPTION INFORMATION

#### Dual Zone
- Provides second output that can control an additional zone of lighting

#### Stepped Dimming (Duo) Operation (PC Only)
- Ideal for A/B (also called inboard/outboard) switching applications
- Determines the necessary on/off combination of the two poles in order to maintain adequate lighting

#### Percentage Offset Operation
- Ideal for classrooms with individually controlled parallel rows of lights
- PC sensors use a relative set-point for the second pole that is a percentage of the first pole's set-point
- ADC sensors enable control of an additional 0-10 VDC dimmable ballast or driver at a selected level (voltage) higher than that of the primary zone

### LOW VOLTAGE

<table>
<thead>
<tr>
<th>Series</th>
<th>Dual Zone</th>
<th>Temp/Humidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMB PC</td>
<td>(blank)</td>
<td>(blank)</td>
</tr>
<tr>
<td>CMB ADC</td>
<td>DZ</td>
<td>LT</td>
</tr>
<tr>
<td>CMB PC ADC</td>
<td>DZ</td>
<td>LT</td>
</tr>
</tbody>
</table>

Example: CMB PC DZ LT

### LINE VOLTAGE

<table>
<thead>
<tr>
<th>Series</th>
<th>Dual Zone</th>
<th>Voltage</th>
<th>Temp/Humidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMRB PC</td>
<td>(blank)</td>
<td>120/277</td>
<td>(blank)</td>
</tr>
<tr>
<td>CMRB ADC</td>
<td>DZ</td>
<td>208/240</td>
<td>LF</td>
</tr>
<tr>
<td>CMRB PC ADC</td>
<td>DZ</td>
<td>347/480</td>
<td>LT</td>
</tr>
</tbody>
</table>

Notes:
1. 480 and 208 option not available w/dual zone (DZ)
2. CMRB PC Only

---

**KEY SPECS**

<table>
<thead>
<tr>
<th>SERIES</th>
<th>ENCLOSURE</th>
<th>CONTROL TYPE</th>
<th>POWER TYPE [VDC/VAC]</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMB PC</td>
<td>Fixture mount box</td>
<td>On/off</td>
<td>Low 12-24</td>
</tr>
<tr>
<td>CMB ADC</td>
<td>Fixture mount box</td>
<td>Dimming</td>
<td>Low 12-24</td>
</tr>
<tr>
<td>CMB PC ADC</td>
<td>Fixture mount box</td>
<td>On/off &amp; dimming</td>
<td>Low 12-24</td>
</tr>
<tr>
<td>CMRB PC</td>
<td>Fixture mount box</td>
<td>On/off</td>
<td>Line 120/277</td>
</tr>
<tr>
<td>CMRB ADC</td>
<td>Fixture mount box</td>
<td>Dimming</td>
<td>Line 120/277</td>
</tr>
<tr>
<td>CMRB PC ADC</td>
<td>Fixture mount box</td>
<td>On/off &amp; dimming</td>
<td>Line 120/277</td>
</tr>
</tbody>
</table>

---

**Example:**

- CMB PC DZ LT

---

**Notes:**
1. 480 and 208 option not available w/dual zone (DZ)
2. CMRB PC Only
Overview
The LSXR Family of fixture mount occupancy sensors provides reliable and versatile solutions for commercial and industrial lighting control applications. All LSXR Family sensors utilize passive infrared (PIR) detection and feature interchangeable lenses, providing flexibility for multiple mounting height and coverage pattern requirements.

All LSXR Family sensors utilize digital Passive Infrared (PIR) detection and power from / switch line voltage. Available options include dual relays, HVOLT powering, and an integrated switching / dimming Photocontrol.

Features
• Four interchangeable lenses - High Bay 360° (6 Lens), High Bay Bi-Directional Aisleway (50 Lens), Large Motion / Extended Range 360º (10 Lens), Small Motion / Standard Range 360º (9 Lens)
• Integrated mounting bracket drops lens down 3” from chase nipple – no bracket accessory required
• Digital PIR detection - excellent RF immunity
• Single or dual relay versions - designed with robust protection from the harsh switching requirements of T5 fluorescent and LED loads
• Powers from single or two-phase line connections
• Miswire protection, reversible line & load connections
• Push-button programmable
• Convenient test mode
• Minimum on Timer (LampMaximizer®)

AVAILABLE LENSES

<table>
<thead>
<tr>
<th>Lens</th>
<th>Description</th>
<th>Image</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>High Bay 360°</td>
<td><img src="image" alt="High Bay 360°" /></td>
</tr>
<tr>
<td>50</td>
<td>High Bay Bi-Directional Aisleway</td>
<td><img src="image" alt="High Bay Bi-Directional Aisleway" /></td>
</tr>
<tr>
<td>10</td>
<td>Large Motion / Extended Range 360º</td>
<td><img src="image" alt="Large Motion / Extended Range 360º" /></td>
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<tr>
<td>9</td>
<td>Small Motion / Standard Range 360º</td>
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ADDITIONAL INFORMATION
For additional product information, visit www.acuitycontrols.com.

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Physical</th>
<th>Electrical</th>
<th>Environmental</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIZE (w/ Mounting Flange): 3.75” H x 2.50” W x 4.00” D (9.5 cm x 6.4 cm x 10.2 cm)</td>
<td>MAXIMUM LOAD/POLE (RELAY): 800 W @ 120 VAC 1000 W @ 208 VAC 1200 W @ 240/277 VAC 1500 W @ 347 VAC 2160 W @ 480 VAC</td>
<td>OPERATING TEMP: Standard: 14° to 122°F (-10° to 50°C) LT Option: -40° to 122°F (-40° to 50°C)</td>
</tr>
<tr>
<td>WEIGHT: 6 oz</td>
<td>MINIMUM LOAD: None</td>
<td>RELATIVE HUMIDITY: Standard: 20 to 75% non-condensing LT Option: 20 to 90% non-condensing (electronics coated for corrosion resistance)</td>
</tr>
<tr>
<td>MOUNTING: 1/2 knockout (7/8” hole) on fixture</td>
<td>MOTOR LOAD: 1/4 Hp</td>
<td>ROHS COMPLIANT</td>
</tr>
<tr>
<td>MINIMUM LOAD: None</td>
<td>FREQUENCY: 50/60 Hz</td>
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</tr>
<tr>
<td>COLOR: White</td>
<td>DIMMING LOAD: Sinks &lt; 20 mA (~40 LED driver/ballast @ 0.5 per) 0-10VDC dimmable ballasts or LED drivers only</td>
<td></td>
</tr>
<tr>
<td>FREQUENCY: 50/60 Hz</td>
<td>WIRING DIAGRAM(S): See Figure # 18, 19, 20, 21 on Page 87</td>
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</table>

AVAILABLE OPTIONS

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
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<tbody>
<tr>
<td>HL</td>
<td>High/Low Occupancy Operation</td>
</tr>
<tr>
<td>2P AO</td>
<td>Alternating Off Relays</td>
</tr>
</tbody>
</table>

- **High/Low Occupancy Operation**
  - Provides high/low control of a 0-10V dimmable fixture
  - Lights are reduced to an energy saving minimum dim level after expiration of occupancy time delay
  - If relay is wired, lights will switch off after a second time delay

- **Alternating Off Relays**
  - Sequence of operation where both relays close during periods of occupancy, but only one opens during vacancy
  - The relay left closed alternates in order to promote even lamp wear
  - 2P AOP version also includes switching photocontrol
PRODUCT INFORMATION

Fixture Mount Interchangeable Lens Sensors

**PRODUCT SELECTION GUIDE**

**PRODUCT INFORMATION**

**COVERAGE PATTERN**

6

**High Bay 360° Lens**
- Best choice for 15 to 45 ft (4.57 to 13.72 m) mounting heights
- 15 to 20 ft (4.57 to 6.10 m) radial coverage overlaps area lit by a typical high bay fixture
- Excellent detection of large motion (e.g., walking) up to a 35 ft (10.76 m) mounting height
- Excellent detection of extra large motion (e.g., forklifts) up to a 45 ft (13.72 m) mounting height

50

**High Bay Bi-Directional Aisleway Lens**
- Provides 50° bi-directional and 10° wide coverage pattern
- 1.2x mounting height equals approximate detection range in either direction
- Typical 40 ft (12.19 m) mounting detects 50 ft (15.24 m) in either direction

10

**Large Motion / Extended Range 360° Lens**
- Best choice for large motion (e.g., walking) detection
- Viewing angle of 67° in a 360° conical shaped pattern
- 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

9

**Small Motion / Standard Range 360° Lens**
- Best choice for small motion (e.g., hand movements) detection
- Viewing angle of 56° in a 360° conical shaped pattern
- 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
## Fixture Mount Interchangeable Lens Sensors: Single Relay

### Specifications subject to change.

<table>
<thead>
<tr>
<th>Series</th>
<th>Lens Option</th>
<th>Multi-Lens</th>
<th>Dimming/Photocontrol</th>
<th>Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSXR</td>
<td>Passive Infrared Indoor Occupancy Sensor</td>
<td>High Bay 360° / Large Motion / Extended Range 360°</td>
<td>(blank) None</td>
<td>(blank) 120-277 VAC (MVOLT)</td>
</tr>
<tr>
<td></td>
<td>Single Lens</td>
<td>High Bay 360° / High Bay Bi-Directional Aisleway</td>
<td>HL High/Low Occupancy Operation</td>
<td>HVOLT 347-480 VAC</td>
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<tr>
<td></td>
<td>(blank) No Lens</td>
<td>High Bay Bi-Directional Aisleway</td>
<td>AO Alternating Off Relays</td>
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</tr>
<tr>
<td></td>
<td>6 High Bay 360°</td>
<td>High Bay Bi-Directional Aisleway</td>
<td>AOP Alternating Off Relays with Photocell</td>
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<td></td>
<td>50 High Bay Bi-Directional Aisleway</td>
<td>High Bay Bi-Directional Aisleway</td>
<td>P Photocontrol</td>
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<td></td>
<td>10 Large Motion / Extended Range 360°</td>
<td>High Bay Bi-Directional Aisleway</td>
<td>ADC Photocontrol with Dimming</td>
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<tr>
<td></td>
<td>9 Small Motion / Standard Range 360°</td>
<td>High Bay Bi-Directional Aisleway</td>
<td>ANL Combination Dimming &amp; Switching Photocontrol w/ High/Low Occupancy Operation</td>
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### Example:
- LSXR 6 HL LT

