Passive Infared Wall/Ceiling Mounted Low Voltage Occupancy Sensor

Coverage:
- 90 sq. ft.
- 4.4” x 3.4” x 2” (112 mm x 86.4 mm x 50.8 mm)
- 16’ (5 m)
- 75 ft (28 m)
- 43 ft (13 m)
- 3 ft (0.9 m)
- 10’ (3 m)
- 3 m

Specifications:
- Power Requirements: 10-30 VDC from Greengate Switchpack or Greengate system. Maximum current needed is 25mA per sensor.
- Input: Open collector output, or 3.3VDC to 5.0VDC.
- Output: 10-30 VDC from Greengate Switchpack or Greengate system.
- Time Delays: Selectable 5, 15, 30 minutes.
- Coverage: 90 sq. ft.
- Light Level Sensing: 0 to 100 foot-candles (R model).
- Operating Environment: Temperature: 32°F – 104°F (0°C – 40°C)
- Relative Humidity: up to 90% non-condensing
- Housing: Medium impact injection molded housing
- Polycarbonate resin complies with UL94V0
- Polyethylene main cord complies with UL1569

Description:
The OAWC-P-009L-H can be mounted to the wall, ceiling, junction box, or round fixture with raceway.

Installation:
The sensor’s segmented lens divides the field-of-view into sensor zones, and detects the changes in temperature that are created when a person, or part of a person as small as a hand, passes into or out of a sensor zone. The sensor includes self-adaptive technology that continually adjusts to conditions by adjusting sensitivity and time delay in real-time. By adjusting sensitivity and time delay automatically, the sensor is maintaining the potential energy savings that are available in the particular application. The Daylighting feature is a R model only: yellow control lead only prevents lights from turning on when the room is adequately illuminated by natural light.

The Walk-Through feature maximizes energy savings by not leaving the lights ON after a momentary occupancy. The sensor will switch the lights ON when it detects a person entering the area. If the sensor does not continue to detect motion 30 seconds following the initial activation, it will automatically go to a shorter 2 minute delay. In Automatic On Mode, the lights turn ON when a person enters the room. In Manual On Mode, the lights are turned ON by actuating a momentary switch (model # GMDS-”) that is connected to the sensor. When used with 2 level lighting (R model only), bi-level Automatic ON can be achieved which allows Zone 1 to come ON automatically upon occupancy. Zone 3 does not come ON unless the occupant presses the optional momentary switch.

Coverage:
- 90 linear ft. coverage

Location:
- The maximum coverage area may vary somewhat according to room shape and the presence of obstacles. For information, see diagram concerning major and minor motion coverage. The sensor must have a clear view of the area to be controlled. The sensor will not “see” through glass. Mounting height should not exceed 12 ft. Optimum mounting height is 10 ft. To prevent false activation, the sensor should be mounted away from the air supply duct a minimum of 4 ft. 6 feet. Mounting at fixture height is most effective.

Wiring:
1. Make sure power is turned OFF at the branch circuit breaker.
2. Wire units as shown in wiring diagrams per applicable voltage requirements. (Use lead-on wire connectors for all connections)
3. Mount unit to wall, ceiling, junction box or round fixture with raceway.
4. Turn power back ON at the branch circuit breaker and wait 2 minutes for the unit to stabilize.
5. Make necessary adjustments. (See Checkout and Adjustments section)

CAUTION: Before installing or performing any service on a Greengate system, the power MUST be turned OFF at the branch circuit breaker. According to NEC 240-83(d), if the branch circuit breaker is used as the main switch for a fluorescent lighting circuit, the circuit breaker should be marked “SWD”. All installations should be in compliance with the National Electric Code and all state and local codes.

NOTE REGARDING COMPACT FLUORESCENT LAMPS: The life of some compact fluorescent lamps (CFLs) is shortened by frequent automatic or manual switching. Check with CFL and ballast manufacturer to determine the effects of cycling.

Installation Instructions:
- Model # OAWC-P-009L-H
- Model # OAWC-P-009L-H-R
- Eaton’s Cooper Controls Business
- 203 Cooper Circle
- Peachtree City, Georgia 30269
- www.coopercircle.com
**DIP Switch Settings**

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<th>Switch</th>
<th>Setting</th>
<th>Description</th>
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<td>D1</td>
<td>1</td>
<td>Power Pack One</td>
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<tr>
<td>D2</td>
<td>1</td>
<td>Power Pack Two</td>
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</table>

**Field-of-view outside the space**

1. Adjust PIR sensitivity to 50% by moving DIP Switch 5 up.

**Daylight Adjustments**

If this feature is not needed, leave the light level at maximum (Full CW).

The Daylighting feature (F model) only prevents the lights from turning ON when the room is adequately illuminated by natural light. If there is enough light in the room regardless of occupancy, the sensor will hold the lights OFF. If there is not enough light in the room, the sensor will allow the lights to turn ON when occupied.

