

puissance

VARIATEURS DE FREQUENCE

SERIE VFD-L

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la force de la gamme I



transtechnik
servomécanismes



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VFD-L series have been approved by CE and UL

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VFD

Delta VFD-L Series Sub-Fractional General Purpose Drive

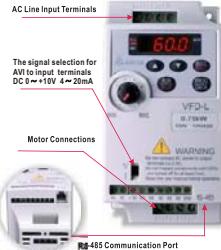


Voltage Range:
1 Phase 110V Series: 200W~400W
1 Phase 230V Series: 200W~0.75KW (200W~1HP)
3 Phase 230V Series: 200W~1.5KW (200W~2HP)

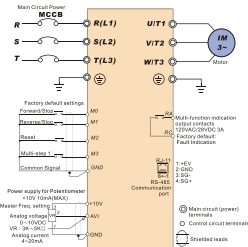
VFD-L

115V/200 400W, 230V/200W 2HP

Function Display



Wiring



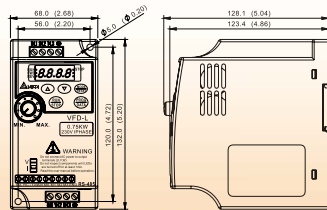
NOTE: Do not plug in a Modem or telephone line to the RS-485 communication port, permanent damage may result. Terminate 1 & 2 and the power source for the optional copy keypad and should not be used with any RS-485 communication.

*When AC Drive model is VFD050L11A/B, VFD050L11A/B, VFD050L21B, VFD050L21B or VFD050L21B, please use power terminals R1 and S1,2.

*When AC Drive model is VFD050L21A, VFD050L21A or VFD050L21A, 3 phase power may be used on R1, S1, S2, T1, T2.

*When AC Drive model is VFD015L23A, single phase power is not recommended.

Dimensions



VFD-L

Standard Specifications

| | Voltage Class | | 115V | | 230V | | | |
|------------------------------|----------------------------|--|--|-----|-----------------------------------|---------|--------------------------|-----|
| | Model Number VFD-□□□□□□A/B | | 002 | 004 | 002 | 004 | 007 | 015 |
| Applicable Motor Output (kW) | | | 0.2 | 0.4 | 0.2 | 0.4 | 0.7 | 1.5 |
| Rated Output Capacity (KVA) | | | 0.6 | 1.0 | 0.6 | 1.0 | 1.6 | 2.7 |
| Rated Output Current (A) | | | 1.6 | 2.5 | 1.6 | 2.5 | 4.2 | 7.0 |
| Max. Output Voltage (V) | | | 3phase double the input voltage | | Proportional to input voltage | | | |
| Rated Frequency (Hz) | | | 1.0-400Hz | | | | | |
| Rated Input Current (A) | | | 6 | 9 | 4.9/1.9 | 6.5/2.7 | 9.7/5.1 | */9 |
| Input Voltage Tolerance | | | Single phase 100~120V 50/60Hz | | Single / 3-phase 200~240V 50/60Hz | | 3-phase 200~240V 50/60Hz | |
| Frequency Tolerance | | | ±5% | | | | | |
| Control System | | | SVPWM (Space Vector Pulse Width Modulation, carrier frequency 3kHz~10kHz) | | | | | |
| Output Frequency Resolution | | | 0.1Hz | | | | | |
| Torque Characteristics | | | Including auto-torque and auto-slip compensation, the starting torque is 150% at 5 Hz | | | | | |
| Overload Endurance | | | 150% of rated current for 1 minute | | | | | |
| Accel/Decel Time | | | 0.1~600Sec. (can be set individually) | | | | | |
| V/F Pattern | | | Adjustable V/F curve | | | | | |
| Stall Prevention Level | | | 20~200% of rated output current | | | | | |
| Frequency Setting | Keypad | | Setting by ▲▼ keys or potentiometer | | | | | |
| Operation Setting | Keypad | | Potentiometer-5K/0.5W, DC 0~+10V (input impedance 100K), 4~20mA (output impedance 250 Ω), 3 multi-function inputs (3 preset speeds, JOG, UP/DOWN command), communication setting | | | | | |
| Signal | External Signal | | M0, M1, M2, M3 can be combined to offer various modes of operation, RS-485 communication port | | | | | |
| Multi-function Input Signal | | | Multi-step speed selection 0 to 3, Jog, accel/decel inhibit, first/second accel/decel selector, counter, PLC operation, external base block (NC, NO) selection | | | | | |
| Multi-function Output Signal | | | AC Drive Operating, Frequency Attained, Non-zero speed, Base Block, Fault Indication, Local/Remote control indication, PLC Operation indication. | | | | | |
| Other Function | | | AVR, S-curve, Over-voltage Stall Prevention, DC Braking, Fault Records, Adjustable Carrier Frequency, Over-Current Stall Prevention, Momentary Power Loss restart, Reverse Inhibit, Frequency Limits, Parameter Lock/Reset | | | | | |
| Protection | | | Over Voltage, Over Current, Under Voltage, Overload, Overheating, Self-testing, Ground fault | | | | | |
| Other | | | Built-in EMI Filter for Frame B (single phase) | | | | | |
| Cooling | | | Forced air-cooling | | | | | |
| Installation Location | | | Altitude 1,000 m or below, keep from corrosive gasses, liquid and dust | | | | | |
| Ambient Temperature | | | -10°C to +40°C (Non-Condensing and not frozen) | | | | | |
| Storage Temperature | | | -20°C to +60°C | | | | | |
| Ambient Humidity | | | Below 90%RH (non-condensing) | | | | | |
| Vibration | | | 9.80665m/s ² (1G) less than 20Hz, 5.88m/s ² (0.6Gat) 20 to 50Hz | | | | | |

