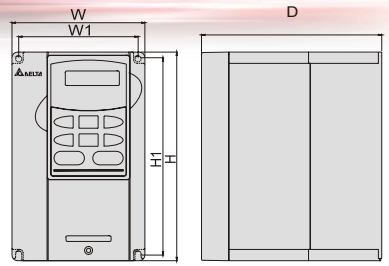
VFD-B

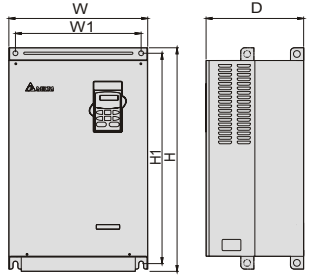
External Dimensions

unit:mm

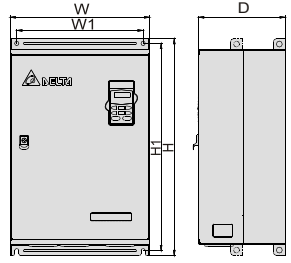
A



B



C



VFD-B

External Dimensions

■ Dimensions

unit: mm (inch)

Model	W	W1	H	H1	D	Fan cooled	Fig
VFD007B21A	118(4.65)	108(4.25)	185(7.28)	173(6.81)	160(6.30)	NO	A
VFD007B23A	118(4.65)				145(5.71)	NO	
VFD007B43A	118(4.65)				145(5.71)	NO	
VFD007B53A	118(4.65)				145(5.71)	NO	
VFD015B21A	118(4.65)	108(4.25)	185(7.28)	173(6.81)	160(6.30)	NO	A
VFD015B21B	118(4.65)				145(5.71)	Yes	
VFD015B23A	118(4.65)				160(6.30)	NO	
VFD015B23B	118(4.65)				145(5.71)	Yes	
VFD015B43A	118(4.65)				160(6.30)	NO	
VFD015B53A	118(4.65)				160(6.30)	NO	
VFD022B21A	150(5.91)	135(5.32)	260(10.24)	244.3(9.68)	160.2(6.31)	Yes	A
VFD022B23B	118(4.65)	108(4.25)	185(7.28)	173(6.81)	145(5.71)	Yes	
VFD022B43A	118(4.65)	108(4.25)	185(7.28)	173(6.81)	145(5.71)	Yes	
VFD022B43B	118(4.65)	108(4.25)	185(7.28)	173(6.81)	145(5.71)	Yes	
VFD037B23A	150(5.91)	135(5.32)	260(10.24)	244.3(9.68)	160.2(6.31)	Yes	A
VFD037B43A						Yes	
VFD037B53A						Yes	
VFD055B23A	200(7.88)	185.6(7.31)	323(12.72)	303(11.93)	183.2(7.22)	Yes	A
VFD055B43A						Yes	
VFD055B53						Yes	
VFD075B23A	200(7.88)	185.6(7.31)	323(12.72)	303(11.93)	183.2(7.22)	Yes	A
VFD075B43A						Yes	
VFD075B53A							
VFD110B23A	200(7.88)	185.6(7.31)	323(12.72)	303(11.93)	183.2(7.22)	Yes	A
VFD110B43A						Yes	
VFD110B53A							
VFD150B23A	250(9.84)	226(8.90)	430.8(15.90)	384(15.12)	205.4(8.08)	Yes	A
VFD150B43A						Yes	
VFD150B53A						Yes	
VFD185B23A	250(9.84)	226(8.90)	430.8(15.90)	384(15.12)	205.4(8.08)	Yes	A
VFD185B43A						Yes	
VFD185B53A						Yes	
VFD220B23A	250(9.84)	226(8.90)	430.8(15.90)	384(15.12)	205.4(8.08)	Yes	A
VFD220B43A						Yes	
VFD220B53A						Yes	
VFD300B23A	370(14.57)	335(13.19)	595(23.43)	560(22.55)	260(10.24)	Yes	B
VFD300B43A	370(14.57)	335(13.19)	589(23.19)	560(22.55)	260(10.24)	Yes	
VFD300B53A	370(14.57)	335(13.19)	589(23.19)	560(22.55)	260(10.24)	Yes	
VFD370B23A	370(14.57)	335(13.19)	595(23.43)	560(22.55)	260(10.24)	Yes	B
VFD370B43A	370(14.57)	335(13.19)	589(23.19)	560(22.55)	260(10.24)	Yes	
VFD370B53A	370(14.57)	335(13.19)	589(23.19)	560(22.55)	260(10.24)	Yes	
VFD450B43A	370(14.57)	335(13.19)	589(23.19)	560(22.55)	260(10.24)	Yes	B
VFD450B53A						Yes	
VFD550B43A	425(16.73)	385(15.16)	660(25.98)	631(24.84)	280(11.02)	Yes	C
VFD550B53A	370(14.57)	335(13.19)	595(23.43)	560(22.55)	260(10.24)	Yes	
VFD750B43A	425(16.73)	385(15.16)	660(25.98)	631(24.84)	280(11.02)	Yes	C
VFD750B53A	370(14.57)	335(13.19)	595(23.43)	560(22.55)	260(10.24)	Yes	