**Full and Half Logic Modes**

- **Full Logic Mode**—the output state of the yellow control lead will not change with ambient light changes, after occupancy activation. If the amount of natural light available rises above the setpoint, the sensor will not turn the lights OFF while occupancy is being detected.
- **Half Logic Mode**—the output state of the yellow control lead will not change with ambient light changes, after occupancy activation. If the amount of natural light available rises above the setpoint, the sensor will not turn the lights OFF while occupancy is being detected.

**Full and Half Logic Modes (See DIP Switch legend)**

- In both Full and Half Logic modes, lights connected to the yellow control lead will not turn ON upon occupancy activation, should the ambient light level exceed the preset foot-candle level.

**After activation:**

- **Full Logic Mode**—the yellow control lead will turn OFF immediately if the room later becomes too well illuminated.
- **Half Logic Mode**—the yellow control lead will not change with ambient light changes, after occupancy activation. If the amount of natural light available rises above the setpoint, the sensor will not turn the lights OFF while occupancy is being detected.

**Note:** Set the light level when the ambient light is at the level where no artificial light is needed. In this feature, the sensor will become more sensitive to the light level before the setpoint.

**Checkout and Adjustment**

Adjustments should be made with the HVAC system ON. Use only insulated tools to make adjustments.

**Self-Adjust**

- Sensor is shipped in the Self-Adjust Mode. This applies to time delay and PIR sensitivity. In preparation for the Installer Test, the time delay is set to 15 seconds after the sensor has been activated, and has stabilized, the unit will turn OFF after 15 seconds after the last motion detected. Coverage and sensitivity can be confirmed by watching the (PIR) indicator LED on the front of the sensor, while moving around the room.

1. Walk around the room and monitor LED. LED should turn on for one second with each motion. (If LED does not turn ON, go to Installer Adjustments - Sensitivity Adjustments Section)

2. Stand still six to eight feet away from the sensor for five seconds. LED should not turn ON. (If any LED turns ON, go to Installer Adjustments - Sensitivity Adjustments Section)

3. Walk outside the room and wait 5 seconds for the lights to turn ON. (If all lights do not turn OFF go to Installer Adjustments Section)

4. Re-enter the room to activate sensor. (If lights do not turn OFF go to Troubleshooting Section)

5. The unit will remain in Test Mode for 5 minutes then automatically exit Test Mode and go for 10 min. Time Delay User Mode setting.

**Time Delay Adjustments**

People who remain very still for long periods of time may need a longer Time Delay than the default setting of 10 minutes. As long as Auto is enabled, the sensor will respond to each pair of false-OFFs with no normal OFF in between, by automatically making light adjustments to either time delay by 2 minute increments or sensitivity, so there should be no need for manual adjustment. If manual adjustment is desired, refer to Time Delay Adjustments in DIP Switch legend.

**Automatic Mode**

- **Automatic Mode**—the lights turn ON when a person enters the room. If optional momentary low voltage switches are used along with Automatic ON Mode, activating the switches will turn the load OFF. If the load is turned off manually, as long as the sensor continues to detect occupancy the load stays OFF. After the time delay expires, the lights stay OFF and the sensor goes back to Automatic ON Mode. For wiring information for the optional momentary low voltage switch(s), please see the wiring section of the installation instructions.

**Manual Mode**

- **Manual Mode**—the optional momentary low voltage switch(s) is required to turn the load(s) ON. Once activated the sensor will maintain the lights ON until motion ceases and the time delay expires. While the room is occupied the DAI relay remains active. After the time delay expires, the load(s) automatically turn OFF and the switch(es) must be used to turn the load(s) ON if there is motion detected within the 10 second before trigger period.

**Lighting Sweep Option**

If selected, this DIP Switch option forces an initial 60 second delay upon “power-up” to prevent false activation in buildings with computer control systems.

- Move DIP Switch 8 UP.

**Troubleshooting**

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<td>Lights Will Not Turn ON</td>
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<td>Wall Switch OFF</td>
<td>Turn Wall Switch ON</td>
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<tr>
<td></td>
<td>If low voltage switch option is used, lights may have been turned off manually</td>
<td>Press low voltage switch</td>
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<td>Daylighting Feature Enabled</td>
<td>Check incoming voltage or daylight feature</td>
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<tr>
<td></td>
<td>Power Interruption</td>
<td>Check incoming voltage or daylight feature</td>
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<tr>
<td></td>
<td>Lights Will Not Turn OFF Automatically</td>
<td></td>
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<tr>
<td></td>
<td>If all lights are required to be turned ON, DIP Switch 10 and daylight timer</td>
<td>Move DIP Switch 10 UP</td>
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<tr>
<td>Override setting allows the lights to remain ON in the unlikely event of sensor failure.</td>
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<td>If lights will still not turn OFF, set sensor to override model and call Technical Services at 1-800-553-3879</td>
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**Warranties and Limitations of Liability**

Please refer to www.coopercontrol.com under the Legal section for our terms and conditions.

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