Occupancy/Vacancy Sensor Passive Infrared (PIR) 120/277Vac

Features
- Simple to install PIR Sensor configured for ease of use-out-of-the-box
- Replace a Wall Switch to provide maximum energy savings and automated control of lighting loads
- Optional modes make configuring a Diversa sensor to a unique space quick and easy
- Commercial Grade Lens and Contact Ratings are ideal for Offices, Schools, and Retail Applications
- Select models available in White (W), Grey (G), and Ivory (I)

Operation
- Wall Switch Occupancy/Vacancy Sensor provides 180° coverage to maximize the detection capability
- A self-adapting mode can be set to use Passive Infrared (PIR) to automatically track occupancy tendencies for continuous maximizing of energy savings
- Can be optimized by setting on-board DIP Switches and Dials

Specifications
- Power: 120/277VAC, 60Hz
- Contact Ratings: 120VAC - 800W, 277VAC - 1200W
- Power Consumption: 400 micro amps
- Approvals:
  - Certified to UL 558, UL244A, CSA C22.2 #14
  - Title 24, California
  - Local Law 48, New York (Vacancy models)

Environment
- Indoors, stationary, non-vibrating, non-corrosive atmosphere and non-condensing humidity
- Ambient Operation Temperature: 32°F to 104°F (0°C to 40°C)
- Storage Temperature: -14°F to 140°F (-25°C to 60°C)

Sensor Modes
- PIR Detection Mode
  - When in operation, the sensor will detect initial motion using Passive Infrared; once motion is detected PIR is used to maintain occupancy. Sensitivity of the PIR can be tuned using the onboard DIP Switches.
  
- Test Mode
  - A short Time Delay Mode can be used during the commissioning phase of an installation to determine if the sensor is working as intended and adjust settings as needed.

Automatic Timeout Mode
- By setting the timeout dial to maximum, the sensor will be put into automatic mode which will adjust the time out automatically to maximize energy savings and occupant comfort.

Walk Through Mode
- Energy consumption due to false triggers is minimized by the automatic walk-through mode. This feature turns the lights off after 3 minutes if no occupancy detection occurs after the first 30 seconds after initial turn on. This feature can be disabled using the on-board DIP Switches.

Natural Daylight Mode (1-P, Optional Feature)
- When equipped and enabled, occupancy alone will not trigger the sensor to turn the lights on. If occupancy is detected AND there is a deficiency of natural light, the output is triggered on. An increase in natural light will not force the lights off but as the ambient light level drops the lights will turn on automatically. The light level that triggers this function can be tuned using the Light Level Dial and the onboard DIP Switches.

Dim Mode (1DP, 2DP, Optional Feature)
- The level at which the light load dims up to can be set using the onboard Light Level Dial and Dip Switch. This allows the light level to control a set point based on the level of natural light detected by the Photo cell.

Bathroom Mode (2-Pole Only)
- This feature allows Pole 1 and Pole 2 to be synchronized to the same Photo and Time Delay settings, or when Pole 1 is used for Light Load and Pole 2 for a Fan then Pole 2 behaves independent of Pole 1. In Bathroom Mode Pole 2 (Fan) will remain on 50% longer than Pole 1 and cannot be Photo Inhibited to ensure that it comes on. (see installation instructions on following page)

Installation & Installer Adjustments
- Sensor Location Guidelines (In this Order of Precedence)
  - To enhance the performance of your Diversa Occupancy Sensors, please review the following installation guidelines carefully. Following these guidelines as closely as possible will improve the closed loop operation of the sensor, result in better set point selection and allow for greater range of dimming (on models with Dimming option):
    - Consult product manual for coverage pattern and ranges for the specific model to be installed
    - Ensure that the sensor is at least 30’ away from air handlers/registers and not painted directly at windows
    - Check that you are installing the right product (check the product model number) as per the drawings
  
- Guidelines applicable for models with Photo: 1-P, 2-P, 1DP, 2DP:
  - Outside the direct cone of light from fixtures & between 3 and 12 feet from a Window
  - As close as possible to the fixture being controlled
  - Above the least illuminated space in the work area
  - Away from lighting that is not being controlled by the sensor

- The room dynamics will change when people and furniture are actually occupying the space, some sensors may need to be tuned to specific rooms after move in. Occupants should expect some adjustment and fine tuning.

Specifications

<table>
<thead>
<tr>
<th>PART NO. FEATURES</th>
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<tbody>
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</tr>
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General Programming Instructions

- This covers programming of functionality enabled by the onboard Dip and Dial settings.
- Please record the factory defaults prior to making changes to enable you to go back to a known working condition.

Diverse Occupancy Sensors with a "P" in the Model Number contain a Photo Sensor. Factory default is set to Photo Inhibit when sufficient daylight is detected. This will override the button on the Sensor and if you may need to override this function in order to confirm functionality. See Dip Switch and Dial Settings for adjustments.

- Start with the PIR Sensitivity at Medium.
- To set the light level at which you want to inhibit the sensor from turning on, put Dip 6 in Down position.
- To enable Bath Mode, ensure that Dip 8 is Up. In this mode Pole 2 will remain on 50% longer than Pole 1 (Time is set with the Time Dial) and Pole 2 cannot be Photo Inhibited.

