

## Jadeshay LOOJUTAYY-2.2KW

# Jadeshay 2.2KW 220V Variable Frequency Drive (VFD) User Manual

Model: LOOJUTAYY-2.2KW

## 1. PRODUCT OVERVIEW

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The Jadeshay 2.2KW 220V Variable Frequency Drive (VFD) is designed for precise motor speed control. This device converts single-phase 220V input power into three-phase 220V output, enabling variable frequency and voltage control for compatible motors. It features advanced technology for stable and efficient operation, incorporating intelligent protection mechanisms.

Key features include:

- **Advanced Technology:** Utilizes a dual-layer board design for enhanced stability and quiet operation.
- **High Efficiency:** IPM and IGBT modules contribute to high efficiency, low heat generation, and automatic protection.
- **Unique Control Method:** Achieves high torque, precision, and a wide speed range with excellent anti-aging and anti-trip performance.
- **Intelligent Protection:** Includes safeguards against overcurrent, overvoltage, overheating, low voltage, and short circuits.
- **Easy Installation:** Compact design with convenient screw terminals for wiring.



Figure 1: Front view of the Jadeshay 2.2KW 220V Variable Frequency Drive. The display shows "50.0" Hz, and a warning label advises reading the manual before operation due to electrical shock risk.

# Variable Frequency Drive

Single-phase input Three-phase output

220V 2.2KW

Protect The Motor

Energy Saving

Frequency

Strong Security



Figure 2: Overview of the Variable Frequency Drive highlighting benefits such as motor protection, energy saving, frequency control, and strong security.

## 2. SAFETY INFORMATION

Before installation, operation, or maintenance, please read this manual thoroughly to ensure correct usage and prevent personal injury or equipment damage. Observe all safety warnings and instructions.

- **Electrical Shock Hazard:** This device operates with high voltage. Ensure power is disconnected before any wiring or servicing. Wait at least 10 minutes after removing power before touching internal components to allow capacitors to discharge.
- **Qualified Personnel:** Installation and maintenance should only be performed by qualified electrical personnel.
- **Proper Grounding:** Always ensure the VFD is properly grounded according to local electrical codes.
- **Environmental Conditions:** Install the VFD in an environment free from excessive dust, moisture, corrosive gases, and direct sunlight. Ensure adequate ventilation.

## 3. INSTALLATION AND WIRING

### 3.1 Mounting

The VFD supports wall mounting and cabinet mounting. Ensure sufficient space around the unit for proper

heat dissipation.

### 3.2 Wiring Instructions

Connect the single-phase 220V power supply to the input terminals (R, S, T) and the three-phase motor to the output terminals (U, V, W). Ensure the ground wire is securely connected.

