

## VEVOR D100-2.2T4B-S

# VEVOR 3HP 2.2KW 5A 3-Phase 380V Variable Frequency Drive (VFD) User Manual

Model: D100-2.2T4B-S

## 1. INTRODUCTION

This manual provides essential information for the safe and efficient operation of your VEVOR 3HP 2.2KW 5A 3-Phase 380V Variable Frequency Drive (VFD). Please read this manual thoroughly before installation, operation, or maintenance to ensure proper usage and prevent potential hazards. Keep this manual for future reference.

### Safety Precautions

- Always disconnect power before installation, wiring, or maintenance. Failure to do so can result in severe injury or death.
- Ensure proper grounding of the VFD and connected motor.
- Only qualified personnel should perform installation and wiring.
- Do not touch internal components immediately after power disconnection, as residual voltage may be present. Wait at least 5 minutes for capacitors to discharge.
- Verify that the input voltage matches the VFD's specifications (3-phase AC 380V).

## 2. PRODUCT OVERVIEW

The VEVOR VFD is designed to control the speed of 3-phase AC motors, offering precise control and energy efficiency. It features an intuitive control panel and robust protection mechanisms.

### Control Panel and Display

# 0-2000HZ WIDE OUTPUT FREQUENCY

With clear user guidance for quick setup



**Figure 2.1:** VFD Control Panel Layout. This image shows the front panel of the VFD, highlighting the 4-digit LED display, speed adjustment knob, and various control buttons including RUN, STOP, ESC, SET, and arrow keys for navigation and parameter adjustment. A status indicator is also visible.

The VFD features a 4-digit LED display for real-time monitoring of frequency, voltage, current, and other parameters. The speed adjustment knob allows for easy manual frequency control. Buttons for RUN, STOP, ESC (exit menu), SET (enter menu/confirm), and arrow keys (up/down, left/right for parameter selection) provide comprehensive control.

## Protection System

# 10-LEVEL MULTIPLE PROTECTION SYSTEM

Resistant to overload failures for sturdy use



- Overcurrent Protection
- Overvoltage Protection
- Overheat Protection
- Reverse Power Protection
- Ground Short Circuit Protection
- Input Phase-Loss Protection
- Output Phase-Loss Protection
- Load Overload 100% Protection
- Load Overload 150% Protection
- Inverter Overload 150% Protection

**Figure 2.2:** VFD Protection Features. This image illustrates the VFD unit and lists its comprehensive protection capabilities, including overcurrent, overload, overvoltage, overheat, reverse power, ground short circuit, input phase-loss, output phase-loss, and inverter overload protections.

The VFD incorporates a robust 10-level multiple protection system to ensure safe and reliable operation. These protections include:

- Overcurrent Protection
- Overload Protection (Load Overload 100% and 150%)
- Overvoltage Protection
- Overheat Protection
- Reverse Power Protection
- Ground Short Circuit Protection
- Input Phase-Loss Protection
- Output Phase-Loss Protection
- Inverter Overload 150% Protection

## Heat Dissipation



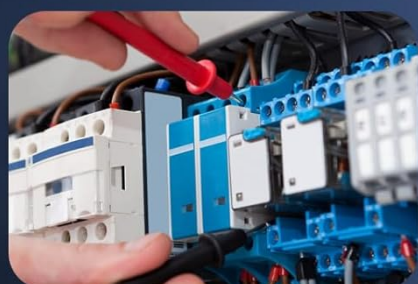


**Figure 2.3:** VFD Cooling System. This image highlights the VFD's internal components, including a large cooling fan and a multi-hole design on the casing, indicating features for efficient heat dissipation during operation. For stable and long-term operation, the VFD is equipped with a powerful cooling fan and a multi-hole casing design. This ensures efficient heat dissipation, preventing overheating and extending the lifespan of the unit.

### 3. SPECIFICATIONS

The following table details the technical specifications of the VEVOR VFD Model D100-2.2T4B-S:

# WIDELY COMPATIBLE WITH VARIOUS 3-PHASE MOTORS



**Figure 3.1:** VFD Dimensions and Specifications. This image displays the physical dimensions of the VFD unit in both inches and millimeters, alongside a list of key specifications such as model number, horsepower, power, input current, input voltage, output voltage, input frequency, output frequency, main material, and net weight.

