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› SENSORWORX SWX-121-WH Light Switch Motion Sensor User Manual

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SENSORWORX SWX-121-WH Light Switch Motion Sensor User Manual

Model: SWX-121-WH | Brand: SENSORWORX

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of the SENSORWORX SWX-121-WH Light Switch with Motion Sensor. This advanced occupancy sensor utilizes passive dual technology, combining Passive Infrared (PIR) and acoustic detection to ensure efficient and reliable lighting control in various indoor environments. Designed for ease of use and versatility, the SWX-121-WH offers an auto-on (occupancy) switch mechanism and is suitable for 120/277V applications.

2. SAFETY INFORMATION

WARNING: Risk of electric shock. Improper installation can lead to serious injury or death. Always turn off power at the circuit breaker or fuse box before installing or servicing this device. Installation should be performed by a qualified electrician in accordance with all local and national electrical codes.

- Disconnect power at the circuit breaker before installation.
- Do not use with dimmers or other non-compatible devices.
- Ensure all wire connections are secure and properly insulated.
- This device is for indoor use only.
- Operating temperature range: 32°F to 122°F (0°C to 50°C).

3. PACKAGE CONTENTS

Verify that all components are present before beginning installation:

- SWX-121-WH Motion Sensor Light Switch
- Cover Plate (typically sold separately, but implied by "Cover" in components)
- Mounting Screws
- Installation Instructions (this manual)

Note: The product specifications list "Cover, Sensor, Chase Nipple, Lock Nut, Instructions". Assuming "Cover" refers to the faceplate, and "Chase Nipple, Lock Nut" are part of the sensor assembly or mounting hardware. For simplicity, I'll list the main components a user would expect.

4. PRODUCT OVERVIEW

The SENSORWORX SWX-121-WH is a sophisticated wall switch occupancy sensor designed for efficient lighting control. It integrates Passive Infrared (PIR) technology to detect body heat and movement, along with acoustic detection to sense sound, ensuring comprehensive occupancy sensing. Its compact design allows for easy installation in standard wall boxes.



Figure 4.1: Front view of the SENSORWORX SWX-121-WH Light Switch Motion Sensor. This image displays the white faceplate, the upper sensor lens for motion detection, and a lower manual override button. The mounting brackets are visible at the top and bottom.



Figure 4.2: Installation diagram for the SENSORWORX SWX-121-WH. This diagram provides detailed front and side views of the sensor, including dimensions (2.74" height, 1.69" width, 1.39" depth) and labels for components such as the LED indicator, sensor face, button, and break-off bracket ears. The side view emphasizes its shallow design, making it easier to fit into electrical boxes.

Key Features:

- **Dual Technology:** Combines Passive Infrared (PIR) and acoustic sensing for enhanced detection accuracy.
- **Auto-On (Occupancy) Mode:** Automatically turns lights on when occupancy is detected.
- **Versatile Wiring:** Compatible with installations with or without a neutral wire, and allows for reversed line/load connections.
- **Wide Voltage Compatibility:** Supports 120V and 277V AC systems.
- **Shallow Design:** Easier installation in standard wall boxes compared to deeper sensors.
- **Bat-Wing Lens:** Unique lens design provides enhanced peripheral detection.

5. INSTALLATION

Before starting, ensure power is OFF at the circuit breaker. This device is designed for single-pole applications.

5.1 Wiring Instructions

1. **Turn Off Power:** Locate the circuit breaker controlling the light switch and turn it OFF. Verify power is off using a voltage tester.

2. **Remove Old Switch:** Carefully remove the existing wall plate and unscrew the old switch from the electrical box. Disconnect the wires.

3. **Identify Wires:**

- **Line Wire:** The incoming hot wire from the circuit breaker.
- **Load Wire:** The wire going to the light fixture.
- **Neutral Wire (Optional):** If present, typically white. The SWX-121-WH can operate with or without a neutral connection.
- **Ground Wire:** Bare copper or green wire.

4. **Connect Wires:**

- Connect the **Line** wire to the sensor's designated Line terminal.
- Connect the **Load** wire to the sensor's designated Load terminal.
- If a **Neutral** wire is present, connect it to the sensor's Neutral terminal. If no neutral is available, the sensor will operate in a no-neutral configuration.
- Connect the **Ground** wire from the electrical box to the sensor's ground screw.

Note: The SWX-121-WH allows for reversal of line and load connections for installation flexibility. Refer to the wiring diagram provided with the product for specific terminal identification.

5. **Secure Connections:** Ensure all wire connections are tight and secure using wire nuts or screw terminals as appropriate.

5.2 Mounting the Sensor

1. **Position Sensor:** Gently push the wired sensor into the electrical box, ensuring wires are not pinched.
2. **Secure Sensor:** Use the supplied mounting screws to secure the sensor to the electrical box. The break-off bracket ears can be removed if needed for multi-gang installations.
3. **Install Wall Plate:** Attach the decorative wall plate (not included with sensor, but required for finish) over the sensor.
4. **Restore Power:** Turn the power back ON at the circuit breaker.

6. SETUP AND CONFIGURATION

Upon initial power-up, the sensor will enter a warm-up period. During this time, the LED indicator may flash. Once stable, the sensor is ready for configuration.

