TOPGREENER TDHOS5

TOPGREENER TDHOS5 Dual Technology Humidity Sensor Switch Instruction Manual

Model: TDHOS5 | Brand: TOPGREENER

1. INTRODUCTION

The TOPGREENER TDHOS5 is a dual-technology sensor switch designed to automatically control bathroom fans and lights. It integrates both Passive Infrared (PIR) motion detection and humidity sensing capabilities. This device helps manage humidity levels to prevent mold and mildew growth while providing convenient, energy-efficient lighting and ventilation control.

This manual provides detailed instructions for the safe installation, operation, and maintenance of your TDHOS5 sensor switch.

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 or a person with a thorough understanding of electrical wiring.

- Always disconnect power before servicing or installing the switch.
- This device is for indoor use only.
- A neutral wire is required for installation.
- Ensure all wire connections are secure and properly insulated.
- Do not exceed the maximum load ratings for the switch (500W for light, 3A for fan).
- Comply with all local and national electrical codes.

3. PACKAGE CONTENTS

Verify that all components are present before beginning installation:

- TOPGREENER TDHOS5 Dual Technology Humidity Sensor Switch
- Interchangeable face covers (White, Black, Light Almond - *Note: Availability of alternate face covers may vary by package.*)

- Wall plate (*Note: Wall plate may not be included in all packages*)
