ECOELER B07R8BKV1K

ECOELER PIR Motion Sensor Light Switch User Manual

Model: B07R8BKV1K (Series YM2108)

1. Introduction

This manual provides comprehensive instructions for the installation, operation, and maintenance of your ECOELER PIR Motion Sensor Light Switch. This device is designed to provide convenient, hands-free lighting control by detecting motion and ambient light levels, helping to conserve energy.

Key features include:

- **Hands-Free Operation:** Automatically activates lights upon motion detection.
- **Dual Modes:** Supports Occupancy (OCC) and Vacancy (VAC) modes for flexible control.
- **Customizable Settings:** Adjustable time delays, sensitivity, and light level sensing.
- **Broad Compatibility:** Works with 300W LED, 300W CFL, and 600W incandescent light bulbs.
- **Safety Certified:** UL Certified, FCC Listed, and California Title 24 Compliant.

Image 1.1: ECOELER Motion Sensor Light Switch with UL, FCC, and Title 24 certifications.

2. Safety Information

WARNING: RISK OF ELECTRIC SHOCK. Improper installation can lead to serious injury or death. Always consult a qualified electrician to ensure proper wiring and installation, especially if you are unfamiliar with electrical work.

- **Power Disconnection:** ALWAYS turn off power at the circuit breaker or fuse box before installing or servicing the switch.
- **Neutral Wire Required:** This switch requires a neutral wire for operation. Verify your electrical box has a neutral wire (typically white) before proceeding with installation.
- **Indoor Use Only:** Designed for indoor applications.
- **Load Compatibility:** Do not exceed the maximum wattage ratings: 300W LED, 300W CFL, 600W Incandescent.
- **Single Pole Only:** This switch is designed for single-pole circuits only. It is not suitable for 3-way or multi-way circuits.

3. Product Overview and Components

The ECOELER Motion Sensor Light Switch integrates a Passive Infrared (PIR) sensor to detect motion and an ambient light sensor to optimize energy usage. The switch features a manual ON/OFF button and adjustable dials for customization.

Included Components:

- Motion Sensor Switch (YM2108 Series)
- Wall Plate
- Mounting Screws (4)
- Terminal Caps (4)
- User Manual

Image 3.1: Included accessories and product dimensions.

