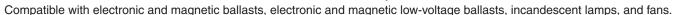
# Single Pole (One Location) or Multi-Location

# **Designer Wall Switch Occupancy Sensor**

Cat. No. ODS10-IQ

**INSTALLATION INSTRUCTIONS** 

Incandescent - 800W - 6.67A @ 120V - Fluorescent - 1200VA - 10A @ 120V - Fluorescent - 2700VA - 10A @ 277V - Supplemental - 1/4hp - 5.8A @ 120V No Minimum Load Required





DI-02X-ODS10-00A

#### **WARNINGS AND CAUTIONS:**

- TO AVOID FIRE, SHOCK, OR DEATH; TURN OFF POWER AT CIRCUIT BREAKER OR FUSE AND TEST THAT THE POWER IS OFF BEFORE WIRING!
- DO NOT control a load in excess of the specified ratings. Damage to the unit, fire, electric shock, personal injury or death can occur. Check your load ratings to determine suitability for your application.
- To be installed and/or used in accordance with electrical codes and regulations.
- If you are not sure about any part of these instructions, consult an electrician.

#### **WARNINGS AND CAUTIONS:**

- . Do not install this unit to control a receptacle.
- Do not touch the surface of the lens. Clean outer surface with a damp cloth only.
- The Cat. No. ODS10-IQ occupancy sensor is intended to replace a standard light switch.
- Use this device ONLY WITH COPPER OR COPPER CLAD WIRE.

# TOOLS NEEDED TO INSTALL YOUR SENSOR

Slotted/Phillips Screwdriver

Electrical Tape Pliers Small Slotted Screwdriver

# **FEATURES**

- Auto ON/Auto OFF
- · Leviton's Decora® style design
- Switches electronic ballasts
- · Low Profile, tamper-resistant lens
- Ambient Light Override

# DESCRIPTION

Leviton Cat. No. ODS10-IQ, Designer Wall Switch Occupancy Sensor, is designed to detect motion from a heat-emitting source (such as a person entering a room) within its field-of-view (monitored space) and automatically switch lights ON and OFF. The controlled lights will remain ON until no motion is detected and the scheduled time-delay has expired

#### Cat. No. ODS10-IQ is UL and cUL listed.

The Occupancy Sensor senses motion within its coverage area of 2100 sq. ft (195.1 m²) maximum and controls the connected lighting. This is a self-contained device which provides sensing and light control. The Occupancy Sensor will turn the lights ON when motion is initially detected, and keep the lights ON for as long as motion is

The Occupancy Sensor uses a small semiconductor heat detector that resides behind a multi-zone optical lens. This Fresnel lens establishes dozens of zones of detection. The sensor is sensitive to the heat emitted by the human body. In order to trigger the sensor, the source of heat must move from one zone of detection to another. The device is most effective in sensing motion across its field-of-view, and less effective sensing motion towards or away from its field-of-view (refer to Field-of-View diagrams). Keep this in mind when selecting the installation location (refer to Field-of-View diagrams).

Note that occupancy sensors respond to rapid changes in temperature, so care should be taken not to mount the device near a climate control source (i.e. radiators, air exchanges, and air conditioners). Hot or cold drafts will look like body motion to the device and will trigger it if the unit is mounted too close. It is recommended to mount the Occupancy Sensor at least 6 ft. away from then climate control source. The device can be mounted in a single gang

In addition, it is also recommended NOT to mount the Occupancy Sensor directly under a large light source. Large wattage bulbs (greater than 100W incandescent) give off a lot of heat and switching the bulb causes a temperature change that can be detected by the device. Mount the Occupancy Sensor at least 6 ft. away from large bulbs. If it necessary to mount the device closer, lower the wattage of the bulb directly overhead.

### **INSTALLING YOUR SENSOR**

**NOTE:** Use check boxes  $\sqrt{\phantom{a}}$  when Steps are completed.



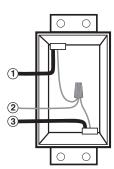
WARNING: TO AVOID FIRE, SHOCK, OR DEATH; TURN OFF POWER at circuit breaker or fuse and test that power is off before wiring!

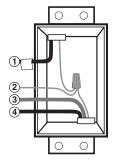






Step 2 Identifying your wiring application (most common):



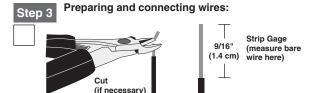


# Single-Pole

- 1. Line (Hot)
- 2. Ground 3. Load

- 1. Line or Load (See important\* instruction)
- 2. Ground 3. First Traveler - note color
- 4. Second Traveler note color

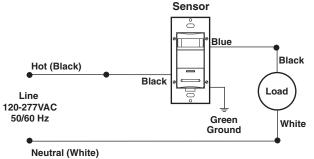
**IMPORTANT:** For 3-Way applications, note that one of the screw terminals from the old switch being removed will usually be a different color (Black) or labeled Common. Tag that wire with electrical tape and identify as the common (Line or Load) in both switch wall boxes.



