

## Fafeicy JLS-E-2S

# Fafeicy JLS-E-2S CNC VFD Frequency Inverter (0.4KW) User Manual

Model: JLS-E-2S

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## 1. INTRODUCTION

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This manual provides detailed instructions for the installation, operation, and maintenance of the Fafeicy JLS-E-2S CNC VFD Frequency Inverter. This device is designed to control the speed and torque of AC motors by varying the frequency and voltage of the power supply. It is suitable for various industrial applications, including assembly lines, conveyor belts, spindle motors, drills, CNC machines, lathes, milling machines, pumps, fans, and compressors.

Please read this manual thoroughly before using the product to ensure safe and efficient operation.

## 2. SAFETY INFORMATION

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**WARNING: Risk of electrical shock. Always read the user manual before operation. Wait at least 10 minutes after removing power before servicing the unit to allow capacitors to discharge.**

- Ensure all wiring is performed by qualified personnel in accordance with local electrical codes and regulations.
- Verify that the input voltage matches the specifications of the VFD.
- Do not operate the VFD with damaged cables or if the enclosure is open.

- Always disconnect power before making any connections, disconnections, or performing maintenance.
- Ensure proper grounding of the VFD and the motor.
- Keep the VFD away from water, moisture, direct sunlight, and corrosive environments.
- Ensure adequate ventilation around the VFD to prevent overheating.

## 3. PRODUCT OVERVIEW

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The Fafeicy JLS-E-2S VFD is a compact and robust frequency inverter designed for precise motor control. It features a user-friendly control panel and clearly labeled terminals for easy installation.

### 3.1 Main Components

- **Control Panel:** For setting parameters and operating the VFD.
- **Input Terminals (L1, L2):** For single-phase 220V power supply.
- **Output Terminals (U, V, W):** For connecting to the motor.
- **Braking Terminals (P, PB):** For connecting an optional braking resistor.
- **Cooling Fan:** Located at the bottom for heat dissipation.



Figure 3.1: Overall view of the Fafeicy JLS-E-2S VFD Frequency Inverter.

Strong anti-interference ability  
Stable and reliable performance.



Figure 3.2: Top view of the VFD with the terminal cover open, showing the wiring terminals. This design provides strong anti-interference ability and stable, reliable performance.



Figure 3.3: Front view of the VFD, highlighting the control panel and the safety warning label.

## 4. SPECIFICATIONS

Feature	Description
Model	JLS-E-2S
Input Voltage	Single-phase 220V
Output Voltage	Single-phase 220V
Control Method	V/F Closed Loop
Output Voltage Regulation	PAM Control
Power (0.4KW variant)	0.4 kW (Current: 2.5 A)

Feature	Description
Material	ABS
Dimensions (approx.)	21 x 17 x 17 cm
Weight (approx.)	1.13 kg
Main Application	Industrial assembly lines, conveyor belts, spindle motors, drills, CNC, lathes, milling machines, pumps, fans, compressors.

## 5. SETUP

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### 5.1 Mounting

Mount the VFD securely in a well-ventilated area, away from direct heat sources, moisture, and excessive dust. Ensure there is sufficient space around the unit for proper airflow, especially around the cooling fan at the bottom.

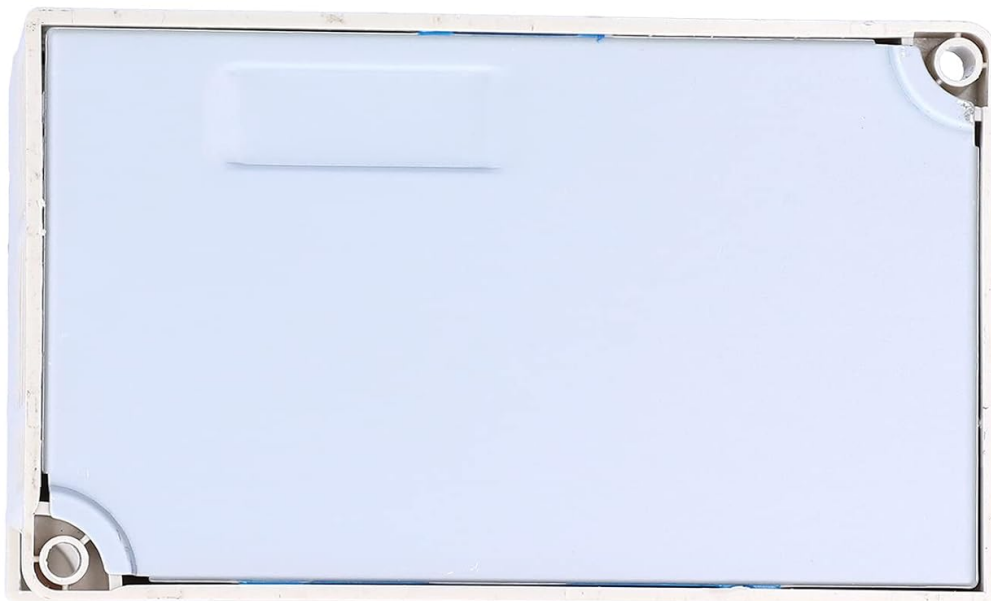


Figure 5.1: Back view of the VFD, illustrating the mounting points for secure installation.