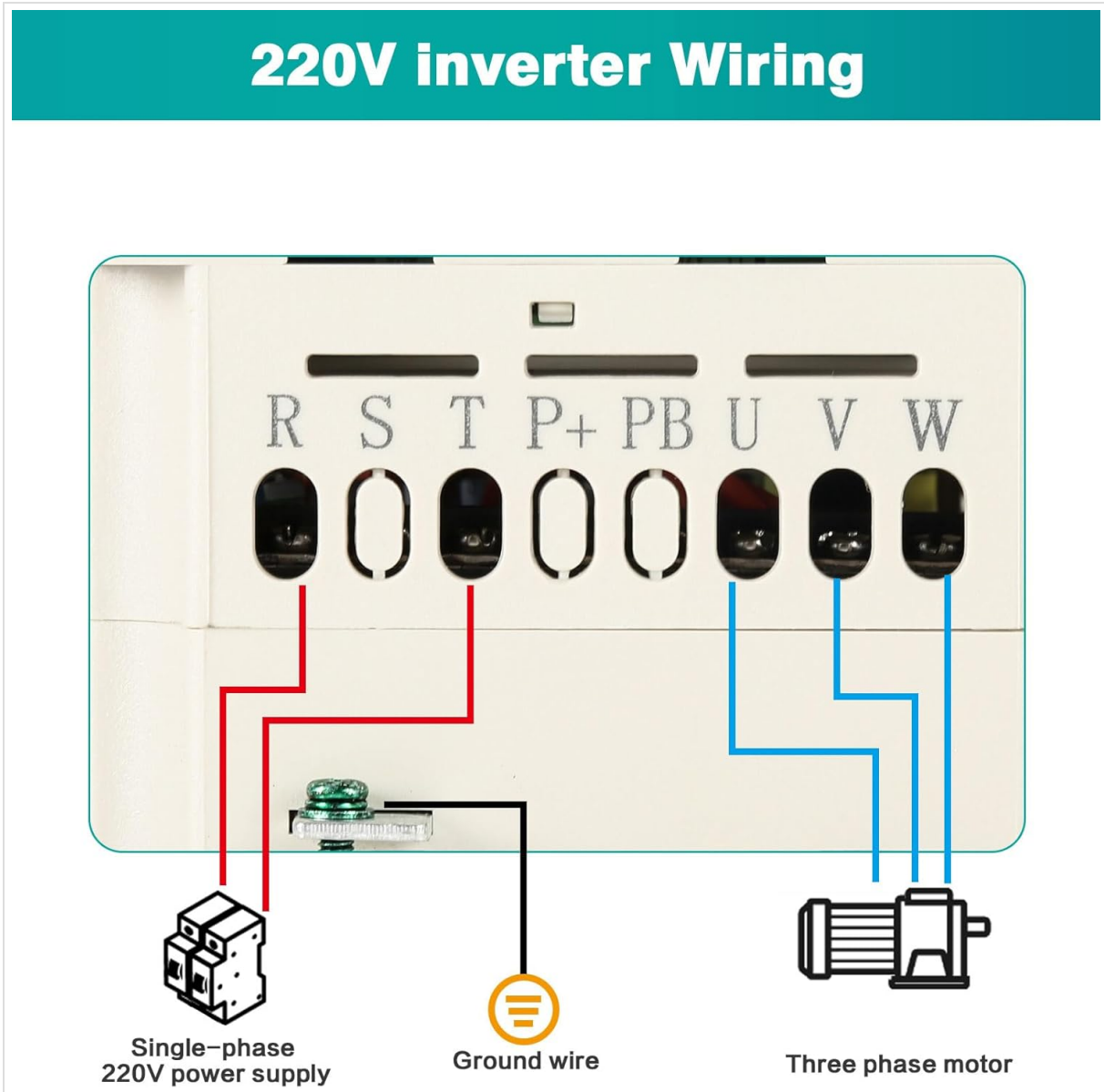


Figure 3: Basic wiring diagram for the 220V inverter. Shows connections for single-phase 220V power supply, ground wire, and a three-phase motor.

