

MS-HS3

Humidity Sensor Switch

120 V~ 50/60 Hz

Fan 3 A

Introduction

The humidity sensor switch controls exhaust and vent fans to remove moisture in the space when humidity levels exceed the threshold. The humidity sensor switch is ideal for bathrooms as it can detect rapid increases in humidity from showers or baths to reduce mold and mildew. It will also detect gradual increases in humidity in bathrooms as well as utility rooms, basements, and other spaces.

Important Notes

1. CAUTION: To reduce the risk of overheating and possible damage to other equipment, **DO NOT** use to control receptacles.
2. Install in accordance with all national and local electrical codes.
3. A neutral or ground connection is required for the product to function. When a neutral connection is available, remove the green sleeve and connect to the neutral. If a neutral is not available, connect the green-sleeved wire to ground only in retrofit and replacement applications. If neither wire is present, consult a licensed electrician.
4. For indoor/dry location use only. Operate between 32 °F and 104 °F (0 °C and 40 °C).
5. Clean with a soft damp cloth only. **DO NOT** use any chemical cleaners.
6. **DO NOT** exceed twenty (20) devices on a single branch circuit.
7. Device makes an audible click when turning on/off. This is normal functionality.
8. Do not use for ceiling paddle fans.
9. For supply connections use 18 AWG (1.0 mm²) or larger wires suitable for at least 167 °F (75 °C).



WARNING: ENTRAPMENT HAZARD.

To avoid the risk of entrapment, serious injury, or death, these controls must not be used to control equipment that is not visible from every control location or that could create hazardous situations if operated accidentally or through malfunction (for example, motorized gates, garage doors, industrial doors, microwave ovens, heating pads, fireplaces, space heaters, etc.). It is the installer's responsibility to ensure that these controls are connected only to suitable loads and equipment types and that such equipment is visible from every control location. Failure to do so could result in serious injury or death.

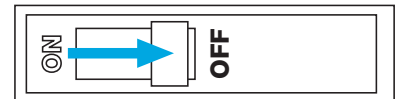
1

Turn power OFF at the circuit breaker



WARNING: SHOCK HAZARD.

May result in serious injury or death. **Turn off power at circuit breaker or fuse before installing.**



2

Ensure a neutral or ground connection is present

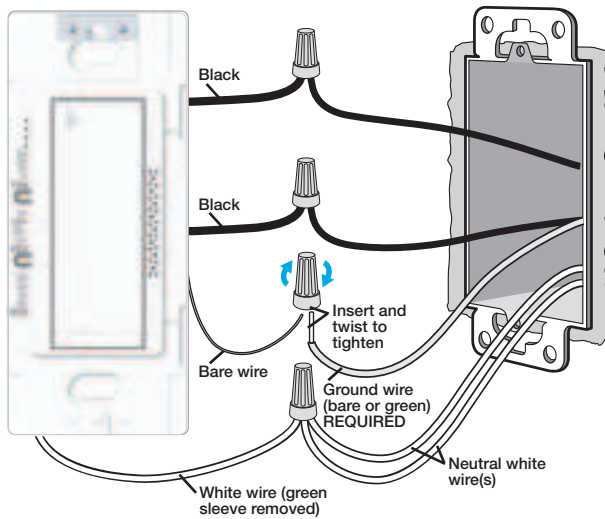
Look for a bundle of white neutral wires coming out of the electrical box.

- A. When a neutral is present, remove the green sleeve and connect the white wire to neutral from the electrical box. Connect the bare wire from the device to the ground wire from the electrical box.
- B. If no neutral is present, connect the bare and green-sleeved wire from the device to the ground wire from the electrical box (can only be used in retrofit and replacement applications when neutral is not available).
- C. If neither wire is present, consult an electrician. This device will not function if it is not connected to neutral or ground.

3 Remove the existing device and connect the humidity sensor switch

Note: The humidity sensor switch is for single-pole locations only. Not for use in 3-way or multi-location circuits.

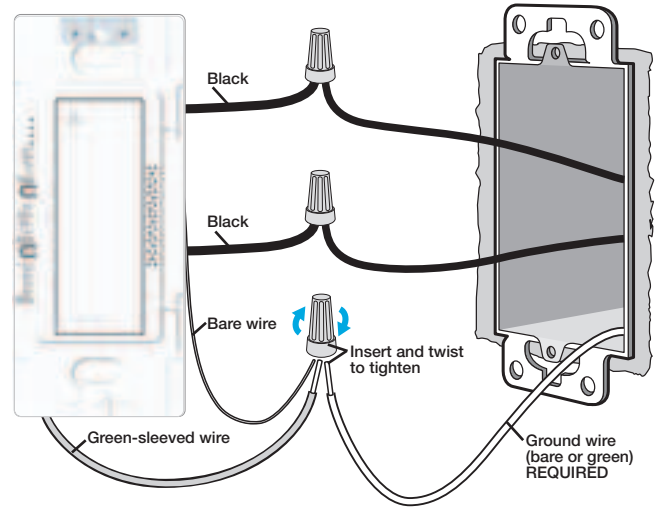
A. If neutral IS present in the electrical box: Remove green sleeve, connect white wire to neutral.



