UOFKIPBA SU800

UOFKIPBA SUSWE SU800 VFD Frequency Converter User Manual

Model: SU800 Series (4KW, 5.5KW, 7.5KW, 220V/380V)

1. Introduction

This manual provides essential instructions for the safe and efficient operation, installation, and maintenance of the UOFKIPBA SUSWE SU800 series Variable Frequency Drive (VFD). The SU800 VFD is a universal frequency converter designed for controlling the speed of three-phase AC motors, available in 4KW, 5.5KW, and 7.5KW power ratings, compatible with both 220V and 380V systems. Please read this manual thoroughly before installation or operation to ensure proper usage and to prevent damage or injury.

2. Safety Information

WARNING: Electrical shock hazard. Only qualified personnel should perform installation, wiring, and maintenance.

- Always disconnect power before working on the VFD or motor. Wait at least 5 minutes after power-off for capacitors to discharge.
- Ensure proper grounding of the VFD and motor according to local electrical codes.
- Do not touch internal components while power is applied or immediately after power-off.
- Protect the VFD from moisture, dust, corrosive gases, and direct sunlight.
- Verify that the VFD's voltage rating matches the input power supply.
- Use appropriate personal protective equipment (PPE) during installation and maintenance.

3. Product Overview

The SUSWE SU800 VFD series offers precise motor speed control and energy efficiency. It features a user-friendly control panel and supports RS485 communication for integration into control systems.