<table>
<thead>
<tr>
<th>Max Dim Level*</th>
<th>Min Dim Level*</th>
<th>Lead Length*</th>
<th>Temp/Humidity</th>
<th>Default Time Delay*</th>
<th>Pack Qty</th>
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<td>(blank) 10 VDC</td>
<td>(blank) 9 VDC</td>
<td>(blank) 8&quot;</td>
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<td>(blank) 10 min (w/15 min minimum on time)</td>
<td>(blank) Single</td>
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<td>9H 9 VDC</td>
<td>1V 1 VDC</td>
<td>42L 42&quot;</td>
<td>LT Low Temp/High Humidity</td>
<td>5M 5 min (LED only)</td>
<td>J100 100-Pack</td>
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<tr>
<td>8H 8 VDC</td>
<td>2V 2 VDC</td>
<td></td>
<td></td>
<td>15M 15 min</td>
<td></td>
</tr>
<tr>
<td>7H 7 VDC</td>
<td>3V 3 VDC</td>
<td></td>
<td></td>
<td>20M 20 min</td>
<td></td>
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<tr>
<td></td>
<td>4V 4 VDC</td>
<td></td>
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<td>30M 30 min</td>
<td></td>
</tr>
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<td></td>
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<tr>
<td></td>
<td>6V 6 VDC</td>
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*Option available in 100-Pack quantities only (add J100 option)

## Fixture Mount Interchangeable Lens Sensors: Dual Relay

### Specifications subject to change.

<table>
<thead>
<tr>
<th>Series</th>
<th>Lens Option</th>
<th>2P</th>
<th>Operating Mode</th>
<th>Voltage</th>
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</tr>
<tr>
<td></td>
<td>Single Lens</td>
<td>(blank) None</td>
<td>AO Alternating Off Relays (promotes even lamp wear)</td>
<td>347 347 VAC</td>
</tr>
<tr>
<td></td>
<td>(blank) No Lens</td>
<td>AO Alternating Off Relays with Photocell</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>6 High Bay 360°</td>
<td>P Photocontrol On/Off-both Poles (single set-point)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>50 High Bay Bi-Directional Aisleway</td>
<td>SZ Photocontrol On/Off (Pole 1 only)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10 Large Motion / Extended Range 360°</td>
<td>DZ Photocontrol On/Off-both Poles (dual set-point)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>9 Small Motion / Standard Range 360°</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Example:
- LSXR 610 2P AO J100

<table>
<thead>
<tr>
<th>Lead Length*</th>
<th>Temp/Humidity</th>
<th>Default Time Delay*</th>
<th>Pack Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>(blank) 8&quot;</td>
<td>(blank) None</td>
<td>(blank) 10 min (w/15 min minimum on time)</td>
<td>(blank) Single</td>
</tr>
<tr>
<td>42L 42&quot;</td>
<td>LT Low Temp/High Humidity</td>
<td>5M 5 min (LED only)</td>
<td>J100 100-Pack</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15M 15 min</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>20M 20 min</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>30M 30 min</td>
<td></td>
</tr>
</tbody>
</table>

*Option available in 100-Pack quantities only (add J100 option)

## Fixture Mount Interchangeable Lens Sensors: Accessory Lenses

### Specifications subject to change.

<table>
<thead>
<tr>
<th>Series</th>
<th>Len Type</th>
<th>Pack Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>LENS</td>
<td>6 High Bay 360°</td>
<td>(blank) Single</td>
</tr>
<tr>
<td></td>
<td>50 High Bay Bi-Directional Aisleway</td>
<td>J10 J10-pack</td>
</tr>
<tr>
<td></td>
<td>10 Large Motion / Extended Range 360°</td>
<td>J100 100-pack</td>
</tr>
<tr>
<td></td>
<td>9 Small Motion / Standard Range 360°</td>
<td></td>
</tr>
</tbody>
</table>

### Example:
- LENS 6 J10
Overview
On/off photocontrol and dimming sensors provide intelligent control of lighting for indoor daylight applications ideal for spaces with windows, such as vestibules, corridors, classrooms or offices, the sensors work by monitoring daylight conditions in a room, then controlling the lighting to ensure that adequate lighting levels are maintained.

Line voltage sensors integrate a line switching relay and/or power off the line. Dimming photocontrol sensors are capable of controlling any 0-10 VDC dimmable ballast or driver.

Features
- Integrated mounting bracket drops lens down 3” from chase nipple - no bracket accessory required
- Single or dual relay versions - designed with robust protection from the harsh switching requirements of T5 fluorescent and LED loads
- Powers from single or two-phase line connections
- Miswire protection, reversible line & load connections
- Photocontrol and 0-10 VDC dimming options
- Push-button programmable
- Convenient test mode
- Minimum on Timer (LampMaximizer®)

Specifications

<table>
<thead>
<tr>
<th>PHYSICAL</th>
<th>ELECTRICAL</th>
<th>ENVIRONMENTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIZE (w/ Mounting Flange): 3.75” H x 2.5” W x 4.0” D (9.5 cm x 6.4 cm x 10.2 cm)</td>
<td>MAXIMUM LOAD/POLE (RELAY): 800 W @ 120 VAC 1000 W @ 208 VAC 1200 W @ 240/277 VAC 1500 W @ 347 VAC 2160 W @ 480 VAC</td>
<td>OPERATING TEMP: Standard: 14°F to 122°F (-10°C to 50°C) LT Option: -40°F to 122°F (-40°C to 50°C)</td>
</tr>
<tr>
<td>WEIGHT: 6 oz</td>
<td>MINIMUM LOAD: None</td>
<td>RELATIVE HUMIDITY: Standard: 20 to 75% non-condensing LT Option: 20 to 90% non-condensing (electronics coated for corrosion resistance)</td>
</tr>
<tr>
<td>MOUNTING: 1/2 knockout (7/8” hole) on fixture</td>
<td>MOTOR LOAD: 1/4 Hp FREQUENCY: 50/60 Hz DIMMING LOAD: Sinks &lt; 20 mA (~ 40 LED driver/ballast @ 0.5 per) 0-10 VDC dimmable ballasts or LED drivers only</td>
<td>ROHS COMPLIANT</td>
</tr>
<tr>
<td>COLOR: White</td>
<td>MINIMUM LOAD: None</td>
<td></td>
</tr>
<tr>
<td>FREQUENCY: 50/60 Hz</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
AVAILABLE OPTIONS**

**For options and detailed information on wiring and sequence of operation visit http://bit.ly/1KNm1Lg

<table>
<thead>
<tr>
<th>LT</th>
<th>Low Temp/High Humidity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sensor electronics are coated for corrosion resistance</td>
</tr>
<tr>
<td></td>
<td>Operates down to -40° F/20°C (-4° F/20° C for PDT)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HVOLT</th>
<th>347 - 480 VAC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allows sensor to be powered from and switch 347-480 VAC</td>
<td></td>
</tr>
</tbody>
</table>

PRODUCT SELECTION GUIDE

Fixture Mount Interchangeable Lens Daylight Control Sensors

### SINGLE RELAY Specifications subject to change.

<table>
<thead>
<tr>
<th>Series</th>
<th>Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSXR PC</td>
<td>(blank) 120-277 VAC (MVOLT)</td>
</tr>
<tr>
<td>LSXR ADC</td>
<td>HVOLT 347-480 VAC</td>
</tr>
<tr>
<td>LSXR PC ADC</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Max Dim Level*</th>
<th>Min Dim Level*</th>
<th>Lead Length*</th>
<th>Temp/Humidity</th>
<th>Pack Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>(blank) 10 VDC</td>
<td>(blank) 0 VDC</td>
<td>(blank) 8&quot;</td>
<td>(blank) None</td>
<td>Single J100</td>
</tr>
<tr>
<td>9H 9 VDC</td>
<td>1V 1 VDC</td>
<td>42L 42&quot;</td>
<td>LT Low Temp/High Humidity</td>
<td>100-Pack</td>
</tr>
<tr>
<td>8H 8 VDC</td>
<td>2V 2 VDC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7H 7 VDC</td>
<td>3V 3 VDC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4V 4 VDC</td>
<td>4 VDC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5V 5 VDC</td>
<td>5 VDC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6V 6 VDC</td>
<td>6 VDC</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Option available in 100-Pack quantities only (add J100 option)

Example: change to: LSXR PC HVOLT 9H J100
WIDE VIEW & HALLWAY

Sensors

Overview (Line voltage)
Line voltage wide view and hallway sensors are ideal for retrofit applications. Line voltage sensors are powered by and directly switch line voltage; therefore, no power packs are needed. Additionally, these sensors do not require a neutral, making wiring directly off local switches a convenient option. Together, these features make them perfect for retrofit applications, where running new wiring is difficult.

For rooms with obstructions, wide view sensors are available with dual technology, which adds Microphonics™ detection to the Passive Infrared (PIR) detection. For rooms that need independent control of two circuits, 2-pole units are available.

Features (Line voltage)
- Passive Dual Technology (PDT) utilizes PIR/Microphonics™ detection
- Miswire protection, reversible line and load connections
- 30 sec to 30 min time delay
- Digital PIR detection - excellent RF immunity
- Self-contained relay(s)
- No power pack(s) needed
- No minimum load
- Green LED status indicator

Overview (Low voltage)
Low voltage wide view sensors are designed to mount in a corner and detect small motions up to 40 ft (12.19 m) away and larger motions up to 70 ft (21.34 m) away. This makes them ideal for 30 x 30 ft (9.14 x 9.14 m) classrooms or corridors up to 70 ft (21.19 m) long. Low voltage hallway units detect occupants entering a hallway up to 130 ft (39.64 m) away.

The enclosure’s convenient tilting feature enables the sensor to be mounted at any height from 8 to 10 ft (2.44 to 3.05 m). When corner or wall mounting is not possible, the WV-BR ceiling bracket accessory can be used to mount the sensor to the ceiling.

These sensors can be used in combination with other low voltage sensors to cover oddly shaped rooms. For rooms with obstructions, wide view sensors are available with dual technology, which adds Microphonics™ detection to the Passive Infrared (PIR) detection.

