

CSCPEXCZ SU600-3R7G3

CSCPEXCZ SU600-3R7G3 3.7KW 380V 3 Phase VFD Inverter Instruction Manual

Model: SU600-3R7G3

[Introduction](#)[Product Overview](#)[Specifications](#)[Setup](#)[Operation](#)[Maintenance](#)[Troubleshooting](#)[Safety Information](#)[Warranty & Support](#)

1. INTRODUCTION

This manual provides essential instructions for the safe installation, operation, and maintenance of the CSCPEXCZ SU600-3R7G3 Variable Frequency Drive (VFD). Please read this manual thoroughly before using the product to ensure proper function and to prevent damage or injury. Keep this manual for future reference.

2. PRODUCT OVERVIEW

The SU600-3R7G3 is a 3.7KW, 380V, 3-phase input to 3-phase output frequency converter designed for precise motor speed control. It features a robust design with a main board engineered for durability.

2.1 Main Board Characteristics

The inverter's main board is designed with enhanced protection features:

- **Waterproof:** Provides protection against water ingress.
- **Moisture-proof:** Resists damage from humidity.
- **Mildew-proof:** Prevents fungal growth on internal components.

Main board material characteristics

- **waterproof**
- **Moisture proof**
- **Mildew proof**



Inverter components display

Figure 2.1: Internal components display, highlighting the main board's protective characteristics.

This design ensures reliable operation in various industrial environments.

3. SPECIFICATIONS

Key technical parameters for the SU600-3R7G3 model:

Parameter	Value
Model	SU600-3R7G3
Adapted Motor Power	3.7KW (5HP)
Input Voltage	Three-phase 380V
Output Voltage	Three-phase 380V
Rated Current	9A

Parameter	Value
Dimensions (L x W x H)	185mm x 87mm x 138mm
Weight	1.16kg

Product parameters

Model: SU600-3R7G3

Adapted motor:

3.7KW (5HP)

Input: three-phase 380V

Output: three-phase 380V

Current: 9A

Dimension: 185X87X138(mm)

Weight: 1.16Kg



*Please refer to the product manual for detailed parameters

3.7KW 380V VFD

Figure 3.1: Product parameters and dimensions for the SU600-3R7G3 VFD.

4. SETUP

4.1 Wiring Diagram

Proper wiring is crucial for safe and correct operation. Refer to the diagram below for connecting input power, output motor, ground, and optional brake resistor.

