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Thincol Digital Temperature Controller (12V)

Thincol Digital Temperature Controller (12V Model) User Manual

Model: Digital Temperature Controller (12V)

Brand: Thincol

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your Thincol Digital Temperature Controller (12V Model). Please read this manual thoroughly before using the device to ensure proper function and safety.

2. SAFETY INFORMATION

Important Safety Instructions:

- Ensure the power supply voltage matches the device's requirements (DC 12V for this model).
- Do not expose the device to water or excessive humidity.
- Avoid installing the device in areas with extreme temperatures or direct sunlight.
- Disconnect power before performing any wiring or maintenance.
- All wiring should be performed by a qualified professional if you are unsure.
- Keep out of reach of children.

3. PACKAGE CONTENTS

The package should contain the following items:

- 1 x Thincol Digital Thermostat Temperature Alarm Controller Sensor (12V Model)

4. PRODUCT OVERVIEW

Familiarize yourself with the components of your temperature controller.



Figure 1: Front view of the Thincol Digital Temperature Controller, showing the dual LED display (PV and SV), 'SET' button, up/down arrows, 'OUT' indicator, and 'Restart' button. The temperature sensor probe is connected via a black wire.



Figure 2: Rear view of the Thincol Digital Temperature Controller, highlighting the blue screw terminals for power input and output connections.



Figure 3: Side view of the Thincol Digital Temperature Controller, showing its compact form factor suitable for

panel mounting.

Key Components:

- **PV Display:** Process Value (Current Temperature)
- **SV Display:** Set Value (Target Temperature)
- **SET Button:** Enters/Exits parameter setting mode.
- **Up/Down Buttons:** Adjust values in setting mode.
- **OUT Indicator:** Illuminates when the output relay is active.
- **Restart Button:** Resets the device.
- **Wiring Terminals:** For power input and load output connections.
- **Temperature Sensor:** Measures the ambient temperature.

5. SPECIFICATIONS

Feature	Specification
Material	Electronic Element
Voltage (Operating)	DC 12V
Power	120W (for 12V model)
Weight	Approx. 48g (1.7oz)
Display Type	LED (PV/SV Dual Display)
Operating Temperature	20 Degrees Celsius <i>(Note: This may represent a specific test condition or default setting. Actual operational range may vary.)</i>
Batteries Required	No
UPC	738602856946
ASIN	B083V2K1YP

6. SETUP AND WIRING

Before wiring, ensure the power supply is disconnected. Incorrect wiring can damage the device or connected equipment. If you are unsure, consult a qualified electrician.

Wiring Connections:

1. **Power Input:** Connect the DC 12V power supply to the designated input terminals on the back of the

controller. Observe polarity (+/-) carefully.

2. **Load Output:** Connect the device you wish to control (e.g., heating element, cooling fan) to the output terminals. The controller acts as a switch for this load. Ensure the load's power requirements do not exceed the controller's maximum output (120W for the 12V model).
3. **Temperature Sensor:** Insert the temperature sensor probe into the environment where temperature measurement is required. Ensure it is securely placed and not directly exposed to heat sources or drafts that could skew readings.

Warning: Always disconnect power before making or changing any wiring connections.

7. OPERATING INSTRUCTIONS

Setting the Target Temperature (SV):

1. Press the **SET** button once. The SV (Set Value) display will begin to flash.
2. Use the **Up** and **Down** arrow buttons to adjust the target temperature to your desired value.
3. Press the **SET** button again to confirm the setting and exit the setting mode.

Cooling/Heating Mode Selection:

The controller can operate in either cooling or heating mode. This is typically configured via an advanced parameter (often labeled P0 or P1). Please consult the full product manual for specific instructions on how to access and set the cooling or heating mode.

Advanced Parameter Settings (P3, P4, P5):

To access advanced parameters, typically a long press of the **SET** button is required. Use the Up/Down buttons to navigate between parameters (e.g., P0, P1, P2, P3, P4, P5) and then press **SET** again to enter the parameter's value adjustment mode.

- **P3 Setting (Delay Stop/Compressor Protection):** If P3 is set to '1', the thermostat will stop running for 1 minute. This function is often used for compressor delay protection in cooling systems. A long press of the **SET** button is required to trigger this function again after it has completed its cycle.
- **P4 Setting (Delayed Start):** If P4 is set to '1', the thermostat will begin operation after a 1-minute delay. During this delay, the digital display will not illuminate until normal operation commences. A long press of the **SET** button is required to trigger this function again.
- **P5 Setting (Parameter Lock):** By default, P5 is set to 'OFF'. Once the desired temperature and other parameters are configured, setting P5 to 'ON' will lock the data, preventing accidental changes. To modify settings again, P5 must be set back to 'OFF'.

Temperature Calibration:

The device supports temperature calibration to fine-tune accuracy. This is usually an advanced parameter (e.g., P7 or P8). Refer to the full product manual for specific instructions on how to access and adjust the temperature calibration offset.

High/Low Limit Temperature Setting:

The controller allows setting upper and lower temperature limits to prevent extreme conditions. These are typically accessible through advanced parameters. Consult the full product manual for details on setting these limits.

8. MAINTENANCE

- **Cleaning:** Wipe the device with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Sensor Care:** Ensure the temperature sensor is clean and free from debris for accurate readings.
- **Connection Check:** Periodically check all wiring connections to ensure they are secure.
- **Storage:** If storing the device for an extended period, disconnect it from power and store it in a dry, cool place.

9. TROUBLESHOOTING

Problem	Possible Cause	Solution
Display is off	No power, incorrect wiring, or device fault.	Check power supply connection. Verify wiring. If problem persists, contact support.
Temperature reading is inaccurate	Sensor placement, dirty sensor, or calibration needed.	Ensure sensor is correctly placed and clean. Perform temperature calibration if necessary.
Output not switching	Incorrect temperature settings, P3/P4 delay active, or wiring issue.	Verify SV setting. Check if P3 or P4 delays are active. Inspect load wiring.
Cannot change settings	P5 parameter lock is active.	Set P5 to 'OFF' to unlock parameters.

10. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation provided with your purchase or contact Thincol customer service directly. Keep your purchase receipt for warranty claims.

Manufacturer: Thincol

