DEWIN IRAYIYEQI-GS109480-02-DEWZZQ-02

DeWin 0.75kW VFD Single-Phase to Three-Phase Frequency Converter User Manual

Model: IRAYIYEQI-GS109480-02-DEWZZQ-02

1. Introduction

This manual provides essential information for the safe and efficient operation of your DeWin 0.75kW Variable Frequency Drive (VFD). This device converts single-phase 220V input into three-phase 220V output, enabling precise speed control for compatible motors. Please read this manual thoroughly before installation and operation.

Key Features:

- **Clear Digital Display:** The control panel features a four-digit display for clear data visibility and easy switching between display states.
- **High Performance Processor:** Utilizes a high-performance processor and includes an integrated RS-485 communication interface for versatile applications.
- **Optimized Energy Efficiency:** Adjustable V/F curve to maximize energy utilization, reduce motor heating, and extend the lifespan of both the motor and the inverter.
- **Efficient Cooling:** Equipped with a powerful cooling fan for rapid heat dissipation, ensuring stable operation.
- **Rich External Terminal Functions:** Includes automatic torque boost and automatic slip compensation functions.



Image 1.1: The DeWin VFD highlighting features such as motor protection, energy saving, frequency control, and strong security.

2. Safety Information

WARNING: Improper installation or operation can lead to serious injury or equipment damage. Always follow safety guidelines.

- Ensure all power is disconnected before installation, wiring, or maintenance.
- Only qualified personnel should perform installation and wiring.
- Verify input and output voltage ratings match your system requirements.
- Proper grounding is essential to prevent electrical shock.
- Do not operate the VFD in environments with excessive dust, moisture, or corrosive gases.
- Keep children and unauthorized personnel away from the device during operation.

3. Package Contents

Please check the package for the following items:

- 1 x DeWin 0.75kW VFD Single-Phase to Three-Phase Frequency Converter
- 1 x Instruction Manual

