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› Dpofirs A2-8030 3kW 220VAC Variable Frequency Drive Instruction Manual

Dpofirs A2-8030

Dpofirs A2-8030 3kW 220VAC Variable Frequency Drive Instruction Manual

1. INTRODUCTION

This manual provides essential information for the safe and efficient operation of the Dpofirs A2-8030 3kW 220VAC Variable Frequency Drive (VFD). The A2-8030 is designed to control the speed of three-phase motors from a single-phase 180-250V AC input. It features an industrial flame-retardant ABS plastic casing, comprehensive functions, a user-friendly keypad, and efficient heat dissipation for reliable performance.

2. SAFETY INFORMATION

Please read and understand all safety instructions before installation, operation, or maintenance. Failure to comply with these instructions may result in personal injury or equipment damage.

- **High Voltage Warning:** This device contains high voltage. Do not open the casing or inspect internal components unless the 'CHARGE' lamp is turned off and at least 5 seconds have passed since power disconnection.
- **Correct Wiring:** Do not connect AC power to the output terminals (U, V, W). Ensure all wiring is correct and secure before applying power.
- **Qualified Personnel:** Installation and maintenance should only be performed by qualified electrical personnel.
- **Environmental Conditions:** Operate the VFD within specified environmental conditions (temperature, humidity, ventilation) to prevent malfunction.



Image 2.1: Front view of the VFD, showing the control panel and a prominent caution label regarding high voltage and wiring.

3. PRODUCT OVERVIEW

The Dpofirs A2-8030 VFD features a robust design with a clear digital display and intuitive control buttons. Its compact size allows for versatile installation.



Image 3.1: Front view of the Dpofirs A2-8030 VFD, displaying the digital readout and control buttons.

3.1. Dimensions

The physical dimensions of the A2-8030 VFD are approximately 170mm (6.7 inches) in length, 160mm (6.3 inches) in width, and 125mm (4.9 inches) in height.



Image 3.2: Side view of the VFD with its dimensions clearly indicated.

4. SPECIFICATIONS

Feature	Specification
Model	A2-8030
Material	Industrial Flame-retardant ABS Plastic
Input Voltage	Single-phase AC 180-250V, 14A, 40-60Hz
Output Voltage	Three-phase 220V, 20A, 0-400Hz

Feature	Specification
Power	3KW
Recommended Motor Voltage	180-250V
Efficiency	86%
Product Size (approx.)	170 x 160 x 125 mm / 6.7 x 6.3 x 4.9 inches
Applications	Spindle motors, lathes, milling machines, pumps, treadmills, conveyors, winders, mixers, extruders, dividers, compressors, vents, elevators, centrifuges, and other machinery.

