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BESTTEN YM2108

BESTTEN Motion Sensor Light Switch User Manual

Model: YM2108

INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your BESTTEN Motion Sensor Light Switch, Model YM2108. This device utilizes Passive Infrared (PIR) technology to detect motion, automatically controlling lighting based on occupancy or vacancy in a room. Please read this manual thoroughly before installation and use to ensure proper function and safety.

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UL
C[®] US
LISTED

Motion Sensor Switch

15A 120/277V



**Advanced Passive
Infrared (PIR)
Technology**



**Occupancy (OCC)/
Vacancy (VCC)
Mode**



**Works with
300W LED,
800W Incandescent/
Fluorescent**



**Adjustable Light Level/
Adjustable Sensor
Sensitivity/
Time Delay Control**



**Neutral Wire
Required**



**Wall Plates
Included**



**Single
Pole**

Image: Overview of the BESTTEN Motion Sensor Switch highlighting its main features: Advanced PIR Technology, Occupancy/Vacancy Modes, compatibility with 300W LED / 800W Incandescent/Fluorescent, adjustable settings, neutral wire requirement, included wall plate, and single-pole wiring.

SAFETY INFORMATION

WARNING: Risk of Electric Shock. Improper installation can lead to serious injury or death. Always turn off power at the circuit breaker before installing or servicing this switch. If you are unsure about any part of these instructions, consult a qualified electrician.

- Ensure power is OFF at the circuit breaker before installation.
- This device requires a neutral wire for operation. Verify its presence in your wall box before purchase and installation.
- Install in accordance with all national and local electrical codes.
- Do not use with loads exceeding the specified ratings (120V 300W LED, 120V 800W Incandescent, 800W/VA @ 120V Rapid Start Fluorescent, 1200W/VA @ 277V Rapid Start Fluorescent).
- For indoor use only.

PRODUCT FEATURES

- Advanced Passive Infrared (PIR) technology for motion detection.
- Supports two operating modes:
 - **Occupancy Mode (OS):** Automatic ON, Automatic OFF.
 - **Vacancy Mode (VS):** Manual ON, Automatic OFF.
- 180-degree motion sensor coverage.
- Adjustable sensor sensitivity.
- Adjustable time delay settings: 15 seconds (Test), 1 minute, 5 minutes, 15 minutes, 30 minutes.
- Adjustable ambient light level detection.
- Requires a neutral wire for installation.
- Single-pole wiring.
- Compatible with 120V/277VAC, 60Hz, 1/6 HP.
- UL Listed for safety.
- Wall plate included.

PACKAGE CONTENTS

The package includes:

- BESTTEN Motion Sensor Light Switch (Model YM2108)
- Wall Plate
- Installation Screws
- Instruction Manual (this document)

INSTALLATION

Pre-Installation Checklist:

- **Turn off power:** Locate the circuit breaker controlling the light switch and turn it OFF. Verify power is off using a voltage tester.
- **Neutral Wire:** This switch requires a neutral wire. Confirm its presence in your wall box. A neutral wire is typically white and connected to other white wires, not connected to your existing standard switch.
- **Tools Required:** Screwdriver, wire strippers, electrical tape, voltage tester.

Wiring Guide:

Follow the wiring diagram below. Ensure all connections are secure.

Neutral Wire Needed

Before purchase, please confirm that there is a Neutral Wire available in the wall box you intend to install this switch. It can be identified by 2 or more white wires connected together in the wall box without being connected to a standard switch.

Wire Guide

HOT: Identify the Hot Wire in the wall box which has power from the breaker panel. This is usually a black wire. Connect it to the black wire on this switch.

LOAD: This is usually the other black wire which delivers power to the light and does not have power. Connect it to the red load wire on this switch.

NEUTRAL: Connect the white wire on this switch to the existing Neutral Wire.

GROUND: Connect the green wire on this switch to the existing Green or bare copper wire in the wall box.

