

Keenso XH-W3005

Keenso XH-W3005 Digital Humidity Controller User Manual

Model: XH-W3005

1. INTRODUCTION

This manual provides instructions for the installation, operation, and maintenance of the Keenso XH-W3005 Digital Humidity Controller. This device is designed to accurately measure and control humidity levels within a specified range, making it suitable for various applications requiring precise humidity management.

Please read this manual thoroughly before operating the device to ensure proper function and safety.

2. SAFETY INFORMATION

WARNING: The XH-W3005 is a direct output device. To prevent potential electrical hazards such as two-stage contact sparks or accidental contact with live wires, ensure that the output end is properly connected and secured before applying power to the unit. Do not power on the device if the output is not connected or improperly connected.

- Always disconnect power before performing any wiring or maintenance.
- Ensure all wiring connections are secure and insulated to prevent short circuits.
- Do not operate the device in environments exceeding its specified operating conditions.
- Keep the device away from water and excessive moisture, except for the humidity sensor which is designed for such environments.
- Only qualified personnel should perform installation and wiring.

3. PRODUCT OVERVIEW

The Keenso XH-W3005 Digital Humidity Controller consists of a main control unit with a digital display and control buttons, and an external humidity sensor probe. The unit is designed for easy integration into various systems.



Figure 3.1: Overview of the Keenso XH-W3005 Digital Humidity Controller and its external sensor.

3.1. Main Control Unit

The main unit houses the digital display, control buttons, and wiring terminals. It processes the sensor input and controls the output based on the set humidity parameters.



Figure 3.2: Front view of the controller unit, showing the digital display and control buttons.

3.2. Humidity Sensor Probe

The external probe accurately measures the ambient relative humidity (RH) and transmits the data to the main control unit. It is designed for durability and precise readings.



Figure 3.3: The controller unit connected to its humidity sensor probe.

4. SPECIFICATIONS

Parameter	Value
Model	XH-W3005
Input Voltage Options	12V, 24V, 220V (<i>Specify model variant upon purchase</i>)
Humidity Range	00% ~ 99% RH
Humidity Control Precision	0.1% RH
Load Power (Max)	120W (for 12V model), 240W (for 24V model), 1500W (for 220V model)
Output Type	Direct Output
Mounting Hole Space	73mm (2.9 inches)
Dimensions (L x W x H)	60 x 45 x 31mm (2.4 x 1.8 x 1.2 inches)
Mounting Type	Tabletop (or panel mount via holes)

Parameter	Value
Battery Requirement	No batteries required

5. SETUP AND INSTALLATION

Proper installation is crucial for the safe and effective operation of the humidity controller. Refer to the wiring diagram and instructions below.

5.1. Wiring Instructions

The XH-W3005 features direct output wiring. Identify the input power wires and output load wires carefully.



Figure 5.1: The controller unit showing input (red/black) and output (yellow/black) wiring connections.

- Input Power:** Connect the red and black wires labeled " " (Input) to your power source (12V, 24V, or 220V, depending on your model). Ensure correct polarity for DC models.
- Output Load:** Connect the yellow and black wires labeled " " (Output) to the device you wish to control (e.g., humidifier, dehumidifier).
- Humidity Sensor:** The external humidity sensor probe is pre-wired and connects to the main unit. Ensure it is securely plugged in.
- Mounting:** The unit can be mounted using the integrated mounting holes or placed on a tabletop.

5. **Final Check:** Before applying power, double-check all connections for security and correctness. Refer to the **WARNING** in Section 2.



The XH-W3005 features a simple interface for setting and monitoring humidity levels.

6.1. Display and Buttons



Figure 6.1: Close-up view of the digital display and control buttons (Up and Down arrows).

- **Digital Display:** Shows the current humidity percentage (RH).
- **Up Button (▲):** Used to increase the set humidity value.
- **Down Button (▼):** Used to decrease the set humidity value.
- **"OUT" Indicator:** An LED indicator that illuminates when the output is active (e.g., humidifier/dehumidifier is turned on).

6.2. Setting Humidity Parameters

1. **View Current Set Point:** Briefly press either the Up or Down button. The display will flash the currently set humidity value.
2. **Enter Setting Mode:** Press and hold either the Up or Down button for approximately 3 seconds. The display will start flashing, indicating you are in setting mode.
3. **Adjust Set Point:** Use the Up (▲) and Down (▼) buttons to adjust the desired humidity percentage.
4. **Save Settings:** After setting the desired value, wait for approximately 3 seconds without pressing any buttons. The display will stop flashing and return to showing the current humidity, saving your new setting.

The controller will automatically activate or deactivate the connected load to maintain the humidity within the set range. If the current humidity is below the set point, the output will activate (e.g., turn on a humidifier). If the current humidity is above the set point, the output will deactivate (e.g., turn off a

humidifier or turn on a dehumidifier, depending on your setup).

7. MAINTENANCE

Regular maintenance ensures the longevity and accuracy of your humidity controller.

- **Cleaning:** Periodically wipe the main unit with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Sensor Care:** Keep the humidity sensor clean and free from dust or debris. Avoid touching the sensor element directly. If the sensor becomes dirty, gently clean it with a soft brush or compressed air. Do not immerse the sensor in liquids.
- **Connection Check:** Occasionally inspect all wiring connections to ensure they remain secure and free from corrosion.

8. TROUBLESHOOTING

If you encounter issues with your Keenso XH-W3005 controller, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Device does not power on.	No power supply; incorrect wiring; faulty power source.	Check power connections. Ensure input voltage matches the controller's specification (12V, 24V, or 220V). Verify power source functionality.
Humidity reading is inaccurate or erratic.	Dirty sensor; damaged sensor cable; sensor placed in an unsuitable environment.	Clean the sensor gently. Inspect the sensor cable for damage. Relocate the sensor to an area representative of the humidity you wish to measure, away from drafts or direct moisture.
Output device (humidifier/dehumidifier) does not turn on/off.	Incorrect set point; faulty wiring to load; load device malfunction; controller malfunction.	Verify the set humidity point. Check output wiring connections. Test the load device independently. Ensure the "OUT" indicator on the controller is functioning as expected.
Controller displays "HHH" or "LLL".	Humidity reading is outside the measurable range (e.g., >99% or <0%).	This indicates the humidity is extremely high or low. Verify the environment or check the sensor for damage if the reading seems incorrect for the conditions.

9. WARRANTY AND SUPPORT

For warranty information or technical support, please contact your retailer or the manufacturer, Keenso. Keep your purchase receipt as proof of purchase.

For further assistance, please visit the [Keenso Store on Amazon](#).

