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DEWIN QYABEEAEC-GS110622-01

DEWIN VFD Variable Frequency Drive 0.75kW User Manual

Model: QYABEEAEC-GS110622-01

1. Introduction

This manual provides essential information for the safe and efficient operation of your DEWIN Variable Frequency Drive (VFD). This VFD is designed to control the speed of three-phase motors, converting single-phase 220V input to three-phase 380V output. It is suitable for various industrial applications requiring precise motor speed control.

2. Safety Information

WARNING: Read this user manual thoroughly before operation. Risk of electrical shock. Always wait at least 10 minutes after removing power before servicing the unit to allow capacitors to discharge.
The VFD incorporates multiple protection features to ensure safe operation, including:

- Overvoltage protection
- Undervoltage protection
- Overcurrent protection
- Overload protection
- Overheating protection
- Power module protection
- Grounding protection
- Short-circuit protection
- Stall protection

Always ensure proper grounding and adhere to local electrical codes during installation and operation.

3. Product Overview

The DEWIN VFD offers stable performance, high torque, and precise control over a wide speed range. It features a 485 communication port for enhanced connectivity and control. The unit is designed with a robust heat dissipation system for long-term stable operation.



Figure 3.1: Front view of the DEWIN VFD, highlighting its protective features, energy saving capabilities, frequency control, and strong security.

Key features include:

- **Stable Performance:** Utilizes a unique control method for high power, high torque, and high precision across a broad speed range.
- **Efficient Heat Dissipation:** Equipped with an intelligent radiator and quiet fan control to effectively reduce heat during operation, ensuring long-term stability.
- **Integrated AVR:** Provides stable and continuous pure sine wave output.
- **Advanced Modules:** Incorporates IPM and IGBT modules for improved efficiency, high output, low heat generation, and stable quality.