Notes:

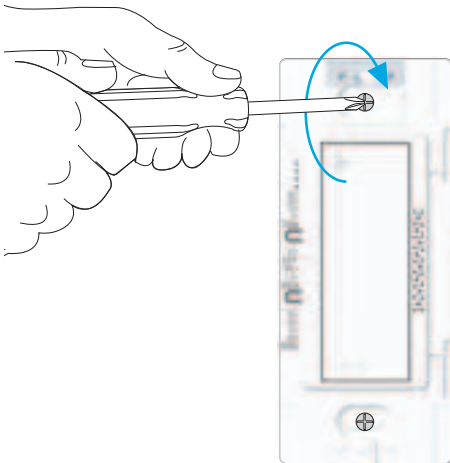
- Wire colors in the electrical box may vary.
- The black wires coming out of the humidity sensor switch are interchangeable.

B. If neutral IS NOT present in the electrical box: Connect the green-sleeved wire to ground.



Note: The black wires coming out of the humidity sensor switch are interchangeable.

4 Mount the switch using the provided screws

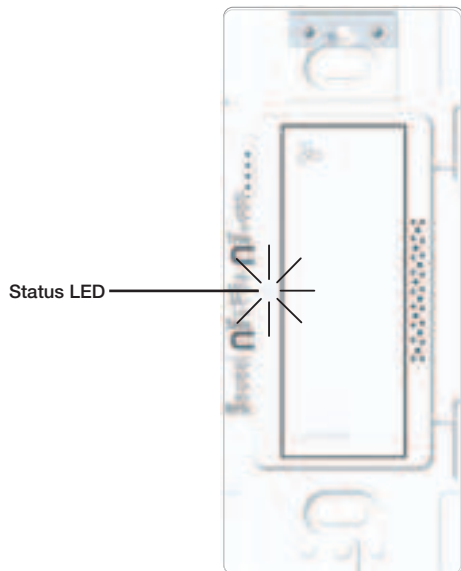
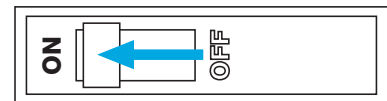


5 Turn power ON at circuit breaker

Once the power has been restored the status LED will blink until the device is fully powered up, which may take up to 20 seconds. Pressing the main toggle button during this time will not change the load state and the LED will continue to blink to indicate the powering up is still in progress.

After power has been restored and the device has fully powered up, the main toggle button can be used to change the state of the load and to test the installation.

Note: Humidity sensing will not be operational until the timeout has expired after a button press to turn off the fan. The default timeout is 30 minutes.



6 Additional modes and settings

The default factory settings have been optimized to meet the expectations of most customers for standard bathrooms and damp spaces (e.g., utility rooms and basements). However, the humidity sensor switch has several adjustable settings that can be used to alter operation for user preference or when necessary to address specific issues to accommodate non-standard space configurations.

Air Cycle Mode

This mode is used to circulate stale, stagnant air in spaces such as basements with poor ventilation. The fan will turn on every hour and run for the duration determined by the timeout setting. To enable Air Cycle Mode, go to www.lutron.com/MS-HS3/air_cycle

7 Installation is complete!

Lutron recommends adding the support QR code label (provided in box) to the back of the wallplate prior to fully installing it over the humidity sensor switch. If changes are needed after living with the humidity sensor switch for a few days, adjustments can be made by scanning the QR code or by going to www.lutron.com/MS-HS3 to get detailed instructions on how to make changes to the settings by using Advanced Programming Mode (APM).

