



ASIA
DELTA ELECTRONICS INC.
Tayuan Plant
31-1, SHIEN PAN ROAD, KUEI SAN
INDUSTRIAL ZONE, TAOYUAN SHIEN,
TAIWAN, R.O.C.
TEL: 886-3-362-6301
FAX: 886-3-362-7267
www.delta.com.tw/industrialautomation

NORTH/SOUTH AMERICA
DELTA PRODUCTS CORPORATION
Sales Office
P.O. BOX 12173
5101 DAVIS DRIVE
RESEARCH TRIANGLE PARK,
NC 27709, U.S.A.
TEL: 1-919-707-3813
FAX: 1-919-707-3909

EUROPE
DELTRONICS (NETHERLANDS) B.V.
DE WITBOOG 15
NL-5652 AG EINDHOVEN
THE NETHERLANDS
TEL: 31-40 259-2800
FAX: 31-40 259-2851

DELTA ELECTRONICS (JAPAN) INC.
DELTA SHIBADAIKON BLDG.
2-1-14 SHIBADAIKON, MINATO-KU,
TOKYO, 105-0012, JAPAN
TEL: 81-3-5733-1111
FAX: 81-3-5733-1211



VFD-L series have been approved by CE and UL

www.delta.com.tw/industrialautomation



VFD

Delta VFD-L Series Sub-Fractional General Purpose Drive

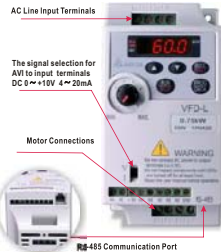


Voltage Range:
1 Phase 110V Series : 200W~400W
1 Phase 230V Series : 200W~0.75KW (200W~1HP)
3 Phase 230V Series : 200W~1.5KW (200W~2HP)

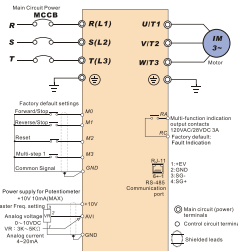
VFD-L

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

Function Display



Wiring



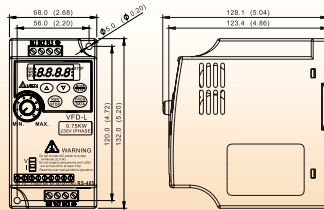
NOTE: Do not plug in a Modem or telephone line to the RS-485 communication port, component damage may result. Terminals 1 & 2 are the power source for the optional copy printer and should not be used when using RS-485 communication.

*If the AC Drive model is VFD02L11A/B, VFD04L11A/B, VFD06L21B, VFD08L21B or VFD07L21B, please use power terminals R1 and S1.

*If the AC Drive model is VFD02L21A, VFD04L21A or VFD07L21A, 3 phase power may be used on R1, S1, T1.

*If the AC Drive model is VFD01B, 23A, 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					
	Rated Input Current (A)	6	9	4.9/1.9	6.5/2.7	9.7/5.1	*/9
Control Characteristics	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%					
Operating 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 Setting by ▲▼ keys or potentiometer					
Frequency Setting	Keypad	Potentiometer-5K/0.5W, DC 0~+10V (input impedance 100K), 4~20mA (output impedance 250Ω), 3 multi-function inputs (3 preset speeds, JOG, UP/DOWN command), communication setting					
	External Signal	Potentiometer-5K/0.5W, DC 0~+10V (input impedance 100K), 4~20mA (output impedance 250Ω), 3 multi-function inputs (3 preset speeds, JOG, UP/DOWN command), communication setting					
Operation Setting	Keypad	RUN/STOP keys					
	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						
	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						
Other	Built-in EMI Filter for Frame B (single phase)						
	Forced air-cooling						
Environment	Cooling						
	Installation Location						
	Ambient Temperature						
	Storage Temperature						
Ambient Humidity							
Vibration							

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

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

Function Display



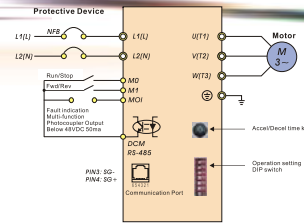
Operation Setting DIP switch



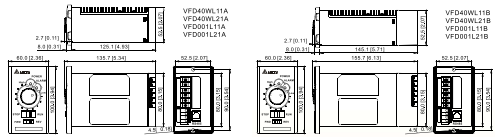
Installation Method



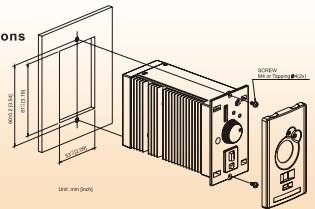
Wiring



Dimensions



Installation Dimensions



Built-in Modbus Communication

	115V		230V		
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			
	Frequency Setting	Potentiometer			
Operating Characteristics	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 60°C			
	Ambient Humidity	Below 90% RH (non-condensing)			
	Vibration	0.060mm/s ² (1G) less than 20Hz, 6.86mm/s ² (0.9G) at 20 to 60Hz			

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