

INSTALLATION INSTRUCTIONS

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!**
- 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.
- **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.

FEATURES

- Leviton's Decora® design
- Controls 15A of lighting load
- CEC Title 20 and 24 Compliant
- Time Delay: 30 seconds to 30 minutes
- LED (Red): Visible status indicator for determining sensing technology operation
- Manual ON / Auto OFF
- Low Profile, tamper-resistant lens
- Adapting time
- Adjustable horizontal blinders for both left and right PIR masking
- Vacancy Confirmation: a 30 second grace period is enabled in case of False OFF

INTRODUCTION

Leviton Cat. No. ODS15-TDx, Designer Wall Switch Vacancy Sensor, is designed to detect motion from a heat-emitting source (such as a person in a room) within its field-of-view (monitored space) and automatically switch lights OFF when motion is no longer detected and the scheduled time-delay has expired. The Sensor adapts its time delay to the occupancy patterns of a room. Cat. No. ODS15-TDx is UL listed, CSA certified and conforms to California Title 20 and 24 requirements.

DESCRIPTION

The Vacancy 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 Vacancy Sensor will turn the lights OFF when no motion is detected, and keep the lights ON for as long as motion is detected.

The Vacancy 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 Figures 1 and 1A). Keep this in mind when selecting the installation location (refer to Figures 1 and 1A).

Note that vacancy 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 Vacancy Sensor at least 6 ft. away from the climate control source.** The device can be mounted in a single gang wall box.

In addition, it is also recommended NOT to mount the Vacancy 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 Vacancy 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.

INSTALLATION

WARNING: TO AVOID FIRE, SHOCK, OR DEATH: TURN OFF POWER AT CIRCUIT BREAKER OR FUSE AND TEST THAT THE POWER IS OFF BEFORE WIRING.

NOTE: Cat. No. ODS15-TDx requires a ground connection in order to operate. Use the ground wire in the electrical box for ground connection. If there is no ground wire, make sure the electrical box is grounded and attach the ground wire to the box with a screw.

1. Connect wires per appropriate WIRING DIAGRAM as follows: BLACK lead to LINE. BLUE lead to LOAD. GREEN lead to GROUND. Twist strands of each lead tightly and, with circuit conductors, push firmly into the appropriate wire connector. Screw connector on clockwise making sure that no bare wire shows below the connector. Secure each wire connector with electrical tape.
2. Carefully position the wires into the wall box, then mount the Sensor Unit into the wall box.
3. Secure device using long mounting screws provided.
4. Restore power at circuit breaker or fuse.

NOTE: Cat. No. ODS15-TDx will beep once 5 seconds after power is applied. Allow approximately 1 minute for charge-up. After approximately 1 minute the lights will turn ON. If the lights turn ON and the LED blinks when a hand is waved in front of the lens, then the Sensor was installed properly. If the operation is different, refer to the Troubleshooting Section.

NOTE: Cat. No. ODS15-TDx is factory preset to work without any adjustments. If you desire to change the factory settings, refer to the Settings section.

5. Attach the Control Panel cover, and a Decora® Wallplate (not included). **INSTALLATION IS COMPLETE.** Leave the room and the lights will turn OFF after the selected time-out expires.

WARNINGS AND CAUTIONS:

- **DO NOT** install this unit to control a receptacle.
- Use this device with **copper or copper clad wire only.**
- Do not touch the surface of the lens. Clean outer surface with a damp cloth only.
- The Cat. No. ODS15-TDx vacancy sensor is intended to replace a standard light switch.

PROGRAMMING FEATURES

Factory Settings: The Sensor is shipped from the factory to work in almost all situations without any added adjustments. The factory settings are: Blinders open and Base time-out 10 minutes.

Blinders: The blinders are two independent shutters that can narrow the field-of-view from a maximum of 180° down to 60°. The blinders are operated by moving the blinder levers towards or away from the center of the Sensor. The blinder levers can be found above the control dials in the control panel (refer to Figure 2A).

Time-Outs: The Sensor has three types of Time-Outs: Walk-through, Base Time, and Adapting.

- **Walk-through Time-Out:** The value of this time-out is preset to 2.5 minutes. It is used by the Sensor as a starting point in adjusting the other types of time-outs.
- **Base Time-Out:** The value of this time-out is user selected through the use of the Time Control Setting.
- **Adapting Time-Out:** When activated, the value of this time-out is changed by the Sensor based on room occupancy.

Walk-Through: The walk-through feature is useful when a room is momentarily occupied. With this feature, the Sensor will turn the lights OFF shortly after the person leaves the room.

The walk-through feature works in the following manner: The lights must be manually turned ON. If the person leaves the room before the default walk-through time-out of 2.5 minutes, the Sensor will turn the lights OFF. If the person stays in the room for longer than 2.5 minutes, the Sensor will instead use the time-out per the Time Control Setting (refer to Time Control Setting in the following sections).