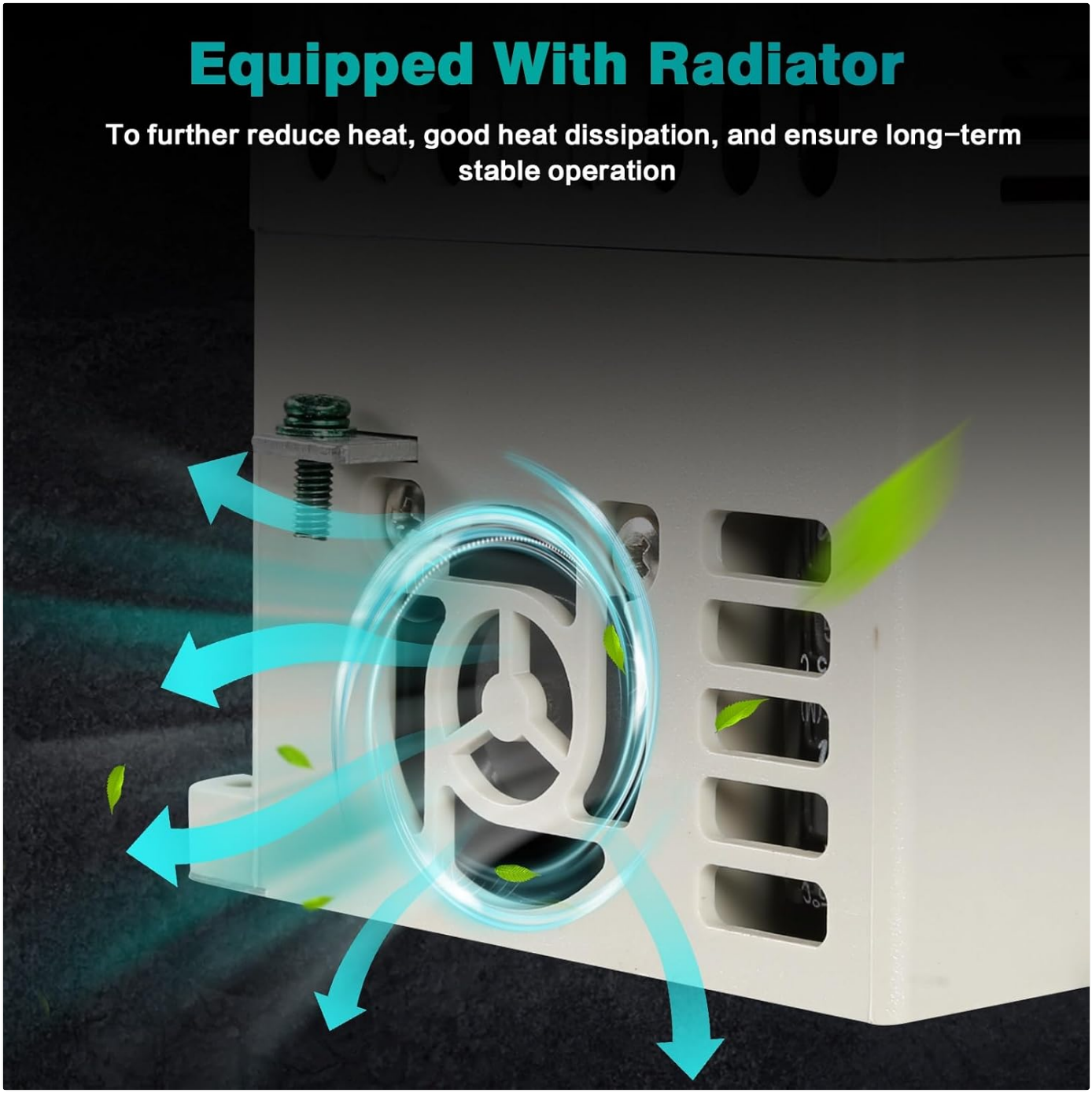


Figure 3.2: The VFD's radiator design for effective heat dissipation.

The VFD is widely applicable in various industrial settings, including:

- Fans
- Water pumps
- CNC machine tools
- Ball mills
- Injection molding machines
- Grinders
- Conveyor belts
- Textile equipment



Figure 3.3: Various applications where the VFD can be utilized.

4. Specifications

The following table details the technical specifications of the DEWIN VFD 0.75kW model:

Product information



Material:	Process flame retardant ABS plastic
Color:	White
Rated input voltage:	single-phase 220V
Rated output Voltage:	three-phase 380V Power: .75KW
Output current:	3A
Factory frequency:	50Hz
Output frequency:	0~999Hz
Installation Method:	wall-mounted, cabinet type
Protection level:	IP20
Cooling method:	air cooling, with fan control

Figure 4.1: Display panel showing key product information.

Specification	Value
Brand	DEWIN
Model Number	QYABEEAEC-GS110622-01
Material	Flame retardant ABS plastic
Color	White
Rated Input Voltage	Single-phase 220V
Rated Output Voltage	Three-phase 380V
Rated Power	0.75 kW
Output Current	3A
Factory Frequency	50/60 Hz

Specification	Value
Output Frequency	0 – 999 Hz
Installation Method	Wall-mounted, Cabinet type
Cooling Method	Air cooled, with fan control
Protection Level	IP20
Dimensions	23 x 17 x 16 cm (approx.)
Item Weight	1.4 Kilograms

5. Setup

5.1 Installation

The VFD can be installed using either a wall-mounted or cabinet-mounted method. Ensure adequate ventilation around the unit for optimal heat dissipation. Avoid installing in areas with excessive dust, humidity, or extreme temperatures.

5.2 Wiring

Proper wiring is crucial for the safe and correct operation of the VFD. The control panel can be easily removed to facilitate wiring connections via screw terminals.



Figure 5.1: The removable control panel for easier wiring access.

