Akicon AK-SW-FLHT

Akicon Humidity Sensor and Light Switch Instruction Manual

Model: AK-SW-FLHT

Brand: Akicon

1. INTRODUCTION

This instruction manual provides detailed information for the installation, operation, and maintenance of your Akicon Humidity Sensor and Light Switch. This device is designed to enhance comfort and air quality in areas prone to humidity, such as bathrooms, laundry rooms, and basements, by automatically controlling ventilation fans and lighting.

Key Features:

- **Humidity Sensing:** Automatically activates the fan when humidity exceeds a preset level and deactivates it when levels return to normal.
- **Timer Function:** Allows for timed operation of the fan, ideal for post-shower ventilation.
- **Multi-Function Control:** Features a fan switch and two light switches, compatible with most bathroom exhaust fans and lights.
- **Flexible Settings:** Offers 5 levels for both humidity sensitivity (90%, 80%, 70%, 60%, 50%) and timer duration (5, 15, 30, 45, 60 minutes).
- **Manual Override:** Ability to manually turn the fan ON/OFF, bypassing the humidity sensor.
- **UL Listed:** Ensures compliance with safety standards.

Figure 1.1: Front view of the Akicon Humidity Sensor and Light Switch.

Product Features
Neutral wire required

LED Indicator
Fan-Blue; Fan & Light-Green,
Light / Night Light-Red;

Humidity Sensor
Automatically detect the
humidity level in the room

**Humidity &
Time Setting**
Removable cover plate

Fan Switch
Simply press the button
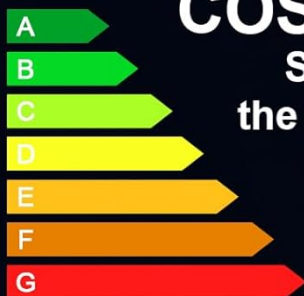to turn on or off manually

LED Light Switch
ON-OFF-ON circling to switch the
color temperature within 2 seconds.

Night Light Switch
Bring you and your family safety
and convenience at night.

Figure 1.2: Detailed view of the switch highlighting LED indicators, humidity sensor, fan switch, LED light switch, night light switch, and humidity/time setting controls.

Figure 1.3: Explanation of Auto and Manual operating modes for energy saving.

2. SPECIFICATIONS

Attribute	Value
Product Dimensions	1.4 x 1.75 x 4.13 inches
Item Weight	7.05 ounces
Model Number	AK-SW-FLHT
Manufacturer	Akicon
Operation Mode	ON-OFF-ON

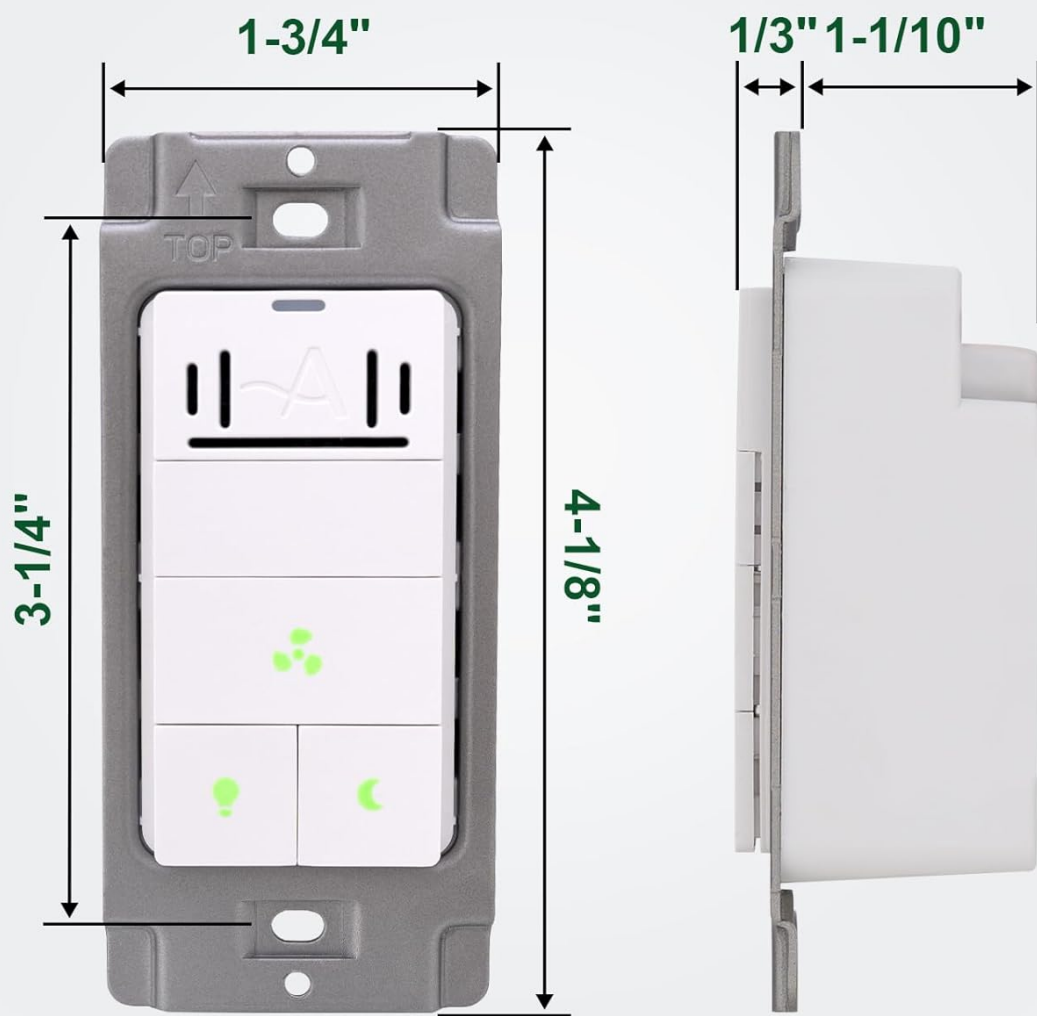| Current Rating	2 Amps
Operating Voltage	120 Volts
Contact Type	Normally Open
Connector Type	Crimp
Circuit Type	3-way
Actuator Type	Humidity Sensor