- · Pull off pre-cut insulation from sensor leads.
- . Make sure that the ends of the wires from the wall box are straight (cut if necessary)
- · Remove insulation from each wire in the wall box as shown.

Installing your Sensor - Single-Pole Application:

NOTE: The Cat. No. ODS10-IQ requires a ground wire to operate properly. If there is no ground wire, ensure electrical box is grounded and attach ground wire to box with a screw. If the ground wire is floating this device will not work.



#### **WIRING SENSOR:**

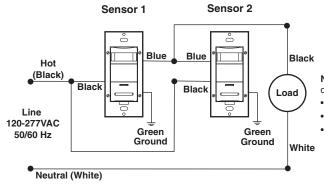
Connect wires per WIRING DIAGRAM as follows: Screw wire connector on clockwise making sure there are no bare conductors below the wire connectors. Secure each connector with electrical tape

- · Green or bare copper wire in wall box to Green lead.
- Line Hot wall box wire to Black lead.
- . Load wall box wire to Blue lead

NOTE: Allow 1 minute for warm-up after connecting and energizing.

Installing your Sensor – 3-Way Wiring Application:

NOTE: The Cat. No. ODS10-IQ requires a ground wire to operate properly. If there is no ground wire, ensure electrical box is grounded and attach ground wire to box with a screw. If the ground wire is floating this device will not work



NOTE: Either sensor can turn the lights ON. Both sensors must time out

#### **WIRING SENSOR 1:**

#### Connect wires per WIRING DIAGRAM as follows:

- Green or bare copper wire in wall box to Sensor 1 Green lead.
- · Line Hot (common) wall box wire identified (tagged) when removing old switch and First traveler from Sensor 2 to Sensor 1 Black lead.
- Second Traveler wall box wire from Sensor 2 to Sensor 1 Blue lead.

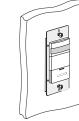
# **WIRING SENSOR 2:**

#### Connect wires per WIRING DIAGRAM as follows:

- Green or bare copper wire in wall box to Sensor 2 Green lead.
- Load wall box wire identified (tagged) when removing old switch and Second Traveler from Sensor 1 to Sensor 2 Blue lead.
- First Traveler Line Hot from Sensor 1 to Sensor 2 Black lead

NOTE: Allow 1 minute for warm-up after connecting and energizing.

Testing your Sensor prior to completely



mounting in wall box:

NOTE: Dress wires with a bend to relieve stress when mounting

- Position all wires to provide room in outlet wall box for device.
- Partially secure device using long mounting screws provided.
- · Restore power at circuit breaker or fuse.

**NOTE:** To avoid PERMANENT DAMAGE to the unit, be careful NOT TO OVERTURN the control knobs or levers when setting the Sensor. The controls can be accessed by removing the wallplate (if applicable) and control panel cover (refer to Control Panel Diagram). Use a small straight blade screwdriver to adjust knobs and and a finger to adjust the blinder levers.

NOTE: DO NOT press in on blinder levers or use excessive force (refer to Control Panel Diagram).

· Attach the Control Panel cover when the desired settings are complete

If lights do not turn ON, refer to the TROUBLESHOOTING section.



Device Mounting:

TURN OFF POWER AT CIRCUIT BREAKER OR FUSE.

Installation may now be completed by tightening mounting screws into wall box. Attach wallplate



Restore power at circuit breaker or fuse. Installation is complete.

Leave the room and the lights will turn OFF after the selected time-out expires.





# **FEATURES**

BLINDERS: The blinders can narrow the field-of-view of the device to prevent unwanted activation from traffic in adjacent space. There are two blinders, and each operate independently. To operate the blinders, use a finger or small screwdriver to move the blinder adjustment levers toward or away from the center of the device.

The blinder levers are found above the control knobs and below the text 'BLINDERS' on the control panel. With both levers moved fully towards the center, the field-of-view is narrowed to 60°. With both levers moved fully away from the center, the field-of-view is at a maximum 180° (refer to Control Panel Diagram).

TIME-DELAY: Cat. No. ODS10-IQ will turn lights ON when motion is detected. When motion is no longer detected, the Sensor Unit will wait a certain amount of time and then turn the lights OFF. This wait time is called 'time-out'.