- Wire nuts
- Instruction Manual

4. PRODUCT FEATURES

The TDHOS5 sensor switch offers the following key features:

- **Dual Technology Control:** Combines Passive Infrared (PIR) motion sensing and humidity sensing for comprehensive automation.
- **Humidity Control:** Automatically activates the fan when humidity exceeds a preset level and turns it off when humidity returns to normal, preventing mold and mildew.
- **Motion Detection:** PIR sensor detects occupancy to automatically turn lights and/or fans ON/OFF.
- **Operating Modes:** Supports Occupancy Mode (Auto ON/Auto OFF for both light and fan) and Vacancy Mode (Manual ON/Auto OFF for light, Auto ON/Auto OFF for fan).
- **Adjustable Settings:** Customizable time delay (15 seconds to 30 minutes) and humidity levels.
- **Independent Control:** Two single-pole relays allow separate control of the bathroom light and fan.
- **LED Compatibility:** Compatible with LED bulbs.
- **Energy Saving:** Designed to save energy by up to 40% with motion sensing.
- **Wide Coverage:** Up to 600 square feet with a 180-degree field of view.
- **Neutral Wire Required:** Requires a neutral wire for proper operation.
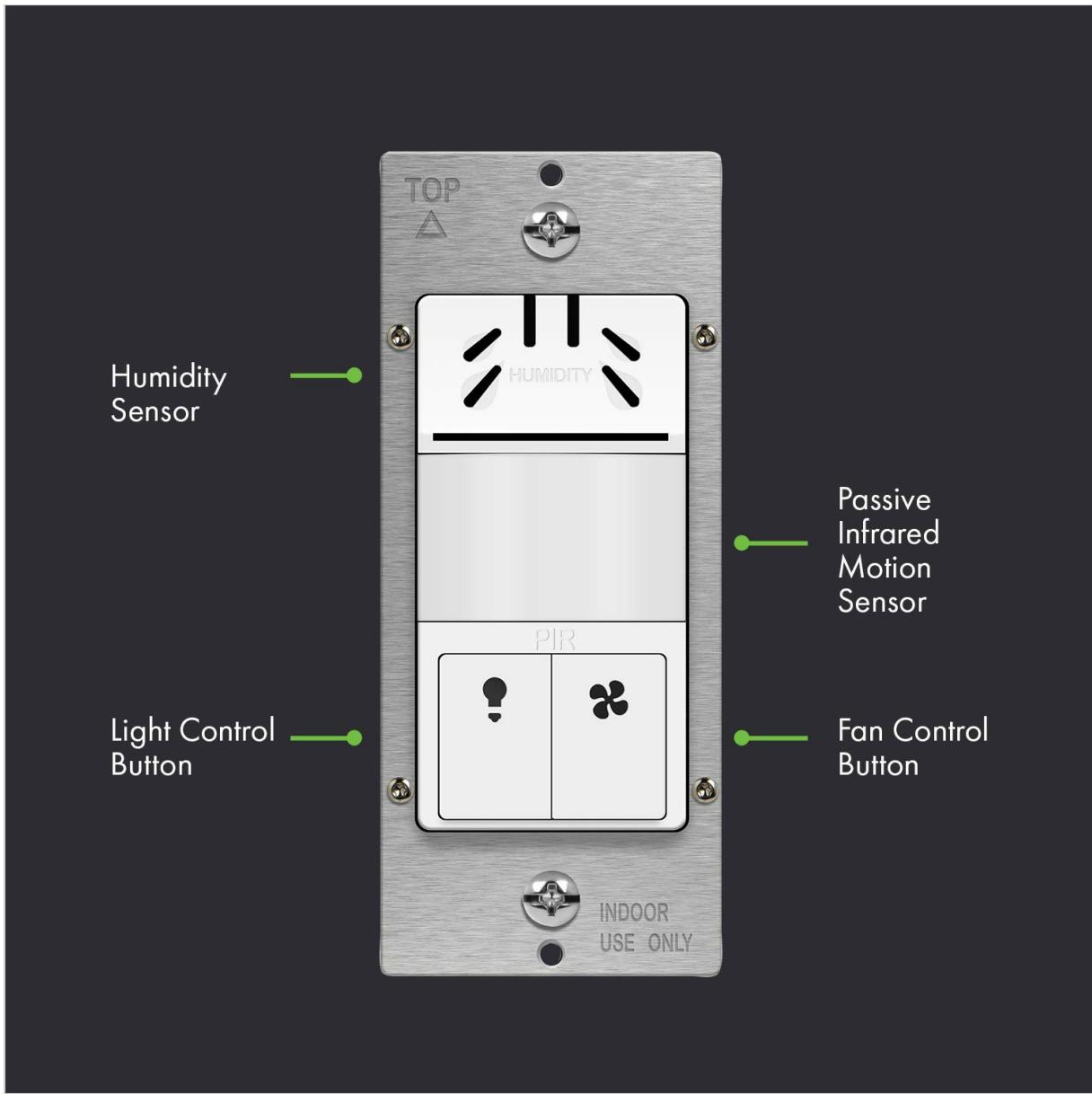
Figure 1: Overview of the TOPGREENER TDHOS5 Dual Technology Humidity Sensor Switch, highlighting the humidity sensor, passive infrared motion sensor, light control button, and fan control button.

