DELTA ELECTRONICS, INC.

Delta VFD-L Series

Sub-Fractional General Purpose Drive

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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

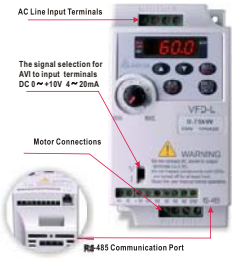
www.delta.com.tw/industrialautomation

20051021AM0-LE

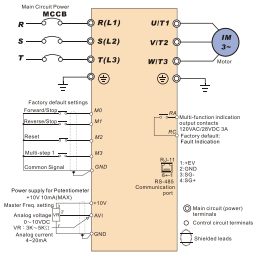
VFD-L

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

Function Display



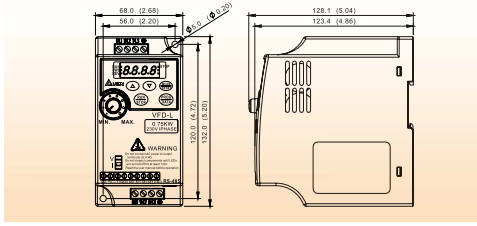
Wiring



NOTE: Do not plug in a Modem or telephone line to the RS-485 communication port, permanent damage may result. 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 VFD02L11A/B, VFD04L11A/B, VFD02L21B, VFD04L21B or VFD07L21B, please use power terminals R/L1 and S/L2.
*If the AC Drive model is VFD02L21A, VFD04L21A or VFD07L21A, 3 phase power may be used on R/L1, S/L2, T/L3.
*If the AC Drive model is VFD11L23A, single phase power is not recommended.

Dimensions



VFD-L

Standard Specifications

Voltage Class			115V		230V			
Model Number VFD-□□□L□□A/B			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
	Max. Output Voltage (V)		3phase double the input voltage		Proportional to input voltage			
	Rated Frequency (Hz)		1.0~400Hz					
Power	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 Characteristics	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					
Operating Characteristics	Frequency Setting	Keypad	Setting by ▲▼ keys or potentiometer					
		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	RUN/STOP keys					
	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					
Environment	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/s²(1G) less than 20Hz, 5.88m/s²(0.6Gat) 20 to 50Hz					

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

VFD-L

Rated frequency range 1Hz～120Hz

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

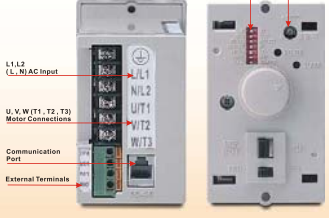
Compact with VFD-PU02 for running and monitoring AC motor drive (Optional)

Built-in Modbus Communication

VFD-L

115V / 230V model

Function Display

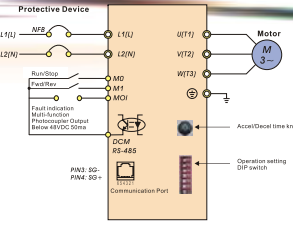


Installation Method

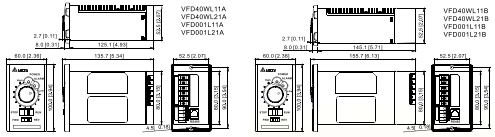
Control Terminal Wiring

Motor Terminal Wiring

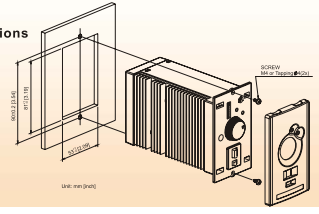
Wiring



Dimensions



Installation Dimensions



VFD-L

Standard Specifications

Voltage			115V				230V			
Model Number VFD-□□□LX1A/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 120 VAC, 50/60 Hz				Single-phase 200 to 240 VAC, 50/60 Hz			
	Voltage/Freq. Tolerance		Voltage:±10%, Frequency:±6%							
	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℃ TO 40℃ (Non-Condensing and not frozen)							
	Storage Temperature		-20℃ TO 60℃							
	Ambient Humidity		Below 90% RH (non-condensing)							
	Vibration		9.80665m/s²(1G) less than 20Hz, 5.88m/s²(0.6G) at 20 to 60Hz							

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