Figure 2.1: Detailed size specifications of the switch for proper fitting.

3. SAFETY INFORMATION

WARNING: Risk of Electric Shock. Turn off power at the circuit breaker before installation.

- Always disconnect power at the circuit breaker or fuse box before installing, servicing, or cleaning the unit.
- Installation must be performed by a qualified electrician in accordance with all local and national electrical codes.
- Ensure a neutral wire is available and properly connected to power the switch.
- Do not install in locations where the ambient temperature exceeds 104°F (40°C).
- This device is intended for indoor use only.
- Do not use with dimmable fans or fans that are not compatible with solid-state controls.
- Verify all connections are secure and properly insulated to prevent short circuits.

4. INSTALLATION GUIDE

4.1 Pre-Installation Checks

- Ensure the power is OFF at the circuit breaker before beginning any work.
- Confirm that your existing electrical box is compatible with the switch dimensions.
- Verify that a neutral wire is present in your electrical box. This switch requires a neutral wire for proper operation.
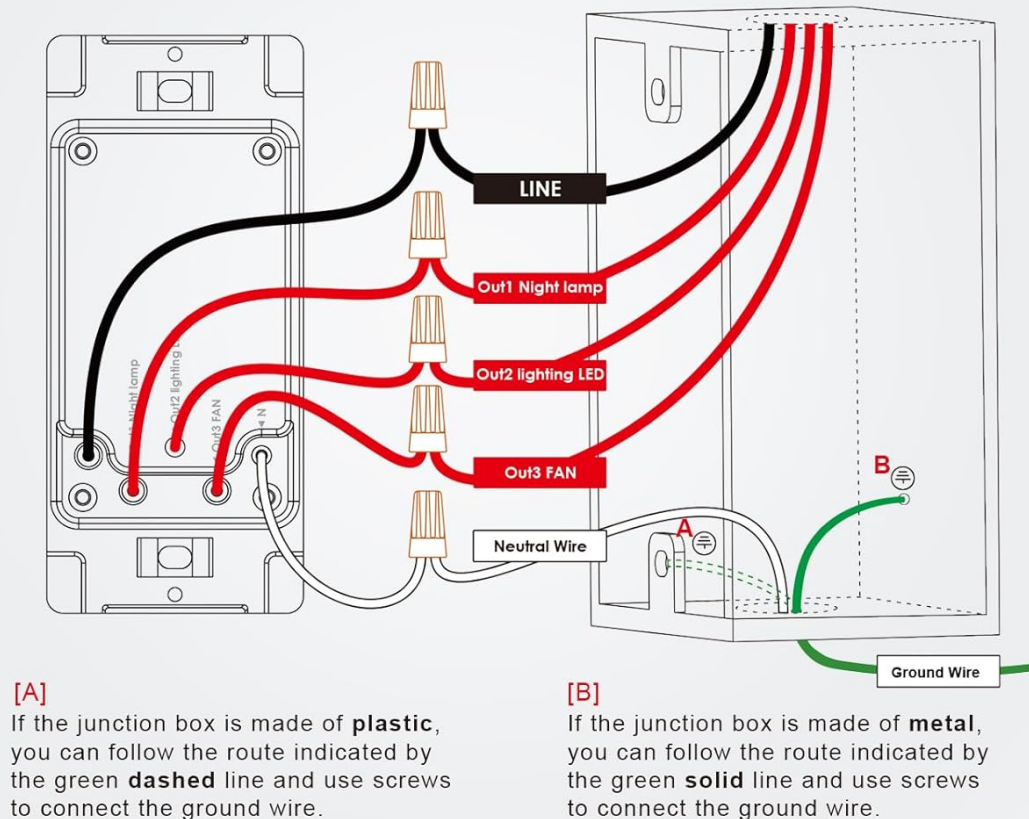
4.2 Wiring Diagram