The walk-through feature may be user disabled (refer to Non-Adapting Mode in the following sections).

Audio Warning: The Sensor is equipped with a beeper to give the user feedback of unit operation. During normal operation, the Sensor will issue three short beeps 20 seconds before the time-out is over to alert the user that the lights are going to turn OFF. The occupant must move in order for the lights to remain ON. The Sensor issues two short beeps to let the occupant know that motion was detected and that the lights will stay ON.

Adapting Time Delay: The Sensor has built in adapting intelligence that changes the adapting time-out duration in response to the occupancy conditions of the room it is installed in.

If the Sensor detects "large" motions (as a person walking by), it will NOT change the time-out duration. If the Sensor detects "small", infrequent motion (as a person sitting down and writing), it will INCREASE the Adapting Time-Out duration. If the Sensor detects "small", frequent motion (as in several persons in a room during a meeting), it will DECREASE the Time-Out duration only if it was NEVER increased (this is because the built-in intelligence will always proceed in the direction of "increasing" adapting time-out once it has increased it for any of the occupancy conditions sensed).

If the room is occupied for longer than 2.5 minutes, the Sensor will enter the Occupied Mode with the Time-Out duration specified by the Time Control Setting. This Time-Out is used as the starting point for adapting. After a few days, the Time-Out value will adapt to the "best" value based on the occupancy conditions detected in the room.

If the Sensor detects motion immediately after the audio warning beep, it will determine that the existing Time-Out value is too short. The Sensor will thus increase the Time-Out value by 1.5 times the existing value.

If the Sensor detects motion within 30 seconds after the lights turn OFF, it will turn the lights ON and increase the Time-Out value by 1.5 times the existing value.

The adapted Time-out may be reset to the base value by rotating the Time Control to a new time selection value (refer to Figure 2A).

Time Control Setting: The base Time-Out value is selected by rotating the Time Control dial. There are four (4) values from which to choose. Each mark around the dial corresponds to a different value as indicated below (refer to Figure 2A). The Sensor will beep once to indicate that a new time value has been selected.

Face Marking	Value of Time
(/) Slash Mark	30 second test mode, NO walk-through
1	5 minutes base-time out
2	10 minutes base-time out
3	20 minutes base-time out

NOTE: All time durations is approximate within ±10 seconds.

Manual ON: The lights will not automatically turn ON. They need to be manually turned ON by the push-button, and will turn OFF when motion is no longer detected and the scheduled time-delay has expired.

RANGE: To decrease detection range and sensitivity, rotate the Range dial CCW (refer to Figure 2A). The detection range can be adjusted from 100% down to 36%.

WEB VERSION

SETTINGS

NOTE: To avoid PERMANENT DAMAGE to the unit, be careful NOT TO OVERTURN or use excessive force when setting control knobs or levers of Cat No. ODS15-TDx. Use a small straight blade screwdriver to adjust knobs and your finger to adjust the blinder levers.

1. Remove the control panel cover.
2. Remove the warning label that covers the adjustment dials.
3. Rotate the Time dial to select the desired base time-out value.
4. If the Sensor is installed within 6 feet of an air duct, rotate the Range Control 1/4 turn counter-clock-wise (CCW), otherwise, leave it at maximum.
5. **Non-Adapting Mode (Fixed Time-Out) :**
 - A. Rotate the Adapt dial full CCW.
 - B. Adjust the Time dial. The Sensor will beep twice each time the Time dial is pointed at a new time-out value (for adapting mode, it beeps once). The time-out values for non-adapting mode are:

Face Marking	Value of Time
(/) Slash Mark	5 minutes base-time out
1	10 minutes base-time out
2	20 minutes base-time out
3	30 minutes base-time out

- C. Return the Adapt dial to its previous setting.
- NOTE:** To return to adapting mode, rotate the Time dial into a new setting while the Adapt dial is anywhere but in the full CCW position. Be sure the Time dial is rotated until a beep is issued to be sure a new time value was selected. Then return the Time dial to the desired time-out setting.
6. If desired, adjust the blinders to block any unwanted motion.
 7. Replace the label and Control Panel Cover.

TO OPERATE

PUSH-BUTTON: Cat. No. ODS15-TDx has a push-button switch that will toggle the lights (refer to Figure 2). If the lights are OFF, the lights will turn ON when the button is pressed, and remain ON in the presence of motion. In the absence of motion, the Sensor Unit will time-out and turn the lights OFF.

If the lights are ON, the lights will turn OFF when the button is pressed. The lights will stay OFF regardless of motion detected.

NOTE: The Motion Indicator LED will blink every 2 seconds while motion is detected.