# Wiring instructions

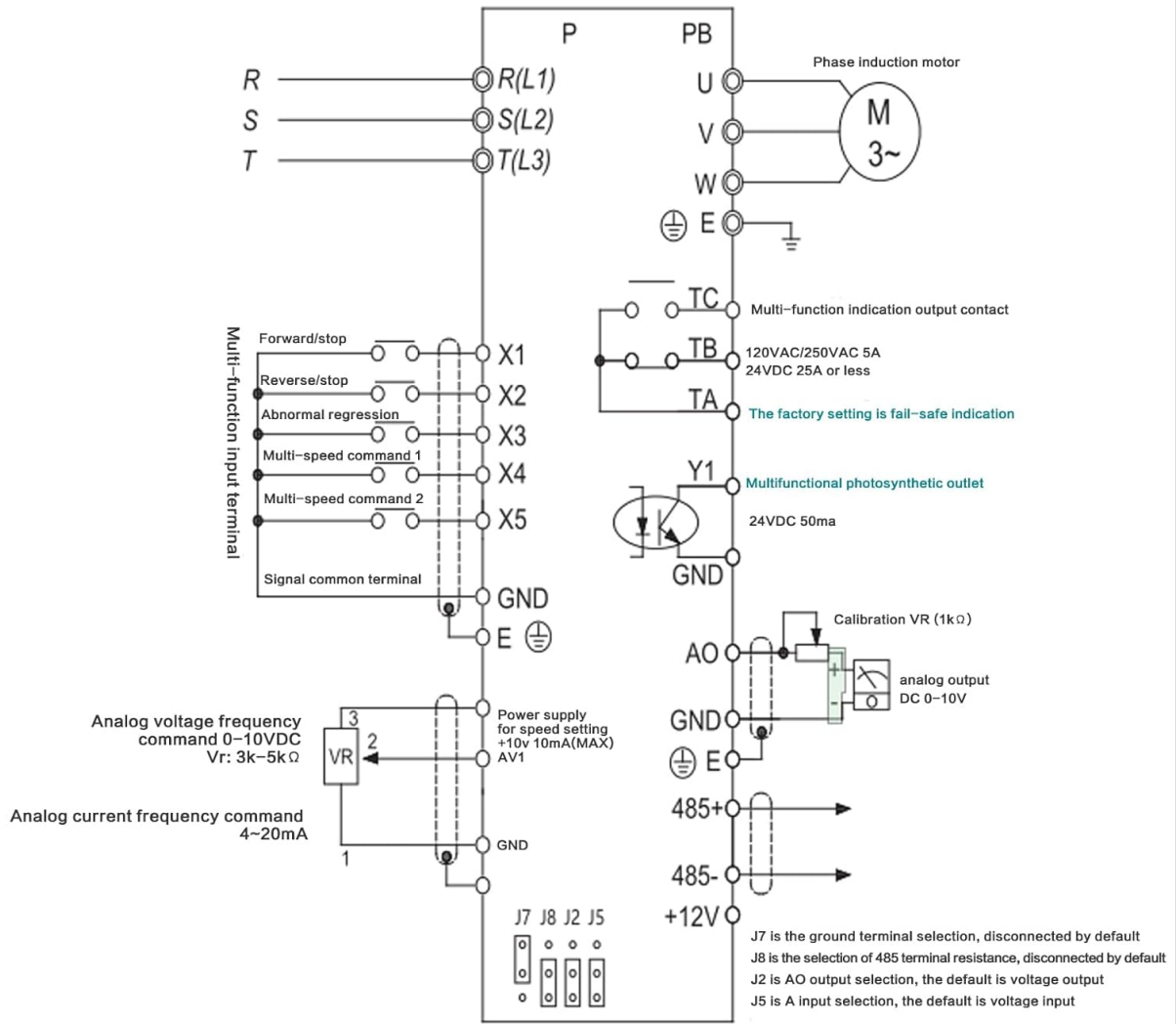


Figure 4: Detailed wiring schematic illustrating connections for power input (R, S, T), motor output (U, V, W), ground (E), multi-function input terminals (X1-X5), multi-function output contacts (TC, TB, TA), multi-function photosynthetic outlet (Y1), analog output (AO), and RS485 communication (485+, 485-).

### 3.3 RS485 Communication

The VFD is equipped with an RS485 communication function, allowing for remote control and monitoring. Refer to the detailed wiring diagram for connection points (485+, 485-).

