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DEWIN IXDIXARCQ-GS109552-01

DEWIN VFD Inverter (AC220V 750W) User Manual

Model: IXDIXARCQ-GS109552-01 | Brand: DEWIN

1. Introduction

The DEWIN VFD Inverter is a high-precision motor speed control unit designed for industrial applications. It features a single-phase 220V input and provides a three-phase 220V output, enabling precise speed regulation for various motors. This unit offers a wide speed regulation range, low energy consumption, and comprehensive protection functions, making it suitable for conveyor belts, assembly lines, rotating equipment, fans, pumps, and compressors.



Figure 1: DEWIN VFD Inverter main unit.

2. Safety Information

Please read all safety instructions carefully before installation and operation. Failure to follow these instructions may result in personal injury or equipment damage.

- **Qualified Personnel:** Installation and maintenance should only be performed by qualified electrical personnel.
- **Power Disconnection:** Always disconnect all power sources before wiring, inspection, or maintenance. Wait for the indicator lights to turn off completely.
- **Proper Grounding:** Ensure the inverter is properly grounded to prevent electrical shock.
- **Environmental Conditions:** Do not operate the inverter in environments with excessive dust, moisture, corrosive

gases, or direct sunlight.

- **Motor Compatibility:** Ensure the motor's voltage and power ratings are compatible with the inverter's specifications.

3. Product Overview

The DEWIN VFD Inverter is constructed with a high-quality, flame-retardant ABS plastic casing, ensuring durability and safety. It features an integrated heat dissipation system with a powerful imported fan for efficient cooling and stable long-term operation.

3.1. Key Features

- Single-phase 220V input, three-phase 220V output.
- Wide speed regulation range (0.1-400Hz).
- Comprehensive protection functions: over-voltage, under-voltage, over-current, overload, short-circuit.
- Automatic torque boost and slip compensation.
- Clear four-digit digital display for real-time data.
- User-friendly control panel with intuitive buttons and a speed adjustment knob.

3.2. Control Panel Layout



Figure 2: Control Panel Interface.

- **Four-digit digital tube:** Displays frequency, voltage, current, and other parameters.
- **PROG:** Program/Menu button.
- **UP/DOWN arrows:** Parameter adjustment/navigation.
- **OK:** Confirm selection/save settings.
- **RUN:** Start motor operation.
- **STOP:** Stop motor operation.
- **Forward/Reverse:** Function parameter display button.
- **Panel speed control Positioner:** Rotary knob for stepless speed adjustment.



Figure 3: Inverter with integrated radiator for efficient heat dissipation.

4. Setup

4.1. Mounting

The DEWIN VFD Inverter is designed for embedded installation. Ensure adequate space around the unit for proper ventilation and heat dissipation. Mount the unit securely using appropriate fasteners.

4.2. Wiring Instructions

The inverter requires a single-phase 220V input and provides a three-phase 220V output. It is crucial to correctly wire the power supply and the motor. If your motor is originally configured for three-phase 380V (Delta connection), it must be reconfigured to a 220V Star or Delta connection to be compatible with this inverter.



Figure 4: 220V Inverter Wiring Diagram.

1. **Input Power (AC 220V):** Connect the single-phase 220V power supply to the 'AC' terminals on the inverter.
2. **Ground Wire (FG):** Connect the ground wire to the 'FG' terminal. This is essential for safety.
3. **Motor Output (U, V, W):** Connect the three-phase motor to the 'U', 'V', and 'W' output terminals.
4. **Motor Connection:** Ensure your three-phase motor is configured for 220V operation (Star or Delta connection). If it was previously used with a 380V supply, its internal winding connection must be changed.

5. Operating Instructions

Once the inverter is correctly wired and mounted, you can proceed with operation.

1. **Power On:** Apply single-phase 220V power to the inverter. The digital display will illuminate.
2. **Initial Check:** Observe the digital display. It typically shows the output frequency (e.g., 50.0 Hz).
3. **Start Motor:** Press the **RUN** button to start the motor. The motor will begin to rotate at the current frequency setting.
4. **Adjust Speed:** Rotate the **Panel speed control Positioner** knob (located at the bottom of the control panel) clockwise to increase motor speed and counter-clockwise to decrease it. The digital display will show the adjusted frequency in real-time.