5. INSTALLATION

5.1 Wiring Requirements

- A neutral wire is required.
- Separate switch legs for the light and fan are needed.
- Ensure the electrical box is deep enough to accommodate the switch.

5.2 Wiring Instructions

1. **Turn Off Power:** Before starting, turn off the power at the circuit breaker or fuse box to avoid electrical shock.

2. **Identify Wires:** Carefully identify the following wires in your electrical box:

   - Hot Wire (Line)
   - Neutral Wire (Required)
   - Load Wire for Light
   - Load Wire for Fan

◦ Ground Wire

3. **Connect Wires:** Use the provided wire nuts to connect the TDHOS5 switch wires to your house wiring according to the wiring diagram.

    ◦ Connect the **Red** wire from the switch to the **Light Load** wire.
    ◦ Connect the **Blue** wire from the switch to the **Fan Load** wire.
    ◦ Connect the **Black** wire from the switch to the **Hot (Line)** wire.
    ◦ Connect the   wire from the switch to the   wire.
    ◦ Connect the **Green** wire from the switch to the **Ground** wire.

4. **Mount the Switch:** Gently push the wired switch into the wall box. Secure it with the mounting screws.

5. **Install Faceplate:** Attach the desired face cover and wall plate.

6. **Restore Power:** Turn the power back on at the circuit breaker.
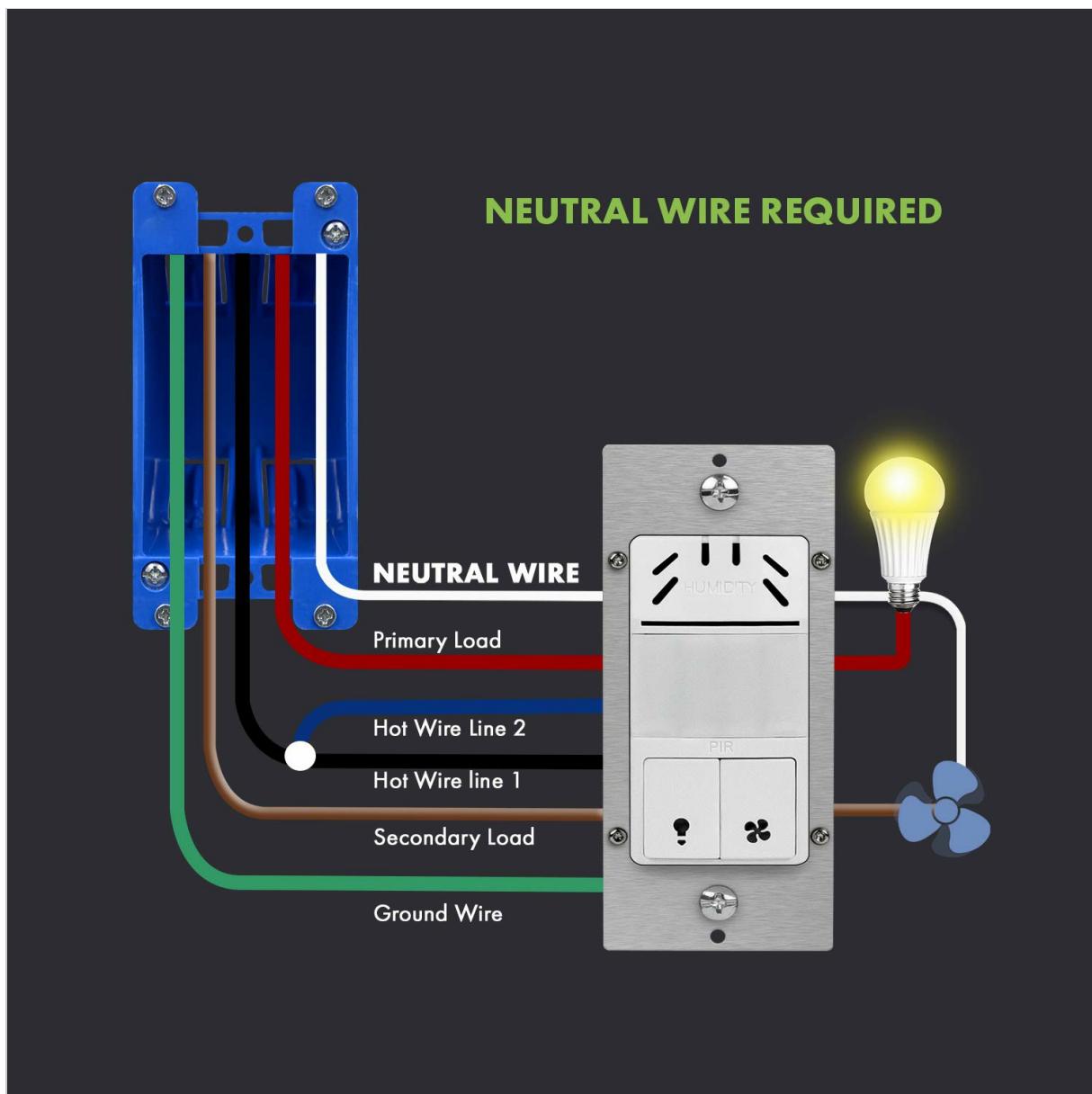