# RS485

## Sommunication Function 8 Segments Adjustable

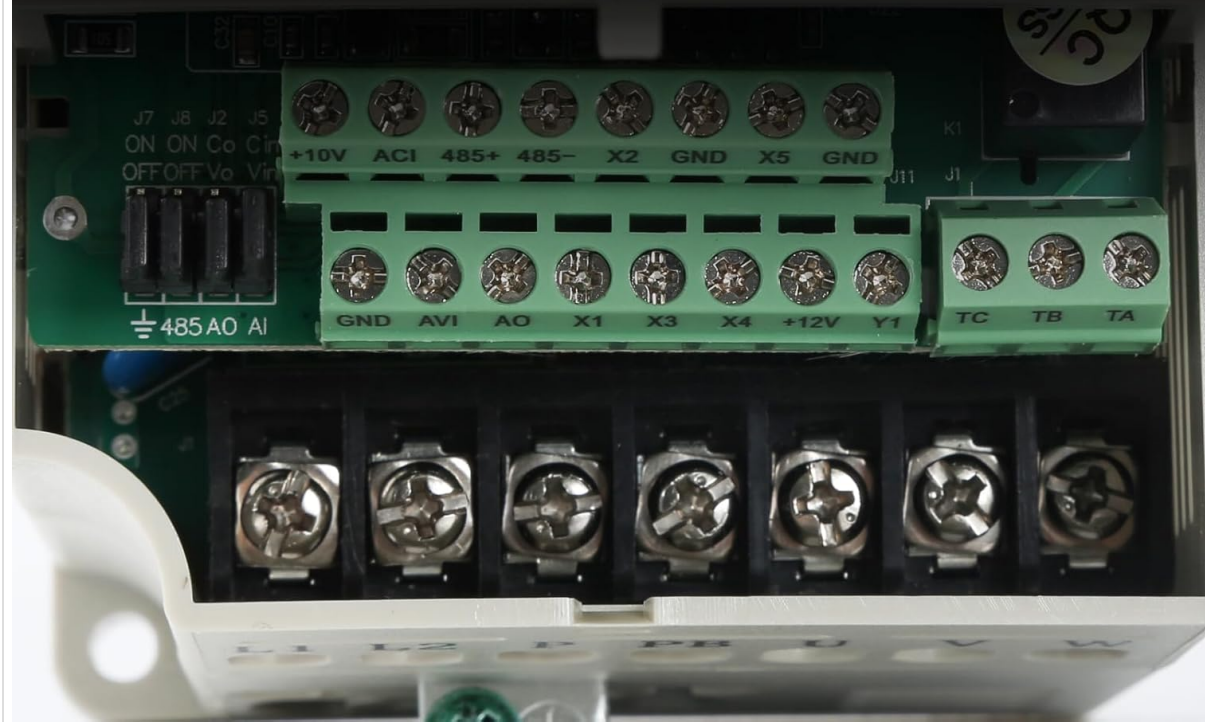


Figure 5: Close-up view of the RS485 communication terminals and other control wiring points on the VFD.

## 4. OPERATION

### 4.1 Control Panel Overview

The VFD features an intuitive control panel for easy operation. It includes a digital display, various function keys, and a speed knob.

# Operation interface



Figure 6: Diagram illustrating the VFD's operation interface, labeling the status indicators (RUN, DIR, TRIP, HZ), electric current and voltage displays, multifunction key (PRG), menu key (MF), shift key, up/down selection keys, run key, enter key, stop button, reset button, and speed knob.

## 4.2 Basic Operation

- **Power On:** After ensuring all wiring is correct and secure, apply power to the VFD. The digital display will illuminate.
- **Adjusting Speed:** Use the **Speed Knob** to adjust the output frequency, which directly controls the motor speed. The display will show the current frequency (Hz). This allows for stepless speed regulation from 0 to 999Hz.
- **Start/Run:** Press the **RUN** button to start the motor. The "RUN" indicator will light up.
- **Stop/Reset:** Press the **STOP/RESET** button to stop the motor. This button also serves to reset any fault conditions.
- **Menu Navigation:** Use the **PRG** (Program) and **MF** (Multifunction) keys to access and navigate through the VFD's parameter settings. The up/down arrow keys and **ENTER** key are used for selection and confirmation.

# Adjust the speed with just a twist

0 ~ 999Hz stepless speed regulation, bid farewell to the traditional gear limit  
Applicable to most motors