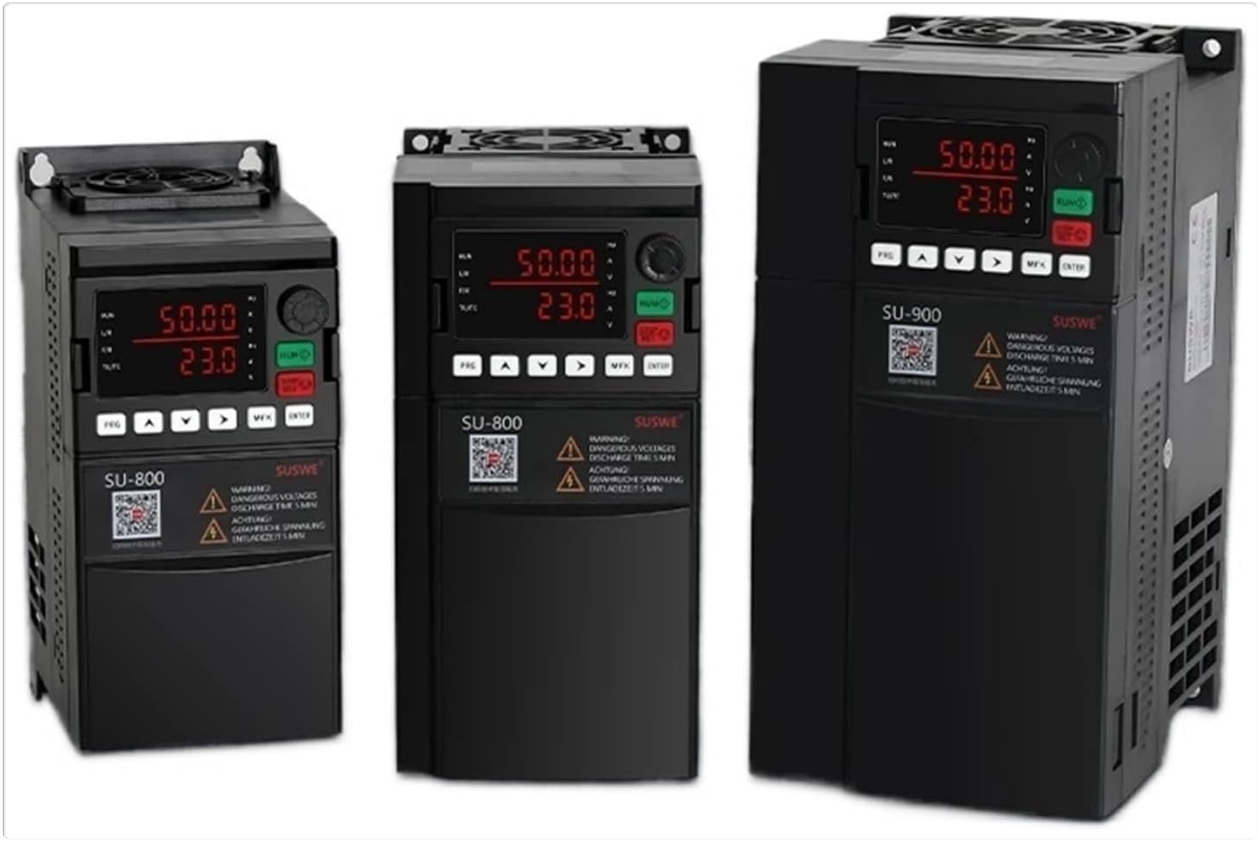

Figure 3.1: Overview of SUSWE SU800 VFD models, showing different physical sizes for various power ratings.

The VFD consists of a main unit with an integrated control panel, cooling system, and terminal blocks for power and control wiring.

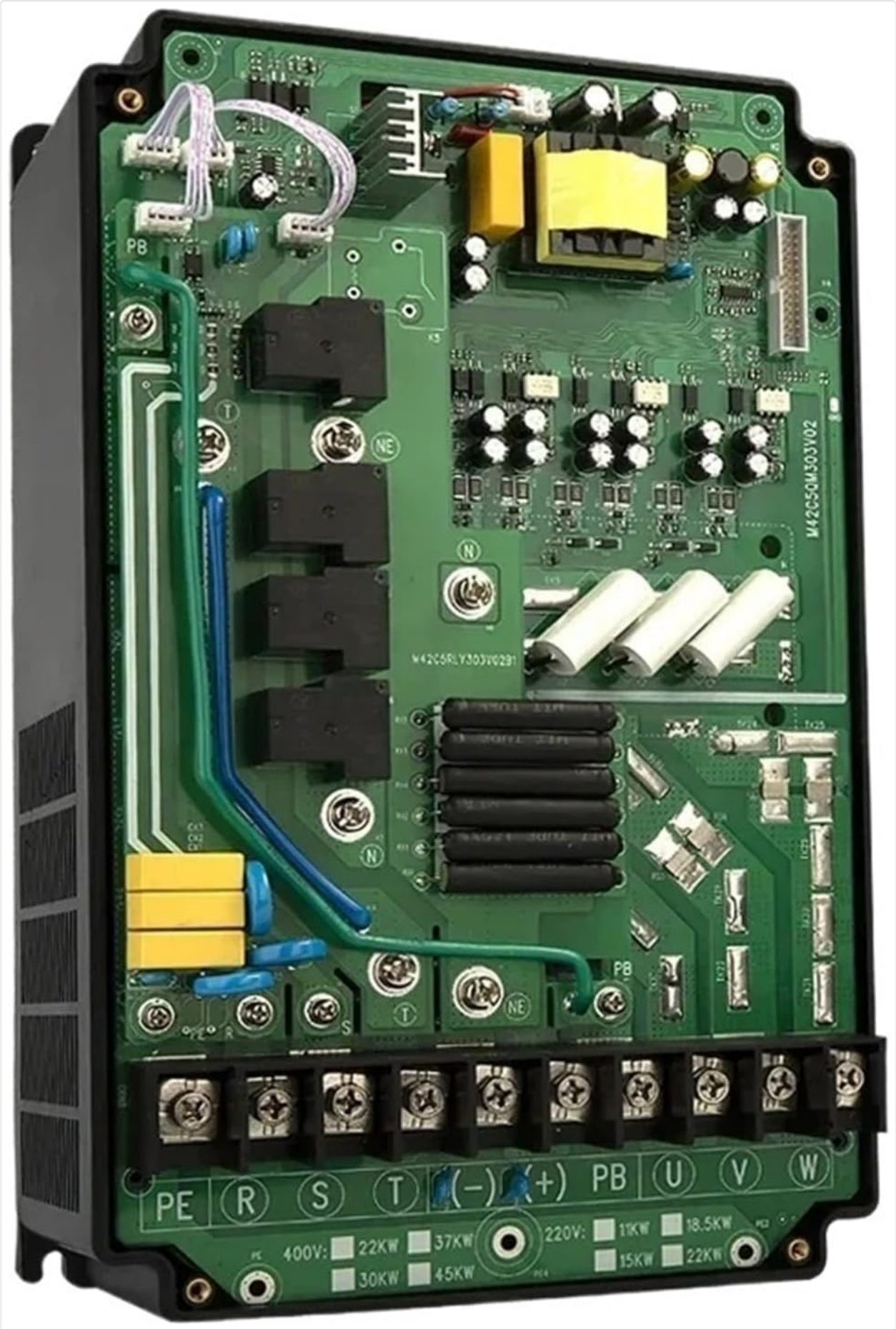

Figure 3.2: Internal view of the VFD's circuit board, illustrating component layout and robust design.

