

Cwmiibili EK-3030

Cwmiibili EK-3030 Digital Temperature Controller User Manual

Model: EK-3030

1. INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, and maintenance of the Cwmiibili EK-3030 Digital Temperature Controller. The EK-3030 is designed for precise temperature control in refrigeration and defrost applications, featuring a 220V power supply and multiple control outputs.



Image 1.1: Front view of two EK-3030 controllers.

2. SAFETY INFORMATION

Please read and understand all safety instructions before installing or operating the device. Failure to follow these instructions may result in electric shock, fire, or damage to the product.

- Ensure the power supply matches the controller's specifications (220VAC ±10%, 50/60Hz).
- All wiring should be performed by a qualified electrician and comply with local electrical codes.
- Disconnect power before performing any installation, wiring, or maintenance.
- Do not operate the controller in environments exceeding its specified ambient temperature range (-5°C to 60°C).
- Avoid exposing the device to water or excessive humidity.

3. PRODUCT FEATURES

- Touch key design with key lock function for secure operation.
- Measures, displays, and controls temperature.
- Functions include temperature calibration, forced defrost, over-temperature alarm, and sensor failure alarm.
- One-key recovery of factory default values and parameter presets.
- Suitable for temperature control in medium and low-temperature cold storage.
- Two sensor inputs: cabinet temperature sensor and defrost temperature sensor.
- Three control outputs: Refrigeration, Defrost, and Fan.

4. SPECIFICATIONS

Parameter	Value
Temperature Measuring Range	-40°C to 99°C
Temperature Controlling Range	-40°C to 85°C
Accuracy	±1°C at (-30°C to 50°C); ±2°C at other ranges
Resolution	0.1°C
Power Consumption	Less than 5W
Output Capacity (Refrigeration)	10A/220VAC
Output Capacity (Defrost)	10A/220VAC
Output Capacity (Fan)	10A/220VAC
Power Supply	220VAC ±10%, 50/60Hz
Ambient Temperature	-5°C to 60°C
Probe Type	NTC (10Kohm/25°C, B value 3435K)
Sensor Length	2 meters
Dimensions (Package)	4.72 x 4.33 x 3.15 inches
Item Weight	1.05 pounds

5. SETUP AND INSTALLATION

5.1 Wiring Diagram

Refer to the following diagram for correct wiring connections. Ensure all connections are secure and insulated.

