Ultrasonic Ceiling Mounted Occupancy Sensor
Cat. No. OSC05-U, OSC10-U, OSC20-U
To be used with 24VDC OSPxx Series and CN100 Power Pack Class II Low-Voltage Wiring

INSTALLATION INSTRUCTIONS

WARNINGs AND CAUTIONS:
• To be installed and/or used in accordance with appropriate electrical codes and regulations.
• If you are unsure about any part of these instructions, consult a qualified electrician.
• Sensors must be mounted on a vibration free surface.
• All sensors must be mounted at least 6 feet away from air vents.
• Do not mount sensors closer than 10 feet from each other.

FCC COMPLIANCE STATEMENT:
This device complies with part 15 and part 18 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.

CATALOG ITEMS

<table>
<thead>
<tr>
<th>Cat. No.</th>
<th>Description</th>
<th>Current Consumption</th>
<th>Operating Frequency</th>
<th>Coverage</th>
<th>Suggested Mounting Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSC05-U</td>
<td>1-Way Ultrasonic</td>
<td>4mA</td>
<td>32KHz</td>
<td>200 sq ft</td>
<td>Mount in center of room</td>
</tr>
<tr>
<td>OSC10-U</td>
<td>2-Way Ultrasonic</td>
<td>4mA</td>
<td>32KHz</td>
<td>400 sq ft</td>
<td>Mount in corner of room</td>
</tr>
<tr>
<td>OSC20-U</td>
<td>2-Way Ultrasonic</td>
<td>4mA</td>
<td>32KHz</td>
<td>800 sq ft</td>
<td>Mount in corner of room</td>
</tr>
</tbody>
</table>

DESCRIPTION
The Occupancy Sensor is a low-voltage ultrasonic sensor that works with the OSPxx Series and CN100 power pack to automatically control lighting. The sensor turns the lights on and keeps them on whenever occupancy is detected and will turn them off after the delayed-off time has expired. The sensor continually analyzes and adjusts to changing conditions. The sensor uses the latest microprocessor-based technology which permits it to continually adjust and optimize its performance. Ultrasonic (doppler shift) motion detection gives maximum sensitivity that yields a sensor with excellent performance.

INSTALLING YOUR OCCUPANCY SENSOR

Step 1: WARNING: TO AVOID FIRE, SHOCK, OR DEATH; TURN OFF POWER at circuit breaker or fuse and test that power is off before wiring!

Step 2: Preparing and connecting wires:

1. Select location for mounting of sensor for your application (refer to Mounting Location Diagram).
2. Use the supplied threaded rod or other methods to make a hole (1/2" to 1") in the ceiling tile just large enough to pass the body of the threaded rod through.
3. Insert the sensor wires through the flared end of the threaded rod. Position the threaded rod to the base of the sensor.
4. Insert the flared end of the threaded rod into the opening in the bottom of the sensor and twist to lock into place.

Step 3 cont’d

5. Push the wires into the hole in the ceiling tile and insert the threaded rod until the other end is flush with the tile.
6. Insert wires through the hole in the included washer, then place the included washer over the rod and screw on the included hex nut.
7. Class II Wiring: Connect low-Voltage wires from Power Pack to Sensor per WIRING DIAGRAM as follows: Test strands of each lead tightly and, with circuit conductors, push firmly into appropriate wire connector. Screw connectors on clockwise making sure that no bare conductor shows beyond the wire connectors. Secure each connector with electrical tape.
8. Rotate the sensor to the desired orientation. Note that the sensor base and back cover are keyed. To lock the device in place, ensure that the arrows are not aligned.
9. Restore power at circuit breaker or fuse to Power Pack. INSTALLATION IS COMPLETE.