4. Specifications

Feature	Description
Model Series	SUSWE SU800
Power Ratings	4KW, 5.5KW, 7.5KW
Input Voltage	220V or 380V (model dependent)
Output Phase	3-Phase
Communication	RS485
Control Method	Vector Control / V/F Control
Manufacturer	UOFKIPBA

5. Setup and Installation

5.1 Mounting

Mount the VFD vertically on a flat, non-flammable surface in a well-ventilated area. Ensure sufficient clearance around the unit for proper heat dissipation and air circulation, especially for the cooling fan.

5.2 Wiring

All wiring must be performed by a qualified electrician. Refer to the wiring diagram provided with your specific model. Ensure all connections are secure and correctly terminated.

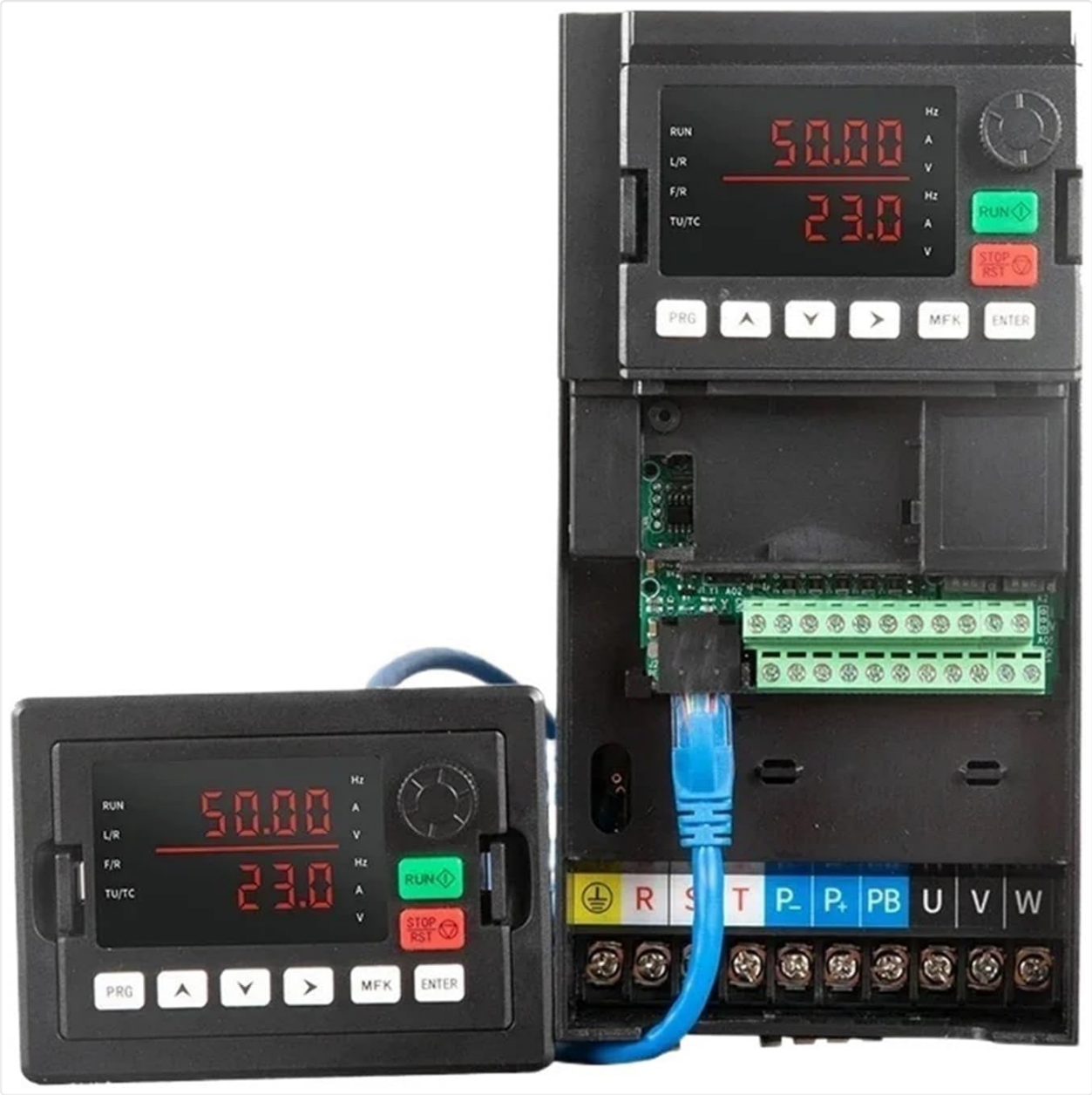

Figure 5.1: VFD showing the main unit, remote control panel connection, and clearly labeled power and control terminals (R, S, T for input; U, V, W for motor output; PB for braking resistor; PE for ground).