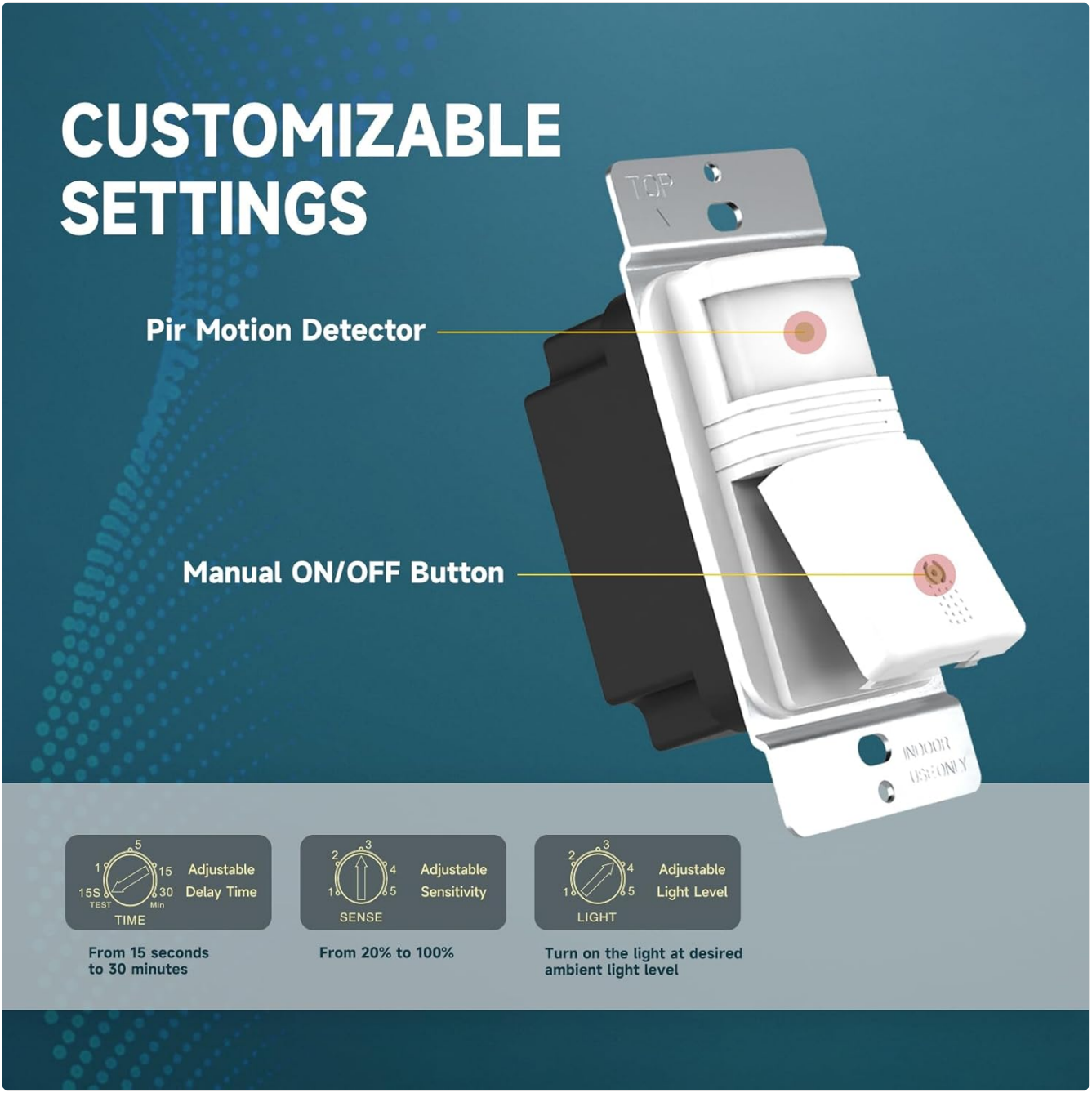

Image 3.2: Overview of the PIR Motion Detector, Manual ON/OFF Button, and adjustment dials for Time, Sense, and Light.

4. Setup and Installation

Pre-Installation Checklist:

- Ensure power is OFF at the circuit breaker.
- Confirm the presence of a neutral wire in your electrical box.
- Tools required: Screwdriver, wire strippers, electrical tape (optional).

Wiring Guide:

Follow these steps carefully. If you are unsure, consult a qualified electrician.

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 using the provided terminal caps:
    - **Black wire (Switch)** to **Hot wire (Circuit Box)**
    - **Red wire (Switch)** to **Load wire (Circuit Box)** (connects to light/fan)
    - **White wire (Switch)** to **Neutral wire (Circuit Box)** (REQUIRED)
    - **Green wire (Switch)** to **Ground wire (Circuit Box)**
5. Carefully push the wired switch into the electrical box.
6. Secure the switch to the electrical box with the mounting screws.
7. Attach the wall plate.
8. Restore power at the circuit breaker.