5. SETUP

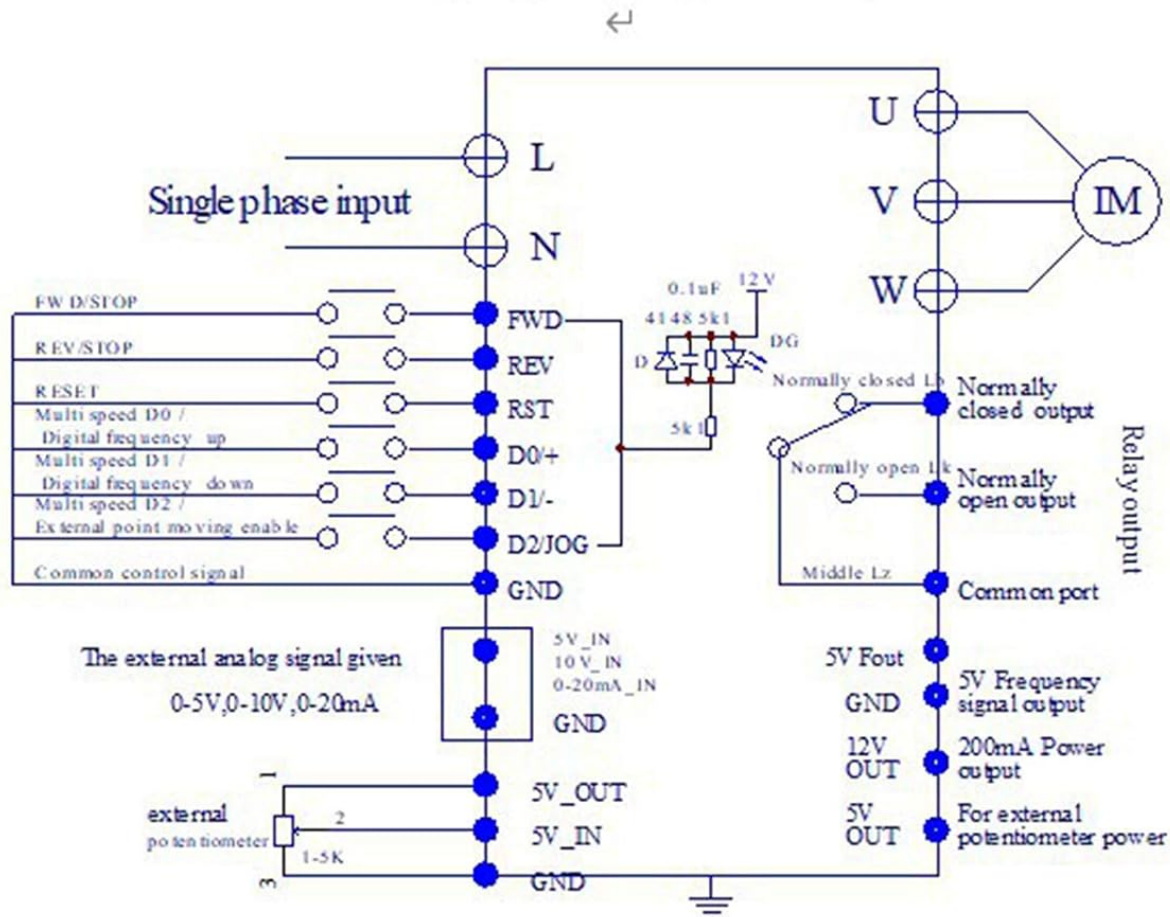
5.1. Mounting

Mount the VFD in a location that is clean, dry, well-ventilated, and free from direct sunlight, excessive dust, corrosive gases, or vibrations. Ensure adequate clearance around the unit for proper airflow and heat dissipation.

5.2. Wiring

Refer to the wiring diagram below for proper connection of the single-phase input power and three-phase motor output. Ensure all connections are tight and insulated.

Wiring figure (single phase)←



main-loop port ←
 control-loop port ←

Port name←	Description←
L N←	Single phase power input. ←
U V W←	Three phase AC output ports can only connect to pure resistance or inductance load such as motors or electric heater.←

Image 5.1: Wiring diagram for single-phase input and three-phase motor output.

- **Input (L, N):** Connect the single-phase AC 180-250V power supply to terminals L and N.
- **Output (U, V, W):** Connect the three-phase motor to terminals U, V, and W. **Caution:** These terminals are for motor connection only. Do not connect AC mains power to U, V, W.
- **Grounding:** Ensure the VFD is properly grounded to prevent electrical shock.
- **Control Terminals:** The diagram also illustrates connections for external control signals, such as forward/reverse, reset, multi-speed, digital frequency adjustment, and external analog signals (0-5V, 0-10V, 0-20mA) for speed control.

6. OPERATING INSTRUCTIONS

6.1. Control Panel Functions

The VFD features a humanized keypad design for ease of use.



Image 6.1: The VFD control panel, which can be detached for remote operation.

- **RUN:** Initiates motor operation.
- **STOP/RESET:** Stops motor operation or clears error codes.
- **SET:** Enters parameter setting mode.
- **Up/Down Arrows:** Adjusts frequency, parameters, or navigates menus.
- **JOG:** Provides momentary motor operation at a preset low frequency.
- **REV/FWD:** Changes motor rotation direction (Reverse/Forward).

6.2. Basic Operation Sequence

1. **Power On:** Ensure all wiring is correct and secure, then apply single-phase AC power to the VFD.
2. **Parameter Setting (if necessary):** Press the **SET** button to enter parameter setting mode. Use the arrow keys to navigate and adjust parameters according to your motor and application requirements. Refer to the full

user manual for detailed parameter descriptions.

3. **Start Motor:** Press the **RUN** button to start the motor.
4. **Adjust Frequency:** Use the **Up/Down Arrows** to increase or decrease the output frequency, thereby controlling the motor speed.
5. **Change Direction:** Press **REV/FWD** to reverse the motor's direction of rotation.
6. **Stop Motor:** Press the **STOP/RESET** button to halt motor operation.

7. MAINTENANCE

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

- **Cleaning:** Periodically clean the exterior of the VFD with a soft, dry cloth. Do not use liquid cleaners or solvents. Ensure ventilation openings are free from dust and debris.
- **Cooling System:** The VFD incorporates a large aluminum base fan radiator and a powerful fan for efficient heat dissipation. Regularly check that the fan is operating correctly and that air inlets/outlets are not obstructed. Dust accumulation on the fan or radiator fins can reduce cooling efficiency.
- **Connection Checks:** Periodically inspect all wiring connections for tightness and signs of wear or damage. Loose connections can lead to overheating or intermittent operation.
- **Environmental Monitoring:** Ensure the operating environment remains within specified temperature and humidity ranges.

8. TROUBLESHOOTING

This section provides general guidance for common issues. For specific error codes or complex problems, consult the detailed product manual or contact technical support.

- **Motor Not Running:**
 - Check input power supply.
 - Verify motor connections (U, V, W).
 - Ensure the VFD is not in an error state (check display for error codes). Press **STOP/RESET** to clear errors.
 - Confirm that the RUN command has been issued.
- **Incorrect Motor Speed:**
 - Adjust frequency using the arrow keys.
 - Check frequency reference settings in parameters.
- **Overload/Overcurrent:**
 - Reduce motor load.
 - Check motor and VFD current ratings.
 - Inspect for mechanical issues with the motor or driven equipment.
- **Overheating:**
 - Ensure proper ventilation and clear any obstructions from the VFD's cooling fan and vents.
 - Verify ambient temperature is within specifications.

9. WARRANTY AND SUPPORT

Dpofirs is committed to providing quality products and customer satisfaction. If you encounter any questions regarding the product or are not satisfied, please contact Dpofirs customer service for assistance. We aim to provide the best possible solution.

For return policy details, please refer to the purchase platform's specific return guidelines, which typically allow for returns or replacements within 31 days of purchase.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

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After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

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.

Submit question

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