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

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20051012AMD-BE

DELTA ELECTRONICS, INC.

Delta VFD-B Series

Variable Speed AC Motor Drives

Features:

- 16-bit microprocessor controlled PWM output
- Automatic torque boost & slip compensation
- Output frequency 0.1~400Hz
- 16-step speed control & 15-step preset speed
- PID feedback control & PG feedback control
- 4 accel./decel. times & 2 S-curve selections
- Pump control & automatic energy-saving
- Process follower - 10~10VDC, 0~10VDC, 4~20mA
- MODBUS communication RS-485 (Baud rate 38400)
- Coast or ramp to stop
- Adjustable V/F curve & automatic voltage regulation
- Automatic adjustment of accel./decel. time
- Auto tuning & sensorless vector control
- Sleep / Revival Function
- Master / Auxiliary and 1st/2nd frequency source selectable

Voltage Range:

1 Phase 230V Series : 0.75~2.2KW (1~3HP)
3 Phase 230V Series : 0.75~37KW (1~50HP)
3 Phase 460V Series : 0.75~75KW (1~100HP)
3 Phase 575V Series : 0.75~75KW (1~100HP)

ISO-9001 REGISTERED

VFD-B series have been approved by CE and UL

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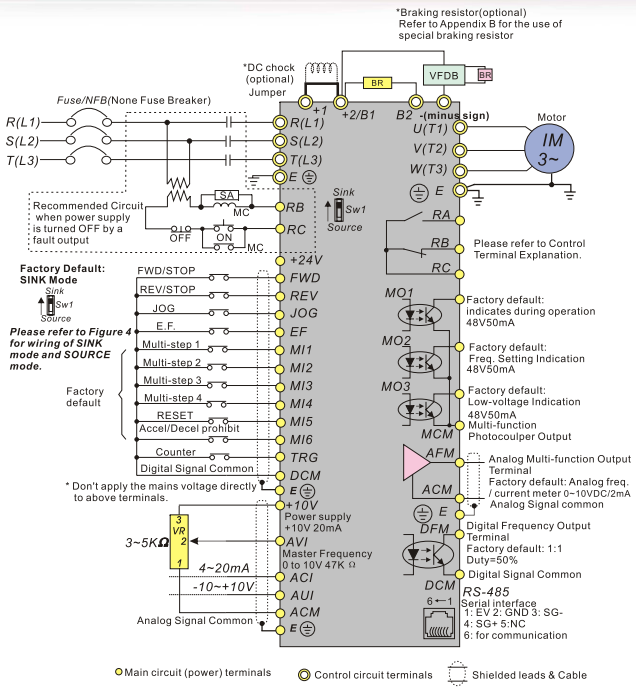
VFD-B

Standard wiring diagram



* Three phase input power may apply to single phase drives

* For the single phase application, the AC input line can be connected to any two of the three input terminals R,S,T.