## 5.2 Wiring

Before wiring, ensure the main power supply is disconnected. Refer to the terminal diagram on the unit and in this manual.

1. **Input Power (L1, L2):** Connect the single-phase 220V AC power supply to terminals L1 and L2.
2. **Motor Connection (U, V, W):** Connect the three-phase motor leads to terminals U, V, and W. Ensure correct phase sequence for desired motor rotation.
3. **Grounding:** Connect the ground terminal of the VFD to a reliable earth ground.
4. **Braking Resistor (P, PB - Optional):** If a braking resistor is used, connect it to terminals P and PB. Consult the braking resistor's manual for specific wiring.
5. **Control Terminals (AO, X1, X2, X3, TC, TA, TB, etc.):** These terminals are for external control signals (e.g., start/stop, speed reference, fault output). Refer to the detailed wiring diagram on the unit or in the full product manual for specific functions.



Figure 5.2: Close-up view of the main power and motor wiring terminals (L1, L2, P, PB, U, V, W).



Figure 5.3: Angled view showing both the power terminals and the smaller control terminals for external connections.

## 6. OPERATING INSTRUCTIONS

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### 6.1 Control Panel Functions



Figure 6.1: Close-up view of the VFD control panel.

- **RUN Button:** Starts the motor.
- **STOP/RESET Button:** Stops the motor or resets fault conditions.
- **PRG (Program) Button:** Enters or exits the parameter setting mode.
- **MF (Multi-Function) Button:** Used for various functions depending on the mode.
- **ENTER Button:** Confirms parameter settings or selections.
- **Up/Down Arrow Buttons:** Navigate through menus or adjust parameter values.
- **Rotary Knob:** Adjusts frequency or other selected parameters.
- **Display Screen:** Shows current frequency, output current, voltage, or parameter codes.

## 6.2 Basic Operation

1. **Power On:** After ensuring all connections are secure, apply power to the VFD. The display will light up.
2. **Set Frequency:** Use the rotary knob to set the desired output frequency. The display will show the set frequency.
3. **Start Motor:** Press the **RUN** button. The motor will start and accelerate to the set frequency.

4. **Stop Motor:** Press the **STOP/RESET** button. The motor will decelerate and stop.
5. **Adjust Speed During Operation:** While the motor is running, you can adjust the frequency using the rotary knob to change the motor speed.

## 6.3 Parameter Settings

The VFD has various parameters that can be adjusted to customize its operation for specific applications. To access and modify parameters:

1. Press the **PRG** button to enter parameter setting mode.
2. Use the Up/Down arrow buttons to navigate through parameter groups and individual parameters.
3. Press **ENTER** to select a parameter.
4. Use the Up/Down arrow buttons or the rotary knob to change the parameter value.
5. Press **ENTER** again to save the new value.
6. Press **PRG** to exit parameter setting mode.

Refer to the comprehensive parameter list in the full product manual for detailed descriptions of each parameter and their recommended settings.

## 7. MAINTENANCE

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Regular maintenance ensures the longevity and reliable operation of your VFD.

- **Cleaning:** Periodically clean the exterior of the VFD with a soft, dry cloth. Do not use liquid cleaners or solvents. Ensure the cooling fan and vents are free from dust and debris to maintain proper airflow.
- **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.

**WARNING: Always disconnect power and wait 10 minutes before performing any cleaning or inspection inside the VFD to avoid electrical shock.**

## 8. TROUBLESHOOTING

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This section provides solutions to common issues. For more complex problems, contact technical support.

Problem	Possible Cause	Solution
VFD does not power on	No input power; Blown fuse; Loose connections	Check power supply; Inspect fuses; Verify all input wiring connections.
Motor does not run	Incorrect wiring; Motor parameters not set; VFD in fault state; Emergency stop active	Check motor wiring (U, V, W); Verify motor parameters (e.g., motor frequency, voltage); Check for fault codes on display and reset if necessary; Ensure emergency stop is disengaged.

Problem	Possible Cause	Solution
Motor runs at incorrect speed	Incorrect frequency setting; Parameter misconfiguration	Adjust frequency using the rotary knob; Check relevant speed control parameters (e.g., maximum frequency, acceleration/deceleration times).
VFD displays an error code	Overcurrent, overvoltage, undervoltage, overheating, etc.	Note the error code and refer to the full product manual's error code section for specific causes and solutions. Often requires pressing STOP/RESET after resolving the underlying issue.
Excessive noise or vibration	Motor imbalance; Loose mounting; Incorrect VFD parameters	Check motor and load for balance; Ensure VFD and motor are securely mounted; Review VFD parameters related to motor tuning.

## 9. WARRANTY & SUPPORT

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For warranty information, technical support, or service inquiries, please contact your retailer or the manufacturer directly. Keep your purchase receipt as proof of purchase.