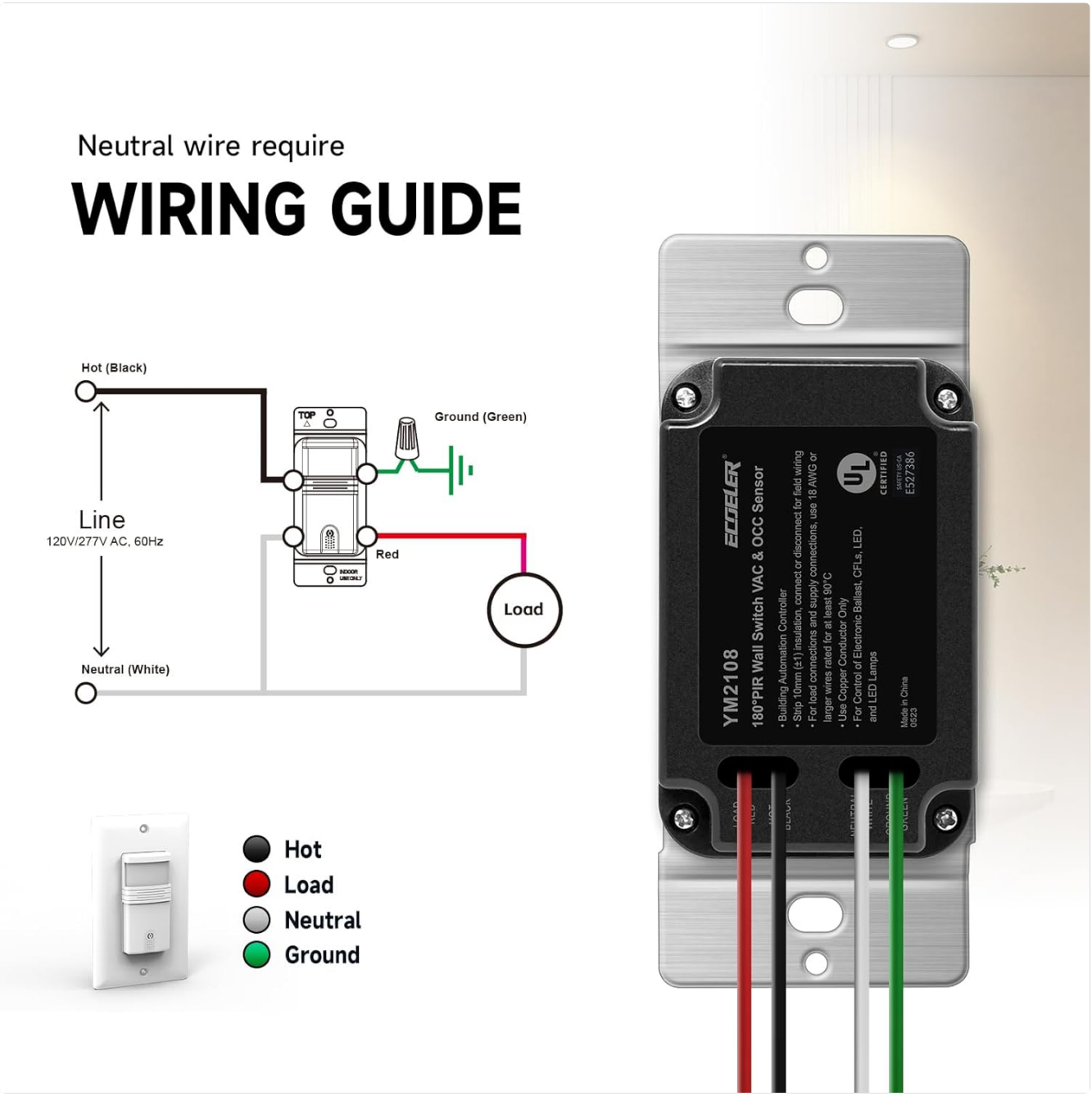

Image 4.1: Detailed wiring diagram for the ECOELER Motion Sensor Light Switch (YM2108 Series).

5. Operating Instructions

Your ECOELER Motion Sensor Light Switch offers two primary operating modes and several adjustable settings to customize its performance.

Operating Modes:

The mode selector switch is located on the front of the device, typically beneath a small cover or flap.

- **OCC (Occupancy) Mode:** In this mode, the lights will automatically turn ON when motion is detected and automatically turn OFF when the space is unoccupied for the set time delay. This mode provides full hands-free operation.
- **VAC (Vacancy) Mode:** In this mode, the lights must be turned ON manually using the manual ON/OFF button. The lights will then automatically turn OFF when no motion is detected for the set time delay. This mode is ideal for rooms where manual control is preferred for turning on, but automatic turn-off is desired for energy saving.