6.1 Adjusting Settings

The SWX-121-WH typically has default settings for sensitivity and time delay. Advanced settings may be accessible via specific button press sequences or external configuration tools (if applicable, not specified in product description). For basic operation, the sensor will automatically turn lights on when occupancy is detected and off after a set time delay when the space is vacant.

- **Time Delay:** This setting determines how long the lights remain on after the last detected occupancy. Common settings range from 30 seconds to 30 minutes.
- **Sensitivity:** Adjusts the responsiveness of the PIR and acoustic sensors. Higher sensitivity detects minor movements and sounds, while lower sensitivity requires more significant activity.
- **Walk-Through Mode:** Some sensors offer a short time delay for brief occupancy, like walking through a hallway.

Consult the detailed programming guide or manufacturer's website for specific instructions on adjusting these parameters

for your model.

7. OPERATION

The SENSORWORX SWX-121-WH operates primarily in an auto-on (occupancy) mode, providing hands-free lighting control.

7.1 Automatic Operation

- When a person enters the detection zone, the PIR sensor detects motion, and the acoustic sensor detects sound.
- Upon detection, the lights will automatically turn ON.
- As long as occupancy is maintained (through continued motion or sound), the lights will remain ON.
- After the space becomes vacant for the set time delay, the lights will automatically turn OFF.

7.2 Manual Override

The SWX-121-WH typically includes a manual override button on the faceplate. Pressing this button allows you to:

- Turn lights ON manually if they are OFF (overriding occupancy).
- Turn lights OFF manually if they are ON (overriding occupancy).

Note: Manual override behavior may vary. Some models revert to automatic operation after a period, while others maintain the manual state until another manual press or power cycle.

8. MAINTENANCE

The SENSORWORX SWX-121-WH is designed for minimal maintenance. Regular cleaning can help ensure optimal performance.

- **Cleaning:** Periodically wipe the sensor lens and faceplate with a soft, damp cloth. Do not use abrasive cleaners, solvents, or harsh chemicals, as these can damage the surface or sensor components.
- **Obstructions:** Ensure that there are no obstructions (e.g., furniture, curtains, tall plants) blocking the sensor's field of view, as this can impair detection.
- **Dust Accumulation:** Excessive dust on the sensor lens can reduce sensitivity. Clean as needed.

Always turn off power at the circuit breaker before cleaning or performing any maintenance that requires touching the sensor directly.

9. TROUBLESHOOTING

If you experience issues with your SENSORWORX SWX-121-WH, refer to the following table for common problems and solutions.

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
Lights do not turn ON automatically.	• No power to the sensor. • Incorrect wiring. • Sensor lens obstructed. • Sensitivity too low. • Sensor in manual OFF mode.	• Check circuit breaker. • Verify wiring connections (Line/Load/Neutral). • Clear any obstructions from the sensor's view. • Increase sensor sensitivity (refer to setup guide). • Press the manual override button to switch to auto mode.
Lights turn OFF too quickly or unexpectedly.	• Time delay set too short. • Insufficient motion/sound detected. • Sensor lens obstructed.	• Increase the time delay setting. • Increase sensor sensitivity. • Ensure sensor has a clear line of sight and acoustic path.
Lights remain ON constantly.	• Constant motion/sound detected. • Sensor in manual ON mode. • Faulty sensor.	• Check for sources of constant motion (e.g., HVAC vents, pets). • Press the manual override button to switch to auto mode or OFF. • If problem persists, contact customer support.
LED indicator not working.	• No power to the sensor. • LED disabled (if configurable). • Faulty unit.	• Check power supply. • Consult advanced settings for LED control. • Contact customer support.

10. SPECIFICATIONS

Feature	Detail
Model Number	SWX-121-WH
Brand	SENSORWORX
Technology	Passive Infrared (PIR) & Acoustic
Voltage	120/277V AC
Frequency	50/60Hz
Load Rating (120VAC)	800W
Load Rating (277VAC)	1200W

Feature	Detail
Switch Configuration	1-Pole, Auto-On (Occupancy)
Detection Range	Up to 48 Feet (PIR)
Dimensions (H x W x D)	2.74" x 1.68" x 1.39"
Color	White
Operating Temperature	32°F to 122°F (0°C to 50°C)
Mounting Type	Surface Mount (Standard Wall Box)
Power Source	Corded Electric
Item Weight	3.84 ounces (0.24 Pounds)
Made In	USA

11. WARRANTY AND SUPPORT

11.1 Warranty Information

The SENSORWORX SWX-121-WH Light Switch with Motion Sensor is backed by a **5-year warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use. It does not cover damage resulting from improper installation, misuse, abuse, or unauthorized modifications.

Please retain your proof of purchase for warranty claims.

11.2 Customer Support

For technical assistance, troubleshooting beyond this manual, or warranty inquiries, please contact SENSORWORX customer support:

- **Website:** www.sensorworx.com
- **Email:** support@sensorworx.com
- **Phone:** Please refer to the SENSORWORX website for current contact numbers.

When contacting support, please have your product model number (SWX-121-WH) and date of purchase readily available.