

FBT E580-4T0370

FBT E580-4T0370 Vector Inverter User Manual

Comprehensive instructions for installation, operation, and maintenance.

1. INTRODUCTION

This manual provides essential information for the safe and efficient use of the FBT E580-4T0370 Vector Inverter. This device is designed for precise motor control in various industrial applications, including machine tools, textile machinery, cable machinery, petrochemical processing, construction, and transmission systems. It offers advanced features for robust performance and flexible control.

Please read this manual thoroughly before installation, operation, or maintenance to ensure proper functionality and to prevent potential hazards.

2. SAFETY INFORMATION

WARNING: Failure to follow these safety instructions may result in serious injury or equipment damage.

- Refer to the instruction manual before installation and operation.
- Do not connect AC power to output terminals UVW.
- Do not remove any cover while applying power and at least 10 minutes after disconnecting power. Residual voltage may be present.
- Securely ground (earth) the equipment to prevent electrical shock.
- Only qualified personnel should perform installation, wiring, and maintenance.

3. PRODUCT OVERVIEW



Figure 1: Front view of the FBT E580-4T0370 Vector Inverter. This image displays the control panel with an orange LED display, navigation buttons (ESC, MODE, FWD, REV/JOG, STOP), and a rotary encoder for parameter adjustment. The model number E580 and 4T0110 (likely a variant or part of the model series) are visible, along with a safety warning label at the bottom.

Key Features:

- **Strong Torque:** 200% start torque at 0Hz under Vector Control (VC), 180% start torque at 0Hz under Sensorless Vector Control (SVC).
- **Display Options:** Standard 5-digit two-line LED panel display with optional LCD keypad.
- **Real-time Monitoring:** Intuitive monitoring of nearly a hundred parameters, including electricity usage, running time, input/output voltage and current, and error records.
- **Macro Functions:** Built-in system and application macros simplify parameter setting.
- **Flexible Speed Control:** Programmable 16-segment speed running with independent settings for running time, acceleration/deceleration, and direction for each segment.
- **Virtual I/O:** Software virtual I/O function for flexible configuration, reducing external interference and simplifying wiring.
- **Comprehensive Protection:** Abundant warning and protection functions ensure operational safety.

4. SETUP AND INSTALLATION

4.1. Environmental Requirements

- Install in a clean, dry, and well-ventilated area.
- Avoid direct sunlight, corrosive gases, dust, and metallic particles.
- Ensure ambient temperature and humidity are within specified limits (refer to full specifications).

4.2. Mounting

Mount the inverter vertically on a sturdy, non-flammable surface. Ensure adequate clearance around the unit for proper heat dissipation and ventilation.

4.3. Wiring

All wiring must be performed by a qualified electrician in accordance with local and national electrical codes.

1. **Power Input (R, S, T):** Connect the 380V AC power supply to the designated input terminals.
2. **Motor Output (U, V, W):** Connect the motor leads to the output terminals. **Do not connect AC power to these terminals.**
3. **Grounding (PE):** Connect the protective earth (ground) terminal to a reliable ground point. This is critical for safety.
4. **Control Wiring:** Connect control signals (e.g., start/stop, speed reference, fault relays) to the appropriate control terminals as per your application requirements. Refer to the detailed wiring diagrams in the complete product manual.

5. OPERATING INSTRUCTIONS

5.1. Initial Power-Up

After completing all wiring and safety checks, apply power to the inverter. The display panel should illuminate, indicating the inverter is ready for operation.

5.2. Basic Operation

- **Start:** Press the **FWD** button for forward rotation or **REV/JOG** for reverse rotation (if configured).
- **Stop:** Press the **STOP** button to halt motor operation.
- **Speed Adjustment:** Use the rotary encoder or external control signals to adjust the motor speed.

5.3. Parameter Setting

The inverter features a user-friendly interface for parameter configuration. Use the **MODE** button to navigate through menus and the **ESC** button to exit. The rotary encoder allows for value adjustment.

- **Accessing Parameters:** Press **MODE** to enter the parameter menu.
- **Navigating:** Use the up/down arrows or rotary encoder to scroll through parameter groups and individual parameters.
- **Modifying Values:** Select a parameter, press **MODE** to edit, adjust the value, and press **MODE** again to save.
- **Macro Functions:** Utilize built-in system and application macros to quickly configure common settings. Refer to the detailed parameter list in the full manual for specific macro codes.

5.4. Advanced Control

- **16-Segment Speed Running:** Configure up to 16 distinct speed segments, each with independent running time, acceleration, deceleration, and direction settings. This is ideal for complex motion profiles.
- **Virtual I/O:** The software virtual I/O function allows for flexible configuration of input/output logic without additional physical wiring, simplifying system integration.

