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- › [Watt Stopper](#) /
- › [Watt Stopper DSW-100-W Dual Technology Wall Switch Sensor Instruction Manual](#)

## Watt Stopper DSW-100-W

# Watt Stopper DSW-100-W Dual Technology Wall Switch Sensor Instruction Manual

Model: DSW-100-W

## 1. INTRODUCTION

The Watt Stopper DSW-100-W is a dual technology wall switch occupancy sensor designed to automatically control lighting based on occupancy. It combines Passive Infrared (PIR) and Ultrasonic technologies to detect motion and presence, ensuring lights are only on when a space is occupied. This manual provides essential information for the safe installation, operation, and maintenance of your DSW-100-W sensor.

## 2. SAFETY INFORMATION

Please read and understand all instructions before installing or operating this device. Failure to follow these instructions may result in electrical shock, fire, or property damage.

- **WARNING:** Turn off power at the circuit breaker or fuse box before wiring.
- Installation should be performed by a qualified electrician in accordance with all national and local electrical codes.
- Do not use this device with dimmers or other incompatible controls unless specified.
- This product is intended for indoor use only.
- Ensure all wire connections are secure and properly insulated.

## 3. PRODUCT OVERVIEW

The DSW-100-W sensor utilizes both Passive Infrared (PIR) and Ultrasonic technologies for reliable occupancy detection. Key features include:

- Dual technology (PIR/Ultrasonic) for enhanced detection accuracy.
- Zero-crossing for extended relay life.
- Vandal-resistant lens design for durability.
- Selectable manual-on or auto-on operation modes.
- Audible alert option for impending shutoff.
- Integrated LED indicator for status.





**Figure 3.1:** Front view of the DSW-100-W sensor, showing the PIR lens, ultrasonic transducers, and control buttons/indicators.

## 4. INSTALLATION

Before beginning installation, ensure power is disconnected at the circuit breaker.

### 4.1 Wiring Instructions

The DSW-100-W sensor requires connection to Line (L), Load, and Ground wires. It is compatible with 120VAC and 277VAC systems.

- **Line (Black Wire):** Connect to the incoming hot wire from the electrical panel.
- **Load (Red Wire):** Connect to the lighting fixture or load.
- **Ground (Green Wire):** Connect to the electrical system ground.
- **Neutral (White Wire):** This sensor typically does not require a neutral connection for basic operation, but always refer to the specific wiring diagram on the device or included instructions.





Figure 4.1: Back view of the DSW-100-W sensor, illustrating wiring terminals and electrical ratings.

## 4.2 Mounting

Install the sensor into a standard electrical wall box. Ensure the sensor is securely fastened and the faceplate is properly attached after wiring is complete.

## 5. OPERATING INSTRUCTIONS

The DSW-100-W offers flexible operation modes and settings.

### 5.1 Operation Modes

- **Auto-On Mode:** Lights turn on automatically when occupancy is detected and turn off after a preset time delay when the space becomes vacant.
- **Manual-On Mode:** Users must manually turn on the lights using the switch. The sensor will then automatically turn off the lights after a preset time delay when the space becomes vacant. This mode is ideal for energy code compliance where manual-on is required.

### 5.2 Time Delay and Sensitivity Adjustment

The sensor typically includes adjustable settings for time delay (how long lights remain on after vacancy) and sensitivity for both PIR and Ultrasonic detection. Refer to the specific labels on the device (e.g., "1.0 Time", "Ultrasonic") for adjustment points. Use a small screwdriver or similar tool to carefully adjust these settings as

needed for your application.

### 5.3 Audible Alert

The DSW-100-W features a selectable audible alert that provides a warning before the lights turn off due to vacancy. This can be enabled or disabled based on user preference.

## 6. MAINTENANCE

The DSW-100-W sensor requires minimal maintenance.

- Cleaning:** Periodically wipe the sensor lens and housing with a soft, damp cloth. Do not use abrasive cleaners or solvents.
- Obstructions:** Ensure the sensor's detection area is free from obstructions such as furniture, tall plants, or partitions that could block its view or ultrasonic waves.

## 7. TROUBLESHOOTING

If you experience issues with your DSW-100-W sensor, refer to the following common troubleshooting steps:

Problem	Possible Cause	Solution
Lights do not turn on automatically.	<ul style="list-style-type: none"><li>Power off.</li><li>Sensor in Manual-On mode.</li><li>Obstruction in detection area.</li><li>Incorrect wiring.</li></ul>	<ul style="list-style-type: none"><li>Check circuit breaker.</li><li>Switch to Auto-On mode if desired.</li><li>Clear obstructions.</li><li>Verify wiring connections (refer to Section 4.1).</li></ul>
Lights do not turn off.	<ul style="list-style-type: none"><li>Constant motion in detection area.</li><li>Sensor sensitivity too high.</li><li>Time delay set too long.</li></ul>	<ul style="list-style-type: none"><li>Ensure area is truly vacant.</li><li>Adjust sensitivity settings.</li><li>Adjust time delay setting.</li></ul>
Lights turn off too quickly.	<ul style="list-style-type: none"><li>Time delay set too short.</li><li>Sensor sensitivity too low.</li><li>Partial obstruction.</li></ul>	<ul style="list-style-type: none"><li>Increase time delay setting.</li><li>Adjust sensitivity settings.</li><li>Clear any partial obstructions.</li></ul>