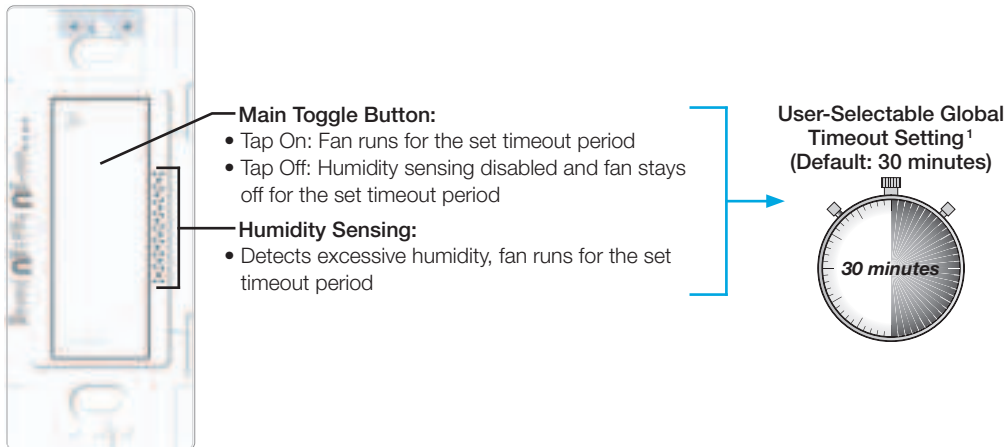
8 Operation

General Operation

The humidity sensor switch measures humidity levels in the space and uses advanced signal processing to determine when to activate the fan. The default operating mode will detect shower activity and/or high humidity levels, at which point the controlled fan will turn on. The fan will then run until the user-selectable timeout has expired (the default setting is 30 minutes). When the fan is running, the white status LED will be bright. Once the timeout has expired, the white status LED will transition to "dim".

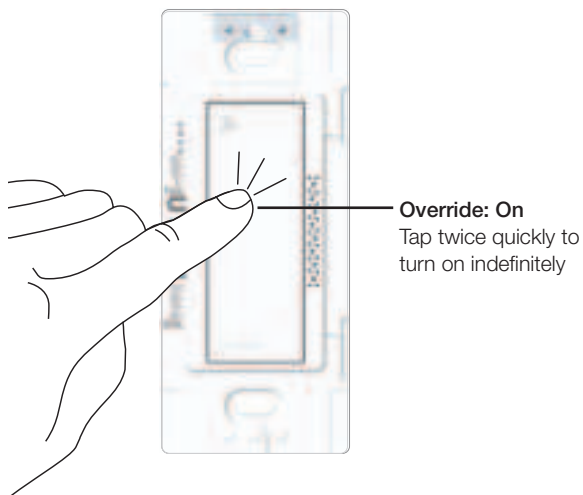
For most bathrooms, the fan will turn on during the shower or slightly after the shower has ended and the user has opened the shower enclosure. Typical propagation of humid air will fill the room starting at the ceiling and then move down the walls. This means that it is not uncommon for the mirror to begin fogging before the control senses that the humidity has changed and turns on the fan.

Operation



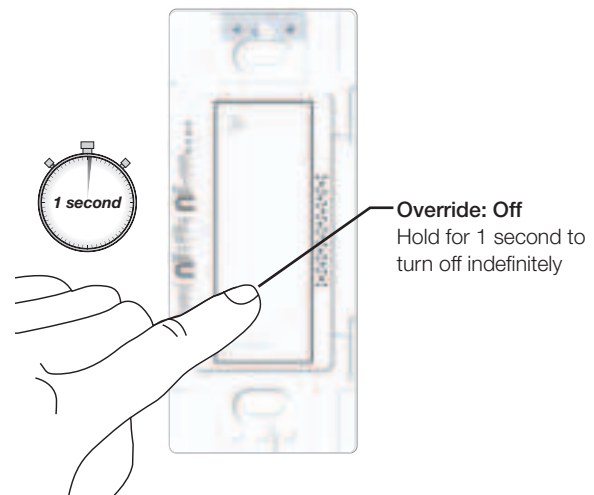
Note: The ability of the humidity sensor switch to detect changes in humidity levels and how quickly the fan turns on can be impacted by many factors. Spaces with high ceilings, open floorplans, glass shower doors with small openings, or significant ventilation will delay the movement of humidity towards the control and delay when the fan turns on.

¹ The default timeout period is 30 minutes. This is a global timeout that applies to any operation where timeout period is referenced. Timeouts and humidity sensing modes are programmable. For more information, go to www.lutron.com/MS-HS3



Notes:

- The status LED will cycle between 2 seconds bright and a 0.5 second dim.
- Pressing the main toggle button once will return the unit to normal operation.



Notes:

- The status LED will cycle between 2 seconds dim and a 0.5 second bright.
- Pressing the main toggle button once will return the unit to normal operation.

9 Troubleshooting

For the best experience and to fully understand the humidity sensor switch's operation in your unique space, Lutron recommends that you live with the device for a few days using the default settings prior to making any adjustments.

- Test the fan operation by manually pressing the toggle button. If the fan does not turn on, turn off power at the breaker and check the wiring. If the status LED turns bright when the button is pressed but the fan does not turn on, the fan may be faulty and may need to be replaced.

Note: Humidity sensing will not be operational until the timeout has expired after a button press to turn off the fan. The default timeout is 30 minutes.

- If the device is not operating as expected, please scan the QR code label on the humidity sensor switch or go to www.lutron.com/MS-HS3 to learn about helpful hints and tips to optimize the sensor switch for your space.
- If additional help is needed, please go to the **Need Help** section at www.lutron.com/MS-HS3

Limited Warranty: www.lutron.com/warranty or call 1.844.LUTRON1 for a printed copy.

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