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ETURBEV GD10-1R5G-S2-B

ETURBEV GD10 Series 1 Phase 220V Mini Economical VFD Inverter User Manual

Model: GD10-1R5G-S2-B

1. Introduction

This manual provides essential instructions for the safe and efficient operation, installation, and maintenance of the ETURBEV GD10 Series 1 Phase 220V Mini Economical VFD Inverter. Please read this manual thoroughly before installation, operation, or maintenance to ensure proper usage and prevent potential hazards. Keep this manual for future reference.

2. Safety Information

WARNING: Risk of Electric Shock and Equipment Damage.

- Only qualified personnel should install, operate, and maintain this device.
- Ensure the power supply is disconnected before performing any wiring or maintenance. Wait at least 5 minutes after power-off for capacitors to discharge.
- Do not touch electrical components or terminals when power is applied.
- Proper grounding is essential to prevent electric shock.
- Verify correct voltage and current ratings before connecting to the power supply.
- Protect the inverter from moisture, dust, corrosive gases, and direct sunlight.

3. Product Overview

The ETURBEV GD10 Series VFD Inverter is designed for precise motor speed control in various industrial applications. It features a compact design and an intuitive control panel.

3.1. Inverter Unit

This image displays the overall view of the ETURBEV GD10 Series VFD Inverter, highlighting its compact form factor and ventilation grilles for heat dissipation.



Figure 1: ETURBEV GD10 Series VFD Inverter (Overall View)

3.2. Control Panel

The control panel provides an interface for monitoring and configuring the inverter. It includes a digital display, function keys, and a rotary knob for parameter adjustment.



Figure 2: Control Panel Detail

- **Display Screen:** Shows operating status, parameters, and fault codes.
- **PRG/ESC:** Program/Escape key for menu navigation.
- **QUICK JOG:** For quick manual operation.
- **Up/Down Arrows:** For adjusting values or navigating menus.
- **DATA ENT:** Data Entry key to confirm selections.
- **SHIFT:** Used for shifting digits during parameter entry.
- **RUN:** Starts the motor.
- **STOP/RST:** Stops the motor or resets faults.
- **Rotary Knob:** For fine-tuning frequency or parameter values.

3.3. Multiple Units

The GD10 series is available in various power ratings, with different physical sizes to accommodate diverse application requirements. This image illustrates the size variations within the series.



Figure 3: GD10 Series Inverters (Size Comparison)

4. Setup

4.1. Mounting

Mount the inverter vertically on a stable, non-flammable surface. Ensure adequate clearance around the unit for proper ventilation (at least 10 cm on all sides) to prevent overheating. Avoid mounting in direct sunlight or near heat sources.

4.2. Wiring

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

1. **Power Input (L, N):** Connect the single-phase 220V AC power supply to the designated input terminals.
2. **Motor Output (U, V, W):** Connect the three-phase motor to the output terminals. Ensure correct phase sequence.
3. **Grounding (PE):** Connect the protective earth terminal to a reliable ground point.
4. **Control Terminals:** Refer to the detailed wiring diagram in the full product manual for connecting external control signals (e.g., start/stop, speed reference, fault output).

Double-check all connections for tightness and correct polarity before applying power.

5. Operating Instructions

5.1. Initial Power-Up

After verifying all wiring, apply power to the inverter. The display should illuminate, indicating readiness. If any fault codes appear, refer to the Troubleshooting section.

5.2. Basic Parameter Setting

The GD10 series has various parameters for configuration. Common parameters include motor rated frequency, maximum output frequency, acceleration/deceleration times, and control mode.

1. Press the **PRG/ESC** key to enter the parameter menu.
2. Use the **Up/Down Arrows** to navigate through parameter groups and individual parameters.
3. Press **DATA ENT** to select a parameter for editing.
4. Use the **Up/Down Arrows** or the **Rotary Knob** to change the value. Use **SHIFT** to move the cursor for digit selection.
5. Press **DATA ENT** again to save the new value.
6. Press **PRG/ESC** to exit the parameter menu.

5.3. Start/Stop Operation

- To start the motor, press the **RUN** button on the control panel.
- To stop the motor, press the **STOP/RST** button.
- The motor speed can be adjusted using the rotary knob or external speed reference signals, depending on the configured control mode.

6. Maintenance

Regular maintenance ensures the longevity and reliable operation of your VFD inverter.

- **Cleaning:** Periodically clean the inverter's exterior and ventilation openings to prevent dust accumulation. 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.
- **Cooling Fan:** Ensure the cooling fan is operating correctly and is free from obstructions. Replace if noisy or malfunctioning.
- **Environmental Conditions:** Verify that the operating environment remains within specified temperature and humidity ranges.

WARNING: Disconnect all power before performing any maintenance or inspection.

7. Troubleshooting

This section provides solutions for common issues. For complex problems or persistent faults, contact technical support.

Problem/Fault Code	Possible Cause	Solution
No Display/No Power	No input power; Blown fuse; Loose wiring.	Check power supply; Inspect fuses; Verify wiring connections.
Motor Not Running	Incorrect parameter settings; Motor wiring error; External stop command active.	Check motor parameters (e.g., frequency, control mode); Verify motor wiring; Ensure no external stop signal is active.
Overcurrent Fault (OC)	Motor overload; Short circuit in motor wiring; Rapid acceleration/deceleration.	Reduce motor load; Check motor and wiring for shorts; Increase acceleration/deceleration times.
Overvoltage Fault (OV)	Input voltage too high; Rapid deceleration without braking resistor.	Check input voltage; Increase deceleration time; Consider adding a braking resistor if necessary.
Overheat Fault (OH)	Insufficient ventilation; High ambient temperature; Fan malfunction.	Ensure proper airflow; Reduce ambient temperature; Check cooling fan operation.

8. Specifications

Feature	Detail
Model	GD10-1R5G-S2-B (Part of GD10 Series)
Input Voltage	1 Phase, 220V AC
Output Voltage	3 Phase, 0-220V AC

Feature	Detail
Product Dimensions	1.18 x 0.79 x 0.79 inches
Item Weight	1.76 ounces
Manufacturer	ETURBEV

9. Warranty and Support

For warranty information, technical support, or service inquiries, please refer to the documentation provided with your purchase or contact your authorized ETURBEV distributor. Keep your purchase receipt as proof of purchase.

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