Figure 2: Basic wiring diagram illustrating the connection of the TDHOS5 switch, emphasizing the required neutral wire and connections for primary load (light) and secondary load (fan).
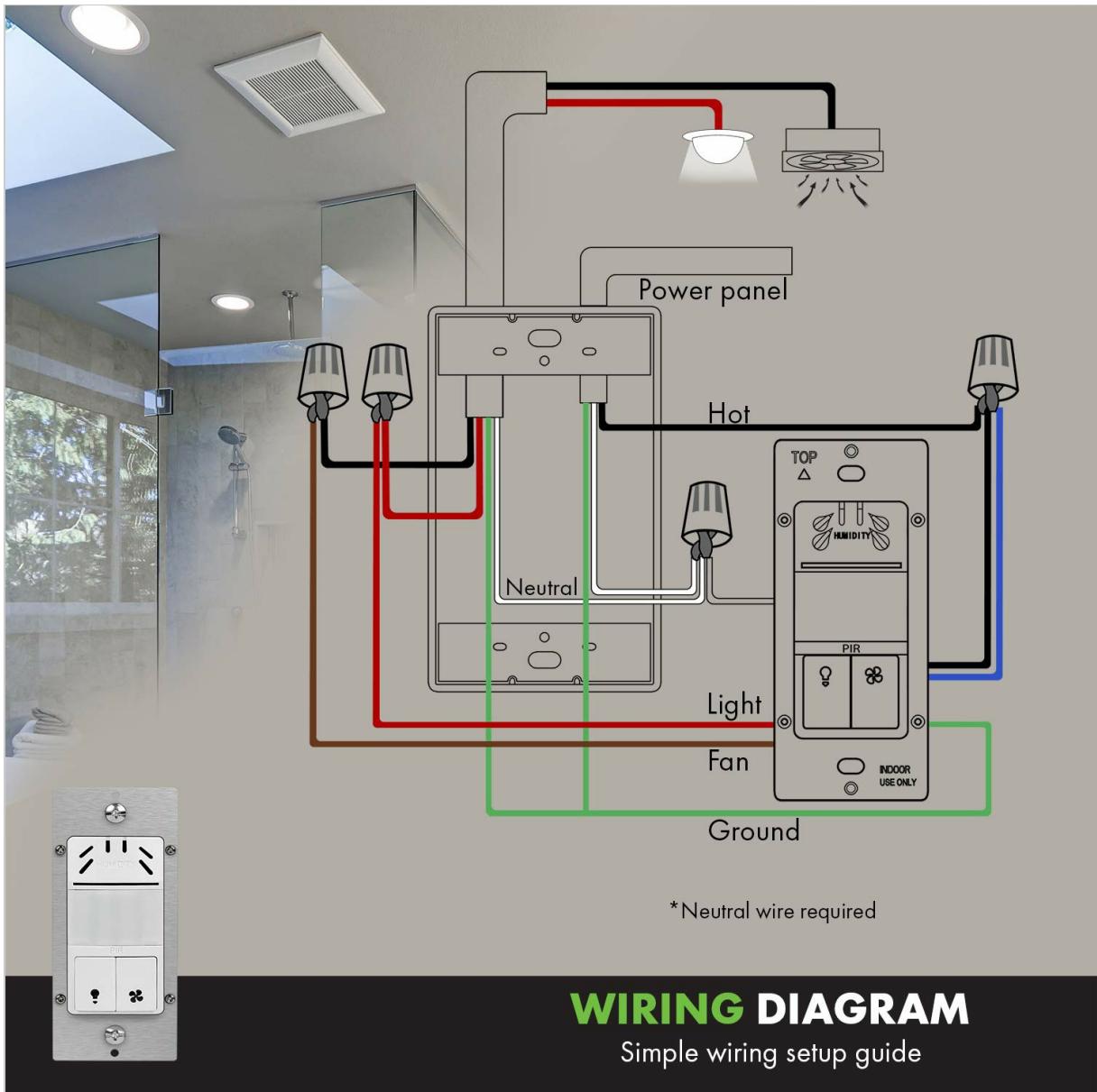
Figure 3: Comprehensive wiring diagram showing the TDHOS5 switch connected to a power panel, light fixture, and exhaust fan within a bathroom setup. A neutral wire is essential for this installation.

6. OPERATION

6.1 Initial Power-Up

Upon initial power-up, the switch will enter a self-test mode. The indicator LEDs may flash. Allow a few moments for the device to initialize.