Follow the wiring diagram carefully. If you are unsure about any steps, consult a qualified electrician.

WIRING DIAGRAM

Humidity Switch

Junction Box

LINE

Out1 Night lamp

Out2 lighting LED

Out3 FAN

Neutral Wire

Ground Wire

A

B

[A]
If the junction box is made of **plastic**, you can follow the route indicated by the green **dashed** line and use screws to connect the ground wire.

[B]
If the junction box is made of **metal**, you can follow the route indicated by the green **solid** line and use screws to connect the ground wire.

⚠ **CAUTION**

Safety Notice

Cut off the power before installation
A neutral wire is needed to power the switch.

Figure 4.1: Wiring diagram for the Akicon Humidity Sensor and Light Switch, showing connections for line, night light, lighting LED, fan, neutral wire, and ground wire.

- Connect the LINE wire (typically black) from your electrical box to the corresponding LINE terminal on the switch.
- Connect the Neutral Wire (typically white) from your electrical box to the Neutral terminal on the switch.
- Connect the FAN wire from your exhaust fan to the FAN terminal (Out3) on the switch.
- Connect the LED Light wire from your light fixture to the LIGHTING LED terminal (Out2) on the switch.
- Connect the Night Light wire from your light fixture to the NIGHT LAMP terminal (Out1) on the switch.
- Ensure the Ground Wire (typically green or bare copper) is properly connected to the electrical box and the switch's ground terminal.

4.3 Mounting the Switch

1. After wiring, carefully place the switch into the wall box.
2. Secure the switch to the wall box using the provided screws. Do not overtighten.
3. Attach the decorative wall plate (not included with switch, typically comes with fan) over the switch.

4.4 Installation Video Guide

Your browser does not support the video tag.

Video 4.1: A detailed installation guide for the Akicon Bathroom Fan with Light (Model AK1390N1-S), which includes steps relevant to wiring and mounting the compatible switch.

5. OPERATING INSTRUCTIONS

The Akicon Humidity Sensor and Light Switch offers both automatic and manual control options for your bathroom fan and lights.

5.1 Humidity Sensor Operation (Auto Mode)

- The switch detects ambient humidity levels. When humidity exceeds the preset threshold, the fan will automatically turn ON.
- Once the humidity drops below the set value, the fan will continue to run for an additional 5 minutes before turning OFF.
- To adjust humidity sensitivity: Use the small dial or button (refer to Figure 1.2 for location) to select one of 5 levels: 90%, 80%, 70%, 60%, or 50%.

5.2 Timer Function

- The timer function allows you to set the fan to run for a specific duration.
- To activate the timer: Press the fan button. The fan will run for the preset time.
- To adjust timer duration: Use the small dial or button (refer to Figure 1.2 for location) to select one of 5 durations: 5, 15, 30, 45, or 60 minutes.
- Note: If the timer is set to OFF, manually turning on the light will not activate auto mode. If the humidity condition is set to OFF, the device will not go into auto mode.

5.3 Manual Control

- **Fan Switch:** Simply press the fan button to manually turn the fan ON or OFF. When manually turned ON, the fan will switch to auto mode after running for a specified time. When manually turned OFF, it will switch to auto mode after 10 minutes.
- **LED Light Switch:** Press the light button to cycle through different color temperatures (2700K/4000K/5500K) within 2 seconds.
- **Night Light Switch:** Press the night light button to turn the integrated night light ON or OFF.