## 8. SPECIFICATIONS

Model Number	DSW-100-W
Technology	Dual Technology (PIR & Ultrasonic)
Operating Voltage	120/277 VAC, 50/60 Hz
Relay Output (120VAC)	800W max. tungsten/ballast, 1/6 hp
Relay Output (277VAC)	1200W max. ballast
Current Rating	2 Amps
Operation Mode	ON-OFF

<b>Contact Type</b>	Normally Closed
<b>Terminal Type</b>	Screw Or Blade
<b>Dimensions (L x W x H)</b>	1 x 1 x 1 inches (Product Dimensions)
<b>Item Weight</b>	5.4 ounces
<b>Color</b>	White
<b>International Protection Rating</b>	IP54
<b>Control Method</b>	Touch
<b>Connectivity Protocol</b>	X-10 (if applicable, verify compatibility)
<b>UPC</b>	754182931927
<b>Manufacturer</b>	Wattstopper
<b>Usage Environment</b>	Indoor Use Only

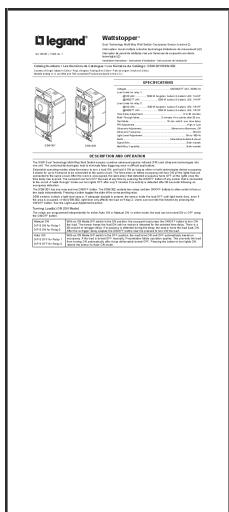
## 9. WARRANTY AND SUPPORT

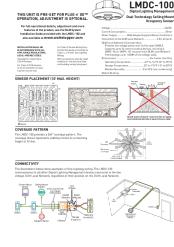
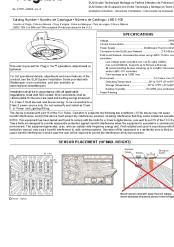
Watt Stopper products are designed for reliability and performance. For specific warranty details, please refer to the documentation included with your purchase or visit the manufacturer's website.

For technical support or further assistance, please contact:

- **Phone:** 800.879.8585
- **Website:** [www.wattstopper.com](http://www.wattstopper.com)

## Related Documents - DSW-100-W

	<p><a href="#">Wattstopper DSW Series Dual Technology Wall Switch Occupancy Sensor Installation Guide</a></p> <p>Comprehensive installation instructions, specifications, operating modes, and troubleshooting for the Wattstopper DSW Series Dual Technology Multi-Way Wall Switch Occupancy Sensors (DSW-301, DSW-302). Covers features like PIR and ultrasonic detection, manual/auto ON modes, time delays, and multi-way wiring.</p>
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	<p><a href="#"><u>UW-100-24 Ultrasonic Low Voltage Wall Switch Occupancy Sensor Installation Instructions</u></a></p> <p>Installation instructions and specifications for the Watt Stopper UW-100-24 Ultrasonic Low Voltage Wall Switch Occupancy Sensor. Covers unit description, operation, adjustments, troubleshooting, and ordering information.</p>
	<p><a href="#"><u>Wattstopper LMDC-100 Dual Technology Ceiling Mount Occupancy Sensor</u></a></p> <p>Detailed specifications and features of the Wattstopper LMDC-100, a dual-technology ceiling mount occupancy sensor for energy-efficient lighting and plug load control. Includes operation, applications, mounting, wiring, and ordering information.</p>
	<p><a href="#"><u>Wattstopper LMDC-100 Occupancy Sensor Quick Start Guide &amp; Installation</u></a></p> <p>Quick start guide for the Watt Stopper LMDC-100 Digital Lighting Management Dual Technology Ceiling Mount Occupancy Sensor. Includes installation, specifications, coverage, and troubleshooting.</p>
	<p><a href="#"><u>Wattstopper LMDC-100 Dual Technology Ceiling Mount Occupancy Sensor Installation Instructions</u></a></p> <p>Comprehensive installation, configuration, and troubleshooting guide for the Wattstopper LMDC-100 Dual Technology Ceiling Mount Occupancy Sensor. Covers specifications, placement, coverage, mounting, connectivity, parameter settings, test mode, reset procedures, Push 'n Learn functionality, default behavior, and troubleshooting tips.</p>
	<p><a href="#"><u>Watt Stopper WS-250 Occupancy Sensor: Features, Specifications, and Applications</u></a></p> <p>Detailed information on the Watt Stopper WS-250 Passive Infrared Wall Switch Occupancy Sensor, including its features, specifications, applications, and installation guidance for energy-efficient lighting control.</p>