

## ECOELER YM2108

# ECOELER Motion Sensor Light Switch User Manual

Model: YM2108

Brand: ECOELER

## INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your ECOELER Motion Sensor Light Switch, Model YM2108. This device is designed to provide automatic lighting control in various indoor spaces such as laundry rooms, garages, hallways, and closets, enhancing convenience and energy efficiency.



Image: The ECOELER Motion Sensor Light Switch, Model YM2108, shown installed in a modern bathroom setting, highlighting its compliance with UL, FCC, and California Title 24 standards.

## KEY FEATURES

- **Hands-Free Operation:** Detects presence to automatically activate lights, eliminating the need for manual switching.
- **Neutral Wire Required:** Ensures stable performance; designed for single-pole installations only, not for 3-way circuits.
- **Occupancy (OCC) & Vacancy (VAC) Modes:**
  - **OCC Mode:** Lights turn on automatically with motion and off when the space is unoccupied.
  - **VAC Mode:** Requires manual activation, then turns off automatically when no motion is detected.
- **Customizable Settings:** Adjustable time delays, sensitivity, and ambient light level sensing for tailored control.
- **High Quality & Compliance:** UL Certified, FCC Listed, and California Title 24 Compliant.
- **Broad Compatibility:** Works with 300W LED, 300W CFL, and 600W incandescent light bulbs.



# HANDS-FREE CONTROL

Enjoy Energy Saving, Convenient and Safe Life

Image: Visual representation of the hands-free control feature, showing the motion sensor light switch seamlessly integrated into different living spaces.

## INSTALLATION GUIDE

**WARNING: Installation should only be performed by a qualified electrician to ensure safety and compliance with local electrical codes. Always turn off power at the circuit breaker before installation.**

The ECOELER Motion Sensor Light Switch (Model YM2108) requires a neutral wire for proper operation. It is designed for single-pole applications only and is not compatible with 3-way circuits.

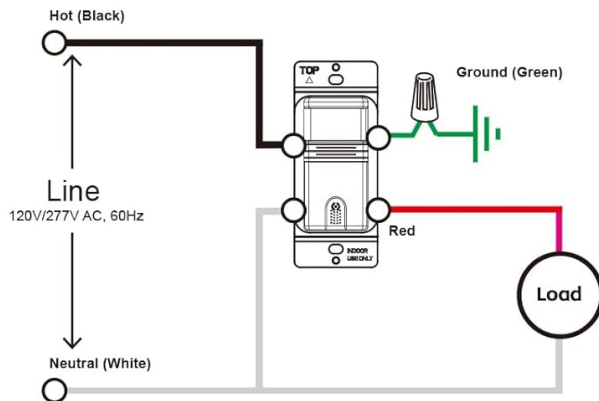
### Wiring Instructions:

1. Turn off power at the circuit breaker.
2. Remove the existing wall plate and switch.
3. Identify the wires in your electrical box: Hot (Black), Load (Red), Neutral (White), and Ground (Green or bare copper).
4. Connect the wires from the ECOELER switch to your house wiring according to the diagram below. Use the provided terminal caps to secure connections.
5. Carefully push the wired switch into the electrical box.

6. Attach the wall plate.
7. Restore power at the circuit breaker.

Neutral wire require

## WIRING GUIDE



- Hot
- Load
- Neutral
- Ground



Image: A clear wiring guide illustrating the connections for the Hot (Black), Load (Red), Neutral (White), and Ground (Green) wires for the YM2108 switch.

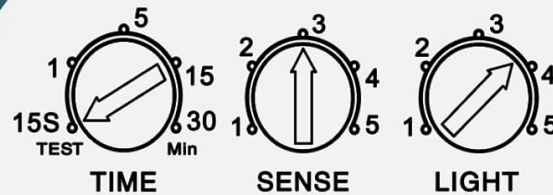
## OPERATION

The ECOELER Motion Sensor Light Switch offers two primary operation modes and several customizable settings to suit your specific needs.

### Operation Modes:

- **Occupancy Mode (OCC):** In this mode, the lights will automatically turn ON when motion is detected and automatically turn OFF after a set delay when no motion is detected. This is ideal for high-traffic areas where automatic lighting is desired.
- **Vacancy Mode (VAC):** In this mode, the lights must be turned ON manually. They will then automatically turn OFF after a set delay when no motion is detected. This mode is suitable for areas where manual control for turning on the light is preferred, but automatic turn-off is desired for energy saving.

# OPERATION MODES



## VACANCY MODE

Manual on & Auto off



## OCCUPANCY MODE

Auto on & off

Occupancy and Vacancy sensor mode  
allow you to customize the sensor according to your needs.

Image: An illustration detailing the Occupancy (Auto on & off) and Vacancy (Manual on & Auto off) modes, with a switch to select between them.

