

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)



ISO-9001
REGISTERED

VFD-L series have been approved by CE and UL

www.delta.com.tw/industrialautomation



VFD-L

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

Function Display

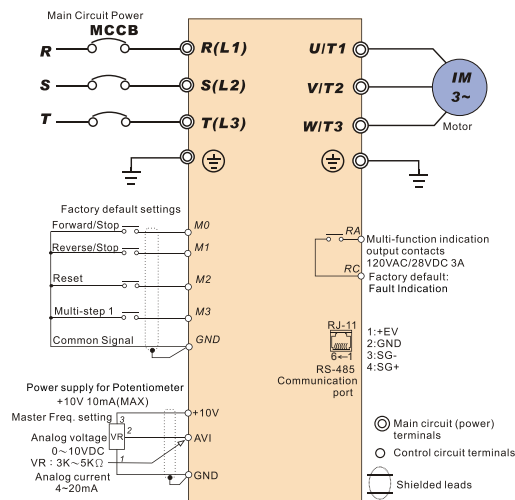
AC Line Input Terminals

The signal selection for AVI to input terminals DC 0 ~ +10V 4 ~ 20mA

Motor Connections

RS-485 Communication Port

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.

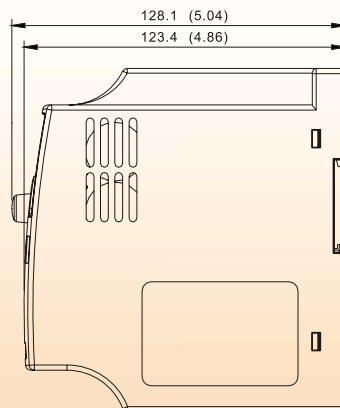
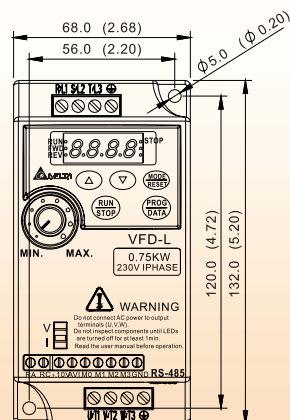
VFD-L

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
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		Keypad	Setting by ▲▼ keys or potentiometer					
	Frequency 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				
	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/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.

Dimensions



VFD-L

Rated frequency range 1Hz~120Hz

VFD-L

115V / 230V model

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)

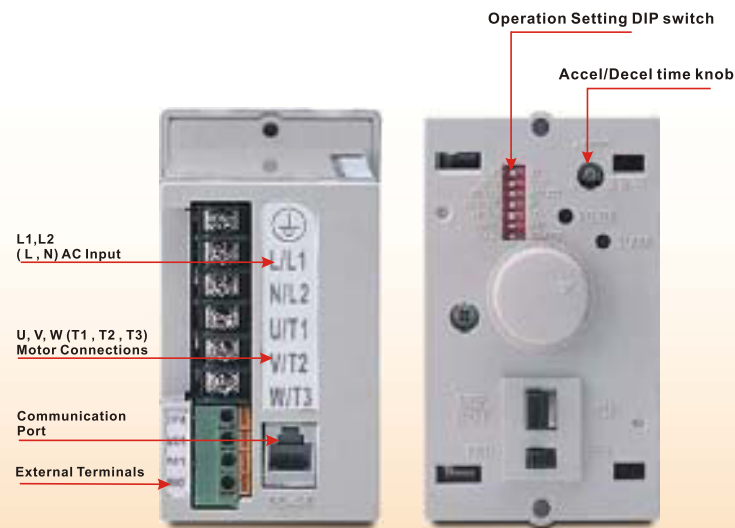


Built-in Modbus Communication

Function Display



Installation Method



Control Terminal Wiring

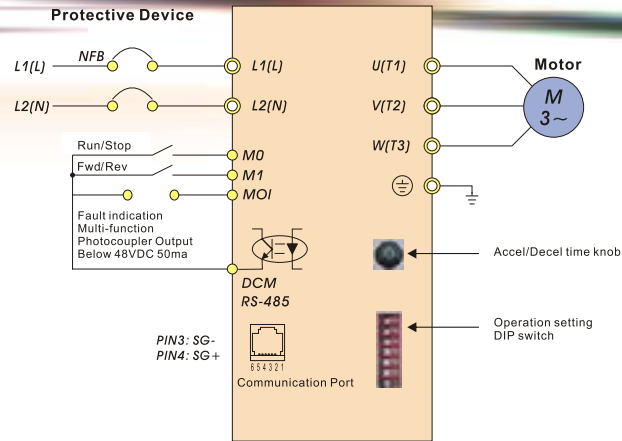


Motor Terminal Wiring

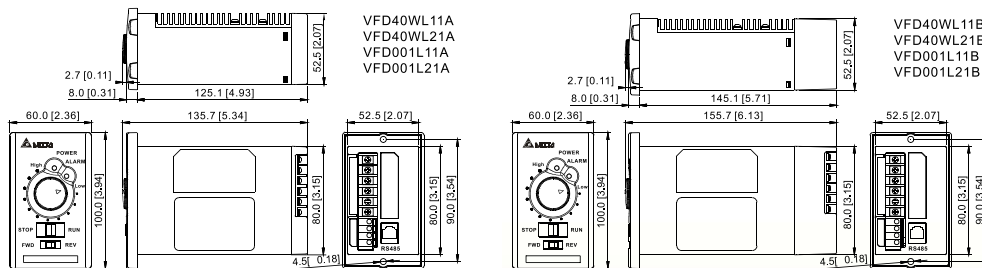
VFD-L

Standard Specifications

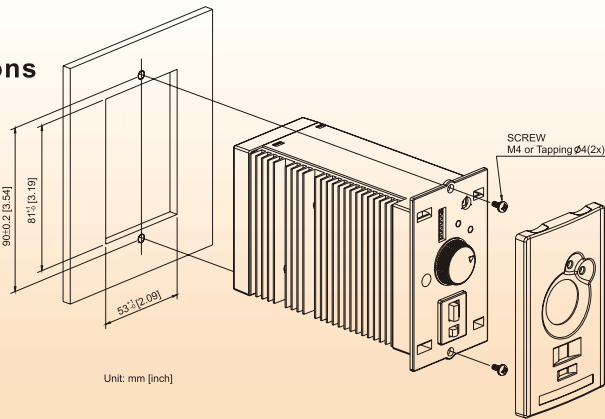
Wiring



Dimensions



Installation Dimensions



Unit: mm [inch]

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:±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℃ TO 40℃ (Non-Condensing and not frozen)						
	Storage Temperature		-20℃ TO 60℃						
	Ambient Humidity		Below 90% RH (non-condensing)						
	Vibration		9.80665m/s ² (1G) less than 20Hz, 5.88m/s ² (0.6G) at 20 to 50Hz						

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