Warnings and Cautions:

- To be installed and/or used in accordance with electrical codes and regulations.
- You are not sure about any part of these instructions, consult an electrician.
- For indoor use only.

Description:
The ceiling-mounted Occupancy Sensor saves energy and adds convenience by accurately detecting when an area is occupied or vacant. It is wireless, solar-powered, and uses a passive infrared (PIR) sensor to detect motion. The occupancy sensor transmits RF signals that control lighting, HVAC and outlets to manage building energy consumption more efficiently.

- Sends wireless signals to receiving devices whenever motion is detected.
- Harvests indoor light to power the sensor and wireless communications.
- Works with other sensors for enhanced occupancy sensing.
- Built-in tests to confirm operation at installation location.
- Supplemental battery or alternative power supply options for extreme low-light conditions.

If occupation is permanently active, a PIR sensor, a radio indicating the occupied status will transmit immediately. An internal timer starts to run for 120 seconds. No radio telegrams will be transmitted when the timer is counting down.

After the timer has finished the countdown, the unit will transmit again if occupancy was detected during the countdown time period. If occupation is not detected, the unit will transmit a heartbeat signal - sending the unoccupied status with a random timing of 2 to 12 minutes. There are two buttons which allow entrance to a “race” or “light-level” test mode. These test modes are for installation purposes only and will be exited automatically after 3 minutes.

Planning:
Take a moment to plan for the sensor’s successful operation and optimal communication with other system components. Remove the sensor from the packaging and place it under a bright light to provide the required startup charge. Optional: To quickly ensure the sensor energy storage is fully charged, insert a CR2032 battery for 5 minutes. Place the sensor in its packaging and place it under a bright light to provide the required startup charge. Optional: To quickly ensure the sensor energy storage is fully charged, insert a CR2032 battery for 5 minutes. Place the sensor in its packaging and place it under a bright light to provide the required startup charge. Optional: To quickly ensure the sensor energy storage is fully charged, insert a CR2032 battery for 5 minutes.

- Ensure the location provides consistent and adequate light.
- Locate the sensor on the ceiling between 8 and 10 ft. (2.4 to 3 m) high with an unobstructed view of the space.
- Consider the area’s traffic patterns and principal use, for example, walking, lounging or sleeping.

To complete the linking process, the awaiting transceiver receives and stores the association permanently so the transceiver must first be powered, within wireless range, and set to accept associations.

- Set the desired transceiver to accept an association (refer to that device’s installation guide).
- Click the Menu button on the side of the sensor base. This sends a associate/disassociate radio telegram (see figure 7). Note: The button interface on the sensor is used for associating and testing only. The occupancy timer settings are configured on the transceiver to which the sensor is associated. Refer to the “Programming and Activation” section of the transceiver/controller installation guides to complete the linking process.

Testing:
Before starting a test, ensure the sensor’s energy storage is fully charged by placing it under bright light (at least 500 lux) for 20 minutes, or insert a battery for 5 minutes. If a battery is used to charge the sensor for a light test, ensure it is removed to get an accurate light measurement.

A test mode will stay active for 3 minutes. Exit to test and resume normal operation, press and hold the Menu button for 5 seconds.

Walk Test
Use the walk test to confirm that motion is within the sensor’s range.

1. Press and hold the Set button for 5 seconds.
2. Red LED will blink to confirm that a walk test is active.
3. Move in and out of the sensor’s range to determine its coverage area.
4. Sensor will blink when it detects motion.
5. Make small hand movements just inside the limit of the sensor’s range to see if the motion triggers a response.

Light Test
Use the light test to measure real-time light levels and confirm whether the occupancy sensor has sufficient light.

1. Create a realistic lighting condition (the test measures the real-time light levels).
2. Press and hold the Set button for 10 seconds.
3. Red & green LEDs will blink to confirm that light test is active.
4. Watch the LED blink rate to determine the light strength.

- The highest is 5 blinks which indicates very good light (200 lux or more). 1 blink indicates minimum light (25 lux).

Note: There is no blink rate, consider relocating the sensor or installing a battery to provide supplemental power. If the sensor does not have a sufficient charge, it cannot enter the test modes. LED or light or red LED blinks when motion is pressed indicates insufficient charge.

Installing Supplemental Battery (Optional):
If light levels are very low where the sensor is installed, auxiliary battery power (CR2032) can be used to supplement the solar energy harvester.
1. Remove the sensor from the mounting plate.
2. Identify the battery holder on the circuit board.
3. Insert the battery under the clip with the positive pole (+) up and press it in place (see figure 8).
4. Replace cover and mount the sensor on the wall.

Troubleshooting:
Sensor does not generate a wireless message:
- Verify the LED blinks when motion is detected during a walk test.
- Verify the solar cell is charged properly.
Sensor is activated when there is nothing to detect:
- Verify there is 4 F, 1,2 m clearance from heat sources that may disturb sensing.
- Reduce sensitivity setting by moving the PIR sensitivity switch on the back to low (the left-hand position).