VFD-B

Standard specifications

230V Series 1-Phase/3-Phase

Model Number VFD - ☐ ☐ ☐ B		007	015	022	037	055	075	110	150	185	220	300	370
Max. Applicable Motor Output (kW)		0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37
Max. Applicable Motor Output (HP)		1.0	2.0	3.0	5.0	7.5	10	15	20	25	30	40	50
Output Rating	Rated Output Capacity (kVA)	1.9	2.5	4.2	6.5	9.5	12.5	18.3	24.7	28.6	34.3	45.7	55
	Rated Output Current (A)	5.0	7.0	11	17	25	33	49	65	75	90	120	145
	Maximum Output Voltage (V)	3-Phase Proportional to input voltage											
	Output Frequency (Hz)	0.1~400Hz											
	Carrier frequency (kHz)	1-15									1-9		
Input Rating	Rated Input Current (A)	Single/3-Phase			3-Phase								
		11.9/5.7	15.3/7.6	22/15.5	20.6	26	34	50	60	75	90	110	142
	Single (3-phase Input Current)	7.0	9.4	14.0									
	Rated Voltage , Frequency	Single/3-phase 200-240V , 50/60Hz			3-phase 200-240V , 50/60Hz								
	Voltage Tolerance	±10%(180~264V)											
	Frequency Tolerance	±5%(47~63Hz)											
	Cooling Method	Natural	Fan Cooled										
	Weight (Kg)	2.7	3.2	4.5	6.8	8	10	13	13	13	13	36	36

460V Series 3-Phase

Model Number VFD - ☐ ☐ ☐ B		007	015	022	037	055	075	110	150	185	220	300	370	450	550	750
Max. Applicable Motor Output (kW)		0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75
Max. Applicable Motor Output (HP)		1.0	2.0	3.0	5.0	7.5	10	15	20	25	30	40	50	60	75	100
Output Rating	Rated Output Capacity (kVA)	2.3	3.2	4.2	6.5	9.9	13.7	18.3	24.4	28.9	34.3	45.7	55.6	69.3	84	114
	Rated Output Current (A)	2.7	4.2	5.5	8.5	13	18	24	32	38	45	60	73	91	110	150
	Maximum Output Voltage (V)	3-Phase Proportional to input voltage														
	Output Frequency (Hz)	0.1~400Hz														
	Carrier frequency (kHz)	1-15									1-9				1-6	
Input Rating	Rated Input Current (A)	3-Phase														
		3.2	4.3	5.9	11.2	14	19	25	32	39	49	60	63	90	130	160
	Rated Voltage , Frequency	3-phase 380-480V , 50/60Hz														
	Voltage Tolerance	±10%(342~528V)														
	Frequency Tolerance	±5%(47~63Hz)														
	Cooling Method	Natural	Fan Cooled													
	Weight (Kg)	2.7	3.2	4.5	2.7	3.2	4.5	6.8	8	10	13	13	13	13	36	36

575V Series 3-Phase

Model Number VFD - ☐ ☐ ☐ B		007	015	022	037	055	075	110	150	185	220	300	370	450	550	750
Max. Applicable Motor Output (kW)		0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75
Max. Applicable Motor Output (HP)		1.0	2.0	3.0	5.0	7.5	10	15	20	25	30	40	50	60	75	100
Output Rating	Rated Output Capacity (kVA)	1.7	3.5	4.5	7.5	10	13.4	18.9	21.9	26.9	33.9	40.8	51.8	61.7	79.7	99.6
	Rated Output Current (A)	1.7	3.5	4.5	7.5	10	13.5	19	22	27	34	41	52	62	80	100
	Maximum Output Voltage (V)	3-Phase Proportional to input voltage														
	Output Frequency (Hz)	0.1~400Hz														
	Carrier frequency (kHz)	1-10									1-8				1-6	
Input Rating	Rated Input Current (A)	3-Phase														
		2.0	3.6	4.9	9.9	10.8	14.3	19.8	22	27.7	37	41	52	62	95	117
	Rated Voltage , Frequency	3-phase 500-600V , 50/60Hz														
	Voltage Tolerance	-15%+10% (425~660V)														
	Frequency Tolerance	±5%(47~63Hz)														
	Cooling Method	Natural	Fan Cooled													
	Weight (Kg)	2.7	3.2	4.5	6.8	8	10	13	13	13	13	36	36	36	50	50