Features (Low voltage)
- Passive Dual Technology (PDT) utilizes PIR/Microphonics™ detection
- 30 sec to 30 min time delay
- Digital PIR detection - excellent RF immunity
- Push button programmable
- Minimum On Timer (LampMaximizer®)
- Convenient test mode
- Green LED status indicator

ENCLOSURES

SPECIFICATIONS

PHYSICAL | ELECTRICAL - LOW VOLTAGE | ENVIRONMENTAL
---|---|---
SIZE: 3.00” H x 3.66” W x 1.75” D (7.62 cm x 9.44 cm x 4.45 cm)
WEIGHT: 8 oz
MOUNTING: Directly to corner or to ceiling using WV-BR bracket
COLOR: White
OPERATING VOLTAGE: 12-24 VAC/VDC
RECOMMENDED POWER PACK: PP20
CURRENT DRAW: Standard, 4 mA
WIRING DIAGRAM(S): See Figure # 14 on Page 86
OPERATING TEMP: 14º to 160º F (-10º to 71º C)
STORAGE TEMP: -14º to 160º F (-26º to 71º C)
RELATIVE HUMIDITY: 20 to 90% non-condensing
ROHS COMPLIANT

SPECIFICATIONS

PHYSICAL | ELECTRICAL - LINE VOLTAGE | ENVIRONMENTAL
---|---|---
SIZE: 4.96” H x 3.10” W x 1.70” D (12.60 cm x 7.87 cm x 4.32 cm)
WEIGHT: 4 oz
MOUNTING: Single gang handy or wiremold corner box V5719
COLOR: White, Ivory
OPERATING VOLTAGE: 1500 W @ 347 VAC
1200 W @ 277 VAC
800 W @ 120 VAC
MOTOR LOAD: 1/4 HP
FREQUENCY: 50/60 Hz
WIRING DIAGRAM(S): See Figure # 15-17 on Page 86
OPERATING TEMP: 14º to 85º F (-10º to 29º C)
STORAGE TEMP: -14º to 85º F (-26º to 29º C)
RELATIVE HUMIDITY: 20 to 90% non-condensing
ROHS COMPLIANT

COVERAGE PATTERNS

End-of-Hallway Lens
- Large motion (e.g., walking) detection up to 130 ft (39.62 m)
- Designed for 7 ft (2.13 m) high mounting at end of hall

Wide View 120° Lens
- Small motion (e.g., hand movements) detection up to 40 ft (12.19 m)
- Large motion (e.g., walking) detection up to 70 ft (21.34 m)
- Designed for 8 to 10 ft (2.44 to 3.05 m) high mounting in room corner
Wide View & Hallway Sensor: Low Voltage

**Electrical Specs**
- Operating Voltage: 12-24 VDC/VAC
- Recommended Power Supply: PP20
- Current Draw: 4 mA w/R option 16 mA
- Wiring Diagram(s): See Figure # 14, 15, 16, 17 on Page 86

**Specifications subject to change.**

**KEY SPECS**

<table>
<thead>
<tr>
<th>SERIES</th>
<th>ENCLOSURE</th>
<th>DETECTION</th>
<th>POWER TYPE (VDC/VAC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WV 16</td>
<td>120° Wide view</td>
<td>PIR</td>
<td>12-24</td>
</tr>
<tr>
<td>WV PDT 16</td>
<td>120° Wide view</td>
<td>Dual Technology</td>
<td>12-24</td>
</tr>
<tr>
<td>HW13</td>
<td>Hallway</td>
<td>PIR</td>
<td>12-24</td>
</tr>
</tbody>
</table>

**OPTION INFORMATION**

**# Low Voltage Relay**
- Enables low voltage sensors to interface with other systems (e.g. BMS, lighting panels)
- Provides dry contact closure via a SPDT, 1 amp, 30 volt relay (resistive loads only)

**LT Low Temp/High Humidity**
- Sensor electronics are coated for corrosion resistance
- Operates down to -40° F/20°C (-4° F/20° C for PDT)

**Example: WV PDT 16 R P LT**

**PRODUCT INFORMATION**

Wide View & Hallway Sensor: Line Voltage

**Electrical Specs**
- Load Rating: 13 Amps @ 120-347 VAC
- Motor Load: 1/4 Hp
- Frequency: 50/60 Hz
- Wiring Diagram(s): See Figure # 14, 15, 16, 17 on Page 86

**Specifications subject to change.**

**KEY SPECS**

<table>
<thead>
<tr>
<th>SERIES</th>
<th>ENCLOSURE</th>
<th>DETECTION</th>
<th>POWER TYPE (VAC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WVR 16</td>
<td>120° Wide view</td>
<td>PIR</td>
<td>120/277</td>
</tr>
<tr>
<td>WVR PDT 16</td>
<td>120° Wide view</td>
<td>Dual Technology</td>
<td>120/277</td>
</tr>
<tr>
<td>HWR13</td>
<td>Hallway</td>
<td>PIR</td>
<td>120/277</td>
</tr>
</tbody>
</table>

**OPTION INFORMATION**

**2P Dual Relay (Available for WVR Models Only)**
- Provides a second line voltage switching relay

**347 347 VAC**
- Allows sensor to be powered from and switch 347 VAC

**LT Low Temp/High Humidity**
- Sensor is corrosion-resistant to moisture
- Operates down to -40° F/C (-4° F/20° C for PDT)

**Example: WVR 16 WH LT**

**Notes**
1. LT option not available for WVR PDT 16
Overview
The SBOR xx ODP and SBO xx ODP Series sensors provide both motion and daylight based control of a 0-10 VDC dimmable outdoor or wet location luminaire. Designed to mount directly through a 1/2” knockout (7/8” hole) in a light fixture or pole, the SBOR xx ODP can both directly switch and dim its connected lighting load. The low voltage SBO xx ODP version requires a power pack to switch. Both versions are tuned for walking size motion while preventing false tripping from the environment. All units also have an integrated Photocell that switches lights off during daytime periods when there is sufficient daylight.

For non-dimming outdoor motion sensor applications the SBOR xx OEX and SBO xx OEX Series sensors are recommended.

Features (All)
- Miswire protection, reversible line & load connections
- Digital PIR detection - excellent RF immunity
- Self-contained relay for switching
- Gasketed for outdoor operation
- Enables fixture or pole mounting
- Multiple sensor body and bracket configurations available
- Adjustable time delays
- Programming button accessible without opening sensor or removing gaskets

Features (-ODP versions only)
- Photocell controls relay (on/off)
- Motion sensor controls dimming output (0-10 VDC)
- Compatible w/ 0-10 VDC dimmable ballasts and LED drivers
- Adjustable max/min dim levels and ramp rates

APPLICATION/OVERAGE

Large Motion / Extended Range 360º Lens
- Best choice for large motion (e.g., walking) detection
- Viewing angle of 67º in a 360º conical shaped pattern
- 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

High Bay 360º Lens
- Best choice for 15 to 45 ft (4.57 to 13.72 m) mounting heights
- 15 to 20 ft (4.57 to 6.10 m) radial coverage overlaps area lit by a typical high bay fixture
- Excellent detection of large motion (e.g., walking) up to a 35 ft (10.76 m) mounting height
- Excellent detection of extra large motion (e.g., forklifts) up to a 45 ft (13.72 m) mounting height
### Outdoor Motion Sensors: Line Voltage

#### Specifications

<table>
<thead>
<tr>
<th>PHYSICAL</th>
<th>ELECTRICAL</th>
<th>ENVIRONMENTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIZE: 3.35&quot; H or 4.88&quot; H x 4.40&quot; W x 4.00&quot; D (8.51 cm or 12.40 cm x 11.18 cm x 10.16 cm)</td>
<td>MAXIMUM SWITCHING LOAD: 800 W @ 120 VAC 1000 W @ 208 VAC 1200 W @ 240 VAC 1200 W @ 277 VAC 1500 W @ 347 VAC 2160 W @ 480 VAC</td>
<td>OPERATING TEMP: -40°F to 160°F (-40°C to 71°C)</td>
</tr>
<tr>
<td>WEIGHT: 9 oz</td>
<td>MINIMUM LOAD: None</td>
<td>IP66 RATED</td>
</tr>
<tr>
<td>MOUNTING: 1/2&quot; knockout (7/8&quot; hole)</td>
<td>MOTOR LOAD: 1/4 HP</td>
<td>ROHS COMPLIANT</td>
</tr>
<tr>
<td>COLOR: White, Black, or Dark Bronze</td>
<td>FREQUENCY: 50/60 Hz</td>
<td></td>
</tr>
</tbody>
</table>

#### Line Voltage Specifications subject to change.

**Example:** SBOR 10 ODP EB3 BK 3V

<table>
<thead>
<tr>
<th>Series</th>
<th>Lens/Mounting Height</th>
<th>Dimming/Photocontrol</th>
<th>Voltage</th>
<th>Body / Bracket</th>
<th>Color</th>
<th>Min Dim Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>SBOR</td>
<td>10</td>
<td>None</td>
<td>(blank)</td>
<td>WH</td>
<td>White</td>
<td>0V</td>
</tr>
<tr>
<td>6</td>
<td>Low Mount (8-15 ft)</td>
<td>OEX</td>
<td>120/277 VAC (HVOLT)</td>
<td>BK</td>
<td>Black</td>
<td>1V</td>
</tr>
<tr>
<td></td>
<td>High Mount (15-30 ft)</td>
<td>OEXD</td>
<td>347-480 VAC</td>
<td>EB1</td>
<td>Black</td>
<td>2V</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OEXP</td>
<td></td>
<td>EB2</td>
<td>Black</td>
<td>3V</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ODP</td>
<td></td>
<td>EB3</td>
<td>Black</td>
<td>4V</td>
</tr>
</tbody>
</table>

**Notes**
1. Required for D or ODP options

### Outdoor Motion Sensors: Low Voltage

#### Specifications

<table>
<thead>
<tr>
<th>PHYSICAL</th>
<th>ELECTRICAL</th>
<th>ENVIRONMENTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIZE: 3.35&quot; H or 4.88&quot; H x 4.40&quot; W x 4.00&quot; D (8.51 cm or 12.40 cm x 11.18 cm x 10.16 cm)</td>
<td>OPERATING VOLTAGE: 12-24 VAC/VDC</td>
<td>OPERATING TEMP: -40°F to 160°F (-40°C to 71°C)</td>
</tr>
<tr>
<td>WEIGHT: 9 oz</td>
<td>CURRENT DRAW: 4 mA</td>
<td>IP66 RATED</td>
</tr>
<tr>
<td>MOUNTING: 1/2&quot; knockout (7/8&quot; hole)</td>
<td>RECOMMENDED POWER PACK: PP20 / MP20 / MPS 480</td>
<td>ROHS COMPLIANT</td>
</tr>
<tr>
<td>COLOR: White, Black, or Dark Bronze</td>
<td>DIMMING LOAD: Sinks &lt; 20 mA (0-10 VDC LED Drivers / Ballasts)</td>
<td></td>
</tr>
</tbody>
</table>

#### Low Voltage Specifications subject to change.

**Example:** SBO 10 ODP BK 3V

<table>
<thead>
<tr>
<th>Series</th>
<th>Lens/Mounting Height</th>
<th>Dimming/Photocontrol</th>
<th>Body / Bracket</th>
<th>Color</th>
<th>Min Dim Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>SBO</td>
<td>10</td>
<td>None</td>
<td>(blank)</td>
<td>WH</td>
<td>0V</td>
</tr>
<tr>
<td>6</td>
<td>Low Mount (8-15 ft)</td>
<td>OEX</td>
<td>Short extension, low back</td>
<td>BK</td>
<td>1V</td>
</tr>
<tr>
<td></td>
<td>High Mount (15-30 ft)</td>
<td>OEXD</td>
<td>Short extension, high back</td>
<td>BZ</td>
<td>2V</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OEXP</td>
<td>Long extension, low back</td>
<td></td>
<td>3V</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ODP</td>
<td>Long extension, high back</td>
<td></td>
<td>4V</td>
</tr>
</tbody>
</table>

**Notes**
1. Required for D or ODP options
Overview
Power packs are the heart of the low voltage sensor system. A power pack may transform Class I high voltage (120-277 VAC or 347 VAC) to Class II 15 VDC for powering remote sensors. A power pack also switches the lighting load on and off using its internal relay. Class II wire leads connect to 18 AWG or smaller low voltage cable running to the sensors, making installation easy and clean. Power packs also have an elongated mounting nipple that allows them to be mounted either directly through a 1/2 inch knockout into a junction box, or inside an adjacent box for meeting specific local code requirements in ceiling plenums.