Refer to the following diagrams for wiring instructions:

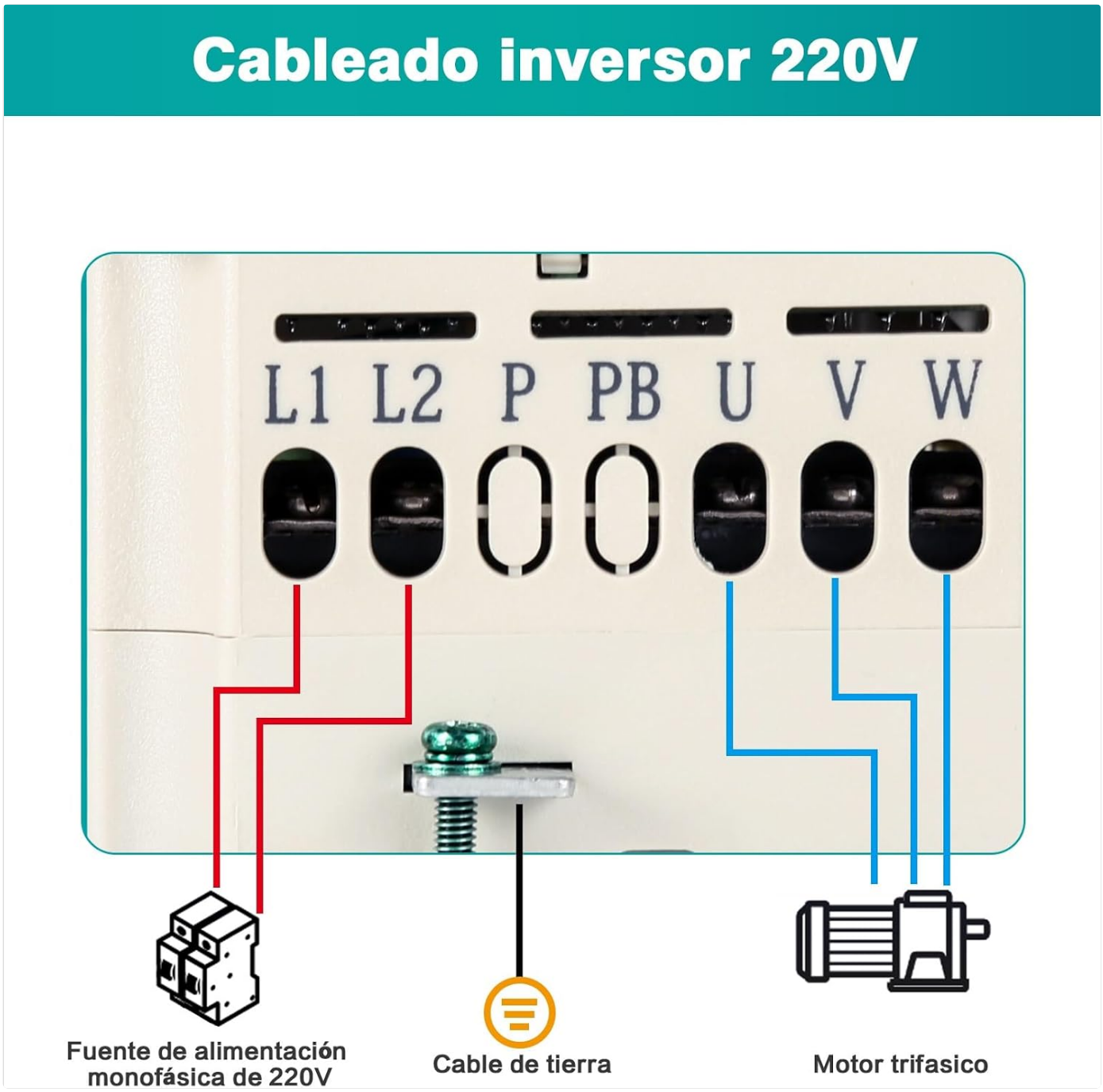


Figure 5.2: Basic wiring diagram for single-phase 220V input to three-phase motor output.

