Elitech STC-001

Elitech STC-001 Digital Temperature Controller Instruction Manual

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of the Elitech STC-001 Digital Temperature Controller. The STC-001 is designed for precise temperature measurement and control in various applications, particularly those involving refrigeration and defrosting. Please read this manual thoroughly before using the device to ensure proper function and safety.

Figure 1: Front view of the Elitech STC-001 Digital Temperature Controller, showing the digital display, 'SET' button, and up/down arrow buttons. A partial wiring diagram is visible on the side casing.

2. PRODUCT OVERVIEW

2.1. Key Features

- Three control outputs: dedicated outputs for refrigeration, defrosting, and lighting.

- Suitable for temperature control in medium and low-temperature cold storage or heating equipment.

- Six-touch key design for quick parameter setting and straightforward operation.

- Measures, displays, and controls temperature with functions including temperature calibration, over-temperature alarm, and sensor fault alarm.

- One-button restoration to factory default values and support for parameter presets.

Figure 2: Image highlighting the key features of the Elitech STC-001, including its multiple control outputs and user-friendly interface.

2.2. Main Functions

- Temperature measurement and control.
- High and low temperature alarm functionality.
- Compressor delay protection (time delay of press).
- Temperature correction/calibration.

Main functions:
① temperature measurement and control
② High and low temperature alarm
③ time delay of press
④ temperature correction

Figure 3: Image illustrating the primary functions of the Elitech STC-001, such as temperature control and alarm capabilities.

2.3. Certifications

The Elitech STC-001 has undergone rigorous testing and complies with relevant safety and environmental standards, including CQC National Safety Quality Certification and EU RoHS environmental certification, ensuring product stability and reliability.

Figure 4: Image displaying the CQC National Safety Quality Certification for the Elitech STC-001, indicating compliance with national and EU standards.

Figure 5: Image indicating that the Elitech STC-001 has passed EMC industrial level 4 testing, ensuring its stable and reliable performance in industrial environments.

3. Setup and Installation

Installation of the Elitech STC-001 should be performed by qualified personnel to ensure safety and correct operation. Refer to the wiring diagram printed on the side of the unit for specific connection details. Ensure all power is disconnected before beginning installation.

3.1. Wiring Connections

The controller typically requires connections for:

- **Power Supply:** Connect to a stable 10A/220VAC power source as indicated on the wiring diagram.

- **Temperature Sensor:** Connect the provided temperature sensor to the designated terminals. Ensure the sensor is placed in the area where temperature measurement is required.

- **Refrigeration Output:** Connect the refrigeration load (e.g., compressor) to the refrigeration output terminals.

- **Defrosting Output:** Connect the defrosting load (e.g., defrost heater) to the defrosting output terminals.

- **Lighting Output:** Connect the lighting load to the lighting output terminals.

Ensure all connections are secure and insulated to prevent short circuits or electrical hazards.

Figure 6: Side view of the Elitech STC-001, showing the terminal block and the integrated wiring diagram for connection guidance.

4. OPERATING INSTRUCTIONS

The Elitech STC-001 features a digital display and three control buttons: 'SET', 'Up', and 'Down'.

4.1. Power On/Off

The unit powers on automatically when connected to a power supply. There is no dedicated power button.

4.2. Viewing Current Temperature

Upon power-up, the display will show the current measured temperature from the sensor.

4.3. Setting Temperature Parameters

1. Press the 'SET' button once to enter the temperature setting mode. The display will flash, showing the current set temperature.
2. Use the 'Up' and 'Down' arrow buttons to adjust the desired temperature value.
3. Press the 'SET' button again to confirm the new setting and exit the setting mode. If no button is pressed for a few seconds, the unit will automatically save the setting and return to displaying the current temperature.

4.4. Advanced Parameter Settings

To access advanced parameters (e.g., differential, compressor delay, alarm limits, temperature calibration), typically a long press of the 'SET' button (e.g., 3-5 seconds) is required. Refer to the detailed parameter codes and their functions in the full product manual or on the manufacturer's website for specific adjustments.

4.5. Alarms

The controller features high and low-temperature alarms, as well as a sensor fault alarm. When an alarm condition is met, the unit will typically display an error code or flash the temperature, and may activate an audible alarm if configured.

Figure 7: Description of the STC-001's capabilities, including temperature measurement, display, control, calibration, over-temperature alarm, and sensor fault alarm functions.

5. MAINTENANCE

Regular maintenance ensures the longevity and accuracy of your Elitech STC-001 controller.

- **Cleaning:** Periodically wipe the unit's surface with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Sensor Check:** Ensure the temperature sensor is clean and free from obstructions. Verify its

placement for accurate readings.