There are several different types of power packs, each with a unique combination of features. The most versatile power pack is the PP20, which utilizes a patented relay contact protection and can power up to 14 sensors. Multi-circuit control can be handled by multiple PP20s, 2-pole power packs (PP20 2P), or combination power pack and secondary pack (SP20) configurations.

 enclosure

<table>
<thead>
<tr>
<th>SINGLE POLE UNITS</th>
<th>SIZE</th>
<th>H: 3.00” (7.62 cm)</th>
<th>W: 2.25” (5.72 cm)</th>
<th>D: 1.88” (4.78 cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEIGHT</td>
<td>6 oz</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MOUNTING</td>
<td>.5” knockout</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COLOR</td>
<td>Black</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Plenum Rated

<table>
<thead>
<tr>
<th>2-POLE UNITS</th>
<th>SIZE</th>
<th>H: 4.13” (10.49 cm)</th>
<th>W: 3.00” (7.62 cm)</th>
<th>D: 1.88” (4.78 cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEIGHT</td>
<td>6 oz</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MOUNTING</td>
<td>.5” knockout</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COLOR</td>
<td>Black</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Plenum Rated

POWERING CAPACITY
A power pack’s transformer can supply up to 150 mA of power @ 15 VDC. Each relay requires 40 mA during the On state. Low voltage remote sensors typically require 3 mA when detecting occupants, and 0.15 mA when in standby. Therefore, each transformer can handle up to 3 relays (including the relay(s) inside the power pack). For example, one PP20 can power its relay (40 mA) and 110 mA of external devices. Because of the ultra low current design of the sensors, up to 14 or more sensors can be connected to a single power pack. If multiple power packs are used together, an additional 110 mA is available.

<table>
<thead>
<tr>
<th>SERIES</th>
<th>POWER SPECS</th>
<th>SENSORS</th>
<th>SENSORS w/ R OPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>[1] PP20 (or MP20)</td>
<td>14</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>[1] PP20 2P</td>
<td>7</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>[1] PP20 w/SP20 (or MP20 w/ MSP20)</td>
<td>7</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>[1] PP20 2P w/ SP20</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

Notes
Table information reflects usage with 120/277 or 347 VAC power
1. The “R” option for sensors adds an isolated low voltage auxiliary relay. Only one sensor with this option is typically needed per room.
### KEY SPECS

<table>
<thead>
<tr>
<th>SERIES</th>
<th>RELAY CONTACT PROTECTION</th>
<th>TRANSFORMER</th>
<th># OF POLES (RELAYS)</th>
<th>SWITCHING LOAD</th>
<th>RELAY TYPE</th>
</tr>
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<tbody>
<tr>
<td>PP20</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>20A / 1 HP</td>
<td>Electrically Held</td>
</tr>
<tr>
<td>PP20 2P</td>
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<td>Yes</td>
<td>2</td>
<td>20A / 1 HP</td>
<td>Electrically Held</td>
</tr>
<tr>
<td>SP20</td>
<td>Yes</td>
<td>No</td>
<td>1</td>
<td>20A / 1 HP</td>
<td>Electrically Held</td>
</tr>
<tr>
<td>PP 2PAR</td>
<td>Yes</td>
<td>Yes</td>
<td>2</td>
<td>20A / 1 HP</td>
<td>Alternating Electrically Held</td>
</tr>
<tr>
<td>MP20</td>
<td>No</td>
<td>Yes</td>
<td>1</td>
<td>20A / 1 HP</td>
<td>Electrically Held</td>
</tr>
<tr>
<td>MS20</td>
<td>No</td>
<td>No</td>
<td>1</td>
<td>20A / 1 HP</td>
<td>Electrically Held</td>
</tr>
<tr>
<td>PP20 SH</td>
<td>Yes</td>
<td>Yes</td>
<td>1</td>
<td>20A / 1 HP</td>
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<tr>
<td>PP 2PM</td>
<td>Yes</td>
<td>Yes</td>
<td>2</td>
<td>20A / 1 HP</td>
<td>Momentary</td>
</tr>
<tr>
<td>MPS 480</td>
<td>No</td>
<td>Yes</td>
<td>2</td>
<td>5A / 0.25HP</td>
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### ORDERING INFORMATION

<table>
<thead>
<tr>
<th>Series</th>
<th>Voltage</th>
<th>Temp/Humidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>PP20</td>
<td>(blank)</td>
<td>(blank)</td>
</tr>
<tr>
<td>PP20 2P</td>
<td>347</td>
<td>Standard</td>
</tr>
<tr>
<td>SP20</td>
<td>347</td>
<td>Low Temp/High Humidity</td>
</tr>
<tr>
<td>MP20</td>
<td>347</td>
<td>Standard</td>
</tr>
<tr>
<td>MS20</td>
<td>347</td>
<td>Low Temp/High Humidity</td>
</tr>
<tr>
<td>PP20 SH</td>
<td>347</td>
<td>Standard</td>
</tr>
<tr>
<td>PP 2PM</td>
<td>347</td>
<td>Low Temp/High Humidity</td>
</tr>
<tr>
<td>MPS 480</td>
<td>347</td>
<td>Standard</td>
</tr>
</tbody>
</table>

**Example:** PP20 347 LT

**Notes**

1. 347 option only available on PP20, SP20, and MP20
Overview
The Sensor Switch MSD 7 is a passive infrared (PIR) occupancy sensor designed to be easily embedded into luminaires. This "micro" sensor directly wires to 0-10 VDC dimmable LED drivers and fluorescent ballasts, providing occupancy based high/low dimming control. The MSD 7 provides excellent line of sight 360° PIR detection of both small motion and walking motion making it ideal for small rooms or offices without obstructions or areas with primarily walking motion (e.g. corridors, library stacks). For outdoor applications, the MSD 7 ODP sensor provides both Motion and Daylight based control of a 0-10 VDC dimmable outdoor or wet location luminaire.

High/low occupancy sensor operation
The sensor indicates occupancy when changes in the infrared energy within its field-of-view are detected. Once occupancy is detected, the 0-10 VDC input will ramp up to its full bright setting. An internal time delay, factory set at 10 minutes, keeps the sensor in the occupied state (full bright) during brief periods of inactivity. The timer is adjustable, and is reset every time occupancy is re-detected. After the occupancy time delay expires, the sensor will dim the lights down to the user selected minimum dim level where it will stay until occupancy is re-detected.

Automatic dimming Photocontrol (optional)
During periods of occupancy but no daylight, the sensor will raise the dim level to its full bright setting (default 10 VDC). As daylight increases and begins to contribute to the overall light level of the room, the sensor starts dimming the ballast/driver proportionally. At the point when sufficient daylight is present to maintain the set-point without any contribution from the lights, the sensor will hold the ballast/driver at its minimum dim level setting. When daylight levels fall below the set-point again, the sensor will start increasing the brightness of the ballast/driver in order to raise the overall light level. Finally, at the point when all daylight contribution is gone, the ballast/driver will again be at its full bright level (default 10 VDC).

Light level set-point
The dimming Photocontrol functions by comparing the amount of daylight available with a defined acceptable lighting level called the set-point. The sensor can find its optimum set-point via the Automatic Set-Point Programming mode. In this mode, the sensor takes light readings at full bright and full dim in order to determine how much artificial light it is controlling. It then sets the minimum light level to be equal to this amount. It is assumed that the space is adequately 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.

Micro Enclosure (Indoor)
- Recommended for walking motion detection from mounting heights between 8 ft (2.44 m) and 20 ft (6.10 m).
- Initial detection of walking motion along sensor axes at distances of 2x the mounting height up to 15 ft (4.57 m) and 1.75x up to 20 ft (6.10 m).
- Provides 12 ft (3.66 m) radial detection of small motion when mounted at 9 ft (2.74 m).
- At the 7.5 ft (2.29 m) hanging height of a typical pendant fixture the sensor provides 10 ft (3.05 m) radial detection of small motion.
- Provides an initial detection of motion up to 20 ft (6.10 m).
- Provides an initial detection of walking motion up to 20 ft (6.10 m).

Specifications
- OPERATING VOLTAGE: 12 - 24 VDC
- CURRENT DRAW: Standard, 4 mA
- DIMMING LOAD: Sinks < 20 mA; ~40 ballasts / LED drivers (0-10 VDC)
- WIRING DIAGRAM(S): See Figure #41 on Page 93

Environmental
- OPERATING TEMP: 14º to 160ºF (-10º to 71ºC)
- RELATIVE HUMIDITY: 20 to 90% non-condensing
- ROHS COMPLIANT

Ordering Information
- Specifications subject to change.
- Example: MSD 7 WH 0V

<table>
<thead>
<tr>
<th>Series</th>
<th>Automatic Dimming Control</th>
<th>Min Dim Level*</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSD 7 Indoor Micro Sensor</td>
<td>(Blank) None</td>
<td>0V 0 VDC 3V 3 VDC</td>
</tr>
<tr>
<td></td>
<td>ADC Integrated Dimming Photocontrol</td>
<td>1V 1 VDC 4V 4 VDC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2V 2 VDC 5V 5 VDC</td>
</tr>
</tbody>
</table>

*Level after occupancy time delay expires

ADDITIONAL INFORMATION
For additional product information, visit www.acuitycontrols.com.
Overview
The MSOD 7 ODP Series sensor provides both Motion and Daylight based control of a 0-10 VDC dimmable outdoor or wet location luminaire. For motion detection, the sensor utilizes 100% Digital Passive Infrared (PIR) technology that is tuned for walking size motion while preventing false tripping from the environment. The unit’s integrated Photocontrol enables additional energy savings during daytime periods when there is sufficient daylight. The MSO 7 sensor is recommended for indoor embedded applications.