Parameter	Value
Model Number	D100-2.2T4B-S
Power	2.2 kW (3 HP)
Input Current	5 A
Input Voltage	3-Phase AC 380V ( $\pm 15\%$ )
Output Voltage	3-Phase AC 0-380V
Input Frequency	50/60 Hz
Output Frequency	0-2000 Hz

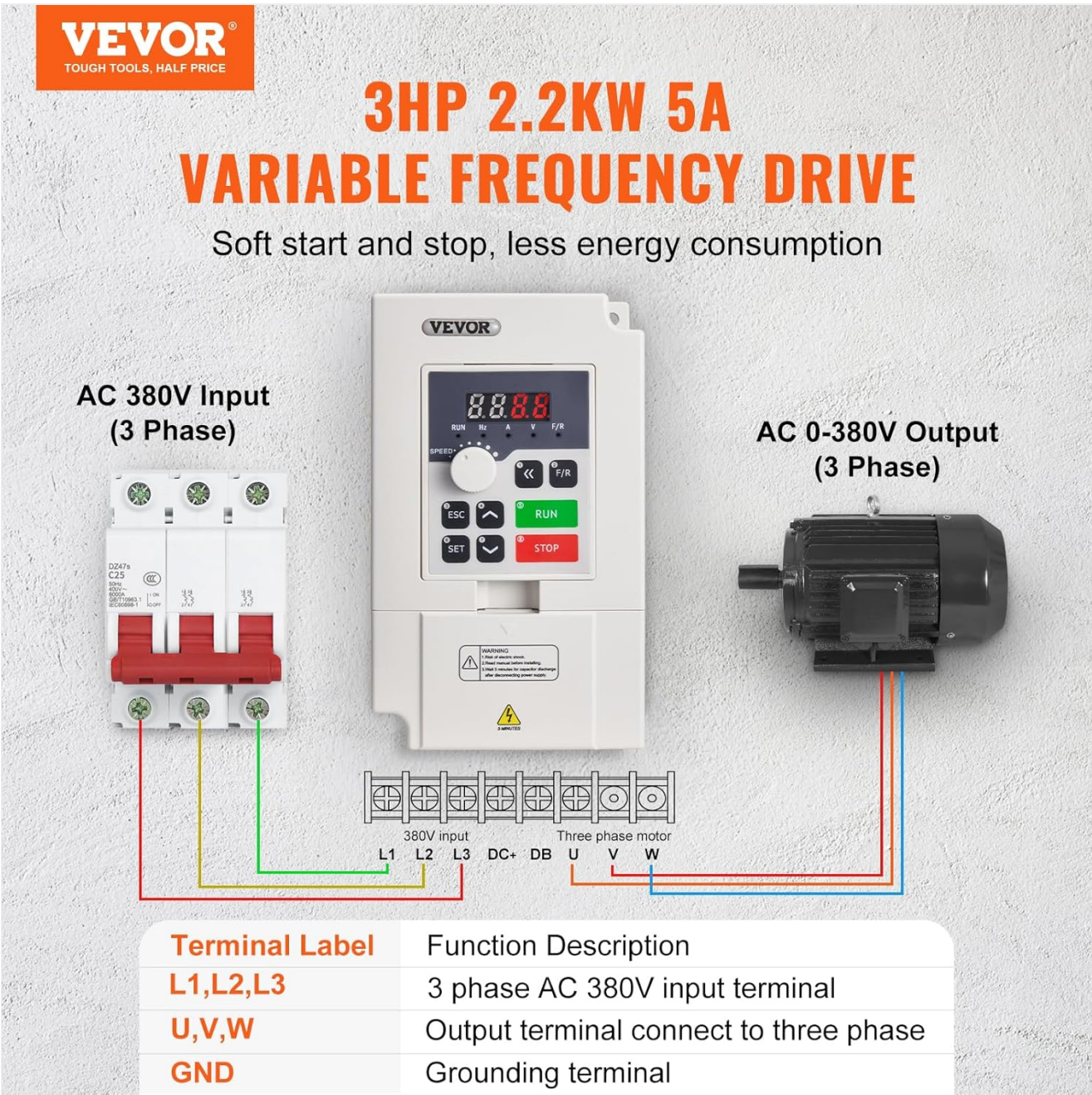


Parameter	Value
Dimensions (L x W x H)	8.99 x 15.01 x 11.76 cm (3.54 x 4.65 x 5.91 inches)
Net Weight	1.1 kg (2.43 lbs)
Main Material	Flame-Retardant ABS
Mounting Type	Wall Mount
Certifications	CE

## 4. SETUP

### Wiring Instructions

Proper wiring is crucial for the safe and correct operation of the VFD. Refer to the diagram below for terminal connections.



**Figure 4.1:** VFD Wiring Diagram. This image illustrates the wiring connections for the VFD, showing a 3-phase AC 380V input

connected to L1, L2, L3 terminals via a circuit breaker, and a 3-phase motor connected to U, V, W output terminals. The grounding terminal is also indicated.

