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› RAYZEK RZ020 Motion Sensor Light Switch User Manual

RAYZEK RZ020-5A-G

RAYZEK RZ020 Motion Sensor Light Switch User Manual

Model: RZ020-5A-G

1. PRODUCT OVERVIEW

The RAYZEK RZ020 Motion Sensor Light Switch is designed to automate your lighting based on motion detection. It offers versatile 3-in-1 sensor modes: Occupancy, Vacancy, and Manual ON/OFF. This switch is suitable for various indoor applications and is UL Listed for safety.



PIR MOTION SENSOR SWITCH

Occupancy Sensor/Vacancy Sensor/On-Off Switch 3 in1



PIR
Motion Sensor



Detection Range
6-9m , $\leq 150^\circ$



Time-Delay
15sec-30min



15/25/35Lux/OFF
Low&High Sensitivity



Figure 1: RAYZEK PIR Motion Sensor Switch Overview

2. SAFETY INFORMATION

WARNING: To avoid fire, shock, or death, turn OFF power at the circuit breaker or fuse box and test that the power is OFF before wiring. Installation should be performed by a qualified electrician if you are not familiar with electrical wiring.

- This device requires an effective Ground Wire. The device will not function if it is not grounded or the ground wire does not work.
- No Neutral Wire is required.
- Single Pole Indoor Use Only. Not suitable for 3-way circuits.
- Ensure all wire connections are secure and insulated.

3. PACKAGE CONTENTS

- RAYZEEK RZ020 Motion Sensor Light Switch
- Wall Plate
- Mounting Screws
- Wire Nuts
- User Manual

4. INSTALLATION INSTRUCTIONS

1. **Turn Off Power:** Locate your circuit breaker or fuse box and turn off the power to the switch location. Verify power is off using a voltage tester.
2. **Remove Old Switch:** Carefully remove the existing wall plate and light switch. Disconnect the wires from the old switch.
3. **Identify Wires:** Use a voltage tester to identify the Hot wire (Line), Load wire, and Ground wire. Label them for easy identification.
4. **Connect New Switch:** Connect the wires from the RZ020 switch to your household wiring using the provided wire nuts:
 - Black wire from RZ020 to the Hot wire (Line)
 - Red wire from RZ020 to the Load wire
 - Green wire from RZ020 to the Ground wire

WIRING DIRECTIONS:

