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› MDWXDOFP XSY-AT1 VFD Inverter User Manual

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Models: 0.75KW 220V, 0.45KW 220V

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1. INTRODUCTION

This manual provides essential information for the safe and efficient use of your MDWXDOFP XSY-AT1 VFD Inverter. This device is designed to control the speed of three-phase AC motors by varying the frequency and voltage of the power supplied to the motor. Please read this manual thoroughly before installation and operation to ensure proper functionality and to prevent damage or injury.

2. SAFETY PRECAUTIONS

WARNING: Failure to follow these safety instructions may result in electric shock, fire, or severe injury.



Image 1: MDWXDOFP XSY-AT1 VFD Inverter with visible safety warning label and accompanying instruction manual.

- If this device is not installed correctly, it may cause electric shock or fire.
- Before wiring, please ensure the power supply is completely disconnected.
- Do not connect the output terminals to an AC power supply; doing so may cause damage to the inverter.
- The inverter must not be installed on flammable materials.
- Ensure the inverter is reliably grounded to prevent electrical hazards.
- Do not touch the terminals of the inverter when power is applied.
- Avoid installing the inverter in environments with explosive gases, as this may lead to an explosion.
- Do not attempt to disassemble the inverter. The internal wiring operates at high voltage, and opening the shell is strictly prohibited.

3. PRODUCT FEATURES

The MDWXDOFP XSY-AT1 VFD Inverter offers reliable performance for motor speed control applications. Key features include:

- Variable Frequency Drive (VFD) technology for precise motor speed control.
- Converts single-phase 220V input to three-phase 220V output.

- Available in 0.75KW and 0.45KW power ratings.
- Integrated control panel for easy operation and parameter adjustment.
- Designed for high performance and low noise operation.

4. TECHNICAL SPECIFICATIONS



Image 2: Side view of the VFD Inverter, highlighting the wiring terminals and the model specification label.

Parameter	Value
Model	XSY-AT1
Input Voltage	Single-phase 220VAC
Output Voltage	Three-phase 220VAC
Input Frequency	50/60 Hz
Power Capacity (0.75KW model)	2.0KVA (0.75KW/1HP)
Output Current (0.75KW model)	5 A
Product Dimensions	1.18 x 0.79 x 0.79 inches
Item Weight	1.76 ounces (50 Grams)

Note: Specifications for the 0.45KW model will vary slightly, particularly in power capacity and output current. Refer to the product label for exact details.

5. SETUP AND INSTALLATION

Proper installation is crucial for the safe and effective operation of the VFD Inverter. Always ensure power is disconnected before beginning any wiring.

5.1 Mounting

- Mount the inverter vertically on a non-flammable surface.
- Ensure adequate ventilation around the unit to prevent overheating. Maintain sufficient clearance from other equipment.
- Avoid locations with excessive dust, moisture, direct sunlight, or corrosive gases.

5.2 Wiring



Image 3: Top view of the VFD Inverter, showing the control panel with buttons and a rotary knob.

1. **Power Off:** Confirm that all power sources are disconnected before making any electrical connections.
2. **Input Power (L, N):** Connect the single-phase 220V AC power supply to the input terminals labeled 'L' and 'N'.
3. **Motor Output (U, V, W):** Connect the three-phase motor to the output terminals labeled 'U', 'V', and 'W'. Ensure correct phase sequence for desired motor rotation.
4. **Grounding (E):** Connect the ground terminal (E) to a reliable earth ground. This is critical for safety.
5. **Control Wiring (Optional):** If external control signals (e.g., start/stop, speed reference) are used, refer to the detailed wiring diagram in the full product manual for specific terminal connections.
6. **Double Check:** Verify all connections are secure and correct before applying power.

6. OPERATING INSTRUCTIONS

The XSY-AT1 VFD Inverter features an intuitive control panel for easy operation.

6.1 Control Panel Overview

- **RUN Button:** Initiates motor operation.
- **STOP/RESET Button:** Stops motor operation or clears fault conditions.

- **FWD/REV Button:** Changes motor rotation direction (Forward/Reverse).
- **PROG Button:** Enters parameter programming mode.
- **FUNC/DATA Button:** Used for function selection and data entry/confirmation.
- **Up/Down Arrows:** Navigate menus and adjust parameter values.
- **Rotary Knob:** Fine-tunes frequency or parameter values.
- **Display:** Shows operating status, frequency, and parameter values.

6.2 Basic Operation

1. **Power On:** Apply power to the inverter. The display will illuminate.
2. **Start Motor:** Press the **RUN** button. The motor will start and accelerate to the set frequency.
3. **Adjust Speed:** Use the **Rotary Knob** or **Up/Down Arrows** to adjust the output frequency, thereby controlling the motor speed.
4. **Change Direction:** Press the **FWD/REV** button to switch the motor's rotation direction.
5. **Stop Motor:** Press the **STOP/RESET** button. The motor will decelerate and stop.

6.3 Parameter Setting

For advanced settings and motor tuning, refer to the detailed parameter list in the complete product manual. Generally, you would:

1. Press **PROG** to enter parameter mode.
2. Use **Up/Down Arrows** to navigate through parameter groups and individual parameters.
3. Press **FUNC/DATA** to select a parameter for editing.
4. Use **Up/Down Arrows** or the **Rotary Knob** to change the value.
5. Press **FUNC/DATA** again to save the new value.
6. Press **PROG** to exit parameter mode.

7. MAINTENANCE

Regular maintenance helps ensure the longevity and reliable operation of your VFD Inverter.

- **Cleaning:** Periodically clean the exterior of the inverter and ventilation openings to prevent dust accumulation. 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.
- **Environment:** Ensure the operating environment remains within specified temperature and humidity ranges.
- **Cooling Fan:** If equipped with a cooling fan, ensure it is free from obstructions and operating correctly.

CAUTION: Always disconnect power to the inverter before performing any maintenance or cleaning.

8. TROUBLESHOOTING

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

Problem	Possible Cause	Solution
Inverter does not power on	No input power; loose wiring; internal fuse blown.	Check power supply; verify input wiring; consult a qualified technician for fuse replacement.
Motor does not run	Inverter in STOP mode; fault condition; incorrect parameters; motor wiring issue.	Press RUN; check display for fault codes and clear with STOP/RESET; verify motor parameters; inspect motor wiring.
Motor speed is unstable	Incorrect acceleration/deceleration times; load fluctuations; poor motor tuning.	Adjust acceleration/deceleration parameters; ensure stable load; perform motor auto-tuning if available.
Overcurrent/Overload fault	Motor overloaded; short circuit in motor wiring; incorrect motor parameters.	Reduce motor load; check motor wiring for shorts; verify motor parameters (e.g., rated current).

9. WARRANTY AND SUPPORT

For warranty information, technical assistance, or service inquiries, please refer to the documentation provided with your purchase or contact your retailer. Ensure you have your product model number (XSY-AT1) and purchase details available when contacting support.

This product is manufactured by MDWXDOFP.