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› CSCPEXCZ SU600 VFD Instruction Manual - 5.5KW 1ph 220V Input to 3ph 380V Output

CSCPEXCZ SU600-5R5G1

CSCPEXCZ SU600 VFD Instruction Manual

Model: SU600-5R5G1 (5.5KW, 1ph 220V Input to 3ph 380V Output)

1. INTRODUCTION

This manual provides essential information for the safe and efficient operation of the CSCPEXCZ SU600 Variable Frequency Drive (VFD). The SU600 VFD is designed to convert single-phase 220V input power to three-phase 380V output, suitable for controlling the speed of three-phase motors ranging from 0.75KW to 5.5KW. Please read this manual thoroughly before installation, operation, or maintenance.

2. SAFETY INFORMATION

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 or maintenance.
- Ensure proper grounding of the VFD and the motor.
- Do not touch electrical components when power is applied.
- Verify input and output voltage ratings match your application.
- Protect the VFD from moisture, dust, and corrosive gases.
- Install the VFD in a well-ventilated area to prevent overheating.

3. PRODUCT OVERVIEW

The SU600 VFD is a robust frequency converter designed for industrial and commercial applications requiring precise motor speed control. It features a durable design with main board material characteristics that are waterproof, moisture-proof, and mildew-proof, ensuring reliability in various environments.

Main board material characteristics

- waterproof
- Moisture proof
- Mildew proof



Inverter components display

Figure 3.1: Inverter Components Display. This image illustrates the internal layout of the SU600 VFD, highlighting the main circuit board and various electronic components. The main board is designed to be waterproof, moisture-proof, and mildew-proof for enhanced durability.

4. SPECIFICATIONS

The following table details the key specifications for the SU600-5R5G1 VFD model:



Figure 4.1: SU600-5R5G1 Product Parameters. This image provides a visual summary of the VFD's specifications, including its model number, compatible motor power, electrical ratings, and physical dimensions.

Parameter	Value (SU600-5R5G1)
Model	SU600-5R5G1
Adapted Motor Power	5.5KW (7.5HP)

Parameter	Value (SU600-5R5G1)
Input Voltage	Single-phase 220V
Output Voltage	Three-phase 380V
Rated Output Current	13A
Dimensions (L x W x H)	185mm x 87mm x 138mm
Weight	1.16 Kg
Main Board Material	Waterproof, Moisture-proof, Mildew-proof

5. SETUP AND WIRING

Proper wiring is crucial for the safe and correct operation of the VFD. Refer to the wiring diagram below and ensure all connections are secure and meet local electrical codes.