## Customizable Settings:

The switch features three adjustable dials to fine-tune its performance:

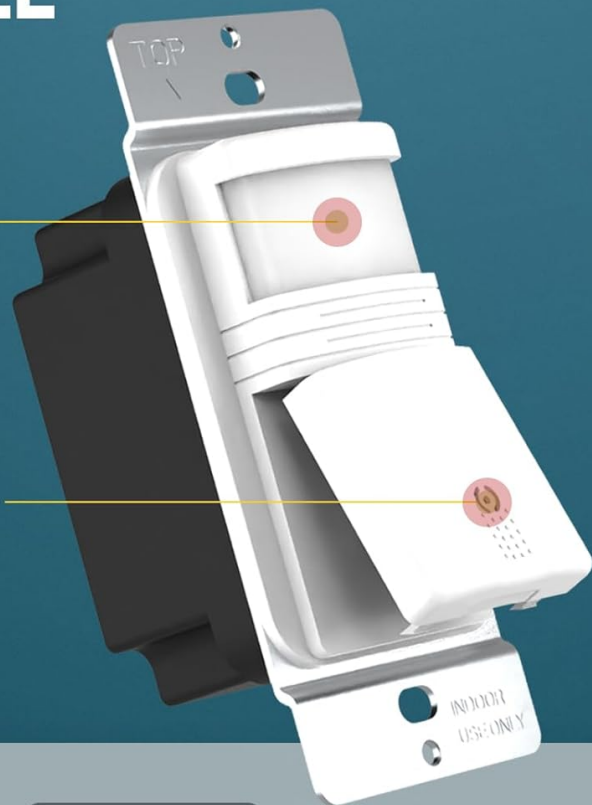
- **TIME (Adjustable Delay Time):** Sets how long the lights remain ON after the last detected motion. Adjustable from 15 seconds (TEST) to 30 minutes.
- **SENSE (Sensor Sensitivity Range):** Adjusts the detection range of the motion sensor. Settings range from 1 (approx. 6.56 ft) to 5 (approx. 29.52 ft).
- **LIGHT (Ambient Light Level):** Determines the ambient light level at which the sensor will activate the lights. Settings range from 1 (5 lux) to 5 (all day, meaning it will activate regardless of ambient light).



# CUSTOMIZABLE SETTINGS

Pir Motion Detector

Manual ON/OFF Button



From 15 seconds to 30 minutes



From 20% to 100%



Turn on the light at desired ambient light level

Image: A detailed view of the customizable settings on the ECOELER Motion Sensor Light Switch, including dials for Time Delay, Sensitivity, and Ambient Light Level.

## MAINTENANCE

The ECOELER Motion Sensor Light Switch requires minimal maintenance. Periodically, gently wipe the sensor lens and switch surface with a soft, dry cloth to remove dust or debris that may interfere with sensor performance. Do not use abrasive cleaners or solvents.

## TROUBLESHOOTING

If you experience issues with your ECOELER Motion Sensor Light Switch, consider the following:

- **Lights not turning on/off automatically:** Verify the selected operation mode (OCC/VAC) and adjust the 'SENSE' (sensitivity) and 'LIGHT' (ambient light level) settings. Ensure there are no obstructions blocking the sensor's field of view.
- **Lights turning off too quickly or staying on too long:** Adjust the 'TIME' dial to increase or decrease the delay time.

- **Lights not turning on at all:** Check the circuit breaker to ensure power is supplied to the switch. Confirm that the wiring connections are secure and correct, especially the neutral wire. Test the connected light bulb to ensure it is functional.

## SPECIFICATIONS

| Feature                         | Specification                                 |
|---------------------------------|---|
| Model Number                    | YM2108  |
| Operation Mode                  | OCC / VAC Mode                                |
| Current Rating                  | 6 Amps  |
| Operating Voltage               | 120 Volts (AC)                                |
| Contact Type                    | Normally Open                                 |
| Connector Type                  | Clamp   |
| Terminal                        | SPST  |
| Item Dimensions (L x W x H)     | 4.61 x 2.87 x 2.24 inches                     |
| Circuit Type                    | 1-way (Single Pole)                           |
| Actuator Type                   | Relay   |
| Contact Material                | Copper  |
| International Protection Rating | IP40  |
| Lower Temperature Rating        | 32 Degrees Fahrenheit (0°C)                   |
| Upper Temperature Rating        | 131 Degrees Fahrenheit (55°C)                 |
| Controller Type                 | Motion Sensor                                 |
| Color                           | White   |
| Wattage                         | 600 watts (Incandescent), 300 watts (LED/CFL) |
| Item Weight                     | 4.2 ounces                                    |
| Power Source                    | Corded Electric                               |
| Type of Bulb                    | LED, CFL, Incandescent                        |
| Included Components             | Motion sensor switch with plate, User manual  |

# PRODUCT SPECIFICATION



Wall Plate



Sensor



4\*Screws



4\*Terminal Caps

|                       |   |
|-----------------------|---|
| Input Rating          | 120V,60Hz                                 |
| Lamp Type             | 300W LED<br>300W CFL<br>600W Incandescent |
| Switch Type           | Single Pole                               |
| Wiring Type           | Terminal Cap                              |
| Operating Temperature | 30°F to 140°F (0°C to 40°C)               |
| Product Size          | 2.70*4.52*1.65 inch                       |
| Remark                | Not suitable for 3way circuit             |

Image: A visual summary of the product specifications and a list of included accessories such as the wall plate, screws, and terminal caps.

## WARRANTY AND SUPPORT

The ECOELER Motion Sensor Light Switch (Model YM2108) comes with a**1-Year Limited Warranty**. This warranty covers manufacturing defects under normal use conditions. In the event of a defect, a replacement or refund may be available.

For warranty claims or technical support, please contact the seller (ECOELER ELECTRIC INC) directly via Amazon for assistance.