- **Connections:** Occasionally check wiring connections for tightness and signs of wear or corrosion.
- **Ventilation:** Ensure the unit's ventilation slots are not blocked to prevent overheating.

6. TROUBLESHOOTING

If you encounter issues with your Elitech STC-001, consider the following common troubleshooting steps:

- **Display Not Working:** Check the power supply and wiring connections.
- **Incorrect Temperature Reading:** Verify the sensor connection and placement. The sensor might be faulty and require replacement. Consider performing a temperature calibration if available in advanced settings.
- **Temperature Not Controlling:** Check the set temperature and differential settings. Ensure the load (refrigeration/defrosting) is correctly wired and functional.
- **Alarm Triggered:** Identify the alarm code (if displayed) and consult the full manual for its meaning. Check if the temperature is outside the set alarm limits or if there's a sensor fault.
- **Unit Unresponsive:** Disconnect power for a few minutes, then reconnect. If issues persist, consider restoring factory default settings (refer to advanced parameter settings).

For persistent issues, contact customer support or a qualified technician.

7. SPECIFICATIONS

While detailed specifications are typically found in the product packaging or official data sheets, the Elitech STC-001 generally operates with a 10A/220VAC power supply and is designed for precise temperature control in refrigeration and heating systems.
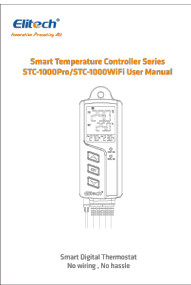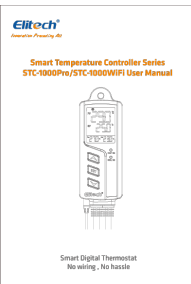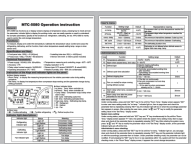
General Specifications (Refer to product packaging for full details)

| Parameter	Value
Model	STC-001
Power Supply	10A/220VAC (typical)
Control Outputs	Refrigeration, Defrosting, Lighting
Display	Digital LED
Control Type	On/Off

8. WARRANTY AND SUPPORT

For warranty information, please refer to the documentation provided with your purchase or contact the seller directly. If you require technical support or have questions not covered in this manual, please reach out to the Elitech customer service department or your authorized distributor.

Related Documents - STC-001

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	[Elitech STC-1000Pro/STC-1000WiFi Smart Temperature Controller User Manual | Features, Operation, Setup](#) User manual for Elitech STC-1000Pro and STC-1000WiFi smart digital temperature controllers. Learn about features, operation, parameter settings, installation, troubleshooting, and app connectivity for precise temperature management.
	[Elitech STC-1000Pro/STC-1000WiFi Smart Temperature Controller User Manual](#) User manual for the Elitech STC-1000Pro and STC-1000WiFi smart digital temperature controllers. Covers features, display, operation, parameter settings, installation, error codes, and app integration for precise temperature management.
	[Elitech Digital Temperature Controller Product Selection Guide - Comprehensive Overview](#) Explore Elitech's range of digital temperature controllers, including ECS, EK, STC, and ETC series. Find detailed specifications, features, and wiring diagrams for refrigeration, heating, and industrial applications.
	[Elitech Industrial Refrigeration and Process Temperature Control Solutions](#) Elitech offers a comprehensive range of temperature control solutions for industrial refrigeration and process applications. This document details various thermostats, electrical control panels, and all-purpose protectors, highlighting their features, technical specifications, and application scenarios.
	[Elitech MTC-5080 Temperature Controller Operation Manual & Specifications](#) Comprehensive operation instructions, technical specifications, and wiring diagram for the Elitech MTC-5080 temperature controller, designed for cold storage applications. Learn about its functions, settings, and error codes.
	[MTC-5080 Operation Instructions and Technical Specifications](#) Comprehensive guide to the MTC-5080 digital temperature controller, detailing its functions, specifications, operation, and safety guidelines for cold storage temperature control.

Documents - Elitech – STC-001
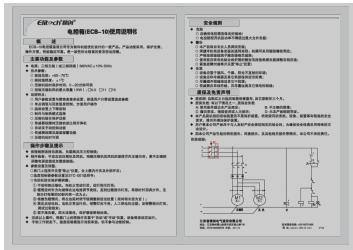
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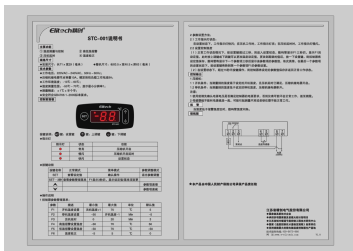
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