- ▷ AN EFFECTIVE GROUND WIRE IS REQUIRED
Or this sensor will not function

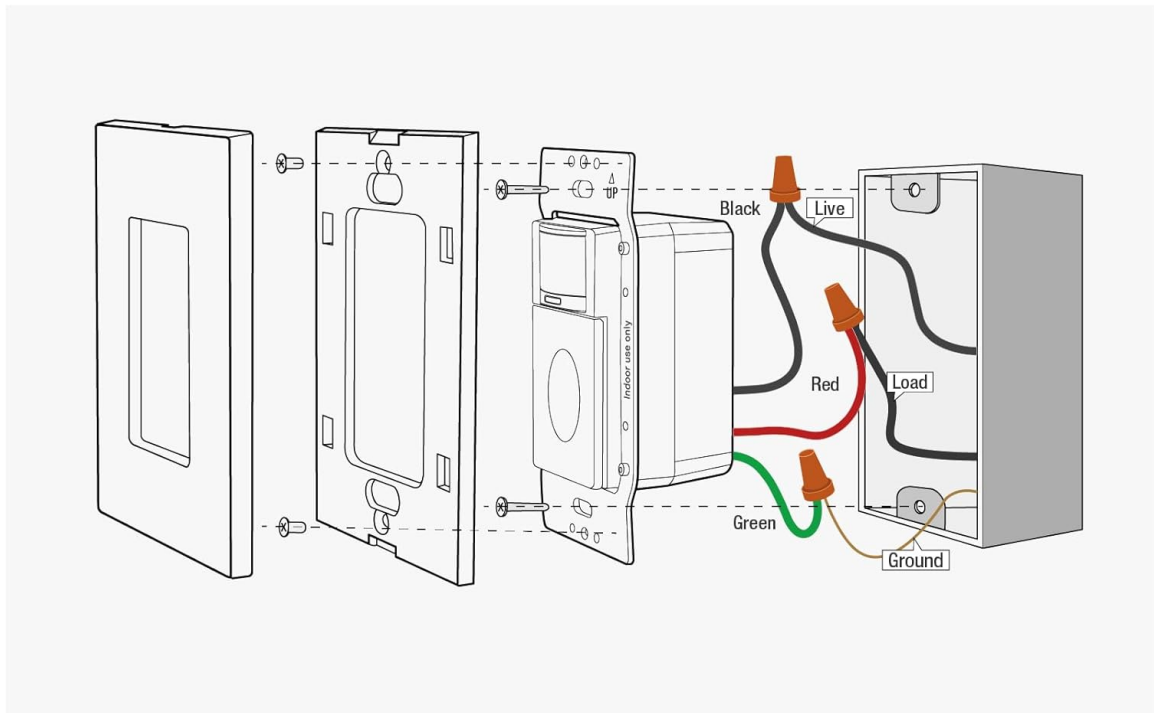


Figure 2: Wiring Directions - Connect Hot, Load, and Ground wires. Neutral wire is not required.

5. **Mount Switch:** Gently push all connected wires back into the wall box, ensuring no wires are exposed. Secure the RZ020 switch into the wall box using the provided screws.
6. **Install Wall Plate:** Attach the decorative wall plate over the switch. Ensure the side marked 'UP' is facing upwards.
7. **Restore Power:** Turn the power back ON at the circuit breaker. The green indicator light on the RZ020 will flash, indicating it is warming up and functioning.

Video 1: Installation Guide for RAYZEEK RZ020 Motion Sensor Light Switch. This video demonstrates the step-by-step process of installing the RZ020 switch, including wiring and mounting.

5. OPERATION MODES

The RZ020 offers three versatile operating modes: Occupancy, Vacancy, and Manual ON/OFF. The default setting after connection is Occupancy mode with a 1-minute time delay and 25 Lux ambient light sensor value.

OPERATION MODES

3 IN 1



OCCUPANCY

AUTO ON
AUTO OFF



VACANCY

Manual ON
AUTO OFF



MANUAL

Manual ON
Manual OFF



Figure 3: Overview of 3-in-1 Operation Modes

5.1. Occupancy Sensor Mode (Auto ON & Auto OFF)

In this mode, the light automatically turns ON when motion is detected and automatically turns OFF after a set time delay when no motion is detected. This mode is ideal for high-traffic areas where hands-free operation is desired.

5.2. Vacancy Sensor Mode (Manual ON & Auto OFF)

In Vacancy mode, the light must be manually turned ON by pressing the main button. It will then automatically turn OFF after a set time delay when no motion is detected. This mode is suitable for areas where you prefer to control when the light comes on, but still want the convenience of automatic shut-off.

5.3. Manual ON/OFF Mode

In Manual mode, the switch functions like a traditional light switch. The light is turned ON or OFF by pressing the small button. Motion detection is still active (red indicator flashes), but it will not trigger the light to turn ON or OFF. This mode is useful when you need the light to stay on indefinitely or prefer full manual control.

Video 2: RAYZEEK RZ020 Motion Sensor Switch User Guide. This video provides a detailed explanation of the different operation modes and how to switch between them.

6. SETTING ADJUSTMENTS

The RZ020 allows for easy adjustment of its operating mode, time delay, and sensitivity without removing the wall plate.

