

Call 1(800)985-6929 for Sales



DELTA
DELTA ELECTRONICS, INC.

Delta VFD-L Series Sub-Fractional General Purpose Drive



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2-1-14 SHIBADAMON, MINATO-KU,
TOKYO, 106-0012, JAPAN
TEL: 81-3-5733-1111
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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)



ISO-9001
REGISTERED

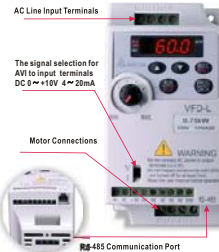
VFD-L series have been approved by CE and UL

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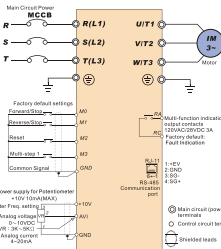
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115V/200 400W,230V/200W 2HP

Function Display

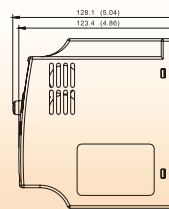
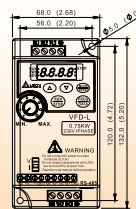


Wiring



NOTE: Do not plug in a Modem or telephone line to the RS-485 communication port, permanent damage may result. Terminals 1 & 2 are the power source for the optional copy keypad and should not be used while using RS-485 communication.
*If the AC Drive model is VFD002L11A/B, VFD004L11A/B, VFD002L21B, VFD004L21B or VFD007L21B, please use power terminals R/L1 and S/L2.
*If the AC Drive model is VFD002L21A, VFD004L21A or VFD007L21A, 3 phase power may be used on R/L1, S/L2, T/L3.
*If the AC Drive model is VFD015L23A, single phase power is not recommended.

Dimensions



VFD-L

Standard Specifications

Voltage Class		115V		230V	
Model Number VFD-□□□□□□□□□□		002	004	002	004 007 015
Applicable Motor Output (kW)		0.2	0.4	0.2	0.4 0.7 1.5
Output Rating	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
Power	Max. Output Voltage (V)	3phase double the input voltage		Proportional to input voltage	
	Rated Frequency (Hz)	1.0~400Hz			
Control Characteristics	Rated Input Current (A)	6	9	4.9/1.9	6.5/2.7 9.7/5.1
	Input Voltage Tolerance	Single phase 100~120V 50/60Hz		Single / 3-phase 200~240V 50/60Hz	
Operating Characteristics	Frequency Tolerance	±5%			
	Control System	SVPWM (Space Vector Pulse Width Modulation, carrier frequency 3kHz~10kHz)			
Other Function	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			
Environment	Accel/Decel Time	0.1~600Sec. (can be set individually)			
	V/F Pattern	Adjustable V/F curve			
Protection	Stall Prevention Level	20~200% of rated output current			
	Setting by ▲▼ keys or potentiometer	Setting by ▲▼ keys or potentiometer			
Cooling	Frequency Setting	Keypad	External Signal	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	
	Operation Setting	Keypad	Keypad	RUN/STOP keys	
Installation Location	Signal	External 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	
Ambient Temperature	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	
Ambient Humidity	Protection			Over Voltage, Over Current, Under Voltage, Overload, Overheating, Self-testing, Ground fault	
	Other			Built-in EMI Filter for Frame B (single phase)	
Vibration	Cooling			Forced air-cooling	
	Installation Location			Altitude 1,000 m or below, keep from corrosive gasses, liquid and dust	
Ambient Humidity	Ambient Temperature			-10° C to +40° C (Non-Condensing and not frozen)	
	Storage Temperature			-20° C to +60° C	
Vibration	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	

*We reserve the right of this catalogue contained information change without prior notice.

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Features:

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



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



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

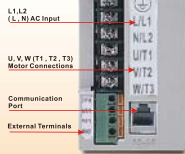


Built-in Modbus Communication

Function Display



Operation Setting DIP switch



Installation Method

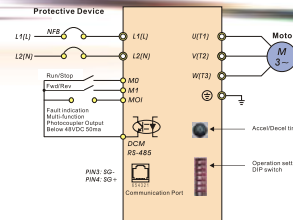


Control Terminal Wiring

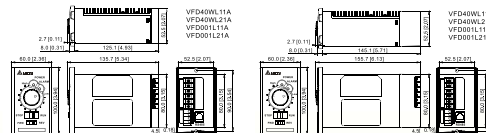


Motor Terminal Wiring

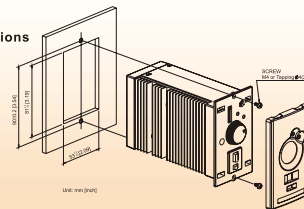
Wiring



Dimensions



Installation Dimensions



Voltage		115V				230V			
Model Number VFD-□□□ LK1A/B		40W		001		40W		001	
Max. Applicable Motor Output(w)		25/40		60/100		25/40		60/100	
Output Rating	Rated Output Capacity (VA)	106/152		212/303		106/152		212/303	
	Rated Output Current (A)	0.28/0.4		0.56/0.8		0.28/0.4		0.56/0.8	
	Max. Output Voltage (V)	3Phase Double the Input Voltage				Proportional to Input Voltage			
	Rated Frequency (Hz)	1.00 to 120.00 Hz							
Input Rating	Rated Voltage/Frequency	Single-phase 100 to 125 VAC, 50/60 Hz				Single-phase 200 to 240 VAC, 50/60 Hz			
	Voltage/Freq. Tolerance	Voltage:±10%, Frequency:±5%							
	Rated Current (A)	1.1A	1.5A	2.2A	3.0A	0.5A	0.7A	1.0A	1.4A
Control Characteristics	Control Systems	SVPWM (Space Vector Pulse Width Modulation, carrier frequency 10kHz)							
	Torque Setting	High/Low, Switching							
	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						
		Ext. Terminal	RUN/STOP, FORWARD/REVERSE, RS-485						
	Output Indication	Panel	Fault Indication (LED Flash)						
		Ext. Terminal	Fault Indication (Open Collector)						
		Protection	Self-testing, OverVoltage, OverCurrent, UnderVoltage, Overload, Overheating, Electronic thermal						
	Other	EMI Filter Built in for Frame B							
	Cooling	Natural air-cooling							
Environment	Installation Location	Altitude 1,000 m or lower, keep from corrosive gasses, liquid and dust							
	Ambient Temperature	-10°C TO 40°C (Non-Condensing and not frozen)							
	Storage Temperature	-20°C TO 80°C							
	Ambient Humidity	Below 80% RH (non-condensing)							
	Vibration	0.00000m/s (1G) less than 20Hz, 0.006m/s (0.0G) at 20 to 60Hz							