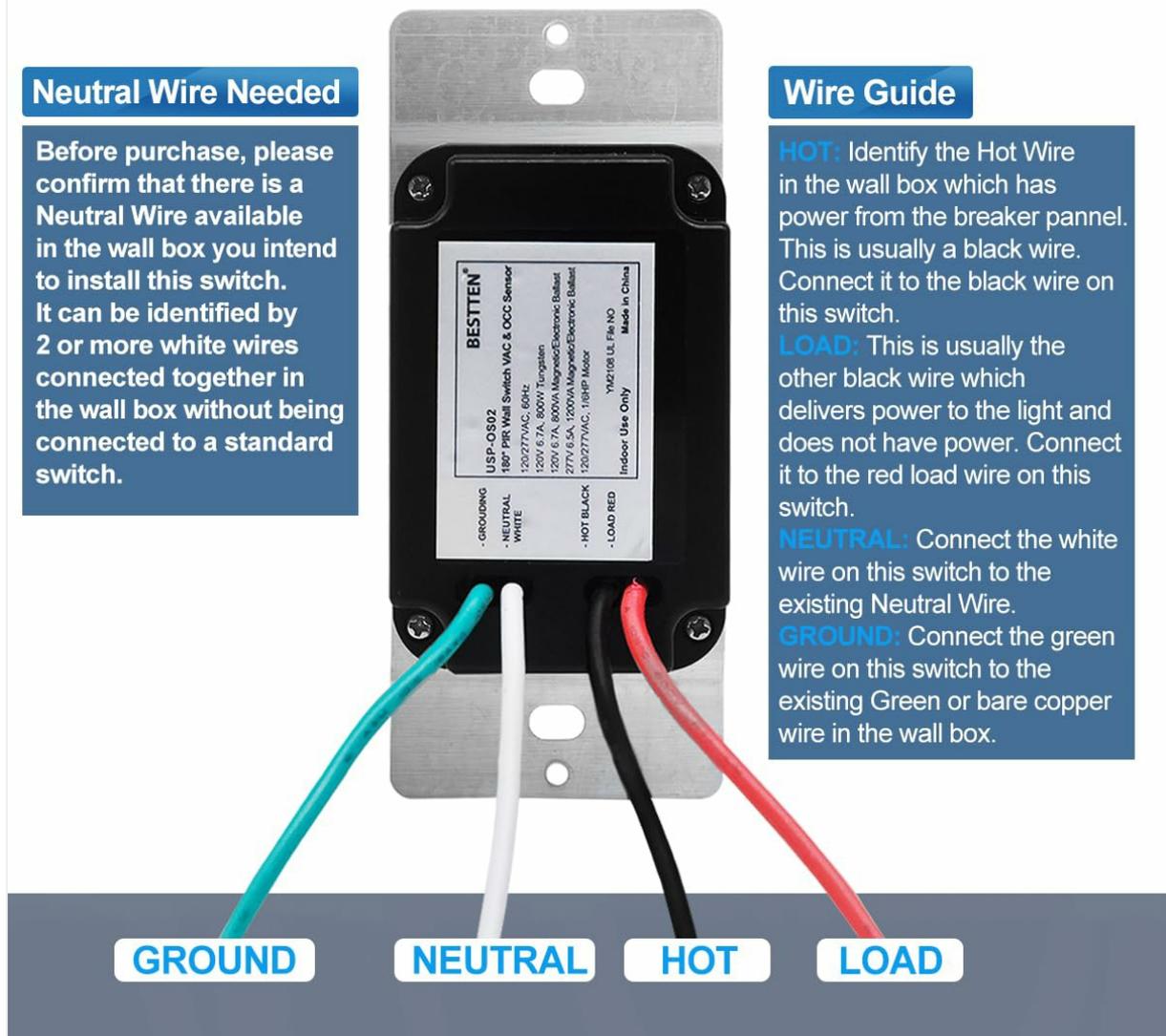


Image: Detailed wiring diagram for the BESTTEN Motion Sensor Switch. It shows connections for Ground (green wire), Neutral (white wire), Hot (black wire), and Load (red wire). Instructions for identifying each wire are provided.

1. **GROUND:** Connect the green wire from the sensor switch to the existing bare copper or green ground wire in the wall box.
2. **NEUTRAL:** Connect the white wire from the sensor switch to the existing neutral wire in the wall box.
3. **HOT:** Identify the hot wire (power from the breaker panel), usually black. Connect it to the black wire on the sensor switch.
4. **LOAD:** Identify the load wire (delivers power to the light fixture), usually another black wire. Connect it to the red wire on the sensor switch.