1. **Input Power (L1, L2, L3):** Connect the 3-phase AC 380V power supply to the L1, L2, and L3 input terminals. It is recommended to install a circuit breaker or fuse upstream for protection.
2. **Motor Output (U, V, W):** Connect the three phases of your 3-phase motor to the U, V, and W output terminals of the VFD.
3. **Grounding (GND):** Connect the grounding terminal of the VFD to a reliable earth ground. This is essential for safety.
4. **Control Terminals:** If using external control signals (e.g., remote start/stop, external potentiometer), refer to the detailed wiring diagram in the full product manual for specific terminal assignments.

## Mounting

The VFD is designed for wall mounting. Ensure the mounting surface is stable and can support the weight of the unit. Allow adequate clearance around the VFD for ventilation and heat dissipation. Avoid mounting in direct sunlight, high humidity, or dusty environments.

## 5. OPERATING INSTRUCTIONS

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This section outlines the basic operation of the VFD. For advanced parameter settings, refer to the comprehensive manual provided with the product.

### Basic Operation

1. **Power On:** After ensuring all wiring is correct and secure, apply power to the VFD. The LED display will illuminate.
2. **Speed Adjustment:** Rotate the **SPEED** adjustment knob on the control panel to set the desired output frequency (and thus motor speed). The display will show the current frequency in Hz.
3. **Start Motor:** Press the green **RUN** button to start the motor. The motor will accelerate to the set speed.
4. **Stop Motor:** Press the red **STOP** button to stop the motor. The motor will decelerate and come to a halt.
5. **Fault Reset:** In case of a fault (indicated by an error code on the display), address the underlying issue and then press the **F/R** button (often labeled as 'Break Down Fault Reset') to clear the fault and resume operation.

### Menu Navigation and Parameter Setting

The VFD allows for detailed parameter configuration to optimize performance for specific applications. Use the **SET** button to enter the menu mode and the **ESC** button to exit. The arrow keys (up/down) are used to navigate through parameters, and the **SET** button is used to select a parameter and confirm changes. Consult the full manual for a complete list of parameters and their functions.

- **Entering Menu:** Press **SET**.
- **Navigating Parameters:** Use the Up/Down arrow keys.
- **Selecting/Editing Parameter:** Press **SET**. Use Up/Down to change value, then **SET** to confirm.
- **Exiting Menu:** Press **ESC** repeatedly until the main display is shown.

### Remote Control Operation

The VFD supports remote control operation via a detachable panel or external control signals. Connect the remote panel to the corresponding interface. For external control, wire the appropriate terminals as per the detailed wiring diagrams in the full manual.

## 6. MAINTENANCE

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Regular maintenance ensures the longevity and optimal performance of your VFD.

- **Cleaning:** Periodically clean the VFD's exterior and ventilation openings 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 damage or corrosion. Check for any unusual noises or odors during operation.
- **Environmental Conditions:** Ensure the VFD operates within its specified environmental conditions (temperature, humidity). Avoid exposure to corrosive gases or excessive vibrations.
- **Fan Check:** Ensure the cooling fan is operating correctly and is free from obstructions.

## 7. TROUBLESHOOTING

This section provides solutions for common issues. For complex problems or issues not listed here, contact customer support.

Problem	Possible Cause	Solution
Motor does not start	No power; Incorrect wiring; Fault condition; Parameter error	Check power supply; Verify wiring connections; Check for error codes and reset; Review parameter settings.
VFD displays an error code	Overcurrent, Overvoltage, Overload, etc.	Identify the specific error code (refer to full manual); Address the cause (e.g., reduce load, check input voltage); Press F/R to reset.
Motor speed is unstable	Incorrect parameter settings; Motor load fluctuations; Poor wiring connection	Adjust acceleration/deceleration times; Check motor and load; Inspect wiring.
VFD overheats	Insufficient ventilation; Ambient temperature too high; Overload condition	Ensure proper airflow around VFD; Reduce ambient temperature; Reduce motor load.

## 8. WARRANTY AND SUPPORT

VEVOR products are designed for durability and performance. For specific warranty terms and conditions, please refer to the warranty card included with your product or visit the official VEVOR website.

### Customer Support

If you encounter any issues or have questions regarding your VEVOR VFD, please contact VEVOR customer support. Have your model number (D100-2.2T4B-S) and purchase information ready when contacting support for faster service.

**Website:** [www.vevor.com](http://www.vevor.com)

**Email:** Refer to your product documentation for specific support email.