The most advanced sensor available. Combines multi-technology with all-digital architecture. Eliminates false triggering. The result is a trouble-free, "install and forget" solution for lighting control.

THE OSCxx-MOW SERIES OCCUPANCY SENSOR
• MULTI-TECHNOLOGY FOR HIGHEST RELIABILITY
  INFRARED & ULTRASONIC
• SIMPLE, FAST INSTALLATION
• SELF-ADJUSTING
• ALL-DIGITAL, COMPLETE RELIABILITY
• PHOTOCCELL BUILT-IN
• CEILING MOUNT

GENERAL OPERATION
Occupancy sensors have two tasks: keeping the lights on while the room is occupied and, conversely keeping the lights off when unoccupied. Ultrasonic (doppler shift) motion detection gives maximum sensitivity yet can be vulnerable to false triggering from air conditioning currents, corridor activity and movement of inanimate objects. Infrared motion sensing gives immunity to false triggering, but lacks sensitivity at greater distances.

Leviton multi-technology sensors combine the benefits of both infrared and ultrasonic technologies for unrivaled performance and reliability.

ADAPTIVE FUNCTIONS
The OSCxx-MOW constantly analyzes and adapts to changing conditions:

General Operation
Upon room entry, the infrared detects motion and turns lights on.

Ultrasonic keeps lights on even with very minor motion.

When unoccupied, lights stay off while air conditioning system cycles on and off, and cleaning crews occupy corridors.

HOW THE ODCXX-M AUTOMATICALLY ADAPTS

<table>
<thead>
<tr>
<th>Condition</th>
<th>Example</th>
<th>Adaptive Reaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timer Left In Test Mode</td>
<td>The sensor remains in an 6 sec. test mode.</td>
<td>The sensor automatically resets the timer to 10 min after 15 min of test mode.</td>
</tr>
<tr>
<td>False-On</td>
<td>The sensor incorrectly turns the lights on.</td>
<td>The sensor automatically resets the timer to 10 min after 15 min of test mode.</td>
</tr>
<tr>
<td>False-Off</td>
<td>The sensor incorrectly turns the lights off.</td>
<td>The sensor automatically resets the timer to 10 min after 15 min of test mode.</td>
</tr>
</tbody>
</table>

Condition Example Adaptive Reaction
If motion is sensed within a short period after the lights go off, then the current delayed off-time setting is increased.

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PRODUCT SPECIFICATIONS

FEATURES
Self-adjusting Settings: Callbacks for adjustment are eliminated. Time delay settings are continually adjusted.
Non-Volatile Memory: Learned and adjusted settings saved in protected memory. Power outages will not cause status loss.
Ambient Light Recognition: The photocell prevents lights from turning on when the room is adequately lit by natural light.
Accurate, Consistent Switching: Occupant complaints are eliminated; lights are on when room is occupied, off when empty. Annoying false-off are minimized and lights on at night is eliminated.
Fast, Simple Installation: A single mounting post and three color-coded wires make installation easy.
Photocell: 20-3,000 Lux adjustable. Factory set 3,000 L (photocell double)
Timer Settings: Automatic and Manual - 30s to 30 min. Test mode - 6 sec.

SPECIFICATIONS
Indicator
Green LED Lamp: Ultrasonic motion.
Red LED Lamp: Infrared motion.
Construction: Two ultrasonic transmitters and two narrow bandwidth receivers each 16mm in diameter. Frequency – Crystal controlled to ±.005%. Transducers – Oriented north and south (OSC20-M, OSC10-M only, others use single pairs), angled 30° down from horizontal. Housing – Rugged, high-impact, flame class rating, UV inhibitors. Color coded leads are 6”.
Size & Weight: 4.5” dia., 1.5” height; 5 oz. (114 mm dia., 38 mm height; 142 g.)
Power Requirements: 24 VDC, (use OSPxx power pack.)

Output: 24 VDC active high logic control signal with short circuit protection.
Operating Environment: 32°F to 104°F (0°C to 40°C); 0% to 95% non-condensing relative humidity. For indoor use only.
Warranty: 5 years.

<table>
<thead>
<tr>
<th>Model</th>
<th>Power Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSC05-MOW</td>
<td>30MA</td>
</tr>
<tr>
<td>OSC10-MOW</td>
<td>40MA</td>
</tr>
<tr>
<td>OSC20-MOW</td>
<td>32MA</td>
</tr>
</tbody>
</table>

Leviton Mfg. Co., Inc.
59-25 Little Neck Pkwy • Little Neck, NY 11362-2591 • Tech Line: 1-800-824-3005 • Fax: 1-800-832-9538
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Automatic Operation
Sensor analyzes room and sets sensitivity to optimal setting

Same as above
Timer setting generally increased during learning period, then decreases to minimize "on" time

No automatic operation

Conditions Analyzed in Automatic Operation
Air currents
False-on occurrences
False-off occurrences
Room (surface) temp
Lens dirt
Signal to noise ratio
Error free operation
decreases the timer setting

Knob Setting Under Manual Operation**
Linear range setting
Full CCW = min (off)
Full CW = max (30 min.)

Linear range setting
Full CCW = min daylight
Full CW = max (off)

Recommended Manual Setting
50%
33%
10 min.
Off


**When a function is set to "Automatic Operation" the initial setting is determined by the position of the knob. CCW is counter clockwise, CW is clockwise.

Models

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Coverage</th>
<th>Transducer Pairs</th>
<th>Operating Frequency</th>
<th>Infrared Lens</th>
<th>Additional Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSC05-M</td>
<td>500 sq. ft.</td>
<td>One</td>
<td>40kHz</td>
<td>Extended Range</td>
<td>Photocell</td>
</tr>
<tr>
<td>OSC10-M</td>
<td>1000 sq. ft.</td>
<td>Two</td>
<td>40kHz</td>
<td>Extended Range</td>
<td>Photocell</td>
</tr>
<tr>
<td>OSC20-M</td>
<td>2000 sq. ft.</td>
<td>Two</td>
<td>32kHz</td>
<td>Extended Range</td>
<td>Photocell</td>
</tr>
</tbody>
</table>

NOTE: Sensor activates upon infrared detection. Place sensors to provide infrared coverage at room entrances.

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**SPECIFICATION SUBMITTAL**

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AUTOMATIC ADJUSTMENTS
The automatic timer and automatic sensitivity features of the OSCxx-MOW work independently to prevent “false-offs” and “false-ons.” When the sensor detects motion immediately after it turns the lights out, a “false-off” is detected, timer increased. If the sensor turns the lights on, but detects no immediate follow-up motion, “false-on” is detected, timer is decreased.

PHYSICAL WIRING

*When the photocell function is not being used, connect the Blue Occupancy Sensor lead to the Blue Power Pack lead. When using the Photocell function, connect the Gray Occupancy Sensor lead to the Blue Power pack lead–Do not use the Blue Occupancy Sensor lead for the photocell function.