Sequence Of Operation - Motion
For outdoor applications, where safety is of primary concern, the MSOD 7 ODP Series sensor is factory set to start dimming the lights once the motion time delay expires. Set to 5 min by default, this time delay is followed by a 5 min ramp down period where the lights slowly drop to the minimum dim level. Utilizing a long ramp down rate eliminates noticeable drops in light level. If motion is detected at any time during the ramp down period or when at the minimum dim level, the sensor will quickly ramp the lights back up to maximum level (default 100%) over a 3 sec (default) period. This ramp up period is intended to quickly return the lighting to full bright without distracting occupants with a sudden jump in the space’s light level. The time delays, ramp rates, and max/min dim levels are user adjustable via the accessible push-button.

Sequence Of Operation - Daylight
To prevent lights from day-burning, the MSOD 7 ODP Series sensor will dim lighting completely to a ~0 VDC control level during periods of sufficient daylight. Ideally the MSOD 7 ODP is used with an LED driver that interprets this ~0 VDC control level as an off or sleep mode signal. Providing this type of Photocontrol eliminates the need for astronomical or time clocks. Additionally, the sensor’s closed loop Photocontrol adjusts its calibration after every cycle to accommodate visual changes to the space in which they are installed (for example different color cars in a parking garage reflecting light differently). The Photocontrol operation can also be configured to just dim lights to the specified minimum dim level (i.e. the level used after motion time delay expires) instead of to 0 VDC. The default setpoint of the Photocontrol is set to 200fc so that slight light level changes will not effect operation.

Coverage Patterns
Micro Enclosure (Outdoor)
- Recommended for walking motion detection from mounting heights between 8 ft (2.44 m) and 20 ft (6.10 m).
- Initial detection of walking motion along sensor axes at distances of 2x the mounting height up to 15 ft (4.57 m) and 1.75x up to 20 ft (6.10 m).
- Provides 12 ft (3.66 m) radial detection of small motion when mounted at 9 ft (2.74 m).
- Initial detection will occur earlier when walking across sensor’s field of view than when walking directly at sensor.

Specifications
- For additional product information, visit www.acuitycontrols.com.

Ordering Information
<table>
<thead>
<tr>
<th>Series</th>
<th>Color</th>
<th>Min Dim Level*</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSOD 7 ODP</td>
<td>WH</td>
<td>0V 0VDC</td>
</tr>
<tr>
<td></td>
<td>BK</td>
<td>1V 1VDC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2V 2VDC</td>
</tr>
</tbody>
</table>

*Level after motion time delay expires
Overview
The Snap-Fit sensor is a compact line voltage sensor that snaps directly into a small cavity in a fixture. The sensor utilizes Passive Infrared (PIR) detection to detect motion from occupants within its 360º coverage pattern that overlaps that of most HID, T-5, or T-8 fixtures used in warehouse applications.

Features
• Convenient Snap-in Mounting
• 360º Coverage Pattern
• Self-Contained Relay - No Power Pack Required
• No Minimum Load
• User Adjustable Time Delay
• Push-Button Programmable
• Interchangeable Line & Load Wires - Impossible to Wire Backwards
• 100 hr Lamp Burn-in Timer
• Green LED Status Indicator

Additional Information
For additional product information, visit www.acuitycontrols.com.

Specifications
- SIZE: 2.25” H x 1.38” W x 0.82” D
  (5.72 cm x 3.51 cm x 2.08 cm)
- WEIGHT: 4 oz
- MOUNTING: Snaps into 2 3/16” H x 1 5/16” W x 1” D cavity in fixture
- MAX LOAD: 800 W @ 120 VAC
  1200 W @ 277 VAC
  1500 W @ 347 VAC
- MOTOR LOAD: 1/4 HP
- FREQUENCY: 50/60 Hz
- Timers are 1.2x for 50 Hz
- WIRING DIAGRAM(S): See Figure # 39 on Page 93
- OPERATING TEMP: 14º to 160º F (-10º to 71º C)
- STORAGE TEMP: -14º to 160º F (-26º to 71º C)
- RELATIVE HUMIDITY: 20 to 90% non-condensing
- ROHS COMPLIANT

Ordering Information
Specifications subject to change.

Example: SFR 7 347 LT
Overview
The SFD 30 Universal 360° Snap Fit sensor is a compact low voltage sensor that snaps directly into a small cavity in a fixture. This sensor directly wires to 0-10 VDC dimmable LED drivers and fluorescent ballasts, providing occupancy based high/low dimming control. The SFD 30 provides excellent line of sight 360° PIR detection of large motion making it ideal for small rooms or offices without obstructions or areas with primarily walking motion (e.g. corridors, library stacks). For outdoor applications, the SFOD 30 ODP sensor provides both Motion and Daylight based control of a 0-10 VDC dimmable outdoor or wet location luminaire.

The SFD 7 Low Bay Snap Fit sensor is a compact low voltage sensor that snaps directly into a small cavity in a fixture. This sensor directly wires to 0-10 VDC dimmable LED drivers and fluorescent ballasts, providing occupancy based high/low dimming control. For motion detection, the sensors utilize 100% Digital Passive Infrared (PIR) technology that is tuned for walking size motion while preventing false tripping from the environment. For outdoor applications, the SFOD 7 ODP sensor provides both Motion and Daylight based control of a 0-10 VDC dimmable outdoor or wet location luminaire.

Features
- Digital PIR Detection - Excellent RF Immunity
- 0-10 VDC Control Output
- Snap-in Style Embedded Mounting
- Compatible w/ 0-10 VDC Dimmable Ballasts and LED Drivers
- Adjustable Time Delays
- Programming Button Accessible w/o Opening Sensor
- Adjustable Time Delay, Max/Min Dim Levels, and Ramp Rates
- No Field Calibration or Sensitivity Adjustments Required
- Non-Volatile Settings Memory
- Convenient Test Mode
- Green LED Status Indicator

SNAP-FIT
Indoor Low Bay & Universal 360° Dimming Sensors

COVERAGE PATTERNS

Mini-Low Bay 360° Lens
- Recommended for walking motion detection from mounting heights between 8 ft (2.44 m) and 20 ft (6.10 m)
- Initial detection of walking motion along sensor axes at distances of 2x the mounting height up to 15 ft (4.57 m) and 1.75x up to 20 ft (6.10 m)
- Provides 12 ft (3.66 m) radial detection of small motion when mounted at 9 ft (2.74 m)
- Initial detection will occur earlier when walking across sensor’s field of view than walking directly at sensor

Universal 360° Lens
- Provides excellent detection of large motion (e.g., walking) when mounted between 15 to 40 ft (4.57 to 12.19 m)
- 15 to 20 ft (4.57 to 6.10 m) radial coverage overlaps area lit by a typical high bay fixture
- Recommended for fixtures that have a 1:1 spacing to mounting height ratio or less (e.g., fixtures 30’ on center or less @ a 30’ mounting height).

ADDITIONAL INFORMATION
For additional product information, visit www.acuitycontrols.com.

SPECIFICATIONS

PHYSICAL
SIZE: 2.25” H x 1.38” W x 0.82” D
(5.72 cm x 3.51 cm x 2.08 cm)
WEIGHT: 4 oz
MOUNTING: Snaps into 2 3/16” H x 1 5/16” W x 1” D cavity in fixture

OPERATING VOLTAGE: 12 - 24 VDC
CURRENT DRAW: Standard, 4 mA
DIMMING LIMIT: Sinks < 20 mA,
~40 ballasts / LED drivers (0-10 VDC)
WIRING DIAGRAM(S): See Figure # 40 on Page 93

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

ORDERING INFORMATION
Specifications subject to change.

Example: SFD 30 ADC WH 1V

<table>
<thead>
<tr>
<th>Series</th>
<th>Automatic Dimming Control</th>
<th>Color</th>
<th>Minimum Dim Level 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFD 7</td>
<td>Dimming Snap-Fit Mini-Low Bay</td>
<td>(blank)</td>
<td>0V – 0VDC 3V 3VDC</td>
</tr>
<tr>
<td>SFD 30</td>
<td>Dimming Snap-Fit Universal</td>
<td>ADC</td>
<td>1V 4V 4VDC 5V</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Integrated Dimming Photocontrol</td>
<td>2V 2VDC 5VDC 5VDC</td>
</tr>
</tbody>
</table>

Notes
1. Level after occupancy time delay expires
SNAP-FIT 360° Outdoor/Wet Location Sensor

Overview
The SFOD xx ODP sensors provide both Motion and Daylight based control of a 0-10 VDC dimmable outdoor or wet location luminaire. It can both dim and turn on/off its connected lighting. For motion detection, the sensors utilize Digital Passive Infrared (PIR) technology that is tuned for walking size motion while preventing false tripping from the environment. The SFOD xx ODP’s integrated Photocontrol enables additional energy savings during daytime periods when there is sufficient daylight.

Features
- Digital PIR Detection - Excellent RF Immunity
- Integrated Photocontrol
- 0-10VDC Output for Dimming
- Gasketed Sensor for Outdoor Operation
- Snap-in Style Embedded Mounting
- Compatible w/ 0-10 VDC Dimmable Ballasts and LED Drivers
- Adjustable Time Delays, Max/Min Dim Levels, and Ramp Rates
- Programming Button Accessible w/o Opening Sensor or Removing Gasketing for Outdoor/Wet locations
- No Field Calibration or Sensitivity Adjustments Required
- Non-Volatile Settings Memory
- Convenient Test Mode
- Green LED Status Indicator

Coverage Patterns

Mini-Low Bay 360° Lens
- Recommended for walking motion detection from mounting heights between 8 ft (2.44 m) and 20 ft (6.10 m)
- Initial detection of walking motion along sensor axes at distances of 2x the mounting height up to 15 ft (4.57 m) and 1.75x up to 20 ft (6.10 m)
- Provides 12 ft (3.66 m) radial detection of small motion when mounted at 9 ft (2.74 m)
- Initial detection will occur earlier when walking across sensor’s field of view than walking directly at sensor

Universal 360° Lens
- Provides excellent detection of large motion (e.g., walking) when mounted between 15 to 40 ft (4.57 to 12.19 m)
- 15 to 20 ft (4.57 to 6.10 m) radial coverage overlaps area lit by a typical high bay fixture
- Recommended for fixtures that have a 1:1 spacing to mounting height ratio or less (e.g., fixtures 30’ on center or less @ a 30’ mounting height)

Sequence of Operation - Motion
For outdoor applications, where safety is of primary concern, the SFOD xx ODP Series sensor is factory set to start dimming the lights once the motion time delay expires. Set to 5 min by default, this time delay is followed by a 5 min ramp down period where the lights slowly drop to the minimum dim level. Utilizing a ramp down rate eliminates noticeable drops in light level. If motion is detected at any time during the ramp down period or when at the minimum dim level, the sensor will rapidly ramp the lights back up to maximum level (default 100%) over a 3 sec (default) period. This ramp up period is intended to quickly return the lighting to full brightness without distracting occupants with a sudden jump in the space’s light level. The time delays, ramp rates, and max/min dim levels are user adjustable via the accessible push-button.