**PLEASE NOTE**: Some Dip Switches control Option Features Not Found on All Products.

### Dip Switches & Dial Settings

<table>
<thead>
<tr>
<th>Dip #</th>
<th>Function</th>
<th>UP</th>
<th>Down</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Detection LED</td>
<td>Disabled</td>
<td>Enabled</td>
<td>Down</td>
</tr>
<tr>
<td>2</td>
<td>Walk Through Mode</td>
<td>Enabled</td>
<td>Disabled</td>
<td>Down</td>
</tr>
<tr>
<td>3</td>
<td>Auto or Manual On Button</td>
<td>Disabled</td>
<td>Enabled</td>
<td>Down</td>
</tr>
<tr>
<td>4</td>
<td>PIR Sensitivity</td>
<td>High Sensitivity</td>
<td>Medium Sensitivity</td>
<td>Down</td>
</tr>
<tr>
<td>5</td>
<td>Natural Daylight Mode</td>
<td>Disabled</td>
<td>Enabled</td>
<td>Down</td>
</tr>
<tr>
<td>6</td>
<td>Light Level Mode Sets</td>
<td>Light Level Sets</td>
<td>Photo Setpoint</td>
<td>Dimming Light Level to be Maintained</td>
</tr>
<tr>
<td>7</td>
<td>Bathroom Mode</td>
<td>Pole 2 Lags Pole 1 by 50% Time</td>
<td>Pole 1 &amp; Pole 2 Synchronized</td>
<td>Down</td>
</tr>
</tbody>
</table>

### Factory Dip Switch Settings

<table>
<thead>
<tr>
<th>Dip</th>
<th>UP</th>
<th>Down</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

### Factory Programming

- Time Delay: 10 Minutes
- Natural Daylight Light Level: 50% (200 Lux)

### Diverse Lens

- Optical usage is to detect small motions such as hand movements.
- Designed for a mounting height of up to 7.5 ft.

### Troubleshooting

Before calling Technical Support, please review the following Troubleshooting Guide.

<table>
<thead>
<tr>
<th>Issue</th>
<th>Possible Cause</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light will not turn OFF automatically</td>
<td>Sensor button has been disabled. Sensor may be detecting heat from Air Handling registers or other heat sources. Check Installation Guidelines and move if necessary. Reduce PIR Sensitivity. Check position of Dip 3.</td>
<td>Check the wiring diagram. Ground must be connected. Check that the activation LED is blinking to detect motion by waving your hand in front of lens. Check position of Dip 1.</td>
</tr>
<tr>
<td>Light will not turn ON automatically</td>
<td>Sensor is set to Manual On Mode.</td>
<td>Test by pushing button. If in Manual On Mode, the lights will turn on if activated by the push button. Check position of Dip 4.</td>
</tr>
<tr>
<td>Light will not turn ON automatically</td>
<td>Sensor is set to Natural Daylight Mode (Photo Inhibit) &amp; Sufficient Natural Light is Present.</td>
<td>If sufficient natural daylight (at preset levels) is present the sensor will not turn the lights on. If the lights are desired to be on on the light levels in the room, make the following adjustment. Place Dip 6 in the Down Position and ensure Dip 7 is in the Up Position. Rotate the Light Level Dial clockwise until the lights turn on when button is pressed.</td>
</tr>
<tr>
<td>Light will not turn OFF automatically</td>
<td>Sensor was turned off manually before the Time Delay expired.</td>
<td>If this action is not desired, the Sensor can be set so that the button is deactivated. Check position of Dip 3.</td>
</tr>
<tr>
<td>Light will not turn ON automatically</td>
<td>Sensor is in Auto Mode.</td>
<td>If sufficient natural daylight (at preset levels) is present the sensor will not turn the lights on. If the lights are desired to be on on the light levels in the room, make the following adjustment. Place Dip 6 in the Down Position and ensure Dip 7 is in the Up Position. Rotate the Light Level Dial clockwise until the lights turn on when button is pressed.</td>
</tr>
<tr>
<td>Light will not turn OFF automatically</td>
<td>Sensor is being activated by a heat source other than occupant.</td>
<td>Check the wiring diagram. Ground must be connected. Check that the activation LED is blinking to detect motion by waving your hand in front of lens. Check position of Dip 1.</td>
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</tr>
<tr>
<td>Light will not turn ON automatically</td>
<td>Sensor button can be disabled thereby relying on the PIR not detecting motion and the Time Delay has to expire.</td>
<td>Sensor button has been disabled. Check position of Dip 1 and Time Delay settings.</td>
</tr>
</tbody>
</table>

### Coverage

- **Installing in Offices**
  - PIR Requires Line of Sight
  - Connect Light Lead to Pole 1 (Black/White)
  - Connect Fan Lead to Pole 2 (Blue & Blue/White)

- **Installing in Bathrooms**
  - PIR Requires Line of Sight
  - Connect Light Lead to Pole 1 (Black/White)
  - Connect Fan Lead to Pole 2 (Blue & Blue/White)