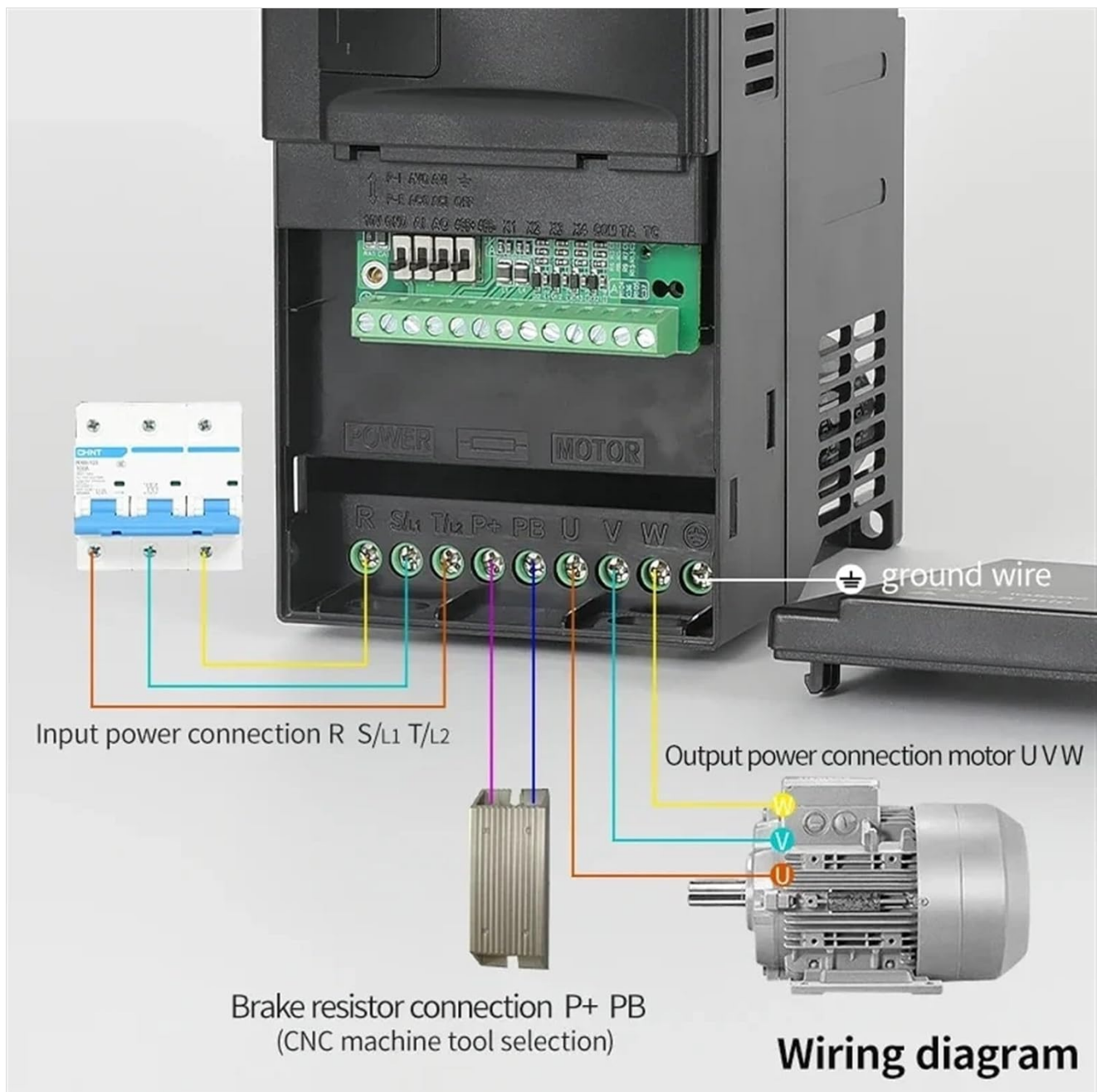


Figure 4.1: Wiring diagram for the SU600 VFD.

- **Input Power Connection (R, S/L1, T/L2):** Connect the three-phase 380V AC power supply to these terminals. Ensure correct phase sequence.
- **Output Power Connection (U, V, W):** Connect these terminals to the three-phase motor.
- **Ground Wire:** Connect the ground terminal to a reliable earth ground. This is essential for safety.
- **Brake Resistor Connection (P+, PB):** For applications requiring rapid deceleration or braking, connect an external brake resistor to these terminals. (Typically used for CNC machine tools or similar applications).

Warning: Ensure all power is disconnected before performing any wiring. Improper wiring can lead to electric shock, fire, or equipment damage. Consult a qualified electrician if unsure.

4.2 External Operation Panel

The VFD can be operated using its integrated control panel or an optional external operation panel for remote control. The external panel offers the same functionality as the built-in panel.



Figure 4.2: Dimensions of the external operation panel.

The external panel connects to the VFD via an external network port, typically using an Ethernet cable.

5. OPERATION

5.1 Control Panel and Display Interface

The VFD features a user-friendly control panel with a digital display and various keys for programming and operation.



Figure 5.1: Introduction to Operation and Display Interface.