- **Power Input (R, S, T):** Connect the main AC power supply to these terminals. Ensure correct phase sequence.
- **Motor Output (U, V, W):** Connect the three-phase motor leads to these terminals.
- **Grounding (PE):** Connect the VFD to a reliable earth ground. This is critical for safety.
- **Control Terminals:** Connect external control signals (e.g., start/stop, speed reference, fault reset) to the designated control terminals. Refer to the detailed wiring diagram in the full product manual for specific terminal functions.
- **RS485 Communication:** For remote control and monitoring, connect the RS485 communication lines to the appropriate terminals.

6. Operating Instructions

The SU800 VFD features an intuitive control panel for local operation and parameter setting.

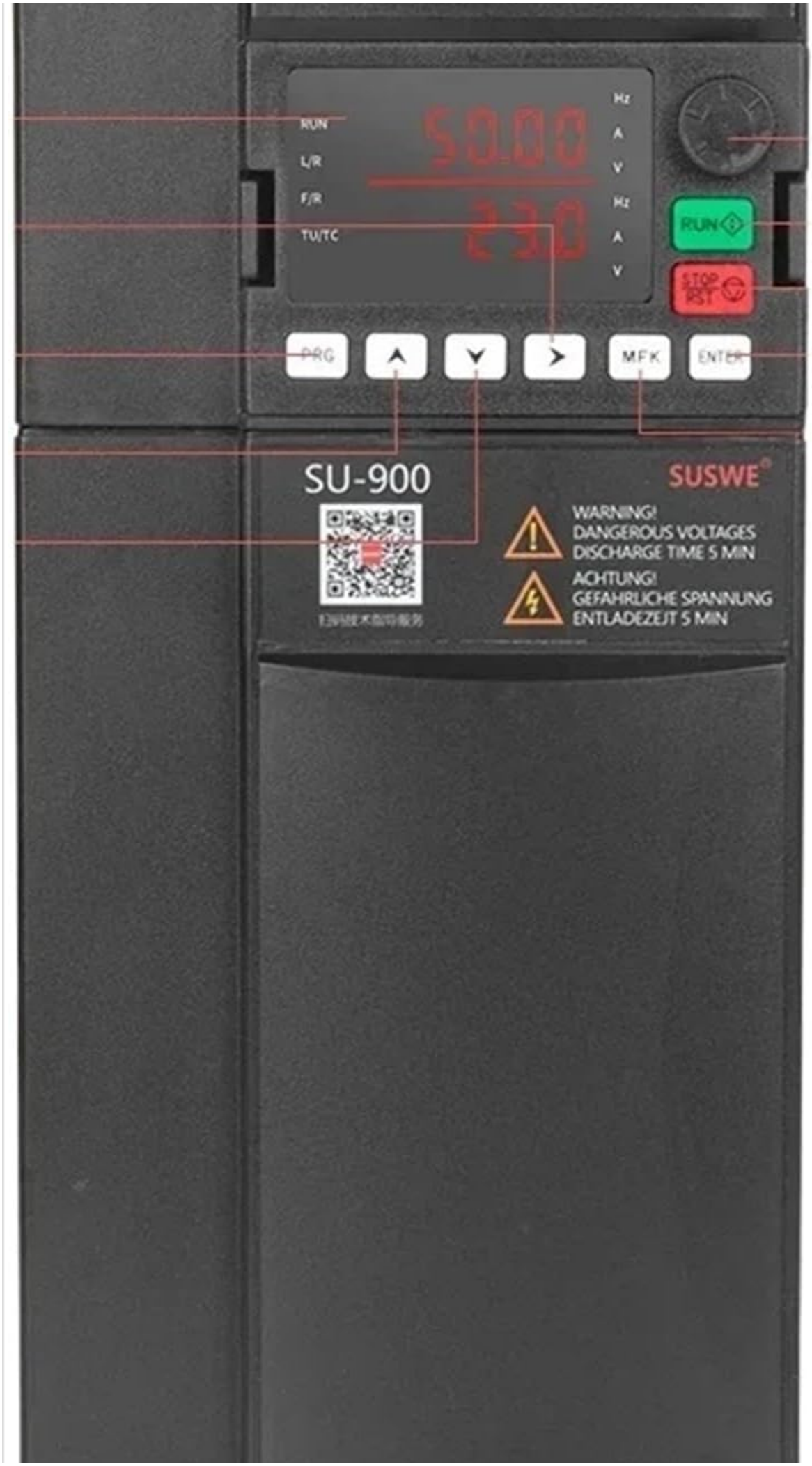
RUN
L/R
F/R
TU/TC
Hz
A
V
Hz
A
V
50.00
230
RUN
STOP RST
PRG
MFK
ENTER
SU-900
SUSWE
WARNING!
DANGEROUS VOLTAGES
DISCHARGE TIME 5 MIN
ACHTUNG!
GEFAHRLICHE SPANNUNG
ENTLADEZEJT 5 MIN