Sequence of Operation - Daylight
To prevent lights from day-burning, the SFOD xx ODP Series sensor will dim lighting completely to ~0 VDC control level during periods of sufficient daylight. Ideally the SFOD xx ODP is used with an LED driver that interprets this ~0 VDC control level as an off or sleep mode signal. Providing this type of Photocontrol control eliminates the need for astronomical or time clocks. Additionally, the sensor’s closed loop Photocontrol adjusts its calibration after every cycle to accommodate visual changes to the space in which they are installed (for example different color cars in a parking garage reflecting light differently). The Photocontrol operation can also be configured to just dim lights to the specified minimum dim level (i.e. the level used after motion time delay expires) instead of to 0 VDC. The default setpoint of the Photocontrol is set to 200 fc so that slight light level changes will not effect operation.

For additional product information, visit www.acuitycontrols.com.
# PRODUCT SELECTION GUIDE

## Fixtures Embedded - Snap-Fit 360° Outdoor/Wet Location Sensor

### ADDITIONAL INFORMATION

For additional product information, visit www.acuitycontrols.com.

### SPECIFICATIONS

<table>
<thead>
<tr>
<th>PHYSICAL</th>
<th>ELECTRICAL</th>
<th>ENVIRONMENTAL</th>
</tr>
</thead>
</table>
| SIZE: 2.25” H x 1.38” W x 0.82” D  
(5.715 cm x 3.51 cm x 2.08 cm)  
WEIGHT: 4 oz.  
MOUNTING: Snaps into 2 3/16” H x 1 5/16” W x 1” D cavity in fixture | OPERATING VOLTAGE: 12 VDC  
CURRENT DRAW: Standard, 4 mA  
DIMMING LOAD: Sinks < 20 mA,  
0-10 VDC LED Drivers / Ballasts  
WIRING DIAGRAM(S): See Figure # 40 on Page 93 | OPERATING TEMP: -40º to 160º F (-40º to 71º C)  
IP65 RATED: When embedded in wet location luminaire  
ROHS COMPLIANT |

### ORDERING INFORMATION

Specifications subject to change.

<table>
<thead>
<tr>
<th>Series</th>
<th>Color</th>
<th>Min Dim Level</th>
</tr>
</thead>
</table>
| SFOD 7 ODP | WH White | 0V 0VDC  
1V 1VDC  
2V 2VDC  
3V 3VDC  
4V 4VDC  
5V 5VDC   |
| SFOD 30 ODP | BK Black | |

**Example:** SFOD 7 ODP BK 1V

**Notes:**  
1. Level after occupancy time delay expires
Overview
The SFD ADC Series Automatic Dimming Control Photocontrol sensor provides continuous dimming control of 0-10 VDC dimmable ballasts or LED drivers for daylight harvesting applications. Ideal for spaces with windows like classrooms, vestibules, corridors, offices, or bathrooms, the SFD ADC works to maintain a constant overall room lighting level by controlling the connected 0-10 VDC dimmable ballast / LED driver(s) to increase or decrease their fixtures’ light output level accordingly. The SFD ADC snap fit sensor is designed to be easily embedded into luminaires. The SFD 7 sensor is recommended for indoor motion control. For outdoor applications, the SFOD 7 ODP sensor provides both Motion and Daylight based control of a 0-10 VDC dimmable outdoor or wet location luminaire.

Features
• Automatically Dims 0-10 VDC Ballasts/Drivers as Daylight Changes
• Auto Set-Point Calibration Mode
• Digital Set-Point Control
• Adjustable High & Low Trim
• Push-Button Programmable
• 100 hr Lamp Burn-in Timer
• Green LED Status Indicator

Specifications

<table>
<thead>
<tr>
<th>PHYSICAL</th>
<th>ELECTRICAL</th>
<th>ENVIRONMENTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIZE: 2.25&quot; H x 1.38&quot; W x 0.82&quot; D (5.715 cm x 3.51 cm x 2.08 cm) WEIGHT: 4 oz MOUNTING: Snaps into 2 3/16&quot; H x 1 5/16&quot; W x 1&quot; D cavity in fixture OPERATING VOLTAGE: 12 VDC CURRENT DRAW: Standard, 4 mA DIMMING LOAD: Sinks &lt; 20 mA; 0-10 VDC LED Drivers / Ballasts WIRING DIAGRAM(S): See Figure # 40 on Page 93</td>
<td>OPERATING TEMP: -40º to 160º F (-40º to 71º C) RELATIVE HUMIDITY: 20 TO 75% Non-Condensing ROHS COMPLIANT</td>
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</tbody>
</table>

Example: SFD ADC WH 3V

<table>
<thead>
<tr>
<th>SERIES</th>
<th>Min Dim Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFD ADC WH Daylight Dimming Snap-Fit</td>
<td>0V 0VDC</td>
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<tr>
<td></td>
<td>1V 1VDC</td>
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<tr>
<td></td>
<td>2V 2VDC</td>
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<tr>
<td></td>
<td>3V 3VDC</td>
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<tr>
<td></td>
<td>4V 4VDC</td>
</tr>
<tr>
<td></td>
<td>5V 5VDC</td>
</tr>
</tbody>
</table>

For additional product information, visit www.acuitycontrols.com.
Overview
The Small Box (SB) Series utilizes an enclosure that can be internally mounted in lighting fixtures. SB series sensors accommodate several lens types, can utilize Passive Infrared (PIR) or Dual Technology (PDT) detection, and can be low or line voltage (Single or 2-Pole).

Features
- Digital PIR Detection - Excellent RF Immunity
- User Adjustable Time Delays
- Push-Button Programmable
- Convenient Test Mode
- 100 hr Lamp Burn-in Timer
- Green LED Status Indicator

LampMaximizer® Technology
- Protects Lamp Life while Maximizing Energy Savings
- Minimum On Timer (15 min default)
- Occupancy Time Delay (10 min default)
- LampMaximizer+ Mode - Optimizes Lamp Life & Energy Savings (disabled by default)
- Switch Counter (in 1000’s)
- Total Lamp On Time (in khrs)

Specifications
- **Size:** (w/ mounting flange) 3.40" H x 3.40" W x 1.40" D (8.64 cm x 8.64 cm x 3.56 cm)
- **Weight:** 6 oz
- **Mounting:** 2.65" square opening in fixture (minimum depth 1.50")
- **Operating Voltage:** 12-24 VAC/VDC
- **Recommended Power Pack:** PP20
- **Current Draw:** Standard, 4 mA w/ R option, 16 mA
- **Dimming Load:** Sinks < 20mA; ~40 Ballasts @ .5mA each
- **Wiring Diagrams:** See Figure # 8 on Page 84 (without relay option)
- **Max Load / Pole:**
  - 800 W @ 120 VAC
  - 1200 W @ 277 VAC
  - 1500 W @ 347 VAC
  - 5 Amps @ 208/240 VAC
  - 5 Amps @ 480 VAC
- **Motor Load:** 1/4 HP
- **Frequency:** 50/60 Hz
- **Operating Temp:** 14º to 160º F (-10º to 71º C)
- **Storage Temp:** -14º to 160º F (-26º to 71º C)
- **Relative Humidity:** 20 to 90% non-condensing
- **RoHS Compliant**

Ordering Information
Specifications subject to change.

**Example:** SB 10 D LT

<table>
<thead>
<tr>
<th><strong>Series</strong></th>
<th><strong>Options</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>See Above Key Specs</td>
<td>See Above Key Specs</td>
</tr>
</tbody>
</table>
Overview
The SBGR PC Series of on/off outdoor rated Photocontrol sensors provides intelligent control of lighting for daylight harvesting applications. Designed to recess mount into a 2.65" (6.73 cm) square opening in a fixture, the sensors work by monitoring daylight conditions, then controlling connected lighting so as to ensure that adequate lighting levels are maintained. The SBGR PC provides on/off style Photocontrol control; turning off the lights when sufficient daylight is present and turning them on when additional lighting is necessary. The SBGR 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
- Gasketed for use in Wet Location Luminaire
- 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 Status Indicator

EMBEDDED Outdoor Small Box Photocontrol Sensors

Option Information
- Dual Zone
  - Provide second output that can control an additional zone of lighting

Stepped Dimming (Duo) Operation (PC Only)
- Ideal for A/B (also called inboard/outboard) switching applications
- Determines the necessary on/off combination of the two poles in order to maintain adequate lighting

Percentage Offset Operation
- Ideal for classrooms with individually controlled parallel rows of lights
- PC sensors use a relative set-point for the second pole that is a percentage of the first pole's set-point

Specifications

<table>
<thead>
<tr>
<th>Series</th>
<th>Dual Zone</th>
<th>Voltage</th>
<th>Color</th>
</tr>
</thead>
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<tr>
<td>SBGR PC</td>
<td>(blank)</td>
<td>(blank) HVOLT</td>
<td>WH</td>
</tr>
<tr>
<td>Embedded</td>
<td>DZ</td>
<td>120/277 VAC</td>
<td>BK</td>
</tr>
<tr>
<td>Small Box</td>
<td>Single</td>
<td>347-480 VAC</td>
<td></td>
</tr>
<tr>
<td>Photocontrol</td>
<td>Zone</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Example: SBGR PC DZ WH

Notes
1. Not available with HVOLT

For additional product information, visit www.acuitycontrols.com.
Overview
The Small Box (SB) Series utilizes an enclosure that can be internally mounted in lighting fixtures. SB series sensors accommodate several lens types, can utilize Passive Infrared (PIR) or Dual Technology (PDT) detection, and can be low or line voltage (Single or 2-Pole).

Features
- Digital PIR Detection - Excellent RF Immunity
- Use Adjustable Time Delays
- Push-Button Programmable
- Convenient Test Mode
- 100 hr Lamp Burn-in Timer
- Green LED Status Indicator

LampMaximizer® Technology
- Protects Lamp Life while Maximizing Energy Savings
- Minimum On Timer (15 min default)
- Occupancy Time Delay (10 min default)
- LampMaximizer+ Mode - Optimizes Lamp Life & Energy Savings (disabled by default)
- Switch Counter (in 1000’s)
- Total Lamp On Time (in khrs)
- Not available with OEX option

Specifications subject to change.

