

SUSWE SU800

SUSWE SU800 Series Variable Frequency Drive User Manual

Models: 4KW, 5.5KW, 7.5KW | Input Voltage: 220V / 380V

1. INTRODUCTION

The SUSWE SU800 Series Variable Frequency Drive (VFD) is designed to control the speed of three-phase AC motors by varying the frequency and voltage of the power supplied to the motor. This device offers precise speed regulation, energy efficiency, and enhanced motor protection for various industrial and commercial applications. This manual provides essential information for the safe and effective installation, operation, and maintenance of your SU800 VFD.

2. IMPORTANT SAFETY INSTRUCTIONS

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

- **Electrical Shock Hazard:** This device operates with high voltages. Only qualified personnel should perform installation, wiring, and maintenance.
- **Power Disconnection:** Always disconnect all power sources to the VFD and wait at least 5 minutes for the capacitors to discharge before performing any work on the unit. The display on the VFD indicates a warning for dangerous voltages and discharge time.
- **Proper Grounding:** Ensure the VFD and the motor are properly grounded according to local electrical codes.
- **Environmental Conditions:** Do not operate the VFD in environments with excessive dust, moisture, corrosive gases, or direct sunlight.
- **Component Integrity:** Do not operate the VFD if any components are damaged or missing.



The image displays the front panel of the SUSWE SU800 VFD, highlighting the digital display, control buttons, and prominent safety warnings regarding dangerous voltages and discharge times.

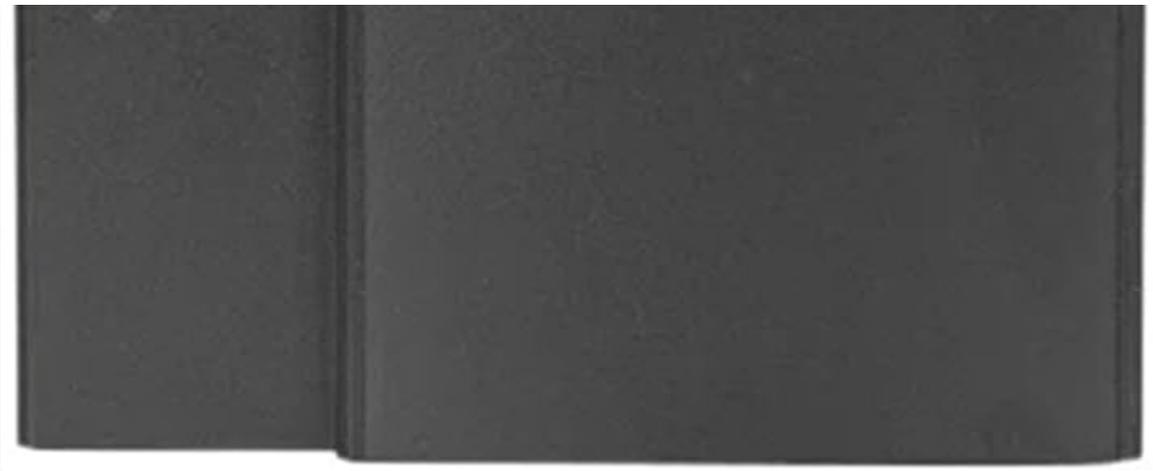
3. PRODUCT OVERVIEW

The SUSWE SU800 VFD is designed for robust performance and ease of use. It features a clear digital display, intuitive control buttons, and efficient cooling.

3.1 Front Panel Controls and Display

The front panel provides real-time operational data and allows for parameter adjustments. The digital display shows key information such as output frequency (Hz), current (A), and voltage (V).





This image provides a close-up of the VFD's control panel, showing the digital readout for frequency (Hz), current (A), and voltage (V), along with the RUN, STOP/RST, PRG, MFK, ENTER, and navigation buttons.

- **Digital Display:** Shows operational parameters like frequency, current, and voltage.
- **RUN Button:** Initiates motor operation.
- **STOP/RST Button:** Stops motor operation and resets fault conditions.
- **PRG Button:** Enters/exits parameter programming mode.
- **MFK Button:** Multi-function key, often used for quick access or specific functions.
- **ENTER Button:** Confirms parameter selections or values.
- **Arrow Buttons (▲ ▼ < >):** Used for navigating menus and adjusting parameter values.

3.2 Cooling System

The VFD incorporates an integrated cooling fan to ensure optimal operating temperatures and prevent overheating, which is crucial for maintaining performance and extending the lifespan of the unit.



The image illustrates the side of the VFD, focusing on the cooling fan designed to dissipate heat and maintain optimal operating temperatures.

3.3 Available Models

The SU800 series is available in various power ratings and input voltage configurations to suit different application requirements.