EASY Adjust Mode And Setting
























 Accurate to adjust with button	 3in1 Mode	 Time-delay	 Sensitivity and Ambient light setting
 <p>Small button</p> <p>Big button</p>	<p>Press and hold small button for more than 4s, LED will flash:</p> <ul style="list-style-type: none">  OCCUPANCY AUTO ON AUTO OFF  VACANCY Manual ON AUTO OFF  OCCUPANCY (without light sensor) AUTO ON AUTO OFF <p>Short press Small button →  MANUAL</p> <p>Short press Big button → Manual ON / Manual OFF</p>	<p>Press and hold big button for more than 4s, LED will flash:</p> <ul style="list-style-type: none"> 15 seconds 1 min 3 mins 5 mins 15 mins 30 mins	<p>Press big button and small button at the same time, LED will flash:</p> <ul style="list-style-type: none"> Low sensitivity High sensitivity Light sensor value 15Lux Light sensor value 25Lux Light sensor value 35Lux Restore to factory settings

Figure 4: Easy Adjust Mode and Setting Overview

6.1. Adjusting Operation Mode

To change the operation mode (Vacancy, Occupancy, Occupancy without light sensor):

1. Press and hold the **small button** for more than 4 seconds. The LED indicator will flash.
2. The number of flashes indicates the current mode:
 - 1 flash: Vacancy mode
 - 2 flashes: Occupancy mode
 - 3 flashes: Occupancy without light sensor mode
3. Release the button after the desired number of flashes.

6.2. Adjusting Time Delay

To change the time delay for automatic shut-off:

1. Press and hold the **big button** for more than 4 seconds. The LED indicator will flash.
2. The number of flashes indicates the time delay setting:
 - 1 flash: 15 seconds
 - 2 flashes: 1 minute
 - 3 flashes: 3 minutes
 - 4 flashes: 5 minutes
 - 5 flashes: 15 minutes
 - 6 flashes: 30 minutes
3. Release the button after the desired number of flashes.

6.3. Adjusting Sensitivity and Ambient Light Sensor

To adjust the motion sensitivity or ambient light sensor value:

1. Press and hold **both the big and small buttons simultaneously** for more than 4 seconds. The LED indicator will flash.
2. The number of flashes indicates the setting:
 - 1 flash: Low sensitivity
 - 2 flashes: High sensitivity (Default)
 - 3 flashes: Light sensor 15 Lux
 - 4 flashes: Light sensor 25 Lux (Default)
 - 5 flashes: Light sensor 35 Lux
 - 6 flashes: Restore to factory settings
3. Release the buttons after the desired number of flashes.



LIGHT SENSOR

Press big button and small button at the same time

Default 25Lux(± 10 Lux), 15Lux, 35Lux, OFF, Low Sensitivity, High Sensitivity, Restore to Factory Settings, Optional.

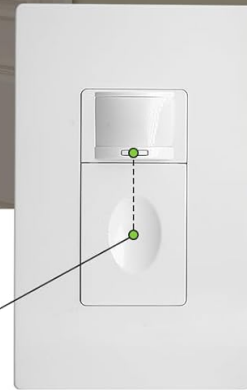


Figure 5: Ambient Light Sensor Functionality - Light stays off if bright, turns on if dark (based on Lux setting).

7. SPECIFICATIONS

Feature	Value
Power Source	120VAC, 50/60Hz
Capacity	Resistive/Standard Ballast/Electronic Ballast/Tungsten/LED: 5.0A, Motor 1/3HP
Detection Range	150°
Detection Distance	6-9m max (<27°C)
Light Sensor	Default 25Lux (± 10 Lux), 15Lux, 35Lux, OFF optional
Time-Delay	Default 1min (15secs, 1min, 3mins, 5mins, 15mins, 30mins adjustable)
Working Humidity	< 95%RH
Installation Height	1.2m ~ 1.6m
Certifications	UL & FCC Listed

HANDS-FREE CONVENIENCE

OCCUPANCY MODES AUTO ON/OFF



TIME-DELAY

Press and hold big button

Default 1min (15secs, 1min, 3mins, 5mins, 15mins, 30mins adjustable)