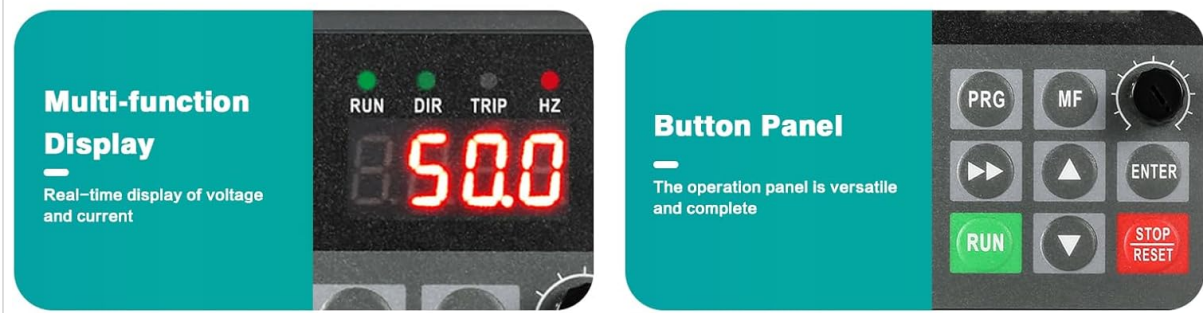
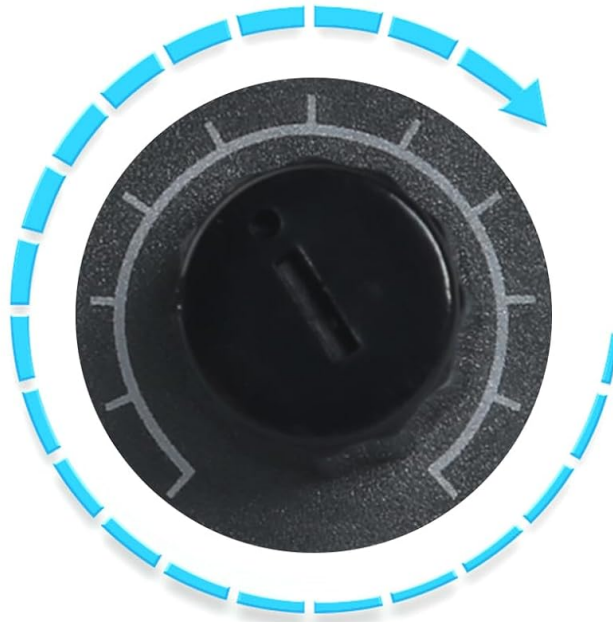


Figure 7: Illustration of the speed adjustment knob for stepless speed regulation and the versatile button panel for operation and configuration.

## 5. MAINTENANCE

Regular maintenance ensures the longevity and reliable operation 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 wiring connections for tightness and signs of wear or damage. Check for any unusual noises or odors during operation.
- **Environmental Check:** Ensure the operating environment remains within specified temperature and humidity ranges.
- **Heat Dissipation:** The VFD is equipped with a radiator. Ensure airflow to the radiator is not obstructed to maintain optimal operating temperature.

## 6. TROUBLESHOOTING

The VFD incorporates intelligent protection features to safeguard against various fault conditions. If a fault occurs, the VFD may display an error code or stop operation. Refer to the following general troubleshooting steps:

- **No Power/Display Off:**

- Check the main power supply and circuit breaker.
  - Verify all input power wiring connections are secure.
- **Motor Not Running:**
    - Ensure the VFD is in RUN mode (RUN indicator lit).
    - Check motor wiring connections (U, V, W).
    - Verify the speed setting is not at zero.
    - Check for any fault indicators (e.g., TRIP) on the display. Press STOP/RESET to clear faults.
- **Overcurrent/Overvoltage/Overheating:**
    - These conditions trigger automatic protection. The VFD will stop and display a fault.
    - Identify the cause (e.g., motor overload, unstable power supply, insufficient ventilation).
    - Address the cause, then press STOP/RESET to clear the fault and restart.
- **Unusual Noise/Vibration:**
    - Stop the motor immediately.
    - Inspect the motor and its load for mechanical issues.
    - Check VFD parameters for correct motor settings.

For specific error codes and advanced troubleshooting, refer to the complete product manual provided with the device or contact technical support.

## 7. SPECIFICATIONS

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The following table outlines the technical specifications for the Jadeshay 2.2KW 220V Variable Frequency Drive.

Feature	Specification
<b>Model</b>	LOOJUTAYY-2.2KW
<b>Material</b>	Fireproof ABS plastic
<b>Nominal Input Voltage</b>	220V Single Phase
<b>Rated Output Voltage</b>	220V Three-Phase
<b>Rated Power</b>	2.2KW
<b>Factory Frequency</b>	50Hz
<b>Output Frequency Range</b>	0-999Hz
<b>Installation Method</b>	Wall mounting, Cabinet mounting
<b>DC Power Supply Type</b>	Voltage type
<b>Control Mode</b>	V/F Closed Loop
<b>Output Voltage Control Method</b>	PAM control
<b>Communication Function</b>	RS485

Feature	Specification
Dimensions (L x W x H)	Approx. 23 x 17 x 16 cm (Product); 22.8 x 16.6 x 15.5 cm (Package)
Weight	Approx. 1.12 kg

# Product information



Model:	JLS-E-2S-1.5G
Material:	Process flame retardant ABS plastic
Color:	White
Rated input voltage:	Single Phase 220V
Rated output Voltage:	Three-phase 220V Rated Power: 0.75KW
Output current:	7A
Factory frequency:	50Hz
Output frequency:	0~999Hz
Installation Method:	Wall-mounted, cabinet
The nature of DC Power supply:	Voltage Type
Control mode:	V/F closed loop
Output voltage regulation method:	PAM control

Figure 8: A visual representation of key product information and specifications, including model, material, voltage, power, and control methods.

