WARNINGs And CAUTIONs:

1. OCCUPANCY Sensor cannot control Emergency Lighting Equipment. If this equipment is being used for Emergency Lighting and Power Equipment, please adhere to the following information. This equipment is rated for only 25% use on Emergency Lighting Equipment. Apply the "Emergency Lights" label (provided) to the front cover.

2. IMPORTANT SAFEGUARDS

When using electrical equipment, basic safety precautions should always be followed, including the following:

a) Read and follow all safety instructions.

b) Do not use outdoors.

c) Do not mount near gas or electric heaters.

d) Equipment should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.

e) Do not use this equipment other than the intended use.

Save These instructions.

All servicing shall be performed by qualified service personnel. If any Emergency Lights are fed or controlled from this panel, it must be located electrically where it is not fed from a UPS, generator, or other guaranteed source of power during emergencies or power outage situations.

Tools Needed To Install Your Sensor

Slotted Phillips Screwdriver
Small Slotted Screwdriver
Cutters
Wire stripper

Parts Included List

Description:
The ODC is a line voltage multi-technology sensor to automatically control lighting. The sensor turns the lights ON and keeps them ON whenever occupancy is detected and turns them OFF after the "Delayed-Off" time has expired. The sensor continuously analyzes and adjusts to changing conditions. The sensor uses the latest microprocessor-based technology which permits it to continue to adjust and optimize its performance. The combination of ultrasonic (doppler shift) motion detection which gives maximum sensitivity and infrared motion detection which permits it to continually adjust and optimize its performance. The combination of ultrasonic motion detection which gives maximum sensitivity and infrared motion detection which permits it to continually adjust and optimize its performance, provides a sensor with excellent performance.

Mounting Sensor in Electrical Box

To mount inside 4" square 1.5" deep electrical box with mud ring, refer to Figure 2 below:

• Load line wire to Line terminal.
• Neutral wire to Neutral terminal.
• Pull out the two coasters that align with the two screws.
• Align sensor so that it fits between the mounting holes of the electrical box and insert over mounting screws.
• Tighten mounting screws firmly.

Preparing and connecting wires:

• Make sure that the ends of the wires from the electrical box are straight (not necessary).
• Remove insulation from each wire as shown.
• Wire Specifications:

  Line, Neutral, Load Wires: Cooper

  Wire range: #10-18 AWG, 0.3 - 5.0 mm square
  Torque rating: 20 in-lb, 2.3 kg-cm.

  Control Wires: (Manual Switch and Emergency Interface)

  Wire range: #16-26 AWG, 0.4 - 0.12 mm square
  Torque rating: 2.5 lb-in, 2.88 kg-cm.

Step 1

Identifying your wiring:


Step 2

Preparing and connecting wires:


Step 3

Installing your Sensor:

1. Load – Line terminal. 2. Neutral – Neutral terminal. 3. Pull out the two coasters that align with the two screws. 4. Align sensor so that it fits between the mounting holes of the electrical box and insert over mounting screws. 5. Push in the two coasters that align with the two screws. 6. Tighten mounting screws firmly.

Step 4

Wiring Sensor:

1. Insert wires into proper terminals. Use a screwdriver to turn terminal screws counterclockwise and insert wires. Roll edges of wires under screws. Note: When wiring Manual Switch and Emergency Interface Class 2, use the same Terminating Devices as in the installation of the sensor. 2. Note: Wires need to be inserted from the top through the wire holes provided on the sensor and clipped down using the washer to the terminal.

MOUNT SENSOR IN ELECTRICAL BOX WITH MUD RING

To mount inside 4" square 1.25" deep ceiling electrical box, refer to Figure 3. 1. Partially thread two #6-32 screws (not included) into the mounting holes of the electrical box. 2. Pull out the two coasters that align with the two screws. 3. Align sensor so that it fits between the mounting holes of the electrical box and insert over mounting screws. 4. Push in the two coasters that align with the two screws. 5. Tighten mounting screws firmly.

MOUNT SENSOR IN ELECTRICAL BOX

To mount inside 4" square 1.25" deep ceiling electrical box, refer to Figure 3. 1. Partially thread two #6-32 screws (not included) into the mounting holes of the electrical box. 2. Pull out the two coasters that align with the two screws. 3. Align sensor so that it fits between the mounting holes of the electrical box and insert over mounting screws. 4. Push in the two coasters that align with the two screws. 5. Tighten mounting screws firmly.

OCCUPANCY SENSOR CONTROL

Motion detection by the multi-technology sensor will turn the lights ON as well as keep them ON. When motion is detected, the sensor will turn the lights ON after the "Delayed-Off" time has expired. The sensor continuously analyzes and adjusts to changing conditions. The sensor uses the latest microprocessor-based technology which permits it to continue to adjust and optimize its performance. The combination of ultrasonic (doppler shift) motion detection which gives maximum sensitivity and infrared motion detection which permits it to continually adjust and optimize its performance, provides a sensor with excellent performance.

Modes of Operation:

Selecting by Bank C Switches:

The Auto ON/Auto OFF Occupancy Sensor can be turned ON and OFF automatically based on occupancy, a times, a period and a system input, and manually from an optional one-way touch switch.

MANUAL ON (Mode 1):

Occupancy Sensors must be mounted on a vibration free surface.

