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› Thermal Edge Model NE04023604 Electrical Enclosure Air Conditioner, 230V, 60 Hz, 4,000 BTUH, UL Type 4

Thermal Edge NE04023604

Thermal Edge Model NE04023604 Electrical Enclosure Air Conditioner

INSTRUCTION MANUAL

1. Introduction

This manual provides essential information for the safe and efficient operation, installation, and maintenance of your Thermal Edge Model NE04023604 Electrical Enclosure Air Conditioner. This unit is designed to cool air at 4,000 BTUH and operates on a 230 VAC/60 Hz power supply. Its robust design, including a narrow body and sloped top, makes it suitable for both indoor and outdoor electrical enclosures, offering NEMA Type 4 protection against various environmental elements.

2. Safety Information

Please read all safety warnings and instructions carefully before installing, operating, or performing maintenance on this unit. Failure to comply with these instructions may result in property damage, serious injury, or death.

- **Electrical Hazard:** Ensure power is disconnected before any installation or maintenance. Only qualified personnel should perform electrical connections.
- **Refrigerant Handling:** This unit contains R 410A refrigerant. Servicing should only be performed by certified technicians.
- **Weight:** The unit weighs approximately 72 pounds. Use proper lifting techniques or assistance to prevent injury during installation.
- **Ventilation:** Ensure adequate clearance around the unit for proper airflow and heat dissipation.
- **UL Listed:** This product is UL Listed, indicating compliance with safety standards.

3. Product Overview

The Thermal Edge Model NE04023604 is an advanced electrical enclosure air conditioner designed for reliable thermal management. Key features include:

- **Digital Temperature Controller:** Programmable set point and temperature controls with visible error/alarm

messaging and keypad lockout.

- **Active Condensate Evaporation System:** Continuously eliminates condensate and pre-cools refrigerant for increased efficiency.
- **Robust Design:** Features a rigid chassis, seam-welded shroud, and thoughtful interior for easy maintenance.
- **High Efficiency:** Equipped with a highly efficient rotary compressor, fully insulated and sealed cabinet, and a Thermal Expansion Valve for consistent cooling capacity.
- **Compressor Protection System:** Includes high & low refrigerant pressure cutouts, anti-short cycle protection, and run capacitors for extended compressor life.
- **NEMA Type 4 Enclosure:** Provides protection against dirt, dust, rain, sleet, snow, splashing water, and hose-directed water.



Figure 3.1: Front view of the Thermal Edge Model NE04023604 Electrical Enclosure Air Conditioner. The unit is a tall, rectangular, light-grey enclosure with a digital display and the "Thermal Edge Inc." logo on the front panel. Vents are visible on the right side of the unit.

4. Setup and Installation

The NE04023604 is designed as a split system for installation. Due to its specialized nature and electrical requirements, professional installation is highly recommended.

1. **Site Selection:** Choose a location that allows for proper mounting on a 12-inch wide enclosure. Ensure the sloped top can facilitate water runoff if installed outdoors.
2. **Mounting:** Securely mount the unit to the electrical enclosure using appropriate hardware. Refer to the detailed mounting template provided with the unit for precise hole placement.
3. **Electrical Connection:** Connect the unit to a dedicated 230 VAC/60 Hz power supply. All wiring must comply with local and national electrical codes. Verify correct voltage and amperage before powering on.
4. **Initial Inspection:** After installation, visually inspect all connections and ensure no obstructions to airflow.

5. Operating Instructions

The unit features a user-friendly digital controller for easy operation.

- **Power On:** Once installed and connected, apply power to the unit. The digital display will illuminate.
- **Setting Temperature:** Use the controls on the digital display to set the desired temperature within the enclosure. Refer to the controller's specific manual for detailed programming instructions.
- **Monitoring:** The digital controller provides real-time temperature readings and system status. Pay attention to any visible error or alarm messages.
- **Condensate Management:** The active condensate evaporation system automatically handles condensation, eliminating the need for a separate drip line.
- **Thermal Expansion Valve:** This component automatically balances and controls refrigerant flow, ensuring efficient cooling across varying temperatures and loads.

6. Maintenance

Regular maintenance ensures optimal performance and longevity of your air conditioner. Always disconnect power before performing any maintenance.

- **Filter Cleaning/Replacement:** Periodically inspect and clean or replace air filters to maintain proper airflow and cooling efficiency.
- **Coil Cleaning:** Over time, condenser and evaporator coils may accumulate dust and debris. Clean coils as needed to prevent reduced performance.
- **Condensate System Check:** While the system is self-evaporating, occasionally check the condensate drain pan (if accessible) for any unusual buildup or blockages.
- **General Inspection:** Annually inspect all electrical connections, fan motors, and refrigerant lines for wear or damage.
- **Professional Service:** For refrigerant-related issues or complex repairs, contact a certified HVAC technician.

7. Troubleshooting

This section provides guidance for common issues. For persistent problems, contact customer support.

Problem	Possible Cause	Solution
Unit not cooling effectively	Dirty air filters or coils; Low refrigerant; Ambient temperature too high.	Clean/replace filters; Clean coils; Ensure proper ventilation around the unit. If refrigerant is low, contact service.
Digital display shows error/alarm	System fault (e.g., high/low pressure cutout, sensor error).	Note the error code and consult the controller's manual or contact support. Check for power fluctuations.
Compressor short cycling	Improper sizing; Low refrigerant; Electrical issue.	The unit has built-in anti-short cycle protection. If this occurs, contact a qualified technician.
Unusual noise or vibration	Loose components; Fan motor issue; Compressor problem.	Disconnect power and inspect for loose parts. If noise persists, contact service.

8. Specifications

Attribute	Detail
Model Number	NE04023604
Cooling Capacity	4,000 BTUH
Voltage	230 Volts AC
Frequency	60 Hz
NEMA Rating	Type 4
Refrigerant	R 410A
Product Dimensions (L x W x H)	9.5 x 11.8 x 32 inches
Item Weight	72 pounds
Control Method	Remote
Controller Type	Remote Control (Digital)
Installation Type	Split System
Manufacturer	Thermal Edge Inc.
Date First Available	July 24, 2018

9. Warranty Information

For detailed warranty terms and conditions, please refer to the documentation provided with your purchase or contact Thermal Edge Inc. directly. Extended protection plans may also be available through your retailer.

10. Customer Support

If you require assistance with installation, operation, maintenance, or troubleshooting, please contact Thermal Edge Inc. customer support. Have your model number (NE04023604) and purchase date ready when contacting support.

Manufacturer: Thermal Edge Inc.

For contact details, please visit the official Thermal Edge website or refer to your product packaging.