6.2 Operating Modes (Motion Sensor)

The motion sensor features two operating modes:

- **Occupancy Mode (Default):** Provides automatic ON/OFF control for both the light and the fan based on detected motion. When motion is detected, the light and fan turn on. After no motion is detected for the set time delay, they turn off.
- **Vacancy Mode:** The light must be turned ON manually. The fan operates automatically based on humidity levels or motion detection. After no motion is detected for the set time delay, the light and fan will turn off automatically.

To switch between Occupancy and Vacancy Mode: Press and hold both the light and fan buttons for 10

seconds. The green LED indicator will illuminate solid, indicating the mode has been toggled.

6.3 Humidity Sensor Operation

The humidity sensor monitors ambient humidity levels. When the humidity exceeds the preset threshold, the fan will automatically turn on. The fan will continue to run for the set minimum time or until the humidity level drops below the threshold.
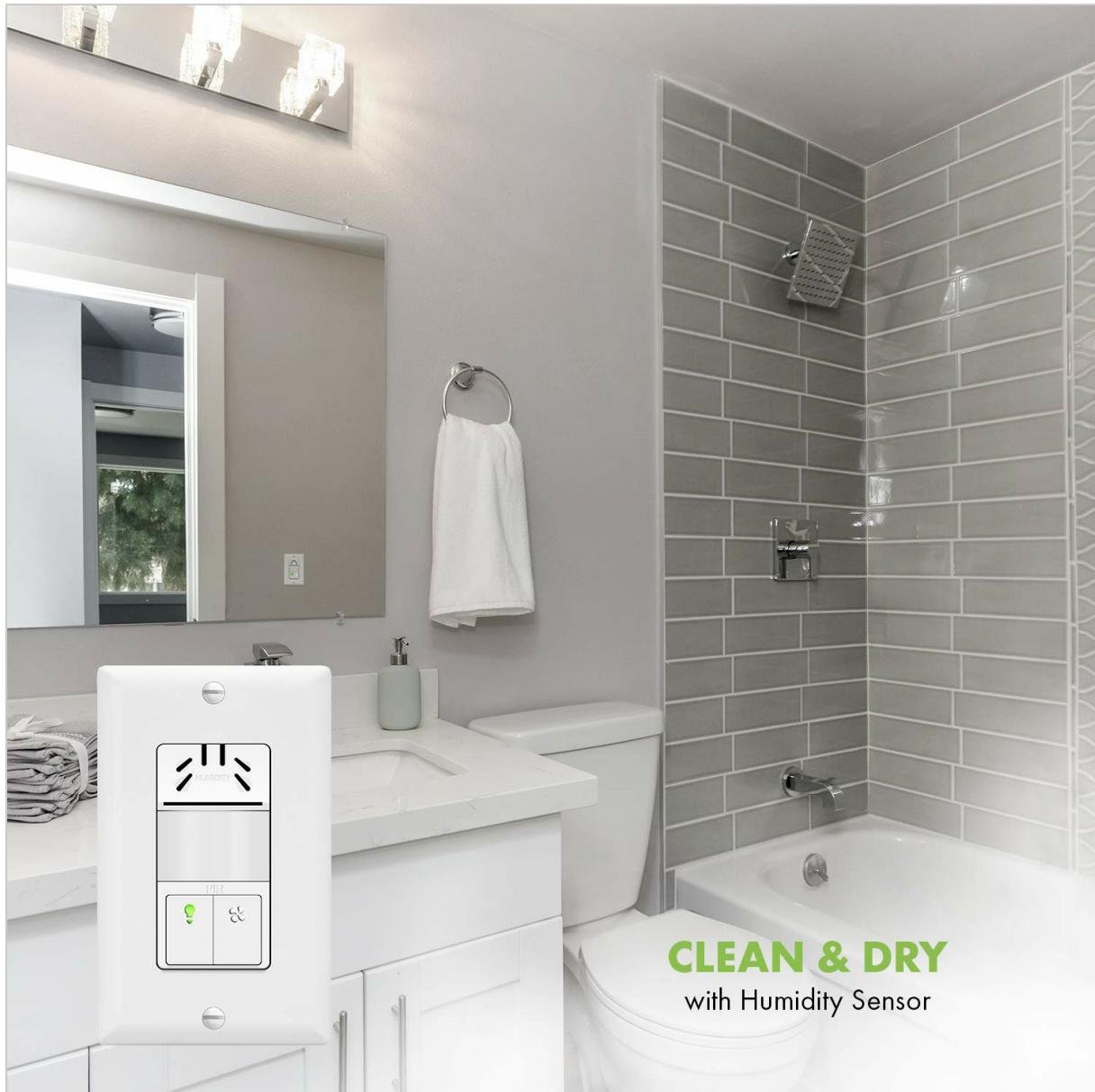
Figure 4: The TDHOS5 switch installed in a bathroom, demonstrating its role in maintaining a clean and dry environment by managing humidity.