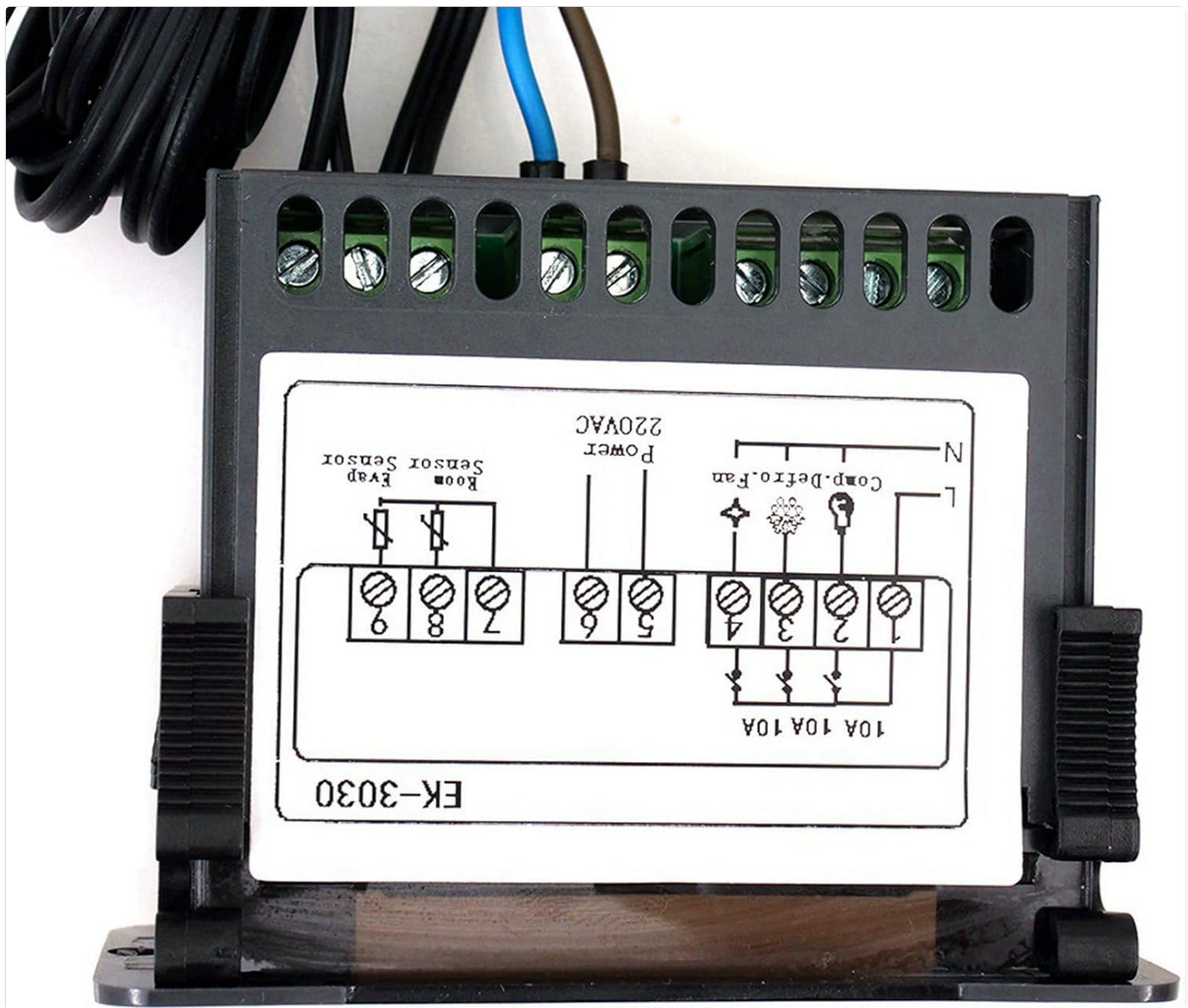


Image 5.1: EK-3030 Wiring Diagram.

The diagram illustrates the terminal connections:

- **Power (220VAC):** Connect to terminals labeled 'Power' (typically L and N).
- **Sensor Connections:** Connect the temperature sensor(s) to the designated sensor terminals. The EK-3030 supports two sensor inputs: one for cabinet temperature and one for defrost temperature.
- **Output Connections:**
 - **Refrigeration Output:** Connect to the refrigeration unit.
 - **Defrost Output:** Connect to the defrost heater.
 - **Fan Output:** Connect to the fan unit.



Image 5.2: Side view showing terminal block.

5.2 Mounting

The controller is designed for panel mounting. Ensure adequate ventilation around the unit and secure it firmly in place using the integrated mounting clips or screws.

6. OPERATING INSTRUCTIONS

The EK-3030 features a digital display and touch-sensitive buttons for operation.



Image 6.1: EK-3030 Front Panel.

6.1 Display and Buttons

- **Digital Display:** Shows current temperature, set points, and error codes.
- **"On Temp" / "Off Temp" Buttons:** Used to view and adjust the refrigeration start/stop temperatures.
- **Up (^) / Down (v) Buttons:** Used to navigate menus and adjust parameter values.
- **OK (✓) Button:** Confirms selections and enters/exits parameter settings.
- **Indicators:** Icons for refrigeration, defrost, and fan status.

6.2 Setting Temperature Parameters

1. Press the "On Temp" or "Off Temp" button to view the current set point.
2. While the set point is displayed, use the Up (^) or Down (v) buttons to adjust the value.
3. Press the OK (✓) button to confirm the new setting.

6.3 Accessing Advanced Parameters

To access advanced settings (e.g., defrost cycle, temperature calibration, alarm thresholds), a specific key combination or long-press of a button is typically required. Refer to the detailed parameter list in the full product documentation for specific codes and adjustment procedures.

6.4 Key Lock Function

The controller features a key lock function to prevent accidental changes to settings. To activate or deactivate the key lock, refer to the specific instructions in the full product documentation, usually involving a long press of a combination of buttons.

6.5 Forced Defrost

The forced defrost function can be initiated manually. Consult the full product documentation for the specific button sequence to activate forced defrost.

6.6 Factory Default Recovery

The controller supports one-key recovery to factory default settings. This can be useful for troubleshooting or resetting configurations. Be aware that all custom settings will be lost. Refer to the full product documentation for the exact procedure.

7. MAINTENANCE

- **Cleaning:** Regularly wipe the controller's surface with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Sensor Inspection:** Periodically check the temperature sensors for physical damage or corrosion. Ensure they are securely connected.
- **Wiring Check:** Annually inspect all wiring connections for tightness and signs of wear or damage.

8. TROUBLESHOOTING

Problem	Possible Cause	Solution
Display shows "HHH" or "LLL"	Temperature exceeds measuring range or sensor failure.	Check sensor connection. Replace sensor if damaged. Ensure ambient temperature is within operating limits.
"Over Temp" Alarm	Temperature has exceeded the set high-temperature alarm threshold.	Verify cooling system operation. Adjust alarm threshold if necessary.
"Sensor Failure" Alarm	Temperature sensor is disconnected or faulty.	Check sensor wiring and connections. Replace the sensor if it is damaged.
Controller not powering on	No power supply or incorrect wiring.	Check power connections and ensure 220VAC supply. Verify wiring against diagram.

Outputs not activating	Incorrect temperature settings, parameter configuration, or faulty output relay.	Review set points and differential settings. Check advanced parameters. Consult a technician if relay is suspected faulty.
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9. WARRANTY AND SUPPORT

For warranty information and technical support, please contact your retailer or the manufacturer, Cwmiibili. Keep your purchase receipt as proof of purchase.
Manufacturer: Cwmiibili
Model Number: I750167699

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

Name

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question