Mounting Option Diagram A
Occupancy Sensor Mounted to Drop Ceiling Using Threaded Rod

Tools needed to install your Sensor:
• Slotted Phillips Screwdriver
• Hex Dr. Driver
• Pliers
• Pencil

Parts Included List:
• #8-32 Washer and Nut (2)
• Threaded Rod (1)
• Plastic Washer (1)

WIRING DIAGRAM

<table>
<thead>
<tr>
<th>Wire Color</th>
<th>Name</th>
<th>Gauge</th>
<th>Temp/Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue</td>
<td>Occupancy</td>
<td>24</td>
<td>200 V DC</td>
</tr>
<tr>
<td>Blue</td>
<td>Occupancy/ Photocell</td>
<td>24</td>
<td>200 V DC</td>
</tr>
<tr>
<td>Black</td>
<td>DC Return</td>
<td>24</td>
<td>200 V DC</td>
</tr>
<tr>
<td>Black</td>
<td>Power</td>
<td>24</td>
<td>200 V DC</td>
</tr>
</tbody>
</table>

NOTE: Wires routed through Ceiling box.

Electrical Tape

DIN RAIL

Mounting Screw (4 places)

WIRING DIAGRAM: Multiple Sensor, Single Power Pack
OSPxx Series
Power Pack

Table 2: Wire Designations

<table>
<thead>
<tr>
<th>Wire Color</th>
<th>Name</th>
<th>Gauge</th>
<th>Temp/Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>Power</td>
<td>24</td>
<td>200 V DC</td>
</tr>
<tr>
<td>Red</td>
<td>Occupancy</td>
<td>24</td>
<td>200 V DC</td>
</tr>
<tr>
<td>Black</td>
<td>Power</td>
<td>24</td>
<td>200 V DC</td>
</tr>
<tr>
<td>Black</td>
<td>Occupancy</td>
<td>24</td>
<td>200 V DC</td>
</tr>
<tr>
<td>Red</td>
<td>Photocell</td>
<td>24</td>
<td>200 V DC</td>
</tr>
</tbody>
</table>

NOTE: Wires routed through DIN rail.

Common-Green

Mounting Screw (4 places)

Wire Mold Round Fixture

Wire Mold Back Cover

Wire Mold Raceway

COMMON-GROUND WIRE

Load

Neutral (White)

Hot (Black)

Red (24VDC)

Neutral (White)

Black

Blue

Gray

White

Gray*

Black *

Gray*

Blue*

Black

Gray*

Blue*
OPERATION

The sensor continually analyzes the parameters of the motion detection signal and adjusts its internal operation to maximize detection of motion while minimizing the effects of noise (electrical noise, air currents, temperature changes, etc.).

ADAPTIVE FUNCTIONS

The sensor is designed to turn the lights off if no motion is detected after a specified time. The length of this time is called the delayed-off time and is adjusted using the timer (Black) knob on the sensor. The adapting patterns will modify the sensor's reaction to the ambient light, installed area and keeping the controlled lights off if there is enough ambient light based on the photocell level (used with the gray wire connection).

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PRODUCT INFORMATION

For technical assistance, contact us at 1-800-824-3005

Visit our website at www.leviton.com

LIMITED 3 YEAR WARRANTY AND EXCLUSIONS

Leviton warrants to the original consumer purchaser and for the benefit of anyone else purchasing the product at the time of its taking possession, free of defect in materials and workmanship under normal and intended use and in accordance with the accompanying instructions. The sensor's only obligation is to correct such defects by repair or replacement, at its option, to the extent such defect is caused by defective materials or workmanship. This warranty is in lieu of all other warranties, expressed or implied, including merchantability and fitness for a particular purpose. Neither Leviton nor its distributors or their respective subsidiaries shall be liable for any incidental, special, or consequential damages in connection with the use of the product. This warranty is limited to the United States. Leviton is not liable for incidental, special, or consequential damages, including without limitation, damage to or loss of any equipment, test sets or personal or labor to perform warranty service. The remedies provided by this warranty are the exclusive remedies and in lieu of all other remedies.
LEVITON INSTRUCTION SHEET/MANUAL

SPECIFICATIONS
- Artwork No/Rev Level: PK-93585-10-00-0A-X1
- Color(s): Black
- Font Families: Helvetica
- Material Type: 50 Lb. offset
- Paper size: 17" X 11"
- Overall size: 2.83" X 3.67"
- Final fold size: 5.83" X 3.67"
- Coating: Li

DOCUMENTATION
- ECO No.: N/A
- Artist: KSC
- Date: 12/20/04

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Fold Line

Panel Line

#s = Fold Sequence