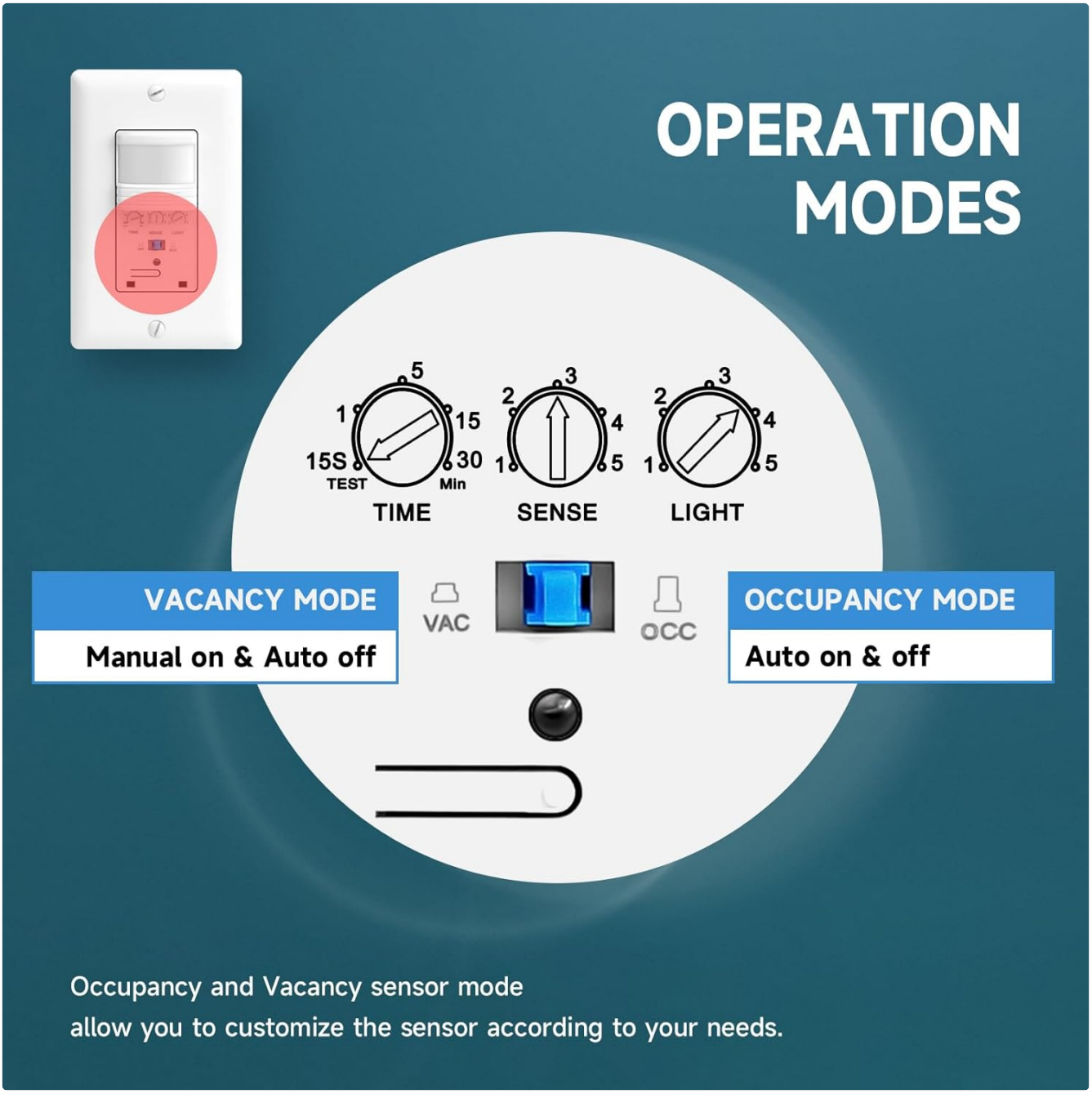

Image 5.1: Mode selection switch for Occupancy (Auto on & off) and Vacancy (Manual on & Auto off).