After wiring, carefully push the switch into the wall box, attach the wall plate, and restore power at the circuit breaker. For the sensor to operate, the ON/OFF switch **MUST** be manually pushed once after installation or a power outage.

OPERATING INSTRUCTIONS

The BESTTEN Motion Sensor Light Switch offers two primary operating modes: Occupancy Mode (OS) and Vacancy Mode (VS). The mode is selected by a small switch located on the front of the device, usually labeled OS/VS.

NOTE:

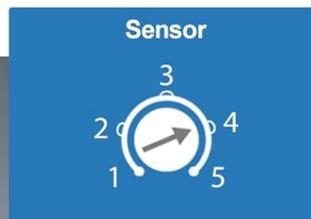
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For sensor to operate, the ON/OFF switch **MUST** be manually pushed once after installation or a power outage.



Time Delay Knob

Intervals of 15 seconds (Test), 1 minute, 5 minutes, 15 minutes, 30 minutes of inactivity



Sensor Sensitivity Range Knob

Adjust the sensitivity setting to desired detection range



Ambient Light Level Knob

Adjust the sensor to turn on the light at desired ambient light level

Image: Front view of the BESTTEN Motion Sensor Switch illustrating the Vacancy and Occupancy mode selector, along with the Time Delay, Sensor Sensitivity, and Ambient Light Level adjustment knobs.

Occupancy Mode (OS)

In Occupancy Mode, the light will turn ON automatically when motion is detected and turn OFF automatically after a set period of inactivity. This mode is ideal for high-traffic areas where hands-free operation is desired.

- To activate: Push the OS/VS button so that 'OS' is selected (or the button is pressed in).
- Function: Automatic ON, Automatic OFF.

Vacancy Mode (VS)

In Vacancy Mode, the light must be turned ON manually by pressing the switch button. It will then turn OFF automatically after a set period of inactivity. This mode is suitable for areas where manual control over initial light activation is preferred, while still benefiting from automatic shut-off.

- To activate: Push the OS/VS button so that 'VS' is selected (or the button is released).
- Function: Manual ON, Automatic OFF.

CONFIGURATION AND SETTINGS

The sensor switch features three adjustable knobs to customize its behavior:

- **Time Delay Knob:** Adjusts the duration the light remains ON after the last detected motion.
 - Settings: 15 seconds (Test), 1 minute, 5 minutes, 15 minutes, 30 minutes.
 - Use the 'Test' setting for initial setup to quickly verify motion detection.
- **Sensor Sensitivity Range Knob:** Controls the detection range of the PIR sensor.
 - Adjust from 1 (lowest sensitivity/shortest range) to 5 (highest sensitivity/longest range).
 - Higher sensitivity may lead to detection of minor movements or movements outside the desired area.
- **Ambient Light Level Knob:** Determines the ambient light level at which the sensor will activate the lights.
 - Adjust from 1 (activates in brighter conditions) to 5 (activates only in very dark conditions).
 - This prevents lights from turning on unnecessarily when there is sufficient natural light.