*Be aware that the right of this catalog contained information change without prior notice.

Features:

- 16-bit microprocessor controlled SVPWM output.
- Low noise ; carrier frequency up to 10kHz.
- Controlled reversing.
- 2 inputs and 1 output terminal for external controls.
- Adjustable V/F curve.
- Adjustable accel / decel time.
- RS-485 communication (Baud rate 9600).
- Option: Programmable Keypad (VFD-PU02).



Suitable for under 100W/3-phase AC motor drive

Function Display

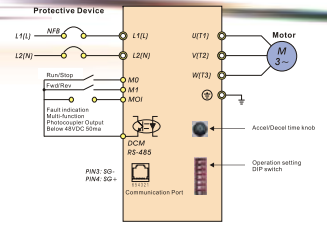


Operation Setting DIP switch
Accel/Decel time knob

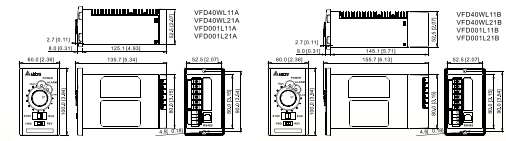
Installation Method



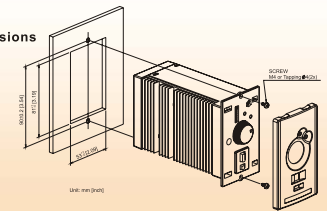
Wiring



Dimensions



Installation Dimensions



Compact with VFD-PU02 for running and monitoring AC motor drive (Optional)



Built-in Modbus Communication



| | Voltage | | 115V | | 230V | |
|---------------------------------|-----------------------------|---|-----------------------------------|---------------------------------------|----------|----------|
| | Model Number VFD-□□□ Lx1A/B | 40W | 001 | 40W | 001 | 001 |
| Max. Applicable Motor Output(w) | 25/40 | 60/100 | 25/40 | 60/100 | 25/40 | 60/100 |
| Output Rating | Rated Output Capacity (VA) | 106/152 | 212/303 | 106/152 | 212/303 | 106/152 |
| | Rated Output Current (A) | 0.28/0.4 | 0.56/0.8 | 0.28/0.4 | 0.56/0.8 | 0.28/0.4 |
| Input Rating | Max. Output Voltage (V) | 3Phase Double the Input Voltage | | Proportional to Input Voltage | | |
| | Rated Frequency (Hz) | 1.00 to 120.00 Hz | | | | |
| Voltage/Freq. Tolerance | Rated Voltage/Frequency | Single-phase 100 to 120 VAC, 50/60 Hz | | Single-phase 200 to 240 VAC, 50/60 Hz | | |
| | Rated Current (A) | 1.1A | 1.5A | 2.2A | 3.0A | 0.5A |
| Control Systems | Control Systems | SVPWM (Space Vector Pulse Width Modulation, carrier frequency 10kHz) | | | | |
| | Torque Setting | High/Low, Switching | | | | |
| Operating Characteristics | Overload Endurance | 150% of rated current for 1 minute | | | | |
| | Accel/Decel Time | 0 to 30.0 seconds | | | | |
| Operating Characteristics | Frequency Setting | Potentiometer | | | | |
| | Operation Setting Signal | Panel | RUN/STOP, FORWARD/REVERSE | | | |
| Operating Characteristics | Output Indication | Panel | Fault Indication (LED Flash) | | | |
| | | Ext. Terminal | Fault Indication (Open Collector) | | | |
| Protection | Protection | Self-testing, OverVoltage, OverCurrent, UnderVoltage, Overload, Overheating, Electronic thermal | | | | |
| | Other | EMI Filter built in for Frame B | | | | |
| Environment | Cooling | Natural air-cooling | | | | |
| | Installation Location | Altitude 1,000 m or lower, keep from corrosive gasses, liquid and dust | | | | |
| Environment | Ambient Temperature | -10°C TO 40°C (Non-Condensing and not frozen) | | | | |
| | Storage Temperature | -20°C TO 60°C | | | | |
| Environment | Ambient Humidity | Below 80% RH (non-condensing) | | | | |
| | Vibration | 0.00600m/s ² (10) less than 20Hz, 6.86m/s ² (0.00) at 20 to 60Hz | | | | |

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