Dual Technology Ceiling Mounted Line Voltage Occupancy Sensor

**General Information**
- Read all instructions on both sides of this sheet first
- Install in accordance with ALL local codes
- For indoor use only

**Specifications**
- **Power Requirements:** 120 to 347 VAC, 50/60 Hz - Neutral Required
  - 120 VAC:
    - Incandescent/Tungsten - 0 to 800W, 50/60 Hz
    - Fluorescent/Ballast - 0 to 1200W, 50/60 Hz
- Motor Load: ¼ HP @ 125 VAC
- 230 VAC:
  - Fluorescent/Ballast - 0 to 1200W, 50/60 Hz
- 277 VAC:
  - Fluorescent/Ballast - 0 to 2700W, 50/60 Hz
- 347 VAC:
  - Fluorescent/Ballast - 0 to 1500W, 50/60 Hz

**Operating Environment:**
- Temperature: 32° F – 104° F (0° C – 40° C)
- Relative Humidity: up to 90% non-condensing

**Description**
The OAC-DT Ceiling Mount Line Voltage Occupancy Sensor is a Passive Infrared (PIR) and Ultrasonic (US) motion sensing lighting control, used for energy savings and convenience. PIR is used to turn the lights ON and then either technology is used to keep the lights ON.

The sensor includes self-adaptive technology that continually adjusts to conditions by adjusting sensitivity and time delay in real-time.

**Coverage**

**Installation**
The OAC-DT sensor can be mounted to a standard 2.125” deep x 4” octagon or 2.125” deep x 4” foursquare electrical boxes (foursquare box requires a two-gang mud ring).

**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 twist-on wire connectors for all connections) CAP ALL UNUSED WIRE LEADS.
3. Mount unit to 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)
## DIP Switch Settings

### LED Indicators Functionality

<table>
<thead>
<tr>
<th>LED Indicators</th>
<th>Functionality</th>
</tr>
</thead>
<tbody>
<tr>
<td>During Installer/Test Mode</td>
<td>While in User Mode</td>
</tr>
<tr>
<td>LED Flashing Speed</td>
<td>LEDs will flash once per 1/4 second</td>
</tr>
<tr>
<td>Duration</td>
<td>10 minutes</td>
</tr>
</tbody>
</table>

## Installer Adjustments

### Sensitivity Adjustments
- **Ultrasonic Sensitivity**
  - **Green LEDs** — Using a small flathead screwdriver turn the green potentiometer so that the arrow points up.
  - **Red LEDs** — Use insulated tools to make adjustments.

### PIR Sensitivity

1. Stand in different areas of the room and wave your hands.
2. If the Red LED does not turn ON, check for any obstructions.
3. Stand still for eight feet away from sensor for five seconds. LEDs should not turn ON.
4. If Red LED turns ON without motion or is constantly ON adjust PIR sensitivity to 50% by moving DIP Switch 5 up.

### Daylight Adjustments (0 to 300 foot-candles)

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

- **Self-adjust**
  - **Ultrasonic Sensitivity set High**
  - **Lower sensitivity by turning green potentiometer CMW in small decrements.**

- **Override**
  - **PIR activated by heat source other than occupant**
  - **Move DIP Switch 5 up**

## Troubleshooting

<table>
<thead>
<tr>
<th>Issue</th>
<th>Possible Causes</th>
<th>Suggestions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lights Will Not Turn ON</td>
<td>Daylight Feature Enabled</td>
<td>If all lights are required to turn ON adjust daylight potentiometer</td>
</tr>
<tr>
<td>Power Interruption</td>
<td>Check incoming voltage and wiring</td>
<td></td>
</tr>
</tbody>
</table>

### If lights will still not turn ON, set sensor to override mode and call Technical Services at 1-800-553-3879

## Checkout and Adjustment

### LED Indicators Functionality

<table>
<thead>
<tr>
<th>LED Indicators</th>
<th>Functionality</th>
</tr>
</thead>
<tbody>
<tr>
<td>During Installer/Test Mode</td>
<td>While in User Mode</td>
</tr>
<tr>
<td>LED Flashing Speed</td>
<td>LEDs will flash once per 1/4 second</td>
</tr>
<tr>
<td>Duration</td>
<td>10 minutes</td>
</tr>
</tbody>
</table>

## 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, US and PIR sensitivity. In preparation for the Installer/Test Mode, the time delay is set to 15 seconds after the last motion detected. Coverage and sensitivity can be confirmed by watching the Green (US) and Red (PIR) indicator LEDs on the front of the sensor, while moving around the room.

1. Walk around the room and monitor LEDs. LEDs should flash every ¼ second with each motion. (If LEDs do not turn ON, go to Troubleshooting Sections)
2. Stand still for eight feet away from the sensor for five seconds. LEDs should not turn ON. (If any LED turns ON, note LED and go to Installer Adjustments — Sensitivity Adjustments Section)
3. Walk outside the room and wait 15 seconds for the lights to turn OFF. (If lights do not turn OFF go to Installer Adjustments — Sensitivity Adjustments Section)
4. Re-enter the room to activate sensor. (If lights do not turn ON go to Troubleshooting Sections)
5. The unit will remain in Test Mode for 10 minutes then automatically exit Test Mode and go into the 10 minute Time Delay User Mode setting.

**Note:** To place into Test Mode, toggle DIP Switch 10 out of its current position, wait 3 seconds, and then back in to its original position. To enter into the room, User-Mode min. DIP switches 1 and 2 down, DIP Switches 1 and 2 are already down, toggle DIP Switch 1 out of its current position, wait 3 seconds, and then back in to its original position. While in Test Mode, the LEDs will flash once per 1/4 second.

### Daylight Feature Enabled

If all lights are required to turn ON adjust daylight potentiometer.

- **Bathroom Mode**
  - **Auto**
  - **Bathroom Mode**
  - **Maximum time delay is 30 Minutes. Check DIP Switches to set the time delay.**

### Ultrasonic Sensitivity

- **Self-adjust**
  - **Ultrasonic Sensitivity set High**
  - **Lower sensitivity by turning green potentiometer CMW in small decrements.**

### PIR Sensitivity

- **Self-adjust**
  - **PIR activated by heat source other than occupant**
  - **Move DIP Switch 5 up**