

Technical Data and Specifications

Output Ratings

- Horsepower;
 - 90V – 132V, 1/4 – 1/2 hp
 - 200 – 240V, 1/2 – 2 hp
- Frequency Range: 0.1 – 400 Hz
- Overload Rating: 150% for 60 seconds
- Frequency Resolution:
 - Digital: 0.1 Hz
- Frequency Accuracy
 - Digital: $\pm 0.01\%$ of max. frequency
 - Analog: $\pm 0.2\%$ of max. frequency
- Undervoltage Carryover Limit: 0.3 to 25 seconds

Motor Performance

- Motor Control: V/Hz
- Constant Torque: Standard
- Speed Regulation: 0.5% of base speed

Input Power

- Voltage at 50/60 Hz ± 3 Hz
 - 100V – 120V, -10% +10% / 1-phase
 - 200V – 240V, -10% +5% / 1-phase
 - 200V – 240V, -10% +5% / 3-phase
- Displacement Power Factor: Better than 0.95
- Efficiency: Typically greater than 95%

Design Type

- Microprocessor: 32-Bit
- Converter Type: Diode
- Inverter Type: Insulated Gate Bipolar Transistor
- Waveform: PWM Volts/Hertz

Environment

- Operating Temperature:
 - -10°C to +40°C
- Humidity: 20 to 90% non-condensing
- Maximum Elevation: 1000 meters (3300 ft.)

Codes and Standards

- NEMA, IEEE, NEC: Design Standards
- UL Listed
- cUL Listed
- CE Marked

Enclosure

- Standard: Protected Chassis (IP20)

Protective Features

- Ground Fault: Standard
- Overload Protection: Standard
- Overcurrent: Standard
- Overvoltage: Standard
- Undervoltage: Standard
- Overtemperature: Standard
- Overload Limit: Standard

Set Up Adjustments, Performance Features, Operator Control and External Interface

Keypad

- Alphanumeric Display: Standard, 1 x 4 character
- Digital Indications: RUN/STOP and FORWARD/REVERSE
- Diagnostics: Last 3 trips with cause
- LED Status Indicators: 4 (RUN/STOP and FORWARD/REVERSE)
- Operator Functions: RUN/STOP, Speed control (digital or potentiometer), RESET, MODE Keys and ENTER.

I/O Terminal Block

- Analog Inputs:
 - 1 Input: 0 – 10V DC, 4 – 20 mA
 - Potentiometer: 1K ohm to 2K ohm
 - Analog Voltage: Nominal 10V DC (10K ohm input impedance)
 - Analog Current: Nominal 4 – 20 mA (250 ohm)
- Digital Inputs: 4 Programmable Inputs
- Digital Outputs: 1 Form A Relay contact

Programmable Parameters

- Out of the Box: Factory settings loaded for quick start-up.
- Accel. and Decel.: 2 separately adjustable Linear or S Curve times: 0.1 – 600 seconds
- DC Injection Braking
- External Fault: Terminal input
- Jog: Terminal input
- Fault Reset: STOP/RESET or terminal input
- I/O: NO/NC Selectable
- Jump Frequencies: 3 (with adjustable width)
- Parameter Security: Programmable software lock
- Preset Speeds: 2 preset speeds
- Reversing: Keypad or terminal
- Speed Setting: Keypad, terminal or pot
- RUN/STOP Control: Keypad or terminal
- Stop Modes: Decel, coast or DC injection

Reliability

- Pretested Components: Standard
- Surface Mount Technology: Standard (PCBs)
- Computerized Testing: Standard
- Final Test with Full Load: Standard
- Eaton's Cutler-Hammer Engineering Systems and Service: National network of AF drive specialists

Table 40-2. Watts Loss

Horsepower	Catalog Number	Volts	Watts Loss
			9 kHz
1/4 1/2	NFXF25A0-1 NFXF50A0-1	115V AC	20W 20W
1/4 1/2 1 2	NFXF25A0-2 NFXF50A0-2 NFX001A0-2 NFX002A0-2	230V AC	20W 20W 38W 75W

Wiring Diagrams

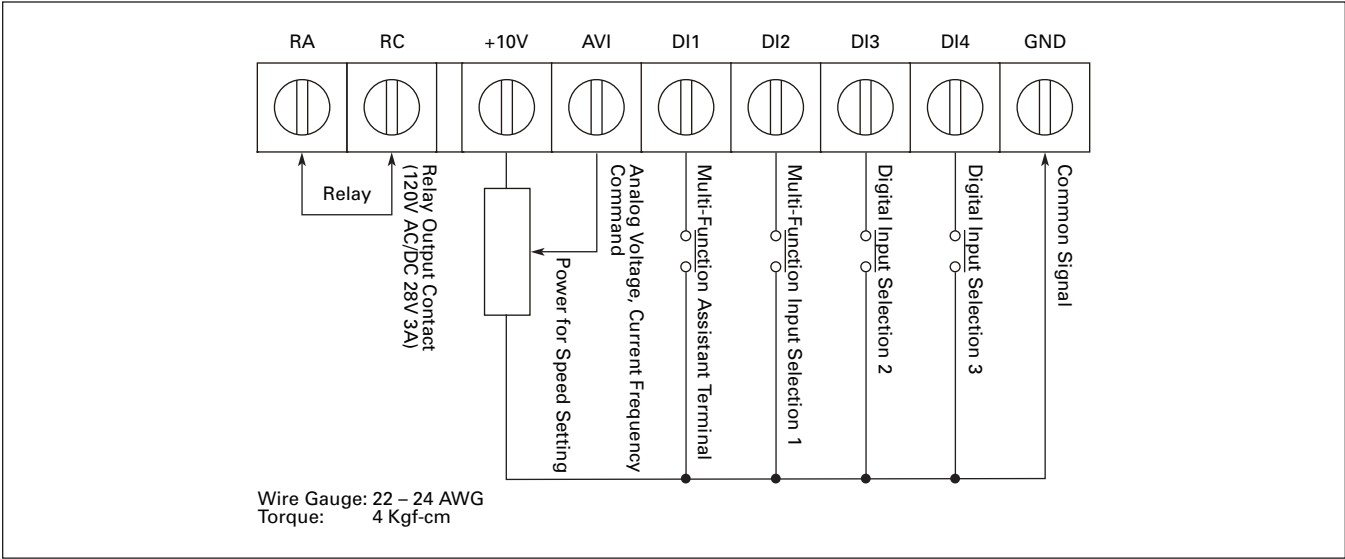


Figure 40-1. Control Terminal Wiring (Factory Settings)