### PRODUCT SELECTION GUIDE

---

**Overview**
The Small Box (SB) Series utilizes an enclosure that can be internally mounted in lighting fixtures. SB series sensors accommodate several lens types, can utilize Passive Infrared (PIR) or Dual Technology (PDT) detection, and can be low or line voltage (Single or 2-Pole).

**Features**
- Digital PIR Detection - Excellent RF Immunity
- Use Adjustable Time Delays
- Push-Button Programmable
- Convenient Test Mode
- 100 hr Lamp Burn-in Timer
- Green LED Status Indicator

**LampMaximizer® Technology**
- Protects Lamp Life while Maximizing Energy Savings
- Minimum On Timer (15 min default)
- Occupancy Time Delay (10 min default)
- LampMaximizer+ Mode - Optimizes Lamp Life & Energy Savings (disabled by default)
- Switch Counter (in 1000’s)
- Total Lamp On Time (in khrs)
- Not available with OEX option

Specifications subject to change.

---

**Ordering Information**
Specifications subject to change.

**Example:** SBGR 9 OEX WH

<table>
<thead>
<tr>
<th>Series</th>
<th>Detection Type</th>
<th>Dimming/Photocontrol</th>
<th>Voltage</th>
<th>Color</th>
<th>Minimum Dim Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>SBGR 6</td>
<td>(Blank) Indoor PIR</td>
<td>(Blank) None</td>
<td>(Blank) 120/277 VAC</td>
<td>WH White</td>
<td>0V 0VDC</td>
</tr>
<tr>
<td>SBGR 9</td>
<td>OEX Indoor PIR</td>
<td>D Occupancy Controlled High/Low Dimming Photocontrol</td>
<td>347-480 VAC</td>
<td>BK Black</td>
<td>1V 1VDC</td>
</tr>
<tr>
<td>SBGR PDT 9</td>
<td>P ADC Photocontrol with Dimming</td>
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<td></td>
<td></td>
<td>2V 2VDC</td>
</tr>
<tr>
<td>SBGR 10</td>
<td></td>
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<td></td>
<td>3V 3VDC</td>
</tr>
<tr>
<td>SBGR PDT 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4V 4VDC</td>
</tr>
<tr>
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<td>(Blank) None</td>
<td>(Blank) 120/277 VAC</td>
<td>WH White</td>
<td>5V 5VDC</td>
</tr>
<tr>
<td>SBGR 9 2P</td>
<td>OEX Outdoor PIR</td>
<td>P Photocontrol</td>
<td>347 347 VAC</td>
<td>BK Black</td>
<td></td>
</tr>
<tr>
<td>SBGR PDT 10</td>
<td>DZ Dual Zone Photocontrol</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes**
1. Not available with Passive Dual Technology (PDT)
2. Not available with Outdoor PIR (OEX)
3. Required for D option

---

**Ordering Information**
Specifications subject to change.

**Example:** SBGR 6 2P OEX WH

<table>
<thead>
<tr>
<th>Series</th>
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<td>WH White</td>
</tr>
<tr>
<td>SBGR 9 2P</td>
<td>OEX Outdoor PIR</td>
<td>P Photocontrol</td>
<td>347 347 VAC</td>
<td>BK Black</td>
</tr>
<tr>
<td>SBGR 10 2P</td>
<td>DZ Dual Zone Photocontrol</td>
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**Ordering Information**
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<tr>
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</tr>
<tr>
<td>SBGR 10</td>
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**Ordering Information**
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<td>OEX Outdoor PIR</td>
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<td>347 347 VAC</td>
<td>BK Black</td>
</tr>
<tr>
<td>SBGR 10</td>
<td>DZ Dual Zone Photocontrol</td>
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<td>OEX Outdoor PIR</td>
<td>P Photocontrol</td>
<td>347 347 VAC</td>
<td>BK Black</td>
</tr>
<tr>
<td>SBGR 10 2P</td>
<td>DZ Dual Zone Photocontrol</td>
<td></td>
<td></td>
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<td>347 347 VAC</td>
<td>BK Black</td>
</tr>
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<td></td>
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**Ordering Information**
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</tr>
<tr>
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<td>OEX Outdoor PIR</td>
<td>P Photocontrol</td>
<td>347 347 VAC</td>
<td>BK Black</td>
</tr>
<tr>
<td>SBGR 10 2P</td>
<td>DZ Dual Zone Photocontrol</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Ordering Information**
Specifications subject to change.

**Example:** SBGR 9 OEX WH

<table>
<thead>
<tr>
<th>Series</th>
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<td>P Photocontrol</td>
<td>347 347 VAC</td>
<td>BK Black</td>
</tr>
<tr>
<td>SBGR 10</td>
<td>DZ Dual Zone Photocontrol</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Ordering Information**
Specifications subject to change.

**Example:** SBGR 6 2P OEX WH

<table>
<thead>
<tr>
<th>Series</th>
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<th>Voltage</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>SBGR 6 2P</td>
<td>(Blank) Indoor PIR</td>
<td>(Blank) None</td>
<td>(Blank) 120/277 VAC</td>
<td>WH White</td>
</tr>
<tr>
<td>SBGR 9 2P</td>
<td>OEX Outdoor PIR</td>
<td>P Photocontrol</td>
<td>347 347 VAC</td>
<td>BK Black</td>
</tr>
<tr>
<td>SBGR 10 2P</td>
<td>DZ Dual Zone Photocontrol</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Overview
The SBG xx Series outdoor rated sensor provides 360º Passive Infrared motion detection. The SBG xx sensor recess mounts into a 2.65" (6.7 cm) square opening in a wet location luminaire. The unit's optional integrated Photocell enables additional energy savings during daytime periods when there is sufficient daylight.

Features
- Digital PIR Detection - Excellent RF Immunity
- Gasketed for use in a Wet Location Luminaire
- Push-Button Programmable
- Non-Volatile Settings Memory
- Adjustable Time Delays
- Convenient Test Mode
- Optional 0-10 VDC Dimming Output
- Green LED Status Indicator

LampMaximizer® Technology
- Protects Lamp Life while Maximizing Energy Savings
- Minimum On Timer (15 min default)
- Occ. Time Delay (10 min default)
- LampMaximizer+ Mode - Optimizes Lamp Life & Energy Savings (disabled by default)
- Switch Counter (in 1000's)
- Total Lamp On Time (in khrs)
- Not available with OEX option

Specifications
- Operating Voltage: 12-24 VAC/VDC
- Operating Temperature: -40º to 160º F (-40º to 71º C)
- IP65 Rated: When embedded in wet location luminaire
- ROHS Compliant

Table of Specifications:

<table>
<thead>
<tr>
<th>Series</th>
<th>Detection Type</th>
<th>Dimming / Photocontrol</th>
<th>Color</th>
<th>Minimum Dim Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>SBG 6</td>
<td>(blank) Indoor PIR</td>
<td>(blank) None</td>
<td>WH</td>
<td>0V 0VDC</td>
</tr>
<tr>
<td>SBG 10</td>
<td>OEX Outdoor PIR</td>
<td>D Occupancy Controlled High/Low Dimming</td>
<td>BK</td>
<td>1V 1VDC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>P Photocontrol</td>
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<td>2V 2VDC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3V 3VDC</td>
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<tr>
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<td>4V 4VDC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5V 5VDC</td>
</tr>
</tbody>
</table>

Notes
1. Dimming & Photocontrol not available together in this model family, see SBG xx ODP datasheet for alternate solution
2. Required for D option
Overview
The SBGR xx ODP Series sensors provide both Motion and Daylight based control of a 0-10 VDC dimmable outdoor or wet location luminaire. The SBGR xx ODP can both switch and dim its connected lighting. For motion detection, the sensor utilizes 100% Digital Passive Infrared (PIR) technology that is tuned for walking size motion while preventing false tripping from the environment. The unit’s integrated Photocontrol enables additional energy savings during daytime periods when there is sufficient daylight.

Features
• Digital PIR Detection - Excellent RF Immunity
• Integrated Photocontrol
• Self-Contained Relay for Switching
• 0-10 VDC Output for Dimming
• Gasketed for use in Wet Location Luminaire
• Compatible w/ 0-10 VDC Dimmable Ballasts and LED Drivers
• Interchangeable Hot & Load Wires, Impossible to Wire in Reverse

• Adjustable Time Delays, Max/Min Dim Levels, and Ramp Rates
• Programming Button Accessible w/o Opening Sensor or Removing Gaskets
• No Field Calibration or Sensitivity Adjustments Required
• Non-Volatile Settings Memory
• Convenient Test Mode
• Green LED Status Indicator

ADDITIONAL INFORMATION
For additional product information, visit www.acuitycontrols.com.

Sequence Of Operation - Motion
For outdoor applications, where occupant safety is of primary concern, the SBGR xx ODP Series sensors are factory set to start dimming the lights once the motion time delay expires. Set to 5 min by default, this time delay is followed by a 5 min ramp down period where the lights slowly drop to the minimum dim level. Utilizing a long ramp down rate eliminates noticeable drops in light level. If motion is detected at any time during the ramp down period or when at the minimum dim level, the sensor will quickly ramp the lights back up to maximum level (default 100%) over a 3 sec (default) period. This ramp up period is intended to quickly return the lighting to full bright without distracting occupants with a sudden jump in the space’s light level. The time delays, ramp rates, and max/min dim levels are user adjustable via the accessible push-button. See luminaire specifications for corresponding power level at minimum dim level.

Sequence Of Operation - Daylight
To prevent lights from day-burning, the SBGR xx ODP Series sensor will switch lighting completely off during periods of sufficient daylight. Providing on/off Photocontrol control eliminates the need for astronomical or time clocks. Additionally, the sensor’s closed loop Photocontrol adjusts its calibration after every cycle to accommodate visual changes to the space in which they are installed (for example different color cars in a parking garage reflecting light differently). The Photocontrol operation can also be set to dim lights to the minimum level instead of turning them off.

ADDITIONAL INFORMATION
For additional product information, visit www.acuitycontrols.com.