4. Specifications

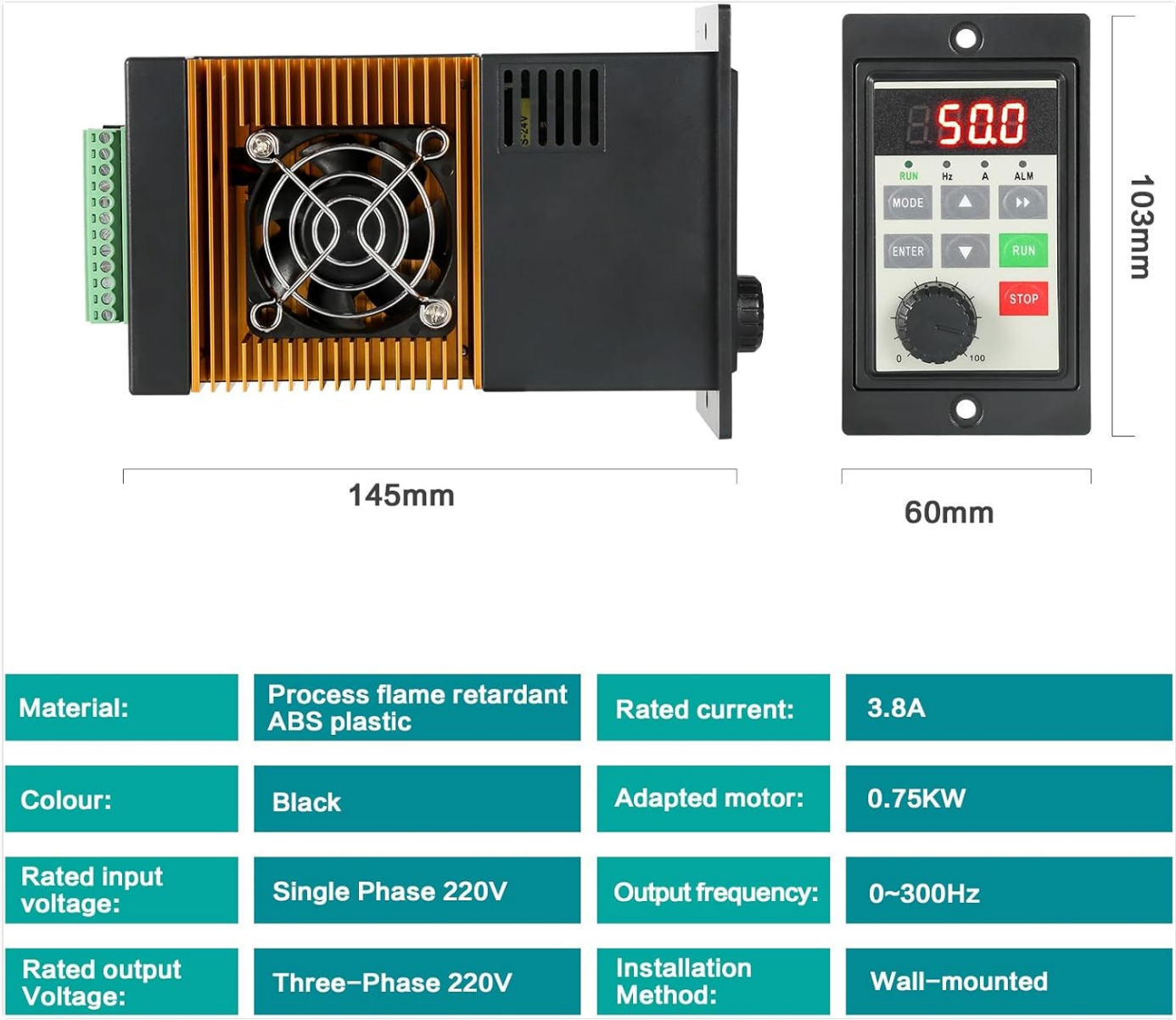


Image 4.1: DeWin VFD dimensions and key specifications.

Parameter	Value
Brand	DEWIN
Model Number	IRAYIYEQI-GS109480-02-DEWZZQ-02
Material	Flame-retardant ABS plastic
Color	Black
Rated Input Voltage	Single-phase 220V

Parameter	Value
Rated Output Voltage	Three-phase 220V
Rated Current	3.8A
Adapted Motor Power	0.75KW
Output Frequency	0-300 Hz
Installation Method	Wall-mounted
Dimensions	19 x 12 x 7.5 cm
Overload Capacity	150% of rated current for one minute
Item Weight	560 g

5. Setup and Installation

5.1 Mounting

The VFD is designed for wall-mounted installation. Ensure the mounting surface is stable and allows for adequate ventilation around the unit to facilitate heat dissipation by the cooling fan.

5.2 Wiring Instructions

Refer to the wiring diagrams below for proper electrical connections. Ensure all connections are secure and comply with local electrical codes.