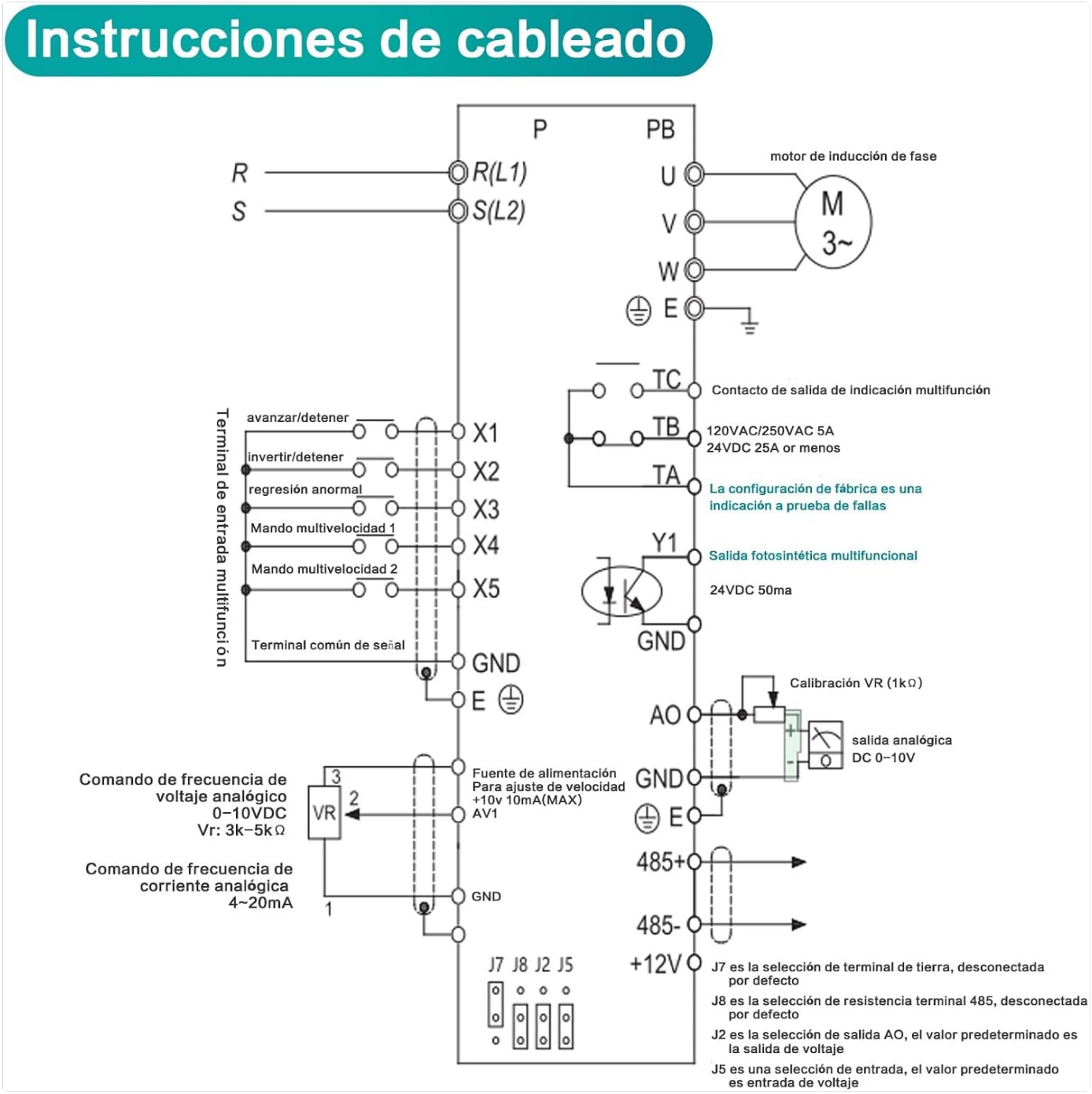


Figure 5.3: Detailed wiring diagram for the VFD, including control signal terminals.