Control Characteristics	Control System		SPWM (Sinusoidal Pulse Width Modulation)control (V/F or sensorless vector control)
	Freq. Setting Resolution		0.01Hz
	Output Frequency Resolution		0.01Hz
	Torque Characteristics		Including the auto-torque, auto-slip compensation; starting torque can be 150% at 1.0Hz
	Overload Endurance		150% of rated current for 1 minute
	Skip Frequency		Three zones, settings range 0.1-400Hz
	Accel/Decel Time		0.1 to 3600 seconds (4 independent settings for Accel/Decel Time)
	Stall Prevention Level Frequency Setting		20%-250%, Setting of Rated Current
	DC Injection Braking		Operation frequency 0-400Hz, output 0-100% rated current Start time 0-60 seconds, stop time 0-60 seconds
	Braking Torque		Approx. 20% (up to 125% possible with option braking resistor or braking unit externally mounted, 1-15HP braking transistor built-in)
	V/F Pattern		Adjustable V/F pattern
Operating Characteristics	Frequency Setting	Keypad	Set by ▲▼
		External Signal	Potentiometer-5KΩ/0.5W, 0 to +10VDC; -10 to +10VDC, 4 to 20mA, RS-485 interface; Multi-Function Inputs 1 to 6 (15 steps, Jog, up/down)
	Operation Setting Signal	Keypad	Set by RUN, STOP and JOG
		External Signal	2 wires / 3 wires (Fwd, Rev, EF), JOG operation, RS-485 serial interface (MODBUS)
	Multi-Function Input Signal		Multi-step selection 0 to 15, Jog, accel/decel inhibit, first to forth accel/decel switches, counter, PLC operation, external Base Block (NC, NO), auxiliary motor control is invalid, ACI/AVI selections, drive reset, UP/DOWN key settings, sink/source selection
	Multi-Function Output Indication		AC Drive Operating, Frequency Attained, Non-zero, Base Block, Fault Indication, Local/Remote indication, PLC Operation indication, Auxiliary Motor Output, Driver is Ready, Overheat, Alarm, Emergency Stop
	Analog Output Signal		Analog frequency/current signal output.
Alam Output Contaact			1Form C contact or open collector output.
Operation Functions			AVR, S-Curve, Over-Voltage, Over-Current Stall Prevention, Fault Records, Adjustable Carrier Frequency, DC Braking, Momentary Power Loss restart, Auto Tuning, Frequency Limits, Parameter Lock/Reset, Vector Control, Counter, PID Control, Fan & Pump Control, PLC, MODBUS Communication, Reverse Inhibition, PG feedback control, abnormal reset, abnomal re-start, digital frequency output, sleep/revival function, master/auxiliary frequency, 1 st/2nd frequency source selections
Protective Functions			Self-testing, Over Voltage, Over Current, Under Voltage, Overload, Overheating, External Fault, Electronic thermal, Ground Fault.
Display Keypads			8-key, 5-digit, 7-segment LED, 8 status LEDs, master frequency, output frequency, Output current, custom units, parameter values for setup, review and faults, RUN, STOP, RESET, FWD/REV, JOG
Enviromental Conditions	Protection Level		IP20 ; NEMA1
	Pollution Degree		2
	Installation Location		Altitude 1,000m or less, keep from corrosive gas, liquid and dust
	Ambient Temperature		-10°C to 40°C (-10°C to 50°C without blind plate) Non-Condensing and not frozen
	Storage / Transportation Temperature		-20°C to 60°C
	Ambient Humidity		Below 90% RH (non-condensing)
	Vibration		9.80665m/s² (1G) less than 20Hz, 5.88m/s² (0.6G) at 20 to 50Hz
Approvals			CE cULus