Instrucciones de cableado

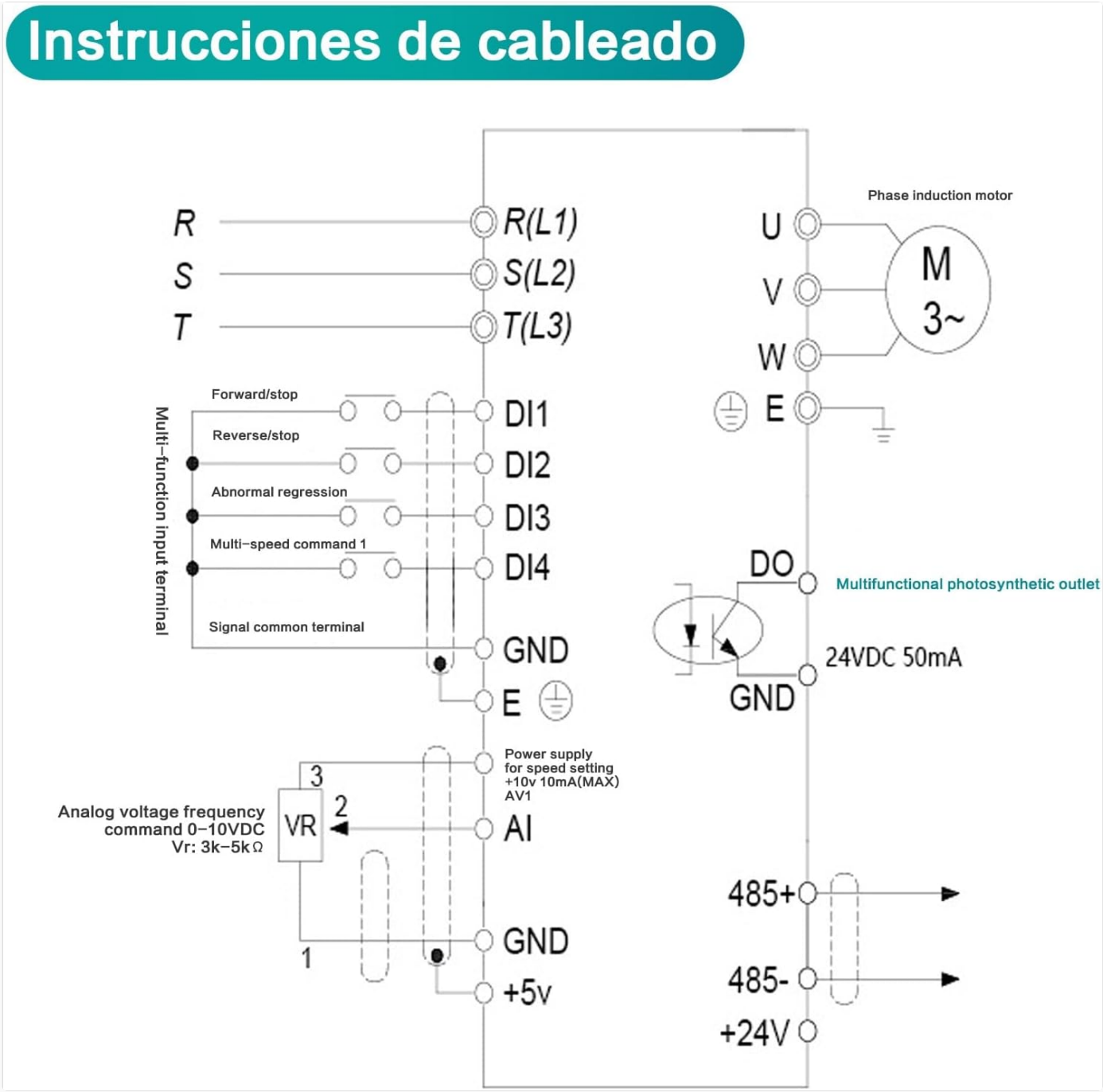


Image 5.1: Detailed wiring diagram for the DeWin VFD, showing input, output, and control terminals.