Figure 5.1: The integrated switch allows separate wiring and control of fan, light, and nightlight functions.

6. MAINTENANCE

- **Cleaning:** To clean the switch, first ensure power is OFF at the circuit breaker. Use a soft, damp cloth to wipe the surface. Do not use abrasive cleaners or solvents.
- **Regular Checks:** Periodically check the switch for any signs of damage or loose connections. If any issues are found, turn off power and consult a qualified electrician.
- **Humidity Sensor Calibration:** The humidity sensor is factory calibrated. If you suspect inaccurate readings, ensure the sensor area is free from obstructions and excessive dust.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Switch does not respond / No power.	No power at the circuit breaker; Loose wiring connection; No neutral wire.	Check circuit breaker and reset if tripped. Verify all wiring connections are secure. Ensure a neutral wire is correctly connected.
Fan does not turn ON automatically with humidity.	Humidity sensitivity set too low; Sensor obstructed or dirty; Fan is not compatible.	Adjust humidity sensitivity to a higher percentage. Clean the sensor area. Verify fan compatibility.
Fan runs continuously or turns ON unexpectedly.	Humidity sensitivity set too high; Timer setting issue; Faulty sensor.	Adjust humidity sensitivity to a lower percentage. Check timer settings. If problem persists, contact customer support.
Lights (LED/Night Light) do not work.	Loose wiring; Incompatible light fixture; Faulty LED/Night Light.	Check light wiring connections. Ensure light fixture is compatible. Contact customer support if lights are integrated and not working.

For issues not listed above, please contact Akicon Customer Service.
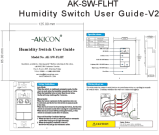
8. WARRANTY AND SUPPORT

This Akicon Humidity Sensor and Light Switch comes with a **3-year warranty** from the date of purchase.

The warranty covers defects in materials and workmanship under normal use. It does not cover damage resulting from improper installation, misuse, abuse, or unauthorized repairs.

Customer Service:

If you have any questions, require technical assistance, or need to claim warranty service, please contact Akicon customer service. Our professional customer service team is available 24/7 to assist you.

For the most up-to-date contact information, please visit the official Akicon website or refer to the contact details provided with your product packaging.

Related Documents - AK-SW-FLHT

	[AK-SW-FLHT Humidity Switch User Guide](#) User guide for the AKICON AK-SW-FLHT Humidity Switch, detailing specifications, setup, operation modes, and wiring instructions for controlling fans and lights based on humidity levels.
	[AKICON 110 CFM Bathroom Exhaust Fan with RGB LED, Humidity Sensor, 3CCT & Night Light - Use and Care Guide](#) Comprehensive use and care guide for the AKICON 110 CFM Bathroom Exhaust Fan, featuring RGB LED mode, humidity sensor, 3CCT, and night light. Includes installation instructions for new and existing construction, troubleshooting, and maintenance.
	[AKICON 110 CFM Bathroom Exhaust Fan Use and Care Guide with RGB LED and Humidity Sensor](#) Detailed use and care guide for the AKICON 110 CFM Bathroom Exhaust Fan. Covers installation (new and existing construction), specifications, safety information, maintenance, troubleshooting, and remote operation for models AKHR110-RGB2-W, AKHR110-RGB2-B, and AKHR110-RGB2-S.
	[AKICON 110 CFM Bathroom Exhaust Fan with RGB LED, Humidity Sensor, 3CCT, and Night Light - Use and Care Guide](#) Comprehensive use and care guide for the AKICON 110 CFM Bathroom Exhaust Fan, featuring RGB LED mode, humidity sensor, 3CCT color temperature, and night light. Includes installation instructions, safety information, troubleshooting, and warranty details.
	[AKICON BPT14-80CL Bathroom Ventilation Fan with Light Use and Care Guide](#) Comprehensive use and care guide for the AKICON BPT14-80CL Bathroom Ventilation Fan with Light, detailing product specifications, installation, maintenance, troubleshooting, and warranty information.
	[AKICON AK1390N2-W/B/S Bathroom Ventilation Fan with Light Use and Care Guide](#) Comprehensive use and care guide for the AKICON AK1390N2-W/B/S bathroom ventilation fan with LED light. Includes installation instructions, safety information, maintenance, troubleshooting, and warranty details.