The "time-out" is selected from four (4) preset values. Pointing the arrow at one of the markings on the face chooses the value of time. The following selections are available

Face Marking	Value of Time
(/) Slash Mark	30 second fixed time-out used for performing a walk-test.

10 minute time-out 20 minute time-out 30 minute time-out

The "time-out" is factory preset to ten (10) minutes. Refer to figure 2A. NOTE: All time durations mentioned in the instructions are approximate within 10 seconds.

AMBIENT LIGHT: The Ambient Light Level is the amount of light present in a room without any artificial light added. If there is already enough light in a room, the occupant may not need further artificial light. Cat. No. ODS10-IQ has an adjustment to keep the lights from turning ON if there is enough light already present. The adjustment should be made when the ambient light is at the level where artificial light is needed. Follow these steps to make a more accurate adjustment of the Light Control.

# SETTINGS

- 1. With the lights ON, rotate the Time Control fully counter-clockwise (CCW) to set the time-out to the thirty (30) second test mode (refer to Control Panel Diagram).
- 2. Rotate the Light Control fully CCW.
- 3. Cover the Sensor Unit with an opaque material, or leave the room and let the Sensor Unit time-out and turn the lights OFF.
- 4. Rotate the Light Control clockwise (CW) slowly, until the light turns ON. This is the setting for the current level of light in the room.
- Adjustments are finished

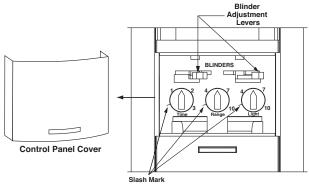
Manual ON Mode (N/A on this sensor): The manual override button on the sensor has been deactivated and will not control the lights. If the light control is in the fully CW position, the lights will turn ON whenever motion is detected, even in full daylight. Intermediate settings will cause the lights to turn ON only when the ambient light is below the level selected by the light control

NOTE: When the setting is at the minimum CCW level, the lights will stay OFF when the room is dim. When the setting is at the maximum level clockwise (CW), the lights will turn ON when the room is bright.

**NOTE:** The ambient light in a room will change with the time of day and the season of the year.

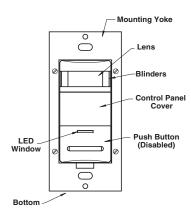
RANGE: To decrease detection range and sensitivity, rotate the knob CCW (refer to Control Panel Diagram). The detection range can be adjusted from 100% down to 36%

# **Control Panel Diagram**



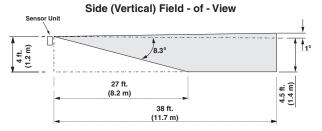
#### **OPERATION**

Auto ON/Auto OFF: This device is factory set to operate in Auto ON/Auto OFF mode. The push button has been disabled to prevent the user from manually controlling the lights. In Auto ON/Auto OFF mode the lights will automatically turn ON when motion is detected. In the absence of motion, after the time out expires, the lights will turn OFF.



# 60 ft. (18.3 m) -30 ft. (9.1 m)-

Field - of - View (Horizontal)



# TROUBLESHOOTING

- 1. If there is no response from the unit (the light never turns ON and the LED never blinks) 1 1/2 minutes after power is applied, then uninstall device and verify there is a ground connection at the wallbox. If there is a ground connection, verify wiring
- 2. If the lights never turn ON, but the LED blinks, check if the Ambient Light Control Knob is pointed fully counter-clockwise (CCW). Rotate it clockwise (CW) until the lights turn ON.
- 3. If the lights constantly stay ON, even when the room is unoccupied: A. Check the Time setting. See how this time compares to how long
- the lights stay ON. B. Try lowering the Range Control. Rotate the knob CCW about 30°.
- C. If the problem persists, try reducing again. Note: Do Not reduce so much that Cat. No. ODS10-IQ cannot see normal occupancy.
- **D.** Be sure to use the Blinders to block any unwanted hallway traffic.
- E. Check for reflected heat/motion as Sensor Unit may be seeing motion through a window.
- F. Check for adjacent HVAC and/or heater ducts.
- 4. For additional information call Leviton's Technical Support Line.

### PRODUCT INFORMATION

- For technical assistance contact us at 1-800-824-3005
- · Visit our website at www.leviton.com

#### FCC COMPLIANCE STATEMENT

This device complies with Part 15 of the FCC Rules. Operation is subject to following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation of the device.

This equipment has been tested and found to comply with the limits for a Class B Digital Device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment OFF and ON, the user is encouraged to try to correct the interference by one or more of the following measures

- Reorient or relocate the receiving Antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/tv technician for help.

#### FCC CAUTION

Any changes or modifications not expressly approved by Leviton Manufacturing Co., Inc., could void the user's authority to operate the equipment.

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