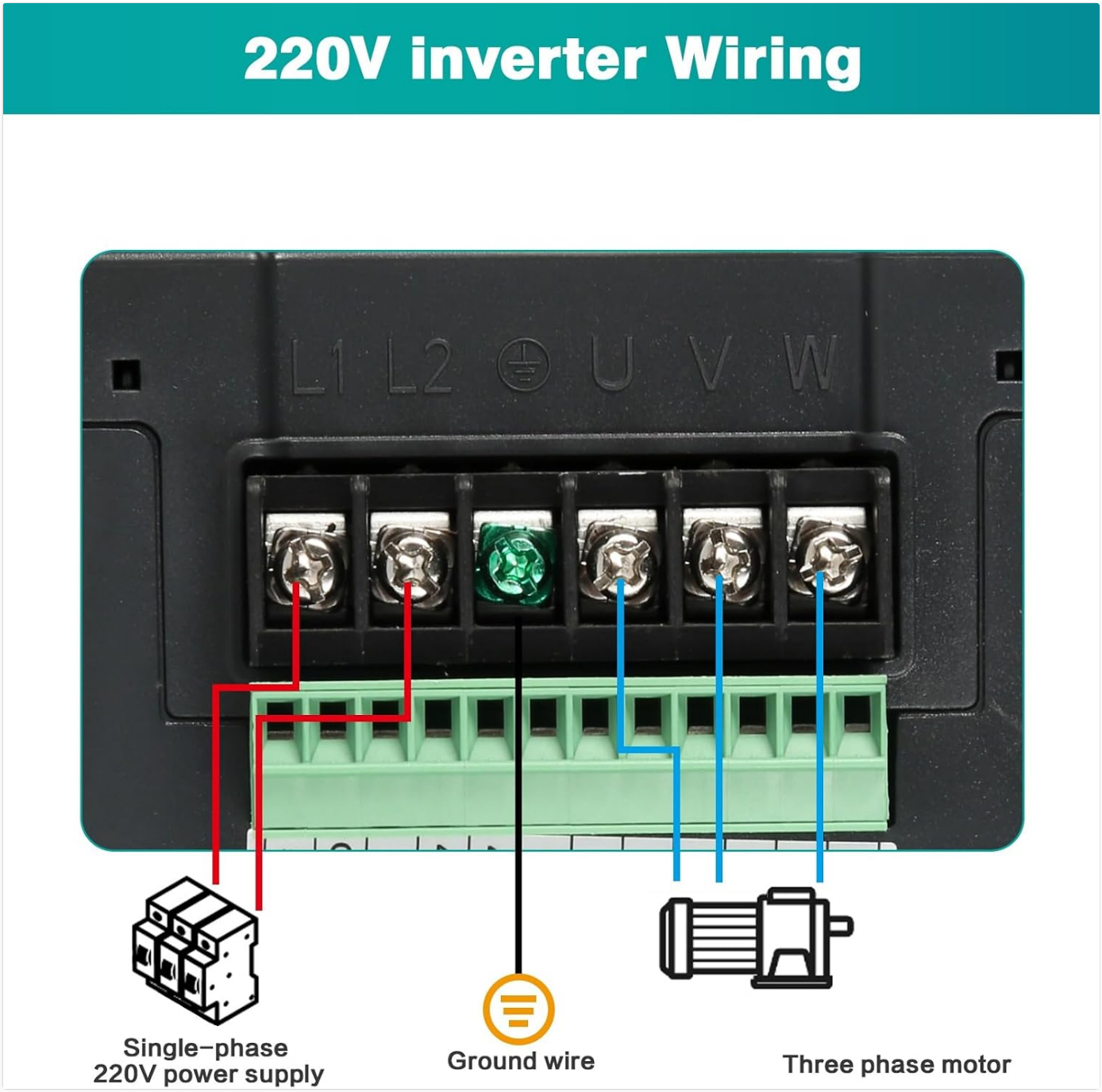


Image 5.2: Terminal block connections for the 220V single-phase input and three-phase output.

Terminal Descriptions:

- **L1, L2:** Single-phase 220V AC input.
- **U, V, W:** Three-phase 220V AC output to the motor.
- **E (Ground):** Essential protective earth connection.
- **DI1-DI4:** Multi-function input terminals for control signals (e.g., forward/stop, reverse/stop, multi-speed commands).
- **GND:** Signal common terminal.
- **DO:** Multifunctional photoelectric output.
- **AI:** Analog input for voltage frequency command (0-10VDC).
- **VR:** Potentiometer for speed setting (3kΩ-5kΩ).
- **+5V:** 5V power supply for external control.
- **485+, 485-:** RS-485 communication interface.
- **+24V:** 24V power supply for external control.

6. Operation

6.1 Control Panel Overview

The VFD features an intuitive control panel for easy operation.



Image 6.1: Labeled diagram of the DeWin VFD operation interface, indicating buttons and display functions.

- **Digital Display:** Shows status indication, frequency (Hz), current (A), and alarm (ALM).
- **MODE Button:** Used to cycle through different display modes or enter menu settings.
- **Up/Down Arrows (▲/▼):** Used for parameter selection and value adjustment within menus.
- **Shift Key (►):** Used to shift digits during parameter setting.
- **ENTER Button:** Confirms selections or enters sub-menus.
- **RUN Button (Green):** Starts the motor operation.
- **STOP Button (Red):** Stops the motor operation.
- **Speed Knob:** Adjusts the output frequency (0-50Hz stepless speed regulation) for motor speed control.