Wiring Terminals:

- **L1, L2:** Single-phase 220V power input.
- **P:** Ground connection.
- **U, V, W:** Three-phase 380V output to the motor.
- **X1-X5:** Multifunction input terminals for control signals (e.g., forward/reverse, stop, multi-speed control).
- **TC, TB, TA:** Multifunction indication output contacts.
- **Y1:** Photosynthetic output.
- **AO:** Analog output (DC 0-10V).
- **485+, 485-:** RS485 communication port.
- **GND:** Ground for control signals.
- **VR:** Variable resistor for frequency command (3k-5kΩ).

Ensure all connections are secure and correctly matched to avoid damage to the VFD or connected equipment.

6. Operating Instructions

The VFD features a user-friendly button panel and a multi-function display for real-time monitoring of voltage and current. Speed adjustment is performed via a rotary knob.



Figure 6.1: Rotary knob for stepless speed regulation (0-50Hz).

Basic Operation:

1. **Power On:** Connect the VFD to the single-phase 220V power supply. The display will illuminate.
2. **Speed Adjustment:** Use the rotary knob to adjust the output frequency, thereby controlling the motor speed. The display shows the current frequency (Hz).
3. **Run/Stop:** Use the 'RUN' button to start the motor and the 'STOP/RESET' button to stop it.
4. **Parameter Settings:** The 'PRG' (Program) and 'MF' (Multi-Function) buttons, along with the arrow keys and 'ENTER' button, are used to access and modify advanced parameters. Refer to the detailed English manual provided with the product for specific parameter settings.

The high-definition display provides intuitive data, and one-click settings allow for quick configuration to desired special modes.

7. Maintenance

Regular maintenance helps ensure the longevity and reliable operation of your VFD.

- **Cleaning:** Periodically clean the VFD's exterior and ventilation openings to prevent dust accumulation, which can hinder heat dissipation.
- **Environmental Control:** Maintain a clean, dry environment for the VFD, free from excessive dust, humidity, and corrosive gases.
- **Inspection:** Regularly check wiring connections for tightness and signs of wear or damage.
- **Power Down Procedure:** Before any maintenance or inspection, always disconnect the power supply and wait at least 10 minutes for the internal capacitors to discharge completely. Failure to do so poses a severe risk of electrical shock.

8. Troubleshooting

If you encounter issues with your DEWIN VFD, consider the following general troubleshooting steps. For specific error codes or complex problems, refer to the detailed English manual or contact technical support.

- **No Power/Display:** Check the input power supply and all power connections. Ensure the circuit breaker or fuse is not tripped.
- **Motor Not Running:** Verify that the 'RUN' command is active, the output frequency is set above zero, and motor wiring is correct. Check for any fault indicators on the display.
- **Overload/Overcurrent Trip:** Reduce the motor load, check for mechanical issues with the motor or driven equipment, and verify motor parameters are correctly set in the VFD.
- **Overheat Trip:** Ensure adequate ventilation around the VFD. Clean any dust from the heatsink and fan. Check ambient temperature.
- **Incorrect Speed:** Verify the speed setting via the rotary knob or external control signals. Check parameter settings related to frequency range and control mode.

9. Warranty Information

Specific warranty terms and conditions for the DEWIN VFD are typically provided at the point of purchase or within the product packaging. Please retain your proof of purchase for warranty claims.
Spare parts availability: Information regarding spare parts is currently unavailable.

10. Support

For technical assistance, detailed parameter configurations, or further inquiries not covered in this manual, please contact your seller or the DEWIN customer support team. Ensure you have your product model number (QYABEEAEC-GS110622-01) and any relevant error codes ready when seeking support.

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