



[Manuals.plus](#) /

> [MDWXDOFP](#) /

> MDWXDOFP XSY-AT1 VFD Frequency Inverter User Manual (1.5KW, 2.2KW, 4KW, 3P 220V)

## MDWXDOFP XSY-AT1

# MDWXDOFP XSY-AT1 VFD Frequency Inverter User Manual

Models: 1.5KW, 2.2KW, 4KW (3-Phase 220V Output)

## 1. SAFETY PRECAUTIONS

---

Read and understand all safety instructions before installing, operating, or maintaining the MDWXDOFP XSY-AT1 VFD Frequency Inverter. Failure to follow these instructions may result in serious injury, death, or property damage.

- **Risk of Electric Shock:** Improper operation may cause severe injury or property loss. Always ensure power is disconnected before wiring or performing any maintenance.
- **Wiring Safety:** Before wiring, confirm that the main power supply is completely off. Never connect the U/V/W output terminals to an AC power supply; this will damage the inverter.
- **Grounding:** The inverter must be properly grounded to prevent electric shock.
- **Environment:** Do not install the inverter in environments containing explosive gases, as this poses a fire hazard.
- **Professional Installation:** Wiring and internal adjustments should only be performed by qualified professionals. The inverter contains high voltage internally; do not open the casing.



Image 1.1: Front view of the XSY-AT1 VFD, showing the control panel and a safety precautions label at the bottom.

## 2. SETUP AND INSTALLATION

### 2.1 Mounting

Mount the VFD in a vertical position on a stable, non-flammable surface, ensuring adequate ventilation for heat dissipation. Avoid direct sunlight, excessive dust, moisture, or corrosive gases. Maintain sufficient clearance around the unit for airflow.

### 2.2 Wiring

All wiring must be performed by a qualified electrician in accordance with local and national electrical codes. Ensure the main power supply is disconnected before beginning any wiring.

- **Input Power (R, S, T):** Connect the 3-phase 220V AC power supply to the R, S, T terminals.
- **Output Power (U, V, W):** Connect the motor to the U, V, W terminals. Do not connect these terminals to the AC mains.
- **Grounding (PE):** Connect the ground terminal (PE) to a reliable earth ground.
- **Control Wiring:** For external control (e.g., remote panel, external switches), refer to the detailed wiring diagram provided in the full product manual (not included here).



Image 2.1: The XSY-AT1 VFD unit shown with its detachable remote control panel, connected via a ribbon cable.

## 3. OPERATING INSTRUCTIONS

---

### 3.1 Control Panel Overview

The VFD features an intuitive control panel for direct operation and parameter setting.



Image 3.1: Close-up view of the XSY-AT1 VFD control panel, showing buttons and display.

- **Display:** Shows current frequency, speed, or parameter values.
- **DISP:** Toggles display modes.
- **FWD/REV:** Changes motor rotation direction.

- **PROG:** Enters/exits programming mode.
- **FUNC/DATA:** Selects parameters or confirms data entry.
- **Up/Down Arrows:** Adjust frequency or navigate parameters.
- **Rotary Knob:** Fine-tunes frequency or parameter values.
- **RUN (Green):** Starts the motor.
- **STOP/RESET (Red):** Stops the motor or clears fault indications.

## 3.2 Basic Operation

1. **Power On:** Apply 3-phase 220V power to the VFD. The display will illuminate.
2. **Set Frequency:** Use the Up/Down arrows or the rotary knob to set the desired output frequency.
3. **Start Motor:** Press the **RUN** button. The motor will accelerate to the set frequency.
4. **Change Direction:** Press the **FWD/REV** button to reverse motor rotation while running or before starting.
5. **Stop Motor:** Press the **STOP/RESET** button. The motor will decelerate and stop.

## 3.3 Parameter Setting

To access and modify advanced parameters (e.g., acceleration/deceleration times, motor parameters), press the **PROG** button to enter programming mode. Use the Up/Down arrows to navigate through parameter groups and the **FUNC/DATA** button to select and confirm values. Refer to the comprehensive programming manual for a full list of parameters and their functions.

## 4. MAINTENANCE

---

Regular maintenance ensures optimal performance and extends the lifespan of your VFD. Always disconnect power before performing any maintenance.

- **Cleaning:** Periodically clean the VFD's exterior and cooling fins to prevent dust buildup, 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 damage or corrosion. Check for any unusual noises or odors during operation.
- **Environmental Check:** Ensure the operating environment remains within specified temperature and humidity ranges. Verify that ventilation is not obstructed.
- **Fan Check:** For models with cooling fans, ensure they are operating correctly and free from obstructions.



Image 4.1: Top view of the XSY-AT1 VFD, highlighting the cooling fins for heat dissipation.

## 5. TROUBLESHOOTING

This section provides basic troubleshooting steps for common issues. For complex problems, consult a qualified technician.

Problem	Possible Cause	Solution
VFD does not power on	No input power; Blown fuse; Loose connection	Check power supply; Inspect fuses; Verify all input wiring connections.
Motor does not run	VFD in STOP mode; Incorrect frequency setting; Motor wiring issue; Fault condition	Press RUN; Adjust frequency; Check motor connections (U, V, W); Check display for fault codes and reset.
Overcurrent fault (OC)	Motor overload; Short circuit in motor/wiring; Rapid acceleration/deceleration	Reduce motor load; Check motor and wiring for shorts; Increase acceleration/deceleration times in parameters.
Overvoltage fault (OV)	High input voltage; Rapid deceleration with high inertia load	Verify input voltage; Increase deceleration time; Consider adding a braking resistor if applicable.

Problem	Possible Cause	Solution
Under voltage fault (UV)	Low input voltage; Power supply fluctuation	Verify input voltage stability; Check power supply capacity.

## 6. SPECIFICATIONS

---

The following specifications apply to the MDWXDOFP XSY-AT1 series VFD Frequency Inverter.

- **Model Series:** XSY-AT1
- **Input Voltage:** 3-Phase 220V AC
- **Output Voltage:** 3-Phase 0-220V AC (proportional to frequency)
- **Output Frequency Range:** 0-400 Hz (typical, configurable)
- **Rated Power Options:** 1.5KW, 2.2KW, 4KW
- **Control Method:** V/F Control
- **Operating Temperature:** -10°C to 40°C (14°F to 104°F)
- **Humidity:** 0-95% relative humidity (non-condensing)
- **Protection Features:** Overcurrent, Overvoltage, Undervoltage, Overheat, Overload protection



Image 6.1: View of the internal components of the XSY-AT1 VFD, demonstrating its construction, alongside the remote control panel.