Adjustable Settings:

Three small rotary dials allow you to fine-tune the switch's behavior. These are typically located behind a small cover

on the front of the switch.

- **TIME (Time Delay):** Adjusts how long the lights remain ON after the last detected motion.
  - Range: 15 seconds (TEST) to 30 minutes.
  - Setting 'TEST' is for quick testing of motion detection.
- **SENSE (Sensitivity):** Controls the motion detection range.
  - Range: Approximately 6.56 ft (20%) to 29.52 ft (100%).
  - Adjust as needed to prevent unwanted triggers or ensure adequate coverage.
- **LIGHT (Ambient Light Level):** Determines the ambient light threshold at which the sensor will allow the lights to turn ON.
  - Range: 1=5lux (very dark) to 5=all day (always allow lights to turn on, regardless of ambient light).
  - Setting '5' effectively disables the ambient light sensor, allowing the lights to turn on with motion even in bright conditions.

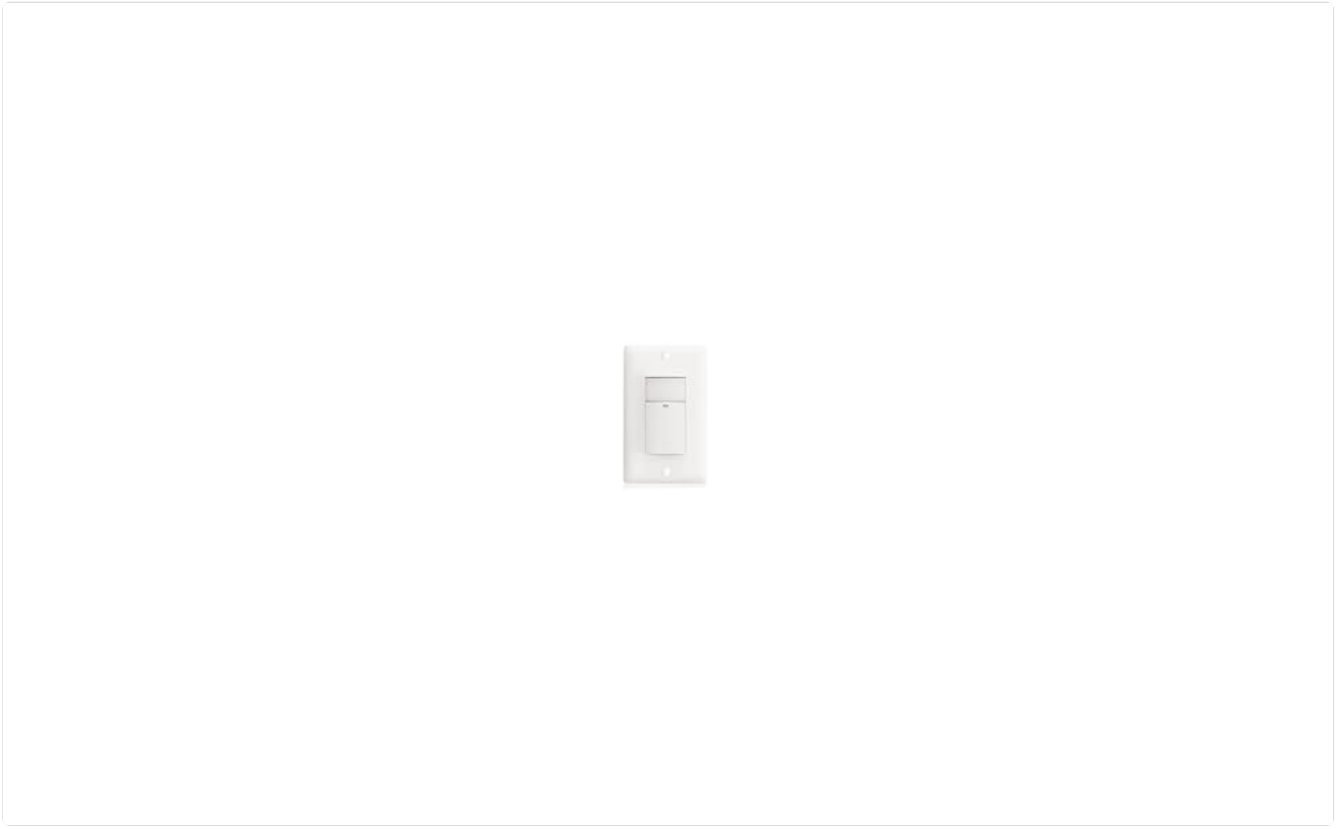

Image 5.2: Detailed breakdown of adjustable settings for Time, Sense, and Light.

6. Maintenance

The ECOELER Motion Sensor Light Switch requires minimal maintenance to ensure optimal performance.

- **Cleaning:** Periodically wipe the sensor lens and switch surface with a soft, dry cloth. Do not use abrasive cleaners, solvents, or excessive moisture, as this can damage the device.
- **Obstruction-Free:** Ensure the sensor's field of view is not obstructed by furniture, curtains, or other objects, as this can affect motion detection.
- **No User Serviceable Parts:** Do not attempt to open or repair the switch. Refer all servicing to qualified

personnel.

7. Troubleshooting

If you experience issues with your motion sensor light switch, try the following troubleshooting steps:

Problem	Possible Cause	Solution
Lights do not turn ON with motion.	• Power is off. • Incorrect wiring. • Ambient light too high (LIGHT setting). • Sensitivity too low (SENSE setting). • Motion outside detection range.	• Check circuit breaker. • Verify wiring connections (refer to Section 4). • Adjust LIGHT dial towards '5' (all day). • Increase SENSE dial setting. • Ensure motion occurs within sensor's field of view.