Figure 6: Detailed Product Specifications

Item dimensions

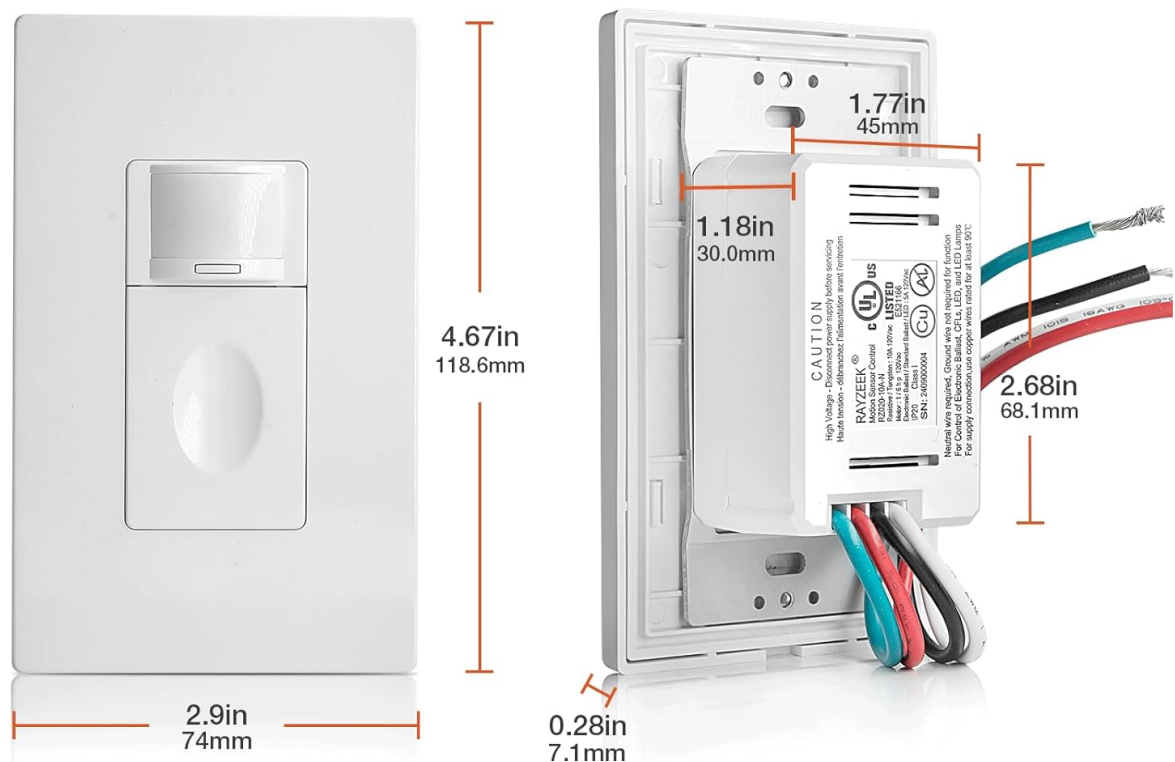


Figure 7: Item Dimensions

8. TROUBLESHOOTING

- **Light does not turn ON:**
 - Ensure power is ON at the circuit breaker.
 - Verify all wiring connections are secure.
 - Check if the ground wire is effectively connected.
 - Confirm the ambient light sensor setting is not preventing the light from turning on (e.g., if set to stay OFF when bright).
 - Check the sensitivity setting; increase if motion is not being detected.
- **Light does not turn OFF:**
 - Ensure there is no continuous motion within the sensor's detection range.
 - Check the time delay setting; it might be set to a longer duration.
 - If in Manual ON/OFF mode, the light will not turn off automatically.
- **Sensor is too sensitive/not sensitive enough:**
 - Adjust the sensitivity setting as described in Section 6.3.
 - Ensure the sensor lens is clean and unobstructed.

- **Light turns ON/OFF randomly:**

- Check for drafts, heat sources, or small pets that might be triggering the sensor.
- Adjust the sensitivity setting to a lower level.

9. WARRANTY AND SUPPORT

The RAYZEEK RZ020 Motion Sensor Light Switch comes with a **1-Year Warranty** from the date of purchase. If you encounter any issues or require technical assistance, please contact RAYZEEK customer support.