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 wall box. If there is a ground connection, verify wiring.
2. 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. ODS15-TDx cannot see normal occupancy.
 - D. Be sure to use the Blinders to block any unwanted hallway traffic.
 - E. Check for reflected radiated heat/motion such as incandescent bulbs, mirrors, HVAC, swinging fixtures, moving mechanical parts, flowing hot water within view, overhead doors opening closing, etc.
 - F. Check for adjacent HVAC and/or heater ducts.
3. If the sensor is turning lights OFF (False OFF):
 - A. Check time delay and extend to 20 or 30 minutes.
 - B. Check range sensitivity of PIR and increase.

For additional information call Leviton's Technical Support Line at 1-800-824-3005.

FOR CANADA ONLY

For warranty information and/or product returns, residents of Canada should contact Leviton in writing at **Leviton Manufacturing of Canada Ltd to the attention of the Quality Assurance Department, 165 Hymus Blvd, Pointe-Claire (Quebec), Canada H9R 1E9** or by telephone at 1 800 405-5320.

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.

LIMITED 5 YEAR WARRANTY AND EXCLUSIONS

Leviton warrants to the original consumer purchaser and not for the benefit of anyone else that this product at the time of its sale by Leviton is free of defects in materials and workmanship under normal and proper use for five years from the purchase date. Leviton's only obligation is to correct such defects by repair or replacement, at its option, if within such five year period the product is returned prepaid, with proof of purchase date, and a description of the problem to **Leviton Manufacturing Co., Inc., Attn: Quality Assurance Department, 201 North Service Road, Melville, New York 11747**. This warranty excludes and there is disclaimed liability for labor for removal of this product or reinstallation. This warranty is void if this product is installed improperly or in an improper environment, overloaded, misused, opened, abused, or altered in any manner, or is not used under normal operating conditions or not in accordance with any labels or instructions. **There are no other or implied warranties of any kind, including merchantability and fitness for a particular purpose, but if any implied warranty is required by the applicable jurisdiction, the duration of any such implied warranty, including merchantability and fitness for a particular purpose, is limited to five years. Leviton is not liable for incidental, indirect, special, or consequential damages, including without limitation, damage to, or loss of use of, any equipment, lost sales or profits or delay or failure to perform this warranty obligation.** The remedies provided herein are the exclusive remedies under this warranty, whether based on contract, tort or otherwise.

Figure 1 - Field-of-View (Horizontal)

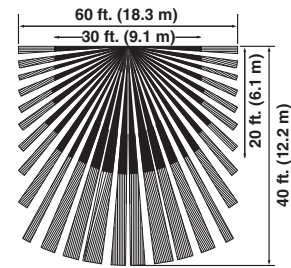


Figure 1A - Side Field-of-View (Vertical)

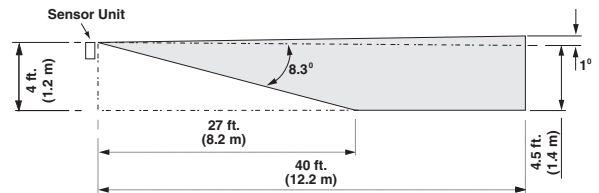


Figure 2 - Sensor Features

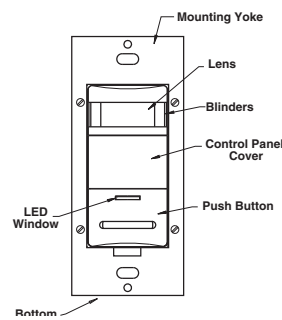
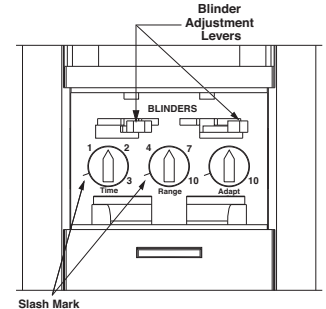
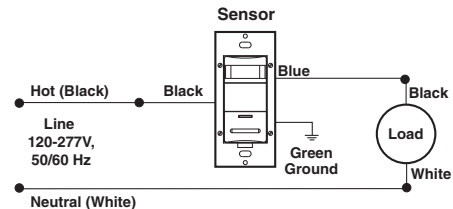


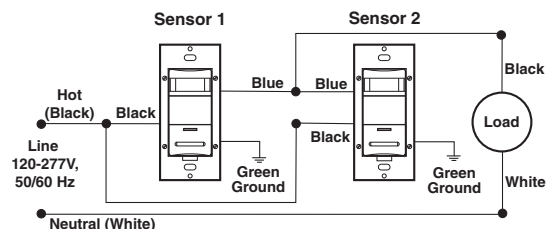
Figure 2A - Control Features



Wiring Diagram 1 - Single Control Application



Wiring Diagram 2 - Two Location Control Application



NOTE: Either Sensor can turn the lights ON. Both Sensors must time-out to OFF, or both manual buttons must be pressed for the lights to turn OFF