

QLYUEUI SU300

QLYUEUI SU300 Variable Frequency Drive (VFD) User Manual

Model: SU300 Series (0.75-5.5KW, AC220V/380V 3-Phase)

1. INTRODUCTION

This manual provides essential information for the safe and efficient installation, operation, and maintenance of the QLYUEUI SU300 series Variable Frequency Drive (VFD). Please read this manual thoroughly before using the product to ensure proper handling and to prevent potential hazards or damage.

The SU300 VFD is designed to control the speed of three-phase AC induction motors, offering precise control, energy savings, and improved system performance. This manual covers models ranging from 0.75KW to 5.5KW, with both 220V and 380V input options.

2. SAFETY INSTRUCTIONS

WARNING: Improper installation or operation can lead to serious injury or death. Only qualified personnel should install, operate, and maintain this equipment.

- Always disconnect power before performing any wiring, maintenance, or inspection. Wait at least 5 minutes after disconnecting power for capacitors to discharge.
- Ensure proper grounding of the VFD and the motor.
- Do not touch internal components or circuit boards while power is applied or immediately after power is removed.
- Install the VFD in a clean, dry, and well-ventilated environment, away from direct sunlight, corrosive gases, flammable materials, and excessive vibration.
- Verify that the input voltage matches the VFD's rated input voltage.
- Use appropriate personal protective equipment (PPE) when working with electrical equipment.

3. PRODUCT OVERVIEW

The QLYUEUI SU300 VFD features a compact design with an integrated control panel for easy operation and monitoring. Key components include the display, control buttons, and terminal blocks for power and control wiring.



Figure 3.1: Front view of the SU300 VFD. This image displays the control panel with its digital display, function buttons (PRG, M-

FUN, SHIFT, ENTER, RUN, STOP/RESET, Up/Down arrows), and the main power and motor output terminal blocks at the bottom.

3.1 Control Panel Functions

- **RUN:** Starts the motor.
- **STOP/RESET:** Stops the motor or resets fault conditions.
- **PRG (Program):** Enters or exits parameter setting mode.
- **M-FUN (Multi-Function):** Accesses multi-function parameters.
- **SHIFT:** Shifts digits during parameter setting or displays different parameters.
- **ENTER:** Confirms parameter settings.
- **Up/Down Arrows:** Adjusts frequency, navigates menus, or changes parameter values.

4. SPECIFICATIONS

The following table outlines the general specifications for the QLYUEUI SU300 series VFD. Specific parameters may vary by model variant.



Figure 4.1: Detailed product parameters for the SU300-2R2G3 model (2.2KW, 380V). This image provides specific technical data including model number, rated current (5.8A), adapted motor power (2.2KW 3Hp), input/output voltage (Three phase 380V), external dimensions (142x85x116.35 mm), and gross weight (1Kg).

Parameter	Value
Model Series	SU300
Power Range	0.75KW - 5.5KW
Input Voltage Options	AC220V (1-Phase or 3-Phase), AC380V (3-Phase)

Parameter	Value
Output Voltage	3-Phase, matches input voltage
Output Frequency Range	0 - 400 Hz
Output Current (2.2KW 380V model)	5.8A
General Output Current Range	4 - 13A (varies by model)
Control Method	V/F Control, Vector Control
Protection Features	Overcurrent, Overvoltage, Undervoltage, Overheat, Overload, etc.
External Dimensions (2.2KW 380V model)	142mm (H) x 85mm (W) x 116.35mm (D)
Gross Weight (2.2KW 380V model)	Approx. 1 kg



Figure 4.2: Side view of the SU300 VFD showing approximate dimensions. This image illustrates the depth (11.3 cm), width (9.5 cm), and height (18.0 cm) of a typical SU300 unit. Note that specific dimensions may vary slightly between different power ratings.

5. SETUP

5.1 Mounting

The VFD should be mounted vertically on a stable, non-flammable surface, ensuring adequate clearance for ventilation. Maintain sufficient space around the unit for heat dissipation and ease of access for wiring and maintenance.



Figure 5.1: Example of VFD mounting. The image shows the rear of the VFD designed for secure attachment to a mounting rail or panel, facilitating installation in industrial control cabinets.

5.2 Wiring

All wiring must comply with local electrical codes and regulations. Use appropriate wire gauges for power and control circuits.

5.2.1 Power Wiring

- **Input Power (R, S, T or L1, L2, L3):** Connect the main AC power supply to these terminals. Ensure correct phase sequence for 3-phase inputs.
- **Ground (PE):** Connect the protective earth ground to the designated ground terminal.
- **Motor Output (U, V, W):** Connect the three-phase motor leads to these terminals. Do not connect the motor's ground to these terminals.

5.2.2 Control Wiring

The VFD provides various control terminals for external control signals, such as start/stop commands, speed reference (analog input), and fault outputs. Refer to the detailed wiring diagram in the full product manual for specific terminal assignments and functions.

6. OPERATING INSTRUCTIONS

6.1 Initial Power-Up

1. After completing all wiring and safety checks, apply power to the VFD.
2. The display will light up, typically showing the current output frequency or a default parameter.

6.2 Basic Operation (Keypad Control)

1. **Set Frequency:** Use the **Up** and **Down** arrow keys to adjust the desired output frequency.
2. **Start Motor:** Press the **RUN** button. The motor will accelerate to the set frequency.
3. **Stop Motor:** Press the **STOP/RESET** button. The motor will decelerate and stop.

6.3 Parameter Settings

The VFD has numerous parameters to configure its operation. Refer to the comprehensive parameter list in the full product manual for detailed descriptions and adjustment procedures.

1. Press **PRG** to enter parameter setting mode.
2. Use **Up** and **Down** arrows to navigate through parameter groups and individual parameters.
3. Press **ENTER** to select a parameter and view its current value.
4. Use **Up** and **Down** arrows to change the value. Use **SHIFT** to move between digits.
5. Press **ENTER** to save the new value.
6. Press **PRG** to exit parameter setting mode.

7. MAINTENANCE

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

- **Cleaning:** Periodically clean the VFD's exterior and cooling fins to prevent dust accumulation, which can hinder heat dissipation. Use a soft, dry cloth or compressed air. Ensure power is disconnected before cleaning.
- **Inspection:** Regularly check for loose connections, damaged wiring, or unusual noises/vibrations.
- **Environment:** Ensure the operating environment remains within specified temperature and humidity ranges.

8. TROUBLESHOOTING

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

Problem	Possible Cause	Solution
VFD does not power on	No input power; Blown fuse; Incorrect wiring	Check power supply; Inspect fuses; Verify wiring connections.
Motor does not run	VFD in stop mode; Fault condition; Incorrect frequency setting; Motor wiring issue	Press RUN; Check for fault codes and reset; Adjust frequency; Verify motor wiring.
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)	High input voltage; Rapid deceleration with high inertia load	Check input voltage; Increase deceleration time; Consider adding a braking resistor if applicable.
Undervoltage fault (UV)	Low input voltage; Momentary power loss	Check input voltage; Ensure stable power supply.

9. WARRANTY AND SUPPORT

For warranty information, please refer to the purchase documentation or contact your vendor. Technical support is available through the manufacturer or authorized distributors. Please have your product model and serial number ready when contacting support.

For further assistance, visit the QLYUEUI official website or contact customer service.

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