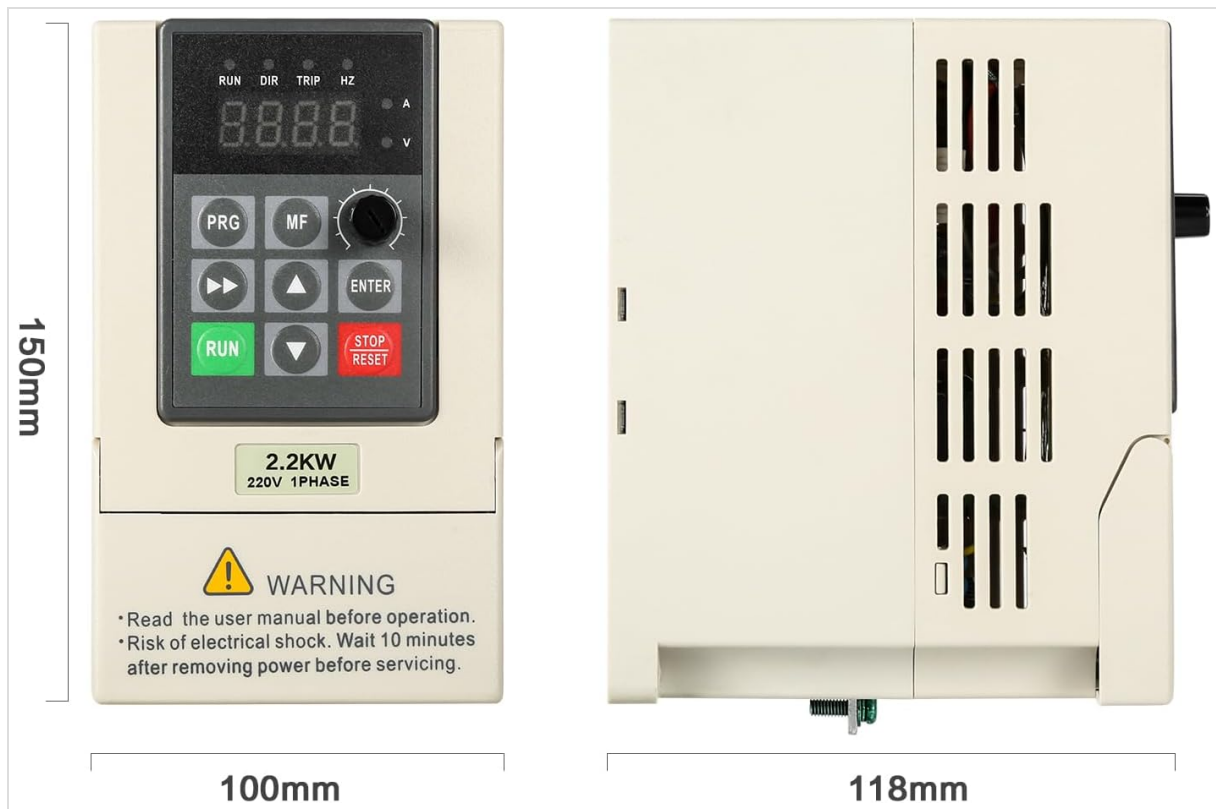


Figure 9: Diagram showing the physical dimensions of the VFD: approximately 150mm height, 100mm width, and 118mm depth.

## 8. WARRANTY AND SUPPORT

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Information regarding specific warranty terms and customer support contact details is not provided in this manual. Please refer to the product packaging, purchase documentation, or contact your retailer for warranty claims and technical assistance.