

## VEICHI AC10 Series (specifically AC10-T/S2-1R5G-B-220V and compatible variants)

# VEICHI AC10 Series Frequency Converter User Manual

Model: AC10-T/S2-1R5G-B-220V and Compatible Variants

## 1. INTRODUCTION

This manual provides essential information for the safe and efficient installation, operation, and maintenance of the VEICHI AC10 series frequency converters. Please read this manual thoroughly before using the product to ensure proper handling and to prevent damage or injury.

The VEICHI AC10 series frequency converters are designed for general-purpose applications, offering reliable motor control and energy efficiency. This manual covers models such as AC10-T/S2-R75G-B-220V, AC10-T/S2-1R5G-B-220V, AC10-T/S2-2R2G-B-220V, AC10-T3-R75G-B-380V, and AC10-T3-1R5G-B-380V.

## 2. SAFETY PRECAUTIONS

Always observe the following safety precautions to prevent electric shock, fire, or personal injury. Failure to comply may result in severe consequences.

- **Qualified Personnel:** Installation, wiring, operation, and maintenance must be performed by qualified electrical personnel only.
- **Power Disconnection:** Always disconnect all power sources before performing any wiring or maintenance. Wait at least 5 minutes after power off for the capacitor discharge indicator to extinguish.
- **Grounding:** Ensure the frequency converter is properly grounded according to local electrical codes.
- **Environmental Conditions:** Do not operate the converter in environments exceeding specified temperature, humidity, or dust levels.
- **Protective Covers:** Do not remove protective covers or touch internal components while power is applied.

## 3. PRODUCT OVERVIEW

The VEICHI AC10 series frequency converter features a compact design with an integrated control panel for easy

operation and monitoring.



Figure 3.1: Front view of the VEICHI AC10 Frequency Converter. This image displays the main unit, highlighting the digital display for parameters, control buttons for programming and operation, and the various terminal blocks for power and control wiring. A screwdriver is visible in the side compartment.

### 3.1. Control Panel Layout

The control panel consists of a digital display and several function buttons:

- **Display:** Shows operational parameters, fault codes, and programming values.
- **PRG (Program):** Enters/exits parameter setting mode.
- **UP/DOWN Arrows:** Navigate through parameters, adjust values.
- **RUN:** Starts the motor.
- **STOP/RESET:** Stops the motor, resets fault conditions.
- **SET/SHIFT:** Confirms parameter settings, shifts cursor during input.

## 4. SETUP AND INSTALLATION

### 4.1. Mounting

Mount the frequency converter vertically on a flat, non-flammable surface. Ensure adequate ventilation space around the unit (at least 10 cm above and below, 5 cm on sides) for heat dissipation.

### 4.2. Wiring

Refer to the wiring diagram provided with your specific model for detailed connections. General wiring guidelines:

- **Power Input (R, S, T or L1, L2):** Connect to the main power supply. Ensure correct voltage (220V or 380V depending on model).

- **Motor Output (U, V, W):** Connect to the motor terminals.
- **Ground (PE):** Connect to a reliable ground point.
- **Control Terminals:** For external control signals (e.g., start/stop, speed reference, fault output).

**Warning: Incorrect wiring can lead to severe damage to the unit or personal injury. Consult a qualified electrician if unsure.**

## 5. OPERATING INSTRUCTIONS

### 5.1. Initial Power-Up

1. After completing all wiring, apply power to the frequency converter.
2. The display will light up, typically showing "0.00" or a default frequency.

### 5.2. Basic Operation (Keypad Control)

1. **Set Frequency:** Press the **PRG** button to enter parameter mode. Navigate to the frequency setting parameter (e.g., F0.01) using the **UP/DOWN** arrows. Press **SET/SHIFT** to edit, adjust value, then **SET/SHIFT** again to confirm. Press **PRG** to exit.
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.

### 5.3. Parameter Settings

The AC10 series has a comprehensive set of parameters for various functions. Refer to the detailed parameter list in the full product manual for advanced configurations (e.g., acceleration/deceleration times, motor parameters, control modes).

Example parameters:

- **F0.00:** Run command source (keypad, terminal, communication)
- **F0.01:** Frequency setting source (keypad, analog input, communication)
- **F0.03:** Max output frequency
- **F0.04:** Acceleration time
- **F0.05:** Deceleration time

## 6. MAINTENANCE

Regular maintenance ensures the longevity and reliable operation of your frequency converter.

- **Cleaning:** Periodically clean the cooling fins and fan to prevent dust accumulation, which can hinder heat dissipation. Use compressed air or a soft brush. Ensure power is off before cleaning.
- **Terminal Check:** Annually check all wiring terminals for tightness. Loose connections can cause overheating or intermittent operation.
- **Environmental Check:** Verify that the operating environment remains within specified temperature and humidity ranges.
- **Fan Replacement:** Cooling fans have a limited lifespan. Consider replacing them every 3-5 years, depending on operating conditions, to maintain optimal cooling.

## 7. TROUBLESHOOTING

This section provides common issues and their potential solutions. For complex problems, contact technical support.