6. MAINTENANCE

Regular maintenance ensures the longevity and reliable operation of your FBT E580-4T0370 Vector Inverter.

- **Power Disconnection:** Always disconnect all power sources and wait at least 10 minutes before performing any maintenance to allow capacitors to discharge.
- **Cleaning:** Periodically clean the inverter's exterior and ventilation openings to prevent dust accumulation, which can impede cooling. Use a soft, dry cloth. Do not use liquid cleaners.
- **Inspection:** Regularly inspect wiring connections for tightness and signs of damage or corrosion. Check for any unusual noises or odors during operation.
- **Fan Check:** Ensure cooling fans are operating correctly and are free from obstructions.

7. TROUBLESHOOTING

This section provides general guidance for common issues. For detailed troubleshooting, refer to the complete product manual.

Problem	Possible Cause	Solution
Inverter does not power on	No input power; Blown fuse; Wiring error.	Check power supply; Inspect fuses; Verify wiring connections.
Motor does not run	Incorrect parameter settings; Motor wiring error; Overload condition.	Verify motor parameters; Check motor wiring; Reduce load or check motor size.
Overcurrent fault	Sudden load change; Short circuit in motor or wiring; Incorrect acceleration time.	Check load conditions; Inspect motor/wiring; Increase acceleration time parameter.
Overvoltage fault	High input voltage; Rapid deceleration; Regenerative load.	Check input voltage; Increase deceleration time; Consider braking resistor if applicable.

If the problem persists after attempting these solutions, contact technical support.

8. SPECIFICATIONS

Parameter	Value
Model	E580-4T0370
Brand	FBT
Input Voltage	380V
Power Rating	37KW
Control Type	Vector Inverter (VC, SVC)
Manufacturer	FBT
Material	tile (as per product data)
ASIN	B08QW7YVFC
First Available	December 17, 2020

9. WARRANTY AND SUPPORT

9.1. Warranty Information


Specific warranty terms and conditions for the FBT E580-4T0370 Vector Inverter are typically provided with the product packaging or available from the point of purchase. Please retain your proof of purchase for warranty claims. Warranty coverage generally includes defects in materials and workmanship under normal use.

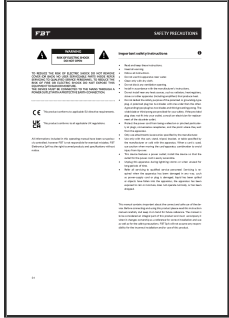
9.2. Technical Support

For technical assistance, troubleshooting beyond this manual, or service inquiries, please contact your authorized FBT distributor or reseller. When contacting support, please have your product model number (E580-4T0370) and purchase details readily available.



Related Documents - E580-4T0370

	<p>FBT Audio Equipment Safety Precautions and Operating Guidelines</p> <p>Essential safety precautions, warnings, and operating guidelines for FBT audio equipment. Learn how to safely install, use, and maintain your FBT products.</p>
	<p>FBT LIGHT-Series Distribution Board for Heat Pumps - User Manual & Technical Data</p> <p>Comprehensive user manual and technical datasheet for the FBT LIGHT-Series distribution board designed for heat pumps. Includes installation, operation, safety, and technical specifications for surge protection and all-current sensitive RCDs.</p>
	<p>FBT HiMaxX 40a & 40: Professional Sound Reinforcement Monitors - User Manual</p> <p>Comprehensive user manual for FBT HiMaxX 40a and HiMaxX 40 active and passive sound reinforcement monitors. Covers safety instructions, connections, technical specifications, diagrams, and mounting. Features detailed descriptions of controls, diagrams, and performance data.</p>
	<p>FBT X-PRO Series Active Loudspeakers - Operating Manual</p> <p>Comprehensive operating manual for FBT X-PRO Series active loudspeakers (110 A, 112 A, 115 A). Features include Bluetooth 5.0, 3-channel mixer, DSP, and high-performance Class D amplification. Learn about installation, safety, and technical specifications.</p>
	<p>FBT Safety Precautions and User Information</p> <p>This document outlines important safety precautions and general information for FBT products, ensuring safe and correct usage. It covers electrical safety, installation guidelines, and servicing procedures.</p>

 A thumbnail image of the document titled "FBT Safety Precautions and Important Instructions". The document features a header with the FBT logo and the title. Below the header, there are several sections of text, including a "WARNING" section with a triangle icon, a "CAUTION" section with a triangle icon, and a "CE" mark. The text is in a small font and is mostly illegible in the thumbnail.	<p>FBT Safety Precautions and Important Instructions</p> <p>This document outlines essential safety precautions and important instructions for the use of FBT products, covering electrical safety, proper installation, and general handling to ensure safe operation and longevity.</p>
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