

XK-W1099 Dual Display Digital Temperature Humidity Controller

Model: XK-W1099 | Brand: Voktta

1. Introduction

The Voktta XK-W1099 is a versatile dual display digital controller designed for precise management of both temperature and humidity. This device is suitable for a wide range of applications, including incubators, where environmental control is critical. It supports multiple input voltages and can be integrated with various humidifying, dehumidifying, heating, and cooling equipment.

Key Features:

- Simultaneous control of temperature and humidity.
- Compatible with humidifier/dehumidifier and heating/refrigeration equipment.
- Separate settings for heating/cooling functions to prevent violent temperature changes.
- Supports temperature and humidity calibration.
- Dual display windows show measured temperature/humidity and allow simultaneous setting.



Front view of the Voktta XK-W1099 controller showing the dual digital displays for temperature (red) and humidity (blue), along with control buttons and the attached sensor.

2. Product Overview

The XK-W1099 controller features two digital displays, one for temperature (OUT1, red) and one for humidity (OUT2, blue). Control buttons are provided for adjusting settings. An external sensor is included for accurate environmental readings.



How to set up and use



Labeled diagram of the XK-W1099 controller's front panel, indicating the temperature output indicator (OUT1), humidity output indicator (OUT2), detect temperature display, detect humidity display, temperature up/down buttons, and humidity up/down buttons.

3. Specifications

Parameter	Value
Model	XK-W1099
Input Voltage	AC110~220V $\pm 10\%$, DC24V, DC12V
Measuring Temperature Range	-20°C to +80°C
Measuring Humidity Range	00%RH to +100%RH

Parameter	Value
Accuracy	$\pm 1^{\circ}\text{C}$, 0.1%RH
Relay Output Contact Capacity	10A Direct Output
Shell Material	PC + ABS fireproof
Sensor Length	1m

4. Installation and Wiring

Proper wiring is crucial for the safe and correct operation of the XK-W1099 controller. Ensure the power supply matches the controller's voltage variant (DC 12V, DC 24V, or AC 110-220V).

4.1. 220V Wiring Method



220V wiring method



Diagram illustrating the 220V AC wiring method for the XK-W1099 controller. It shows connections for direct output (OUT1 and OUT2) and input exchange (110-220V).

4.2. 12V/24V Wiring Method



12V/24V wiring method

Tip: 12V/24V W1099 power supply, you can use a transformer or 12V/24V output DC power supply

Note: W1099 is a direct output, so when the output terminal is not connected to the load, please do not power on, to prevent the two-stage contact of the wire from sparking



Diagram illustrating the 12V/24V DC wiring method for the XK-W1099 controller. It shows connections for direct output (OUT1 and OUT2) and input DC (12V/24V).

Tip: For 12V/24V W1099 power supply, you can use a transformer or 12V/24V output DC power supply.

Note: W1099 is a direct output. When the output terminal is not connected to the load, please do not power on to prevent the two-stage contact of the wire from sparking.

5. Operating Instructions

The XK-W1099 controller provides intuitive controls for setting and adjusting temperature and humidity parameters.

Operating instructions

Set the starting temperature:

Press the Δ key once to display the start temperature, press and hold the Δ key for about 3 seconds, the start temperature flashes, and the required temperature can be set by the $\Delta \nabla$ key.

Set stop temperature:

Press the ∇ key once to display the stop temperature, press and hold the ∇ key for about 3 seconds to stop the temperature flashing, and you can set the desired temperature value through the $\Delta \nabla$ key.



Set start humidity:

Press the Δ key once to display the start humidity, long press the Δ key for about 3 seconds, the start humidity flashes, and the required humidity value can be set by the $\Delta \nabla$ key.

Set stop humidity:

Press the ∇ key once to display the stop humidity, press and hold the ∇ key for about 3 seconds to stop the humidity flashing, and the required humidity value can be set by the $\Delta \nabla$ key.



Temperature and humidity correction:

The function is used for temperature and humidity correction. If the detected temperature deviates from the actual temperature, you can use this function to correct. The corrected value = measured value + corrected value. Press $\Delta \nabla$ for 3 seconds to display 0.0, and then $\Delta \nabla$ can be adjusted. After adjusting the correction value, wait for 5 seconds, then it will automatically jump back to display the actual temperature. (The humidity correction method is the same, press $\Delta \nabla$)

How to restore the factory default value?:

When the power is on, press and hold the $\nabla \nabla$ key for 3 seconds, the digital tube will display 888 and then automatically jump back to the detection temperature, that is, restore the factory value

Visual guide detailing how to set starting and stopping temperatures and humidity, perform temperature and humidity correction, and restore factory default values using the controller's buttons.

5.1. Setting Starting Temperature/Humidity

- Press the **"up"** button once to display the current starting temperature (or humidity).
- Long press the **"up"** button for approximately 3 seconds. The display will flash.
- Use the **"up"** and **"down"** keys to set your desired starting temperature (or humidity) value.

5.2. Setting Stopping Temperature/Humidity

- Press the **"down"** button once to display the current stopping temperature (or humidity).
- Long press the **"down"** button for approximately 3 seconds. The display will flash.
- Use the **"up"** and **"down"** keys to set your desired stopping temperature (or humidity) value.

5.3. Temperature and Humidity Correction

This function allows you to correct deviations between the detected and actual environmental values.

- Press the **"up"** and **"down"** buttons simultaneously for 3 seconds to display '0.0'.
- Use the **"up"** and **"down"** keys to adjust the correction value.
- After adjusting, wait for 5 seconds; the display will automatically revert to the actual temperature/humidity.
- The corrected value is calculated as: Measured Value + Corrected Value.

5.4. Restoring Factory Default Values

- With the power on, press and hold the **"down"** key for 3 seconds.
- The digital display will show '888' and then automatically return to the detection temperature, indicating that factory settings have been restored.

6. User Tips

- Always ensure the correct voltage variant (DC 12V, 24V, or AC 110-220V) is used for your specific model to prevent damage.
- When wiring, double-check all connections to ensure they are secure and match the diagrams provided.
- For optimal performance, place the sensor in a location that accurately represents the environment you wish to control, away from direct heat sources or drafts.

7. Maintenance

The XK-W1099 controller requires minimal maintenance. Keep the device clean and free from dust. Ensure the sensor is not obstructed and its cable is undamaged. Avoid exposing the unit to extreme temperatures or moisture beyond its specified operating range.

8. Troubleshooting

If you encounter issues with your XK-W1099 controller, consider the following:

- **No Display/Power:** Check power connections and ensure the correct voltage is supplied.
- **Incorrect Readings:** Verify the sensor is properly connected and not damaged. Perform a temperature/humidity correction if readings are consistently off.
- **Output Not Activating:** Check your set start/stop values. Ensure the connected equipment is functioning correctly and wired properly to the controller's output terminals.
- **Unresponsive Buttons:** Try resetting the device to factory defaults (see section 5.4).

9. Warranty and Support

For detailed warranty information and technical support, please refer to the official user manual. A comprehensive user manual in PDF format is available for detailed information and advanced settings. You can access it via the following link: [XK-W1099 User Manual \(PDF\)](#).

For further assistance, please contact Voktta Direct Store customer service.