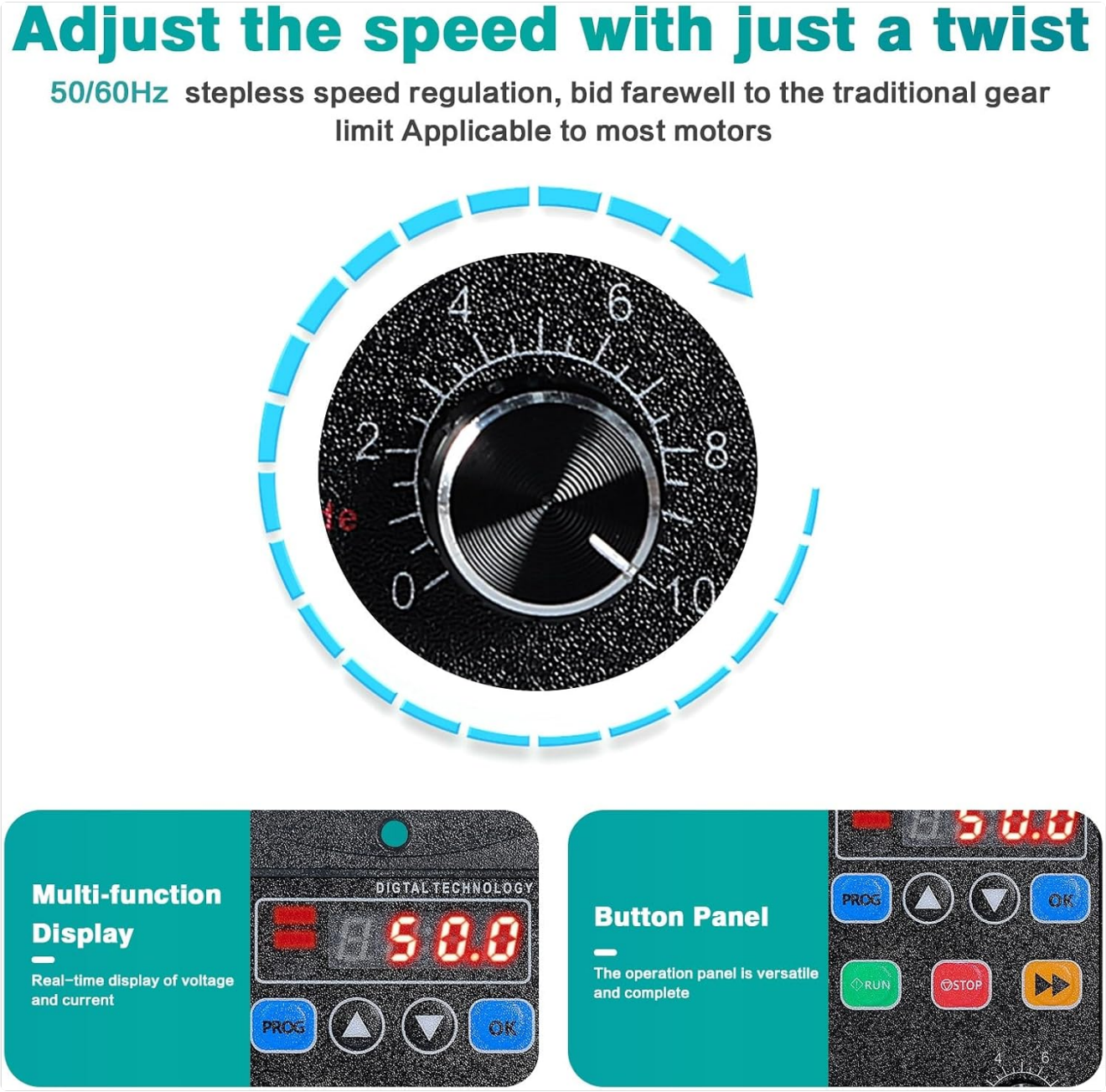


Figure 5: Speed adjustment knob for stepless speed regulation.

5. **Stop Motor:** Press the **STOP** button to halt motor operation.
6. **Parameter Settings:** For advanced settings and parameter adjustments, refer to the detailed programming guide provided with the inverter. Use the **PROG**, **UP**, **DOWN**, and **OK** buttons to navigate and modify parameters.

6. Maintenance

Regular maintenance ensures the longevity and optimal performance of your VFD inverter.

- **Cleaning:** Periodically clean the inverter's exterior and ventilation openings to prevent dust accumulation, which can hinder heat dissipation. Use a soft, dry cloth. Do not use liquid cleaners.
- **Ventilation:** Ensure the cooling fan and radiator are free from obstructions. Proper airflow is critical for preventing overheating.
- **Connection Checks:** Regularly inspect all wiring connections for tightness and signs of wear or corrosion. Loose connections can lead to poor performance or safety hazards.
- **Environmental Monitoring:** Maintain the operating environment within the specified temperature and humidity

ranges.

7. Troubleshooting

This section addresses common issues you might encounter with your VFD inverter.

7.1. Common Problems and Solutions

Problem	Possible Cause	Solution
Motor does not start	No power, incorrect wiring, motor overload, emergency stop engaged.	Check power supply, verify wiring, reduce motor load, check for emergency stop button.
Undervoltage error displayed	Input voltage too low, internal DC bus issue.	Verify stable input AC voltage. If issue persists, contact support.
Overload error	Motor drawing too much current.	Reduce motor load, check motor for mechanical issues, verify motor power rating.
Overheat warning	Insufficient ventilation, high ambient temperature, fan malfunction.	Ensure clear airflow, clean radiator, check fan operation.
Erratic speed control	Interference, faulty speed potentiometer, incorrect parameter settings.	Check for sources of electrical interference, inspect potentiometer, reset parameters to default.

If you encounter issues not listed here or if the suggested solutions do not resolve the problem, please contact customer support.

8. Specifications

Detailed technical specifications for the DEWIN VFD Inverter (AC220V 750W).



Material:	Process flame retardant ABS plastic	Adaptable motor Power	0.75KW
Rated input voltage:	Single Phase 220V	Rated frequency:	50/60Hz
Rated output voltage:	Three-Phase 220V	Output frequency:	0.1~400Hz
Rated current:	4A	Installation method:	Embedded

Figure 6: Inverter dimensions and key specifications.

Feature	Specification
Material	Process flame retardant ABS plastic
Rated Input Voltage	Single Phase 220V
Rated Output Voltage	Three-Phase 220V
Rated Current	4A
Adaptable Motor Power	0.75KW
Rated Frequency	50/60Hz
Output Frequency	0.1-400Hz
Installation Method	Embedded
Dimensions (approx.)	112mm (H) x 60mm (W) x 132mm (D)

8.1. Applicable Uses

This VFD inverter is widely applicable for controlling the speed of various industrial equipment:



Figure 7: Widely applicable for various motor-driven devices.

- Motors
- Water Pumps
- Fans
- Blenders
- Air Compressors
- Conveyor Belts

9. Warranty and Support

For warranty information and technical support, please refer to the documentation included with your purchase or contact

the seller directly. A 15-day return policy is typically available for this product. Ensure you retain your proof of purchase for any warranty claims.

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