Linked device does not respond to wireless messages:
- Check for environment or range issues.
- Verify the device is linked.
- Check the transceiver connection and the wiring for errors.
- Check if appropriate devices are linked according to good system planning.

Explanation of Occupied & Heartbeat Message Data Telegrams:

- Data Byte 3: Super Capacitor Voltage, 0-250 (0-5V).
- Data Byte 2: Solar Panel Current, 0-127 microA.
- Data Byte 1: bToF (occupied) or 0x0 (unoccupied).
- Data Byte 0: 0b00 (wait sensor) 0b11 (ceiling sensor).

Specifications:

<table>
<thead>
<tr>
<th>Field of View</th>
<th>See Field of view below</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency / Range</td>
<td>902 MHz / 50-150 feet</td>
</tr>
<tr>
<td>Power Supply</td>
<td>Solar Powered, Battery for backup (optional)</td>
</tr>
<tr>
<td>Power Required for Operation</td>
<td>50 lux for 30 transmissions per hour</td>
</tr>
<tr>
<td>Charge Time for Full Charge</td>
<td>3 Hours @ 200 lux (after startup) 6 Hours @ 200 lux (cold start)</td>
</tr>
<tr>
<td>Environmental Indoor Use Only 14° to 104°F (-10° to 40°C) 20% to 95% relative humidity (non-condensing)</td>
<td></td>
</tr>
<tr>
<td>Charge Time before Linking</td>
<td>2 Minutes @ 50 lux</td>
</tr>
<tr>
<td>Radio Certification</td>
<td>FCC (United States) SV2-STM300U I.C. (Canada) 5713A-STM300U</td>
</tr>
</tbody>
</table>

Equipment Needed for Installation:

- Power drill, 3/16" bit
- Screwdriver
- Leveling tool
- Light meter
- Battery (CR2032) for testing

Compliant Devices:

- FOR INDOOR USE ONLY.
- YOU ARE NOT SURE ABOUT ANY PART OF THESE INSTRUCTIONS, CONSULT AN ELECTRICIAN.
- WSS10-AUZ, WSS10-UAZ, WSS10-0UZ, WSS10-GUZ
- Works with other sensors for enhanced occupancy tracking.
- Harvests indoor light to power the sensor and wireless communications.
- Examples: Self-powered Light Switches, Occupancy Sensors.

Programming and Activation:

Two or more compatible devices can be linked and configured to provide the desired control. There are basic two types of devices in the system: transmitters and transceivers.

- Transmit-Only Transmitters are simple energy-harvesting devices that send RF messages to communicate a condition, level, or state. Transmitters can only be linked to transceivers.
- Transmit & Receive: Transceivers are controlling devices that send as well as receive RF messages. They also process relevant control logic, and activate the appropriate outputs (switching a light on or off for example). Transceivers can be associated with transmitters as well as other transceivers. A transceiver can have up to 30 devices associated to it.

Examples: Relays, Gateways.

The Occupancy Sensor is a Transmit-only Device. To associate the occupancy sensor to a transceiver: the transceiver must first be powered, within wireless range, and set to accept associations.

- Set the desired transceiver to accept an association (refer to that device’s installation guide).
- Click the Menu button on the side of the sensor base. This sends a associate/disassociate radio telegram (see figure 7). Note: The button interface on the sensor is used for associating and testing only. The occupancy timer settings are configured on the transceiver to which the sensor is associated.

The following protocol is used to link the sensor to a transceiver:

1. Press and hold the Set button for 5 seconds.
2. Red LED will blink to confirm that a walk test is active.
3. Move in and out of the sensor’s range to determine its coverage area.
4. Make small hand movements just inside the limit of the sensor’s range to see if the motion triggers a response.
5. Insert the battery under the clip with the positive pole (+) up and press it in place (see figure 8).
6. Replace cover and mount the sensor on the wall.
7. Set the desired transceiver to accept an association (refer to that device’s installation guide).
8. Click the Menu button (the sensor provides an “Unassociated” message).
9. Verify the LED blinks when motion is detected during a walk test.
10. Press and hold the Set button for 10 seconds.
11. Red & green LEDs will blink to confirm that light test is active.
12. Watch the LED blink rate to determine the light strength.

- The highest is 5 blinks which indicates very good light (200 lux or more). 1 blink indicates minimum light (25 lux).

Note: There is no blink rate, consider relocating the sensor or installing a battery to provide supplemental power. If the sensor does not have a sufficient charge, it cannot enter the test modes. LED or light or red LED blinks when motion is pressed indicates insufficient charge.
LIMITED 2 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 two years from the purchase date. Leviton’s only obligation is to correct such defects by repair or replacement, at its option, if within such two year period the product is returned prepaid, with proof of purchase date, and a description of the problem to Leviton Manufacturing Co., Inc., Att: 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 two 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.

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FCC COMPLIANCE STATEMENT:

FCC ID: SZV-STM300U
IC: 5713A-STM300U

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

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.

For Technical Assistance Call: 1-800-824-3005 (U.S.A. Only)

www.leviton.com

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