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Thermal Edge NE0304864X

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MODEL: NE0304864X

Brand: Thermal Edge

1. INTRODUCTION

This manual provides essential information for the safe and efficient operation, installation, and maintenance of your Thermal Edge Model NE0304864X Electrical Enclosure Air Conditioner. Please read this manual thoroughly before installation or operation to ensure proper usage and to prevent damage to the unit or injury to personnel.

The Thermal Edge NE0304864X is an indoor/outdoor enclosure air conditioner designed to cool electrical enclosures, providing 3,000 BTUH of cooling capacity. It operates on a 480 VAC/60 Hz power supply and features a NEMA Type 4X corrosion-resistant enclosure, offering protection against various environmental elements.



Figure 1: Front view of the Thermal Edge NE0304864X Electrical Enclosure Air Conditioner. The unit is a tall, rectangular, light-gray cabinet with a digital display and the "Thermal Edge Inc." logo on the upper front panel. Ventilation grilles are visible on the right side.

2. SAFETY INFORMATION

Always adhere to local and national electrical codes during installation and maintenance. Only qualified personnel should perform installation, maintenance, and repair procedures.

- Disconnect all power to the unit before performing any service or maintenance.
- Ensure proper grounding of the unit to prevent electrical shock.
- Do not operate the unit if any components are damaged or missing.
- Wear appropriate personal protective equipment (PPE) when working with the unit.
- Refer to the wiring diagram provided with the unit for correct electrical connections.

3. SETUP AND INSTALLATION

The NE0304864X is designed for easy integration with electrical enclosures. Its narrow body style is suitable for mounting on enclosures as narrow as 12 inches wide.

3.1 Mounting

- Ensure the mounting surface is flat and capable of supporting the unit's weight (99 pounds).
- Utilize the provided mounting hardware and follow the specific mounting template for your enclosure.
- The unit features a sloped top to facilitate water runoff, which should be considered during outdoor installations.

3.2 Electrical Connection

- Connect the unit to a dedicated 480 VAC, 60 Hz power supply.
- Ensure all electrical connections comply with local and national codes.
- Verify proper grounding before energizing the unit.

3.3 Initial Checks

- Inspect the unit for any shipping damage.
- Confirm all access panels are securely fastened.

4. OPERATING INSTRUCTIONS

The NE0304864X is equipped with a programmable digital controller for precise temperature management.

4.1 Digital Temperature Controller

- **Programming Set Point:** Use the controller interface to set the desired temperature for the enclosure. Refer to the controller's specific manual for detailed programming steps.
- **Temperature Controls:** The controller allows for precise adjustment and monitoring of the enclosure temperature.
- **Alerts and Messaging:** The digital controller provides visible error and alarm messages, as well as system status indications. Respond to alerts promptly.
- **Keypad Lockout:** A keypad lockout function is available to prevent unauthorized changes to settings.

4.2 Condensate Management

The unit features an active condensate evaporation system that continuously eliminates condensation. This system also pre-cools the refrigerant, enhancing unit efficiency and eliminating the need for a separate drip line.

4.3 Refrigerant Flow Control

A thermal expansion valve (TXV) is integrated to balance and control the refrigerant flow, ensuring optimal cooling capacity and efficiency across a wide range of ambient temperatures and load conditions.

4.4 Remote Control

The unit supports remote control functionality. Consult the specific remote control documentation for pairing and operation instructions.

5. MAINTENANCE

Regular maintenance ensures the longevity and efficient operation of your air conditioner. The unit's interior design facilitates easy maintenance access.

5.1 Routine Checks (Monthly)

- **Filter Cleaning:** Inspect and clean or replace air filters as needed to maintain optimal airflow.
- **Condenser Coils:** Check for dust and debris accumulation on the condenser coils. Clean gently with a

soft brush or vacuum if necessary.

- **Drainage System:** Verify that the condensate evaporation system is functioning correctly and there are no blockages.

5.2 Annual Inspection (By Qualified Technician)

- **Refrigerant Level:** Check the R-410A refrigerant charge. Only qualified personnel should handle refrigerants.
- **Electrical Connections:** Inspect all electrical connections for tightness and signs of wear.
- **Compressor Performance:** Evaluate compressor operation and efficiency.
- **Fan Motors:** Check fan motors for proper operation and lubrication.

Always disconnect power before performing any maintenance.

6. TROUBLESHOOTING

This section provides guidance for common issues. For complex problems, contact Thermal Edge customer support.

Problem	Possible Cause	Solution
Unit not cooling	<ul style="list-style-type: none">• No power supply• Dirty air filters/coils• Digital controller error/alarm• Low refrigerant charge	<ul style="list-style-type: none">• Check power connection and circuit breaker.• Clean or replace filters/coils.• Refer to controller display for specific error codes and solutions.• Contact qualified technician for refrigerant check.
Digital controller displays error/alarm	<ul style="list-style-type: none">• High/Low refrigerant pressure cutout• Temperature sensor fault• Compressor anti-short cycle protection active	<ul style="list-style-type: none">• Check for obstructions to airflow, clean coils. If persistent, contact technician.• Contact technician for sensor diagnosis.• Wait for the protection cycle to complete (typically a few minutes).
Excessive noise during operation	<ul style="list-style-type: none">• Loose components• Fan motor issue• Compressor issue	<ul style="list-style-type: none">• Inspect and tighten any loose screws or panels.• Contact qualified technician.• Contact qualified technician.

7. SPECIFICATIONS

Model Number	NE0304864X
Cooling Capacity	3,000 BTUH
Power Supply	480 VAC, 60 Hz
Enclosure Type	UL Type 4X (NEMA Type 4X)
Refrigerant	R 410A
Control Method	Remote Control
Installation Type	Split System
Product Dimensions (H x W x D)	38 x 11.8 x 9.5 inches
Item Weight	99 pounds
Manufacturer	Thermal Edge Inc.

8. WARRANTY AND SUPPORT

For warranty information, please refer to the documentation provided with your purchase or contact Thermal Edge Inc. directly. Thermal Edge Inc. is committed to providing quality products and customer support.

For technical assistance, troubleshooting beyond this manual, or to inquire about service, please contact Thermal Edge customer support. Contact details can typically be found on the manufacturer's official website or through your product vendor.

Manufacturer: Thermal Edge Inc.

Website: Visit the Thermal Edge Store on Amazon (for general brand information)