

[Manuals.plus](#) /

› [YASKAWA ELECTRIC](#) /

› YASKAWA ELECTRIC DELTA VFD-B SERIES 15HP AC DRIVE User Manual

YASKAWA ELECTRIC VFD110B23A

YASKAWA ELECTRIC DELTA VFD-B SERIES 15HP AC DRIVE User Manual

Model: VFD110B23A

INTRODUCTION

This manual provides essential information for the safe and effective operation, installation, and maintenance of the YASKAWA ELECTRIC DELTA VFD-B Series 15HP AC Drive, model VFD110B23A. Please read this manual thoroughly before installing or operating the drive to ensure proper usage and to prevent damage to the equipment or injury to personnel.

SAFETY INFORMATION

Always observe the following safety precautions to prevent electric shock, fire, or personal injury:

- Ensure power is disconnected before performing any installation, wiring, or maintenance.
- Only qualified personnel should install, operate, and maintain this equipment.
- Do not touch the drive terminals immediately after power-off, as residual voltage may be present. Wait for the charge indicator to extinguish.
- Install the drive in a well-ventilated area, free from dust, corrosive gases, and direct sunlight.
- Properly ground the drive according to local electrical codes.

PRODUCT OVERVIEW

The DELTA VFD-B Series is a general-purpose AC motor drive designed for various industrial applications. It offers stable and reliable performance for controlling the speed and torque of three-phase AC induction motors.



Figure 1: The DELTA VFD-B Series 15HP AC Drive, still sealed in its protective plastic packaging, indicating a new or unused condition.

Key Features:

- High performance vector control.
- Built-in PID feedback control.
- Multiple control modes (V/F, Sensorless Vector).
- Comprehensive protection functions.
- User-friendly interface.

SETUP

1. Unpacking and Inspection

Carefully remove the drive from its packaging. Inspect the unit for any signs of damage during transit. Verify that all components listed in the packing list are present. The package typically includes the drive unit and a user manual (often on a CD).



Figure 2: Included with the drive is a CD containing the AC Motor Drives VFD Series User Manual, essential for detailed installation and operation instructions.

2. Mounting

Mount the drive vertically on a flat, non-flammable surface. Ensure adequate clearance around the unit for proper ventilation and heat dissipation. Refer to the detailed mounting dimensions in the full user manual.

3. Wiring

All wiring must comply with local and national electrical codes. Use appropriate wire gauges for the input power, motor connections, and control signals.

- **Power Input (R, S, T):** Connect the three-phase AC power supply (200-240V, 50/60Hz) to these terminals.
- **Motor Output (U, V, W):** Connect the three-phase motor to these terminals.
- **Ground (PE):** Ensure a proper ground connection for safety.
- **Control Terminals:** Connect external control signals (e.g., start/stop, speed reference, fault reset) as required by your application. Refer to the wiring diagrams in the comprehensive manual.



Figure 3: The product label clearly displays the model number VFD110B23A, input/output electrical specifications (3PH 200-240V,

15HP), frequency range, and compliance markings, crucial for correct wiring and operation.

4. Initial Power-Up

Before applying power, double-check all wiring connections. Power on the drive and observe the display. The drive should initialize and show a ready status. If any error codes appear, refer to the troubleshooting section.

OPERATING INSTRUCTIONS

1. Basic Operation

- **Start/Stop:** Use the RUN/STOP buttons on the control panel or external control signals to start and stop the motor.
- **Speed Adjustment:** Adjust the motor speed using the potentiometer on the control panel or through digital input/analog input signals.

2. Parameter Settings

The drive's behavior is configured through various parameters. Access these parameters via the control panel. Common parameters include:

- **Frequency Setting (F0.00):** Sets the output frequency.
- **Acceleration Time (F0.01):** Time taken for the motor to accelerate from 0Hz to maximum frequency.
- **Deceleration Time (F0.02):** Time taken for the motor to decelerate from maximum frequency to 0Hz.
- **Motor Rated Current (F0.03):** Set according to the motor's nameplate current.

Refer to the detailed parameter list in the full user manual for comprehensive configuration options.

MAINTENANCE

Regular maintenance ensures the longevity and reliable operation of your AC drive.

- **Routine Inspection:** Periodically check for loose connections, abnormal noises, or unusual odors.
- **Cleaning:** Keep the drive clean and free from dust and debris. Use compressed air to clear ventilation openings. Ensure power is off before cleaning.
- **Cooling Fan:** Inspect the cooling fan for proper operation. Replace if it becomes noisy or stops functioning.
- **Capacitor Life:** Electrolytic capacitors have a finite lifespan. Consider replacement after 5-10 years of continuous operation, depending on environmental conditions.

TROUBLESHOOTING

This section provides solutions for common issues. For detailed error codes and advanced troubleshooting, consult the complete user manual.

Problem	Possible Cause	Solution
Motor does not run	No power, incorrect wiring, fault condition, parameter error.	Check power supply, verify wiring, clear fault, check parameter settings.
Overcurrent (OC) fault	Motor overload, short circuit, rapid acceleration/deceleration.	Reduce load, check motor/cables, increase acceleration/deceleration time.

Problem	Possible Cause	Solution
Overvoltage (OV) fault	High input voltage, regenerative braking.	Check input voltage, increase deceleration time, consider braking resistor.
Overheat (OH) fault	Insufficient cooling, high ambient temperature, overloaded.	Improve ventilation, reduce ambient temperature, check motor load.

SPECIFICATIONS

Attribute	Detail
Model Number	VFD110B23A
Input Power	3 Phase, 200-240V, 50/60Hz, 50A
Output Power	3 Phase, 0-240V, 49A, 18.3KVA, 15HP
Frequency Range	0.1-400Hz
Item Weight	15 Pounds
Enclosure Type	Type 1
Manufacturer	Yaskawa Electric
Date First Available	December 22, 2014

WARRANTY AND SUPPORT

YASKAWA ELECTRIC products are manufactured to high standards and come with a manufacturer's warranty. For specific warranty terms and conditions, please refer to the documentation included with your product or visit the official Yaskawa Electric website.

For technical support, service, or parts inquiries, please contact Yaskawa Electric customer service or an authorized service center. Contact information can typically be found on the manufacturer's website or in the full user manual.

Note: This unit was described as "NEW IN AN OPEN BOX" and "GUARANTEED NOT DOA" by the seller. Any specific seller guarantees are separate from the manufacturer's standard warranty.