Lights stay ON too long or turn OFF too quickly.	• Incorrect TIME setting. • Constant motion detected.	• Adjust TIME dial to desired duration. • Ensure no continuous motion sources are within detection range.
Lights turn ON unexpectedly (false triggers).	• Sensitivity too high (SENSE setting). • Heat sources or air currents.	• Decrease SENSE dial setting. • Ensure sensor is not near HVAC vents, windows, or other heat sources.
Lights do not turn OFF.	• Constant motion detected. • Switch stuck in manual ON. • Faulty unit.	• Ensure no continuous motion sources. • Check if the manual ON/OFF button is engaged. • Contact customer support if issue persists.

8. Specifications

Specification	Detail
Operation Mode	Automatic (Occupancy/Vacancy)

Specification	Detail
Current Rating	10 Amps
Operating Voltage	120 Volts (AC)
Contact Type	Normally Open
Connector Type	Wiring Cap Connect
Switch Type	PIR Motion Sensor
Terminal	Screw
Material	Acrylonitrile Butadiene Styrene, Copper, Metal, Plastic, Steel
Item Dimensions (L x W x H)	4.6 x 2.87 x 2.24 inches
Circuit Type	1-way (Single Pole)
Mounting Type	Wall Mount
Actuator Type	PIR motion sensor
Lower Temperature Rating	32 Degrees Fahrenheit (0°C)
Upper Temperature Rating	131 Degrees Fahrenheit (55°C)
Controller Type	Motion sensor
Control Method	Automatic and Manual
Wattage	600 watts (Incandescent), 300 watts (LED/CFL)
Color	White
Unit Count	10 Count (for this specific product variant)
Contact Material	Stainless Steel
International Protection Rating	IP40
Specification Met	UL; Title 24; FCC
Model Number (ASIN)	B07R8BKV1K

9. Warranty Information

All ECOELER products come with a**1-year warranty** from the date of purchase. This warranty covers non-man-made damage under normal use. For any warranty claims or replacement solutions, please contact our support team.

10. Support

For further assistance, technical support, or to report any issues not covered in this manual, please contact ECOELER customer service. Refer to the product packaging or the ECOELER official website for current contact information.