This image displays three different physical sizes of the SUSWE VFD, representing the range of power capacities available in the SU800 series, such as 4KW, 5.5KW, and 7.5KW models.

4. TECHNICAL SPECIFICATIONS

Parameter	Value
Model Series	SU800
Input Voltage	220V / 380V (3-Phase)
Output Power Range	4KW, 5.5KW, 7.5KW
Output Type	3-Phase
Control Method	V/F Control, Vector Control
Communication Interface	RS485
Manufacturer	UOFKIPBA

5. INSTALLATION GUIDE

5.1 Mounting

Mount the VFD vertically on a flat, stable surface. Ensure adequate clearance (at least 10 cm) around the unit for proper ventilation and heat dissipation, especially above and below the cooling fan.

5.2 Wiring Connections

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

power is disconnected before making any connections.

- **Power Input (R, S, T):** Connect the three-phase AC power supply to these terminals.
- **Motor Output (U, V, W):** Connect the three-phase motor leads to these terminals.
- **Ground (PE):** Connect the protective earth ground to the PE terminal.
- **Control Terminals (PB, P, B, V, U, W):** These terminals are for external control signals, such as start/stop commands, speed reference, and fault outputs. Refer to the detailed wiring diagram for specific functions.
- **RS485 Communication:** Connect the RS485 communication lines for remote control and monitoring, if applicable.



This image provides a detailed view of the VFD's internal wiring and terminal blocks, clearly labeled for power input (R, S, T), motor output (U, V, W), ground (PE), and control connections (PB, P, B, V, U, W).



The image shows the main VFD unit connected to a separate remote control panel using a blue Ethernet-style cable, demonstrating the capability for external operation and monitoring.

6. OPERATING INSTRUCTIONS

6.1 Basic Operation

1. **Power On:** After ensuring all connections are secure, apply power to the VFD. The display will illuminate.
2. **Set Frequency:** Use the arrow buttons (▲ ▼) to adjust the desired output frequency (motor speed).
3. **Start Motor:** Press the **RUN** button to start the motor. The display will show the actual output frequency.
4. **Stop Motor:** Press the **STOP/RST** button to stop the motor.

6.2 Display Information

The VFD's display provides real-time feedback on the motor's operation:

- **Hz:** Indicates the output frequency to the motor.
- **A:** Displays the motor's current consumption.

- **V:** Shows the output voltage to the motor.

6.3 Parameter Setting

To access and modify advanced parameters:

1. Press the **PRG** button to enter the parameter menu.
2. Use the arrow buttons (▲ ▼) to navigate through parameter groups and individual parameters.
3. Press **ENTER** to select a parameter or view its current value.
4. Use the arrow buttons (▲ ▼) to adjust the parameter value.
5. Press **ENTER** again to save the new value.
6. Press **PRG** to exit the parameter menu.

7. MAINTENANCE AND CARE

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

- **Cleaning:** Periodically clean the VFD's exterior and ventilation openings to prevent dust accumulation, which can impede cooling. Use a soft, dry cloth. Do not use liquid cleaners.
- **Ventilation:** Ensure that the VFD's cooling fan and vents are not obstructed. Proper airflow is critical for heat dissipation.
- **Terminal Connections:** Periodically check all terminal connections for tightness. Loose connections can cause overheating and intermittent operation.
- **Environment:** Maintain the VFD in a clean, dry environment, free from excessive vibration, moisture, and corrosive substances.

8. TROUBLESHOOTING GUIDE

This section provides solutions to common issues you might encounter with your VFD. For problems not listed here, contact customer support.

Problem	Possible Cause	Solution
VFD display is off / No power	No input power; Blown fuse; Loose wiring.	Check input power supply; Inspect fuses; Verify all power connections are secure.
Motor not running	Incorrect wiring; VFD in STOP mode; Fault condition; Incorrect frequency setting.	Verify motor wiring (U, V, W); Press RUN button; Check for fault codes on display and reset; Adjust frequency setting.
Overcurrent / Overload fault	Motor overloaded; Short circuit in motor/cables; Acceleration time too short.	Reduce motor load; Check motor and cables for damage; Increase acceleration time parameter.
Overvoltage / Undervoltage fault	Input voltage too high/low; Regenerative braking issue.	Verify input power supply voltage; Consider adding a braking resistor if regenerative loads are present.
Communication error (RS485)	Incorrect wiring; Incorrect communication parameters; Device address conflict.	Check RS485 wiring (A/B lines); Verify baud rate and protocol settings; Ensure unique device addresses.

9. WARRANTY AND CUSTOMER SUPPORT

For warranty information, technical assistance, or service inquiries, please contact the seller or manufacturer directly. Keep your purchase receipt as proof of purchase for any warranty claims.