Figure 6.1: Detailed view of the VFD's control panel, showing the digital display, function buttons (RUN, STOP/RST, PRG, MFK, ENTER, arrow keys), and warning labels.

6.1 Control Panel Functions

- **RUN:** Starts the motor.
- **STOP/RST:** Stops the motor or resets a fault condition.
- **PRG (Program):** Enters or exits the parameter setting mode.
- **Arrow Keys (Up, Down, Left, Right):** Navigate through menus, adjust parameter values, or change display modes.
- **MFK (Multi-Function Key):** Assignable function, typically used for quick access to common operations.
- **ENTER:** Confirms parameter settings or enters sub-menus.

6.2 Basic Operation

1. **Power On:** Apply main power to the VFD. The display will illuminate.
2. **Set Frequency:** Use the arrow keys to adjust the desired output frequency (motor speed) if in direct frequency setting mode.
3. **Start Motor:** Press the **RUN** button. The motor will accelerate to the set frequency.
4. **Stop Motor:** Press the **STOP/RST** button. The motor will decelerate and stop.

6.3 Parameter Setting

To access and modify VFD parameters (e.g., acceleration/deceleration times, motor parameters, control modes):

1. Press the **PRG** button to enter parameter mode.
2. Use the arrow keys to navigate through parameter groups and individual parameters.
3. Press **ENTER** to select a parameter.
4. Use the arrow keys to change the parameter value.
5. Press **ENTER** again to save the new value.
6. Press **PRG** to exit parameter mode.

Refer to the comprehensive parameter list in the full product manual for detailed descriptions of each parameter.

7. Maintenance

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

7.1 Cleaning

- Periodically clean the VFD's exterior and cooling fins to prevent dust accumulation.
- Ensure the cooling fan is free from obstructions and dust. Use compressed air to gently clean the fan blades and heatsink.