Figure 5: A steamy bathroom environment where the TDHOS5 switch's humidity sensor would activate the fan to reduce moisture and improve air quality.

6.4 Adjustable Settings

The TDHOS5 allows for adjustment of time delay and humidity sensitivity:

- **Time Delay:** 4 settings ranging from 15 seconds to 30 minutes. Refer to the specific instructions provided with the product for programming these settings.
- **Humidity Level:** 3 adjustable levels (Low, Medium, High) to set the humidity threshold for fan activation. Refer to the specific instructions provided with the product for programming these settings.

Figure 6: The TDHOS5 switch installed in a laundry room, demonstrating its utility for automatic fan control to manage humidity in areas prone to moisture.

7. MAINTENANCE

The TOPGREENER TDHOS5 switch requires minimal maintenance.

- **Cleaning:** To clean the switch, wipe it with a soft, damp cloth. Do not use abrasive cleaners or solvents. Ensure power is off before cleaning.
- **Sensor Obstruction:** Ensure the humidity sensor and PIR lens are not obstructed by dust, paint, or other objects, as this can affect performance.
- **Regular Checks:** Periodically test the functionality of the motion and humidity sensors to ensure they are operating correctly.

8. TROUBLESHOOTING

Problem	Possible Cause	Solution

Problem	Possible Cause	Solution
Light/Fan does not turn ON.	No power, incorrect wiring, sensor obstructed, incorrect mode.	Check circuit breaker. Verify wiring connections. Ensure sensor is clear. Check operating mode (Occupancy/Vacancy).
Light/Fan stays ON too long or turns OFF too quickly.	Incorrect time delay setting.	Adjust the time delay setting as per the operation instructions.
Fan does not activate with high humidity.	Incorrect humidity level setting, sensor obstructed.	Adjust the humidity sensitivity setting. Ensure the humidity sensor is not blocked.
Motion sensor is too sensitive or not sensitive enough.	Sensor placement, environmental factors.	Ensure the sensor has a clear line of sight. Avoid placing near heat sources or drafts.
LED indicator not working.	Faulty unit.	Contact customer support if all other functions are working correctly.

9. SPECIFICATIONS

- **Model:** TDHOS5
- **Voltage:** 120 Volts AC
- **Wattage (Light):** Up to 500 Watts
- **Amperage (Fan):** Up to 3 Amperes
- **Material:** Thermoplastic Polycarbonate
- **Installation Method:** In-Wall
- **Sensor Type:** Passive Infrared (PIR) and Humidity Sensor
- **Coverage:** 180 degrees, up to 600 sq ft
- **Time Delay Settings:** 15 seconds, 5 minutes, 20 minutes, 30 minutes
- **Humidity Sensitivity:** Low, Medium, High
- **Certifications:** UL Listed, CA Title 24 Compliant
- **Dimensions (L x W x H):** 47 x 43 x 66 mm (1.85 x 1.7 x 2.6 inches)
- **Neutral Wire:** Required

10. WARRANTY AND SUPPORT

TOPGREENER products are designed for reliability and performance. For warranty information or technical support, please refer to the official TOPGREENER website or contact their customer service directly. Keep your purchase receipt as proof of purchase for warranty claims.

Contact Information: Please visit www.topgreener.com for the latest support resources and contact details.