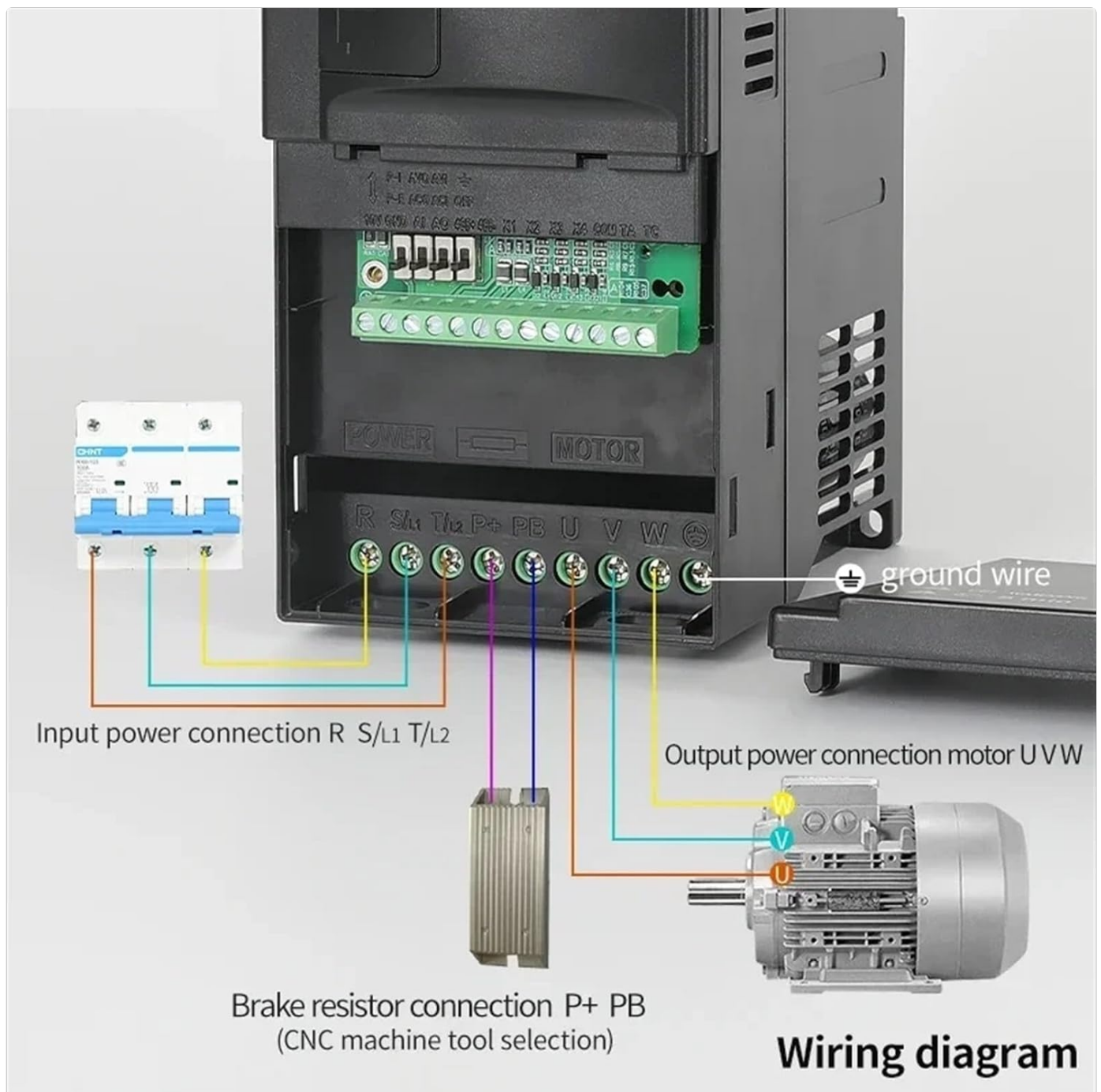


Figure 5.1: Wiring Diagram. This diagram illustrates the connection points for the SU600 VFD. It shows the single-phase 220V input power connection (R, S/L1/L2), the three-phase 380V output power connection to the motor (U, V, W), the ground wire, and optional connections for a brake resistor (P+, PB).

Wiring Steps:

1. **Input Power Connection:** Connect the single-phase 220V AC power supply to terminals R and S/L1/L2. Ensure the power source is properly fused and switched.
2. **Motor Connection:** Connect the three-phase motor to the output terminals U, V, and W. Verify the motor's voltage and current ratings are compatible with the VFD's output.
3. **Grounding:** Connect the ground wire from both the power supply and the motor to the VFD's ground terminal. Proper grounding is essential for safety.
4. **Brake Resistor (Optional):** If a brake resistor is required for your application (e.g., for CNC machine tools), connect it to terminals P+ and PB.
5. **External Operation Panel (Optional):** If using an external operation panel, connect it to the external network port as shown in the operating interface diagram.

6. OPERATING INSTRUCTIONS

The SU600 VFD features an intuitive control panel for easy operation and parameter adjustment.



Figure 6.1: Operation and Display Interface. This image details the VFD's control panel, showing the digital display, programming key (PRG), confirm key (ENT), run key (RUN), stop key (STOP), incremental key (up arrow), and decrement key (down arrow). It also indicates the external network port and an optional external operation panel.

Control Panel Functions:

- **PRG (Programming Key):** Enters or exits parameter programming mode.
- **ENT (Confirm Key):** Confirms parameter settings or enters sub-menus.
- **RUN (Run Key):** Starts the motor.
- **STOP (Stop Key):** Stops the motor.
- **Up/Down Arrows (Incremental/Decrement Keys):** Adjusts frequency, navigates menus, or changes parameter values.
- **Display:** Shows current frequency, current, voltage, and fault indicators (FWD, REV, ALM).

Basic Operation:

- 1. **Power On:** After ensuring all wiring is correct and secure, apply power to the VFD. The display will light up.
- 2. **Set Frequency:** Use the Up/Down arrow keys to set the desired output frequency.
- 3. **Start Motor:** Press the **RUN** button to start the motor. The display will show the operating frequency and other relevant parameters.
- 4. **Stop Motor:** Press the **STOP** button to stop the motor.
- 5. **Parameter Adjustment:** To change advanced settings, press the **PRG** key to enter programming mode. Use the Up/Down keys to navigate parameters and **ENT** to confirm changes. Refer to the full product manual for detailed parameter descriptions.

7. MAINTENANCE

Regular maintenance ensures the longevity and reliable operation of your SU600 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. Do not use liquid cleaners.
- **Inspection:** Regularly inspect all wiring connections for tightness and signs of wear or damage. Check for any unusual noises or odors during operation.
- **Environment:** Ensure the operating environment remains within the specified temperature and humidity ranges. Keep the VFD away from direct sunlight, excessive vibration, and corrosive substances.
- **Fan Check:** Verify that the cooling fan operates freely and is not obstructed.

8. TROUBLESHOOTING

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

Problem	Possible Cause	Solution
VFD does not power on	No input power; loose wiring; internal fault.	Check power supply and fuses. Verify input wiring. If problem persists, contact support.
Motor does not run	Incorrect wiring; VFD in stop mode; parameter settings incorrect; motor fault.	Check motor wiring (U, V, W). Press RUN. Verify frequency setting. Check motor for issues.
Overcurrent fault (OC)	Motor overload; short circuit in motor wiring; acceleration time too short.	Reduce motor load. Check motor and wiring for shorts. Increase acceleration time parameter.
Overvoltage fault (OV)	Deceleration time too short; regenerative load.	Increase deceleration time parameter. Consider adding a brake resistor if regenerative load is present.
Undervoltage fault (UV)	Input voltage too low; power supply instability.	Check input power supply voltage. Ensure stable power.

9. WARRANTY AND SUPPORT

For warranty information, technical assistance, or service, please contact your vendor or the manufacturer directly. Ensure you have your product model number (SU600-5R5G1) and purchase details available when seeking support. Manufacturer: CSCPEXCZ