TROUBLESHOOTING

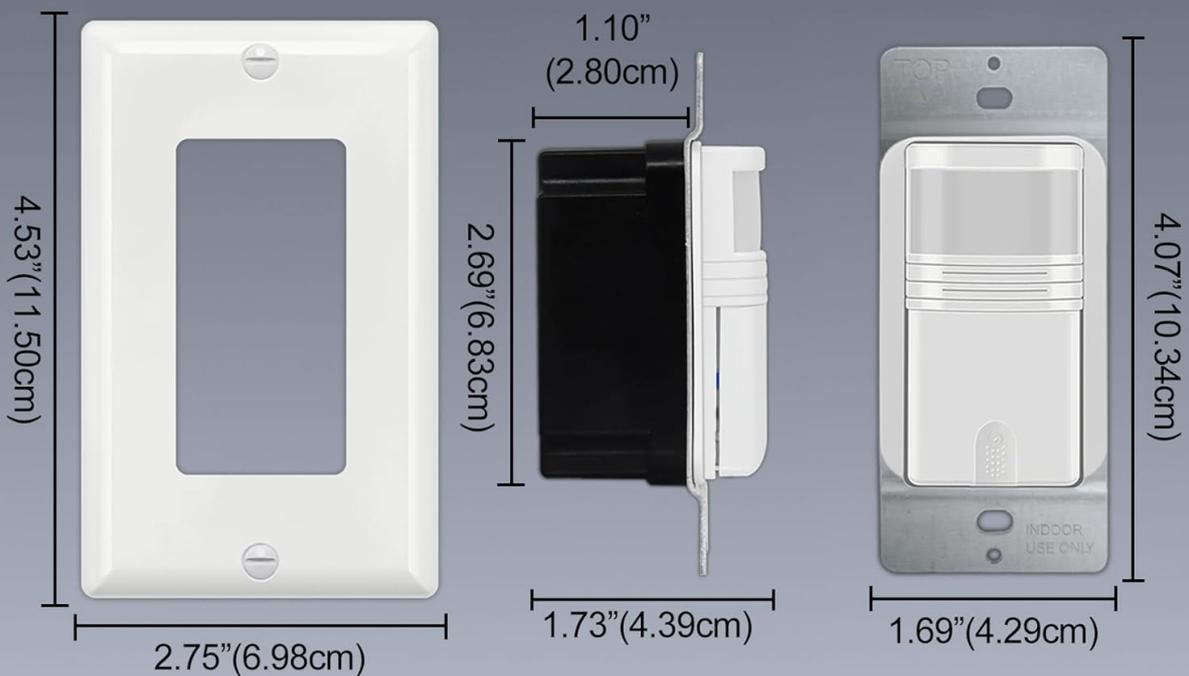
Problem	Possible Cause	Solution
Light does not turn ON.	<ul style="list-style-type: none">• Power is OFF at breaker.• Incorrect wiring.• Ambient light level setting too high.• Sensor sensitivity too low.• Switch not manually pushed after power restoration.	<ul style="list-style-type: none">• Check circuit breaker.• Verify wiring according to the diagram.• Adjust Ambient Light Level knob to a lower setting.• Increase Sensor Sensitivity.• Manually press the ON/OFF button on the switch.
Light turns ON unexpectedly or stays ON too long.	<ul style="list-style-type: none">• Sensor sensitivity too high.• Time delay set too long.• Heat sources or air drafts in detection area.	<ul style="list-style-type: none">• Decrease Sensor Sensitivity.• Adjust Time Delay knob to a shorter duration.• Ensure sensor is not aimed at heat vents or areas with significant air movement.
Light flickers or does not work with certain bulbs.	<ul style="list-style-type: none">• Incompatible bulb type or wattage.	<ul style="list-style-type: none">• Ensure bulb wattage and type are within specified limits (e.g., 300W LED, 800W Incandescent).

SPECIFICATIONS

Model Number	YM2108
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Voltage	120V/277VAC, 60Hz
Load Type & Wattage	120V 300W LED 120V 800W Incandescent 800W/VA @ 120V Rapid Start Fluorescent 1200W/VA @ 277V Rapid Start Fluorescent
Motor Load	1/6 HP
Wiring	Single-Pole, Neutral Wire Required
Sensor Type	Passive Infrared (PIR)
Detection Angle	180 degrees
Material	Thermoplastic
Dimensions (H x W x D)	11.5 cm x 6.98 cm x 4.39 cm (4.53 in x 2.75 in x 1.73 in)
Certifications	UL Listed
Operating Temperature	Up to 60°C (140°F)

Product Dimensions



* The wallplates are included.

Image: Diagram showing the precise dimensions of the BESTTEN Motion Sensor Switch and its included wall plate in both inches and centimeters.

MAINTENANCE

The BESTTEN Motion Sensor Light Switch is designed for maintenance-free operation. To clean the device, gently wipe the surface with a soft, damp cloth. Do not use abrasive cleaners or solvents. Ensure power is off before cleaning.

There are no user-serviceable parts inside the switch. Any attempt to open or modify the device will void the warranty and could pose a safety hazard.

WARRANTY AND SUPPORT

This BESTTEN Motion Sensor Light Switch (Model YM2108) comes with a **3-year warranty** from the date of purchase, covering defects in materials and workmanship under normal use. This warranty does not cover damage caused by improper installation, misuse, abuse, or unauthorized modifications.

For technical support, warranty claims, or further assistance, please contact BESTTEN customer service. Refer to the product packaging or the BESTTEN official website for current contact information.