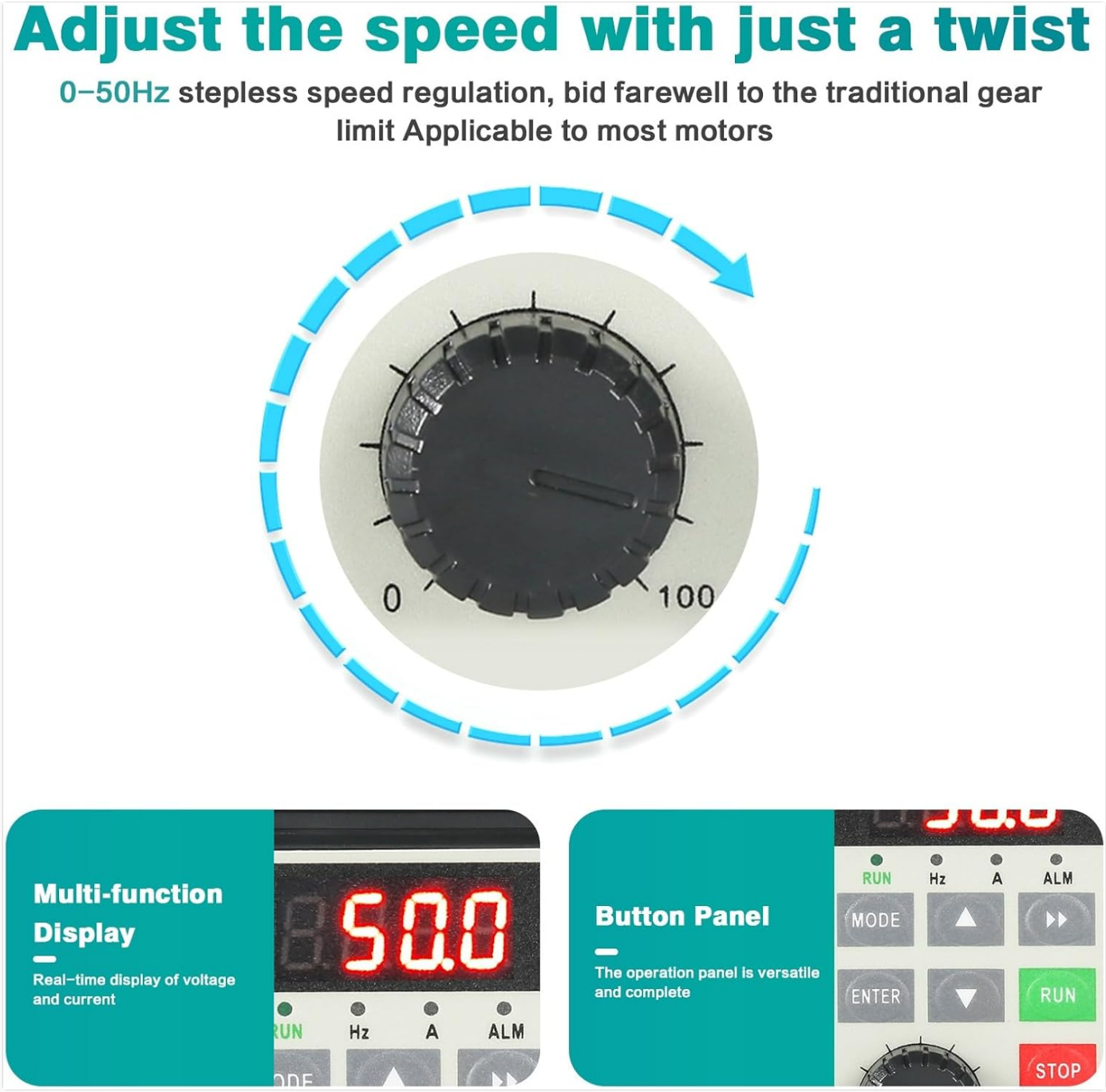


Image 6.2: Close-up of the VFD speed adjustment knob with a 0-100 scale, allowing for precise speed regulation.

6.2 Basic Operation Steps

1. Ensure all wiring is correct and secure.
2. Apply single-phase 220V power to the VFD.
3. The digital display will illuminate.
4. Adjust the speed knob to the desired frequency (speed).
5. Press the **RUN** button to start the motor.
6. To stop the motor, press the **STOP** button.
7. For advanced settings, use the MODE, ENTER, and arrow buttons to navigate the menu. Refer to the detailed parameter settings in the full instruction manual for specific configurations.

7. Applications

The DeWin 0.75kW VFD is suitable for controlling the speed of various 0.75kW three-phase 220V asynchronous motors.

Common applications include:



Image 7.1: Examples of applications for the DeWin VFD, including motors, water pumps, fans, blenders, air compressors, and conveyors.

- Conveyor belts
- Rope weaving machines
- Assembly lines
- Rotary pots
- Rotary sushi equipment
- Fans
- Pumps
- Compressors
- Blenders

8. Maintenance

- Regularly inspect the VFD for any signs of damage or loose connections.
- Keep the unit clean and free from dust and debris to ensure proper cooling.
- Ensure the cooling fan is operating correctly and is not obstructed.
- Avoid exposing the VFD to direct sunlight, high temperatures, or excessive humidity.
- Do not attempt to repair the unit yourself. Contact qualified service personnel if issues arise.

9. Troubleshooting

This section provides general guidance for common issues. For complex problems, consult a qualified technician.

- **No Power/Display:** Check the input power supply and all wiring connections. Ensure the circuit breaker is not tripped.
- **Motor Not Running:** Verify the RUN button has been pressed. Check motor wiring and ensure the motor is not overloaded. Confirm the speed setting is not at zero.
- **Overload Alarm (ALM):** Reduce the motor load or check for mechanical issues with the motor/driven equipment. Ensure the VFD is correctly sized for the motor.
- **Abnormal Noise:** Check motor connections and ensure proper grounding. Verify the V/F curve settings are appropriate for the motor.
- **Incorrect Speed:** Adjust the speed knob. If using external control, verify the analog input signal.

10. Warranty and Support

For warranty information or technical support, please refer to the documentation provided with your purchase or contact your retailer. Keep your purchase receipt as proof of purchase.

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

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