Suggested Mounting Location:

Mount in corner/over doorway

PHOTOCELL and DAILY LIGHTING OPERATIONS

Daylight harvesting is used for additional energy savings. The photocell holds the lights OFF with the longest period of daylight present. Typical light levels are measured in foot-candles or lux, and average office areas are designed to utilize 50-60 foot-candles (750-1000 lux). The "Daylight Design Level" (DDL), when set per the calibration instructions, is used as a starting point. The sensor learns the occupancy patterns of a space during the course of a day, for a seven day period. The sensor will adjust the sensitivity to make it likely to turn ON during a historically vacant time period.

CALIBRATION

After the sensor is installed, the photocell must be configured correctly to maintain the desired light level and gain additional energy savings. To achieve this, the installer first needs to understand Closed and Open Loop Daylighting, then decide which application will better fit the customer's needs before configuring and calibrating the device.

Closed Loop:

When a photocell (light pipe) is focused on an area which is primarily illuminatated by natural light from windows or skylights, along with a minimal amount of artificial light from the lights is controlling. NOTE: Use the angled light pipe for Open Loop Daylighting. When a sensor is grid connected, a basic closed loop system may not achieve the desired light levels. This input is intended for use with BMS (Building Management System) or any control device that will control the lights at the factory default.

Open Loop:

When a photocell (light pipe) is focused on area which is primarily illuminatated by artificial light from the lights is controlling. NOTE: Use the light pipe for Closed Loop Daylighting.
**LIMITED 5 YEAR WARRANTY AND EXCLUSIONS**

- **WEB VERSION OFF**
- **Manual Mode**: Available for both Open and Closed Loop applications to quickly configure the Daylight Design Level (DDL). Adaption should always be done when ambient light is at user’s desired level.

**Procedure - Open Loop - Closed Loop**

1. Move dip switch C4 to ON (for Open Loop), or to OFF (for Closed Loop).
2. Install appropriate light pipe.
3. Install flat light pipe (factory-installed).
4. Turn the photocell knob (fully clockwise) to AUTO (LED will be solid GREEN for 24 hours during photocell auto calibration).
5. Move dip switch C4 to OFF position.
6. Re-install sensor cover.

**Closed Loop**

- ON trigger point
- 5.
- OFF trigger point
- 10 minutes.
- Field-of-view Ranges
- 11.5
- 8.5
- 20
- 16
- 20
- 25%
- 20

**Photocell - Multi-Tech**

- Open Loop:...
- Closed Loop:...

**LED INDICATORS**

- RED - Blinks upon PIR detection. Can be disabled by moving B4 to ON
- GREEN - Blinks when the knob setting has changed.
- YELLOW - Blinks when the knob setting has changed.
- RED - Blinks when the knob setting has changed.

**Table 1: Adjustment Knob Settings**

<table>
<thead>
<tr>
<th>Knob Color</th>
<th>Symbol</th>
<th>Function</th>
<th>Knob Setting</th>
<th>Factory Default Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green</td>
<td></td>
<td>Sets the ultrasonic range</td>
<td>Full Low (MIN) (OFF)</td>
<td>50 % (OFF)</td>
</tr>
<tr>
<td>Red</td>
<td></td>
<td>Sets the infrared range</td>
<td>Range Setting</td>
<td>75 % (OFF)</td>
</tr>
<tr>
<td>Black</td>
<td></td>
<td>100% - Off Time</td>
<td>Full Off (MIN) (OFF)</td>
<td>50% (10 min)</td>
</tr>
<tr>
<td>Blue</td>
<td></td>
<td>Outdoor Light Sensitivity</td>
<td>Full CW (MAX) (MIN) (OFF)</td>
<td>5 % (OFF)</td>
</tr>
</tbody>
</table>

**SWITCH SETTINGS**

<table>
<thead>
<tr>
<th>SWITCH</th>
<th>SWITCH FUNCTIONS</th>
<th>Switch A</th>
<th>OFF</th>
<th>ON</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>PIR/ULTRASONIC</td>
<td>PIR</td>
<td>PIR</td>
<td>0</td>
</tr>
<tr>
<td>A2</td>
<td>PIR/ULTRASONIC</td>
<td>PIR</td>
<td>PIR</td>
<td>0</td>
</tr>
<tr>
<td>B1</td>
<td>WALK-THROUGH</td>
<td>PIR</td>
<td>PIR</td>
<td>0</td>
</tr>
<tr>
<td>B2</td>
<td>WALK-THROUGH</td>
<td>PIR</td>
<td>PIR</td>
<td>0</td>
</tr>
<tr>
<td>B3</td>
<td>ULTRASONIC</td>
<td>PIR</td>
<td>PIR</td>
<td>0</td>
</tr>
<tr>
<td>B4</td>
<td>IR/ULTRASONIC</td>
<td>PIR</td>
<td>PIR</td>
<td>0</td>
</tr>
</tbody>
</table>

**Troubleshooting**

- **Lights do not turn ON**
- **Circuit breaker or fuse has tripped.**
- **Lights stay ON**
- **Infrared sensor can “see” into hallway.**
- **Reduce RED and/or GREEN knob by 25%; remove sensor cover and walk hallway. If lights continue to come ON, move sensor.**
- **Light turns ON too high.**
- **To Test:** Check switch settings. Typical setting is 15 minutes.

**FCC COMPLIANCE STATEMENT**

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device must not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation. Any changes or modifications not expressly approved by Leviton could void the user’s authority to operate this equipment.

**For Canada Only**

- This product may be covered by US PAT. Nos. 8,154,154; 7,924,155; 8,227,731; 11.507,857; 8,733,329.

**Product Information**

- **For technical assistance**, contact us at 1-800-624-3003. Visit our website at www.leviton.com.