PRODUCT SELECTION GUIDE
EMBEDDED Small Box Sensors

PHYSICAL

OPERATING VOLTAGE: 12-24 VAC/VDC
CURRENT DRAW: 4 mA
RECOMMENDED POWER PACK:
PP20 or MP20
DIMMING LOAD: Sinks < 20 mA
(0-10 VDC LED Drivers / Ballasts)
WIRING DIAGRAMS: See Figure # 9 on Page 84

ENVIRONMENTAL

OPERATING TEMP:
-40º to 160º F (-40º to 71º C)
IP65 RATED: When embedded in wet location luminaire
ROHS COMPLIANT

Example: SBGR 6 ODP WH 3V

<table>
<thead>
<tr>
<th>Series</th>
<th>Voltage</th>
<th>Color</th>
<th>Minimum Dim Level</th>
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<tbody>
<tr>
<td>SBGR 6 ODP</td>
<td>(blank) 120/277 VAC (MVOLT)</td>
<td>WH White</td>
<td>0V 0VDC</td>
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<tr>
<td>SBGR 10 ODP</td>
<td>HVOLT 347 - 480 VAC</td>
<td>BK Black</td>
<td>1V 1VDC</td>
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</tr>
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<tr>
<td></td>
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<td>5V 5VDC</td>
</tr>
</tbody>
</table>
SPECIALTY PRODUCTS

76  DATALOGGER
78  WIRE GUARDS
79  MASKING LABELS
79  BALLAST DISCRIMINATOR
Data Logger Monitoring System

Overview
The Data Logger Monitoring System models facility lighting and occupancy patterns. Primarily used to quantify potential energy savings from occupancy sensor projects, this powerful tool is essential for performance contractors, lighting retrofitters, and facility managers when calculating Return on Investment (ROI) and payback estimates.

Setting New Standards in Monitoring
Much like our occupancy sensors, Sensor Switch’s Data Logger Monitoring System utilizes innovative technology, surpassing all similar systems available. Its features are both unique and necessary to perform thorough ROI and payback analysis. Data Loggers units can be leased on a per project basis at no charge, or purchased by qualified customers. Subscription access to the Data Logger Software Analysis Suite is also available to customers in good standing and at no charge. To request or purchase Data Loggers, contact your local Acuity Brands sales representative or email: datalogger@sensorswitch.com.

Device Features
While light monitors have been around for years, the Data Logger surpasses all predecessors with several new easy-to-use features that assure more useful results.

- Combination occupancy sensor & light monitoring device
- Distinguishes between natural and artificial light sources
- Multiple loggers can be used together to monitor large spaces
- Installs in seconds; push-button operation
- Data points are recorded every two minutes

Energy Savings Analysis
The Data Logger’s information is downloaded into sophisticated software that analyzes the data and generates customized reports.

- Each Data Logger is assigned an Area Type
- Software averages information from Data Loggers of similar Area Types
- “Lights On vs. Occupancy” activity per area presented in 24 hour timelines
- Total energy usage calculated from user-entered lighting loads
- User-adjustable “virtual” occupancy sensor time delay settings
- Analysis of “Savings vs. Time Delay Setting” on sensors

Additional Information
For additional product information, visit www.acuitycontrols.com.
**System Highlights**
- Data Logger units record activity of a building’s lighting, as well as its occupants.
- Data Logger software analyzes information and generates customized reports.
- Customized reports quantify potential energy savings from occupancy.
- Data is presented in “Lights On vs. Occupancy” timeline.
- Customized reports quantify potential energy savings from occupancy sensor projects.
- Use of system is provided to qualified customers at no charge.

**Customized Reports**
- Savings calculated using up to 4 Time-of-Day Billing Rates.
- Total potential savings summaries presented in easy-to-read charts & graphs.

**Example: LQDM 6 KIT**

<table>
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<th>Area Type</th>
<th>Qty</th>
<th>Watts</th>
<th>Peak</th>
<th>Off</th>
<th>Shldr1</th>
<th>Shldr2</th>
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<th>Peak</th>
<th>Off</th>
<th>Shldr1</th>
<th>Shldr2</th>
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**ORDERING INFORMATION**

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<td>LQDM 6 KIT</td>
<td>Kit containing: 45 data logger devices, 1 hard sided carrying case, 3M double sided tape strips, field monitoring forms, DL6 Software Guide and Installation Guidelines</td>
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For additional product information, visit [www.acuitycontrols.com](http://www.acuitycontrols.com).
WIRE GUARDS
for Occupancy Sensors

Overview
These super tough wire guards are extremely effective in reducing malfunctions and high maintenance costs in areas where abuse is severe. These units are cages constructed of sturdy 9-gauge steel wire coated with heavy duty polyester. These durable, easy-to-install devices help prevent vandalism and accidental damage without significantly effecting the sensor's view pattern or coverage range.

Features
- 9-Gauge Coated Steel Wire
- Easy Installation and Removal
- Paintable
- CSFM and MEA approved
- UL Listed
- LED Status Indicator on Sensor Remains Visible

SPECIFICATIONS

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<td>CORNER WIRE GUARD</td>
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ORDERING INFORMATION

Example: WG1

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Specifications subject to change.
MASKING LABELS
High Bay 360° &
High Bay Bi-directional Aisleway

Overview
These labels (included) enable masking off a portion of the view pattern for end-of-aisle applications or trimming the sensor’s side viewing to create a rectangular pattern for center-of-aisle viewing only.

Note: Masking labels not included with wet location sensors

PRODUCT INFORMATION

Overview
The BD1 Ballast Discriminator is the ideal tool to quickly determine your retrofit opportunities by distinguishing between magnetic and electronic ballasts. Simply point the discriminator at the light fixture, then press and hold the button until the LED lights. If the LED lights green, the ballast is electronic; if the LED lights orange, the ballast is magnetic. A must for every lighting retrofitter.

Ballast Discriminator

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<td>Ballast Discriminator - Handheld Tool</td>
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WIRING DIAGRAMS

82  WALL SWITCH OCCUPANCY SENSORS
84  CEILING MOUNT OCCUPANCY SENSORS
86  WALL MOUNT OCCUPANCY SENSORS
87  FIXTURE MOUNT OCCUPANCY SENSORS
88  DAYLIGHT CONTROL OCCUPANCY SENSORS
90  POWER PACKS & SECONDARY PACKS
91  SPECIALTY POWER PACKS
92  WALLPODS
93  EMBEDDED OCCUPANCY SENSORS
WALL SWITCH OCCUPANCY SENSORS

**FIG. 1**
WALL SWITCH – 1-POLE NEUTRAL/GROUND

**FIG. 2**
WALL SWITCH – 1-POLE GROUND

**FIG. 3**
WALL SWITCH – 2-POLE NEUTRAL/GROUND

**FIG. 4**
WALL SWITCH – 2-POLE GROUND
**FIG. 6**

**PRESET TIMER SWITCH**

**FIG. 7**

**WALL SWITCHES: LOW VOLTAGE**
CEILING MOUNT OCCUPANCY SENSORS

FIG. 8
LOW VOLTAGE STANDARD & EXTENDED RANGE SENSORS

FIG. 9
LINE VOLTAGE STANDARD & EXTENDED RANGE SENSORS

FIG. 10
LINE VOLTAGE 2-POLE STANDARD RANGE, EXTENDED RANGE, & HIGH BAY SENSORS
FIG. 11
LOW VOLTAGE CEILING & FIXTURE MOUNT SENSORS

R - RELAY OPTION

FIG. 12
LINE VOLTAGE HIGH BAY CEILING, RECESSED & FIXTURE MOUNT SENSORS

FIG. 13
LINE VOLTAGE 208/240, or 480 VAC HIGH BAY SENSORS*

* Applies only to CMR/CMRB occupancy sensors.
WALL MOUNT OCCUPANCY SENSORS

FIG. 14
LOW VOLTAGE WIDE VIEW & HALLWAY SENSORS

FIG. 15
LINE VOLTAGE WIDE VIEW & LARGE AREA WALL SWITCH SENSORS: SINGLE POLE

FIG. 16
LINE VOLTAGE WIDE VIEW & LARGE AREA WALL SWITCH SENSORS: 2-POLE

FIG. 17
LINE VOLTAGE HALLWAY SENSORS
FIG. 18
LINE VOLTAGE INTERCHANGEABLE LENS FIXTURE MOUNT

FIG. 19
LINE VOLTAGE INTERCHANGEABLE LENS FIXTURE MOUNT: 2-POLE

FIG. 20
LINE VOLTAGE INTERCHANGEABLE LENS FIXTURE MOUNT: 2P W/ SINGLE ZONE ON/OFF PHOTOCONTROL

FIG. 21
LINE VOLTAGE INTERCHANGEABLE LENS FIXTURE MOUNT: 2-PHASE
DAYLIGHT CONTROL OCCUPANCY SENSORS

FIG. 22
LOW VOLTAGE ON/OFF PHOTOCONTROLS

FIG. 23
LOW VOLTAGE ON/OFF PHOTOCONTROL W/ LOW VOLTAGE OCCUPANCY SENSORS

FIG. 24
LINE VOLTAGE AUTO DIMMING PHOTOCONTROLS

FIG. 25
LINE VOLTAGE ON/OFF PHOTOCONTROLS
FIG. 26
LOW VOLTAGE AUTOMATIC DIMMING PHOTOCONTROLS

FIG. 27
LOW VOLTAGE ON/OFF & AUTOMATIC DIMMING PHOTOCONTROLS

FIG. 28
LOW VOLTAGE ON/OFF & AUTOMATIC DIMMING PHOTOCONTROL W/ LOW VOLTAGE OCCUPANCY SENSORS
POWER PACKS & SECONDARY PACKS

FIG. 29
MULTIPLE SENSORS CONTROLLING ONE CIRCUIT

FIG. 30
ONE SENSOR CONTROLLING TWO CIRCUITS

FIG. 31
WIRING MULTIPLE POWER PACKS TOGETHER
SPECIALTY POWER PACKS

FIG. 33
MOMENTARY POWER PACK (PP 2PM)

FIG. 34
ALTERNATING OFF RELAY POWER PACK (PP 2PAR)
WALLPODS

FIG. 35
BI-LEVEL (AUTO-ON / MANUAL ON) SOLUTION W/ OCCUPANCY SENSOR: SINGLE GANG

If No Sensor is Used, Tie the sPODM White Wire to Red Wire

FIG. 36
MANUAL ON/DIMMING W/ OCCUPANCY SENSOR

If Sensor Also Has Dimming Output, Connect Sensor VIO Wire to sPODM and Ballast VIO Wire
If No Sensor is Used, Tie the sPODM White Wire to Red Wire

FIG. 37
3-WAY MANUAL ON SOLUTION W/ OCCUPANCY SENSOR: SINGLE GANG

If No Sensor is Used, Tie the sPODM White Wire to Red Wire
FIG. 38
BI-LEVEL
(AUTO-ON / MANUAL ON)
SOLUTION W/ OCCUPANCY SENSOR:
TWO-GANG

FIG. 39
LINE VOLTAGE SNAP FIT SENSORS

FIG. 40
LOW VOLTAGE HIGH/LOW OPERATION SNAP-FIT SENSORS

FIG. 41
LOW VOLTAGE HIGH/LOW OPERATION EMBEDDED SENSORS

FIG. 42
LINE VOLTAGE 2-POLE EMBEDDED SMALL BOX SENSORS

If No Sensor is Used, Tie the sPODM White Wire to Red Wire
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