- **Display:** Shows operational parameters such as frequency (Hz), current (A), voltage (V), and fault indicators (ALM).
- **FWD/REV Indicators:** Indicate forward or reverse rotation direction.
- **PRG (Programming Key):** Used to enter and exit programming mode.
- **ENT (Confirm Key):** Confirms parameter settings or menu selections.
- **Run Key:** Starts the motor.
- **Stop Key:** Stops the motor.
- **Incremental Key (Up Arrow):** Increases parameter values or navigates menus upwards.
- **Decrement Key (Down Arrow):** Decreases parameter values or navigates menus downwards.
- **Konb (Rotary Encoder):** Used for fine adjustment of frequency or parameter values.
- **External Network Port:** For connecting the optional external operation panel.

5.2 Basic Operation Steps

1. **Power On:** Ensure all wiring is correct and secure, then apply power to the VFD. The display will light up.

2. **Frequency Setting:** Use the incremental/decrement keys or the rotary knob to set the desired output frequency.
3. **Start Motor:** Press the **RUN** key to start the motor. The FWD or REV indicator will light up.
4. **Stop Motor:** Press the **STOP** key to stop the motor.
5. **Programming Parameters:** Press the **PRG** key to enter programming mode. Use the arrow keys to navigate through parameters and the **ENT** key to select and confirm changes. Refer to the detailed programming manual for specific parameter settings.

6. MAINTENANCE

Regular maintenance helps ensure the longevity and reliable operation of your VFD.

- **Cleaning:** Keep the VFD clean and free from dust and debris. Use a soft, dry cloth for cleaning. Do not use liquid cleaners.
- **Environmental Conditions:** Ensure the operating environment remains within specified temperature and humidity ranges. The main board's waterproof, moisture-proof, and mildew-proof characteristics provide enhanced protection, but extreme conditions should still be avoided.
- **Ventilation:** Ensure adequate airflow around the VFD to prevent overheating. Keep ventilation openings clear.
- **Connections:** Periodically check all wiring connections for tightness and signs of wear or corrosion.
- **Inspection:** Visually inspect the unit for any signs of damage, discoloration, or unusual odors.

Caution: Disconnect all power before performing any maintenance or inspection. Wait at least 5 minutes after power-off for internal capacitors to discharge, as indicated by the warning label on the unit.

7. TROUBLESHOOTING

If the VFD does not operate as expected, refer to the following basic troubleshooting steps. For complex issues, consult a qualified technician.

- **No Power:** Check the input power supply and circuit breaker. Ensure all power connections are secure.
- **Motor Not Running:** Verify that the RUN command has been issued. Check motor wiring and ensure the motor is not overloaded or jammed.
- **Fault Indicator (ALM):** If the ALM indicator is lit, check the VFD's display for a specific error code. Refer to the full programming manual for a list of error codes and their remedies. Common faults include overcurrent, overvoltage, undervoltage, and overheating.
- **Incorrect Speed:** Verify the frequency setting. Check if any external control signals (e.g., analog input) are correctly configured and providing the expected values.
- **Unusual Noise/Vibration:** Stop the motor immediately. Check motor bearings, coupling, and VFD mounting.

Always ensure safety precautions are followed when troubleshooting electrical equipment.

8. SAFETY INFORMATION

Adherence to safety guidelines is paramount when working with electrical equipment. Failure to follow these instructions may result in serious injury or death.

- **Electrical Hazard:** This VFD operates with high voltages. Only qualified personnel should install, operate, or maintain this equipment.
- **Disconnect Power:** Always disconnect and lock out all power sources before working on the VFD or connected motor. Wait for the internal capacitors to discharge (at least 5 minutes after power-off).

- **Grounding:** Ensure the VFD is properly grounded according to local electrical codes.
- **Environmental Conditions:** Do not operate the VFD in environments with flammable gases, liquids, or explosive dust.
- **Protective Equipment:** Always wear appropriate personal protective equipment (PPE), such as safety glasses and insulated gloves, when working with electrical systems.
- **Emergency Stop:** Ensure an accessible emergency stop mechanism is in place for the entire system.

9. WARRANTY & SUPPORT

For warranty information, technical support, or service inquiries, please contact your vendor or the manufacturer directly. Provide your product model number (SU600-3R7G3) and purchase details when seeking assistance.
Manufacturer: CSCPEXCZ