Problem/Fault Code	Possible Cause	Solution
No Display/Power	No input power; Blown fuse; Internal fault.	Check power supply; Check fuses; Contact support.
Overcurrent (OC) Fault	Motor overload; Short circuit in motor wiring; Rapid acceleration/deceleration.	Check motor load; Inspect motor wiring; Increase acceleration/deceleration time.
Overvoltage (OV) Fault	Input voltage too high; Rapid deceleration with high inertia load.	Check input voltage; Increase deceleration time; Consider braking resistor.
Undervoltage (UV) Fault	Input voltage too low; Power supply dip.	Check input voltage; Ensure stable power supply.
Overheat (OH) Fault	Ambient temperature too high; Fan failure; Blocked ventilation.	Improve ventilation; Clean cooling fins; Check fan operation.

To reset a fault, press the **STOP/RESET** button after resolving the cause.

## 8. SPECIFICATIONS

The following specifications are typical for the VEICHI AC10 series. Specific values may vary slightly by model.

Parameter	Value/Range
Input Voltage	Single-phase 220V (AC10-T/S2 models) or Three-phase 380V (AC10-T3 models)
Output Frequency Range	0.00 Hz - 400.00 Hz
Control Mode	V/F control, Sensorless vector control
Overload Capacity	150% of rated current for 60 seconds
Protection Features	Overcurrent, Overvoltage, Undervoltage, Overheat, Overload, Short circuit
Operating Temperature	-10°C to 40°C (14°F to 104°F)
Humidity	Less than 90% RH (non-condensing)
Dimensions (Approx.)	Varies by power rating (e.g., 2 x 2 x 2 inches for smaller models)
Weight (Approx.)	Varies by power rating (e.g., 4.41 Pounds for smaller models)

*Note: For precise specifications of your specific model, refer to the product label or the comprehensive technical datasheet.*

## 9. WARRANTY AND SUPPORT

### 9.1. Warranty Information

This product is typically covered by a manufacturer's warranty against defects in materials and workmanship for a

period specified at the time of purchase. Please retain your proof of purchase for warranty claims. The warranty does not cover damage caused by improper installation, misuse, unauthorized modification, or operation outside of specified environmental conditions.

For specific warranty terms and conditions, please refer to the documentation provided with your purchase or contact the seller.

## 9.2. Technical Support


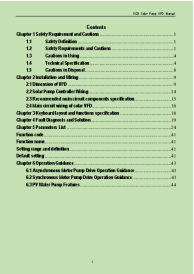

If you encounter issues that cannot be resolved using the troubleshooting guide, or require further technical assistance, please contact your supplier or the manufacturer's authorized service center.


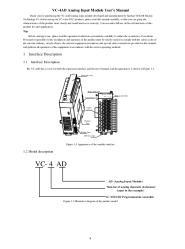

When contacting support, please be prepared to provide the following information:

- Product Model Number (e.g., AC10-T/S2-1R5G-B-220V)
- Serial Number (if applicable)
- Date of Purchase
- Detailed description of the problem, including any fault codes displayed.

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### Related Documents - AC10 Series (specifically AC10-T/S2-1R5G-B-220V and compatible variants)

	<p><a href="#">VEICHI AC70T Crane Purpose VFD Manual</a></p> <p>Comprehensive manual for the VEICHI AC70T Crane Purpose Variable Frequency Drive (VFD), detailing installation, operation, parameters, and maintenance for optimal crane performance.</p>
	<p><a href="#">VEICHI SI23 Solar Pump VFD Manual - Installation, Operation, and Specifications</a></p> <p>Comprehensive manual for the VEICHI SI23 Solar Pump Variable Frequency Drive (VFD). Covers safety requirements, installation, wiring, technical specifications, model naming, and disposal instructions for efficient solar-powered water pumping systems.</p>
	<p><a href="#">VEICHI SI23 Solar Pump VFD Manual: Installation, Operation, and Parameters</a></p> <p>This manual provides detailed information on the VEICHI SI23 Solar Pump Variable Frequency Drive (VFD), including safety precautions, installation guidelines, operational procedures, comprehensive parameter lists, and troubleshooting tips for solar water pumping systems.</p>

	<p><a href="#">VEICHI ACH100 High Voltage Frequency Inverter - Technical Specifications, Features, and Applications</a></p> <p>Comprehensive guide to the VEICHI ACH100 series high voltage frequency inverter, detailing its technical specifications, structural features, advantages, dimensions, and applications across various industries. Includes company overview and product naming conventions.</p>
	<p><a href="#">VEICHI VC-4AD Analog Input Module User's Manual</a></p> <p>Comprehensive user's manual for the VEICHI VC-4AD Analog Input Module, covering installation, wiring, operation, programming examples, and technical specifications for VEICHI PLC systems.</p>
	<p><a href="#">VEICHI VI20-156S-FE IOT Human Machine Interface Datasheet</a></p> <p>Overview and technical specifications for the VEICHI VI20-156S-FE IOT Human Machine Interface, covering its features, hardware, electrical, environmental, and mechanical details, along with wiring and installation information.</p>