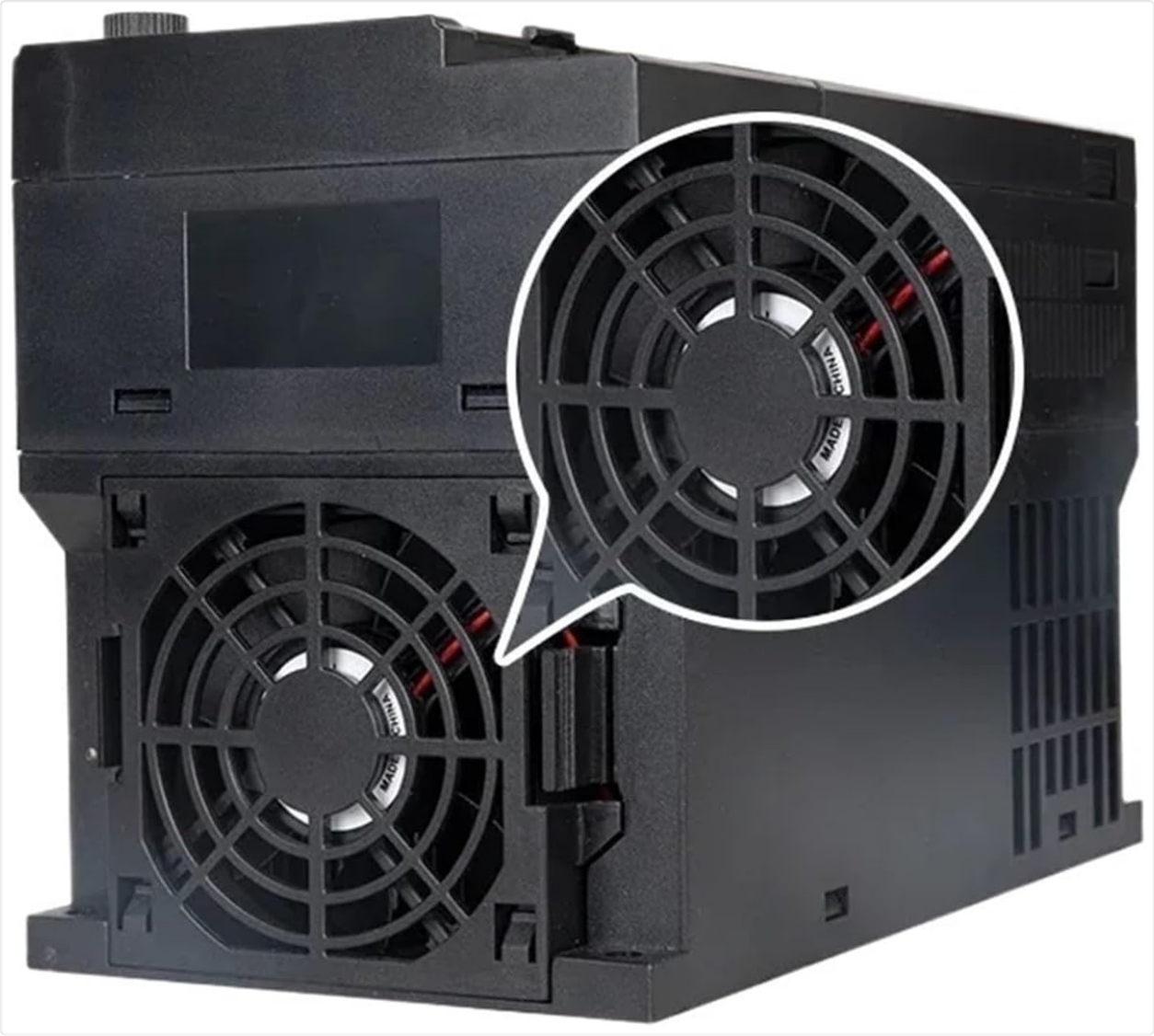

Figure 7.1: View of the VFD's cooling fan, highlighting the importance of keeping it clear for optimal thermal performance.

7.2 Inspection

- Check all wiring connections for tightness and signs of corrosion or damage.
- Inspect the VFD for any physical damage, discoloration, or unusual odors.
- Monitor the operating temperature of the VFD. Excessive heat can indicate issues.

8. Troubleshooting

If the VFD encounters an issue, it will typically display an error code. Refer to the full product manual for a complete list of error codes and their remedies. Below are some common issues and general solutions:

Problem	Possible Cause	Solution
Motor not running	No run command, incorrect wiring, fault condition.	Check run command source, verify motor and power wiring, check for fault codes and reset.
Overvoltage fault	Excessive deceleration time, regenerative load, unstable input voltage.	Increase deceleration time, install braking resistor if needed, check input power quality.

Problem	Possible Cause	Solution
Overcurrent fault	Motor overload, short circuit, rapid acceleration.	Reduce motor load, check motor and output wiring for shorts, increase acceleration time.
Undervoltage fault	Low input voltage, power supply interruption.	Check input power supply voltage, ensure stable power.

If troubleshooting steps do not resolve the issue, contact technical support.

9. Warranty and Support

This product is subject to a 30-day return policy. Additionally, protection plans may be available for extended coverage. For specific warranty terms, technical assistance, or service, please refer to your purchase documentation or contact the seller directly.
For further information or detailed parameter settings, please consult the complete product manual or visit the manufacturer's official website.