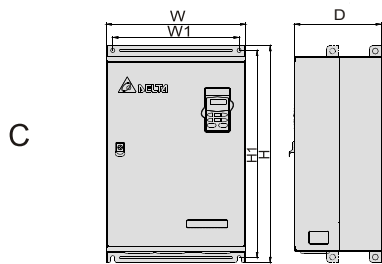
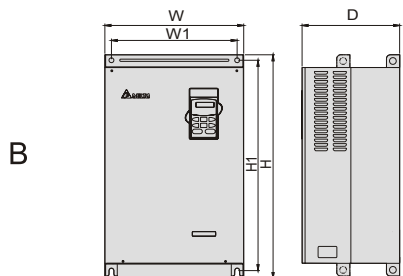
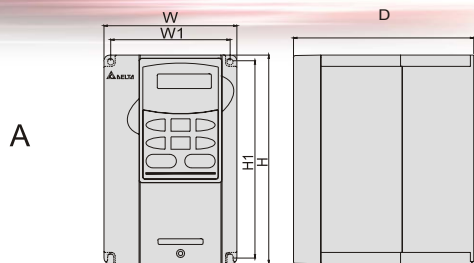


# VFD-B

## External Dimensions



unit:mm

# VFD-B

## External Dimensions

### ■ Dimensions

Model	W	W1	H	H1	D	Fan cooled	Fig
VFD007B21A	1184(6.5)	1084(2.5)	185(7.28)	173(6.81)	160(6.30)	NO	A
VFD007B23A	1184(6.5)				145(5.71)	NO	
VFD007B43A	1184(6.5)				145(5.71)	NO	A
VFD007B53A	1184(6.5)				145(5.71)	NO	
VFD015B21A	1184(6.5)	1084(2.5)	185(7.28)	173(6.81)	160(6.30)	NO	A
VFD015B21B	1184(6.5)				145(5.71)	Yes	
VFD015B23A	1184(6.5)				160(6.30)	NO	
VFD015B23B	1184(6.5)				145(5.71)	Yes	A
VFD015B43A	1184(6.5)				160(6.30)	NO	
VFD015B53A	1184(6.5)				160(6.30)	NO	
VFD022B21A	1505(9.1)	135(5.32)	260(10.24)	244.3(9.68)	160(26.31)	Yes	
VFD022B21B	1184(6.5)	1084(2.5)	185(7.28)	173(6.81)	145(5.71)	Yes	A
VFD022B43A	1184(6.5)	1084(2.5)	185(7.28)	173(6.81)	145(5.71)	Yes	A
VFD022B43B	1184(6.5)	1084(2.5)	185(7.28)	173(6.81)	145(5.71)	Yes	A
VFD037B23A	1505(9.1)	135(5.32)	260(10.24)	244.3(9.68)	160(26.31)	Yes	
VFD037B53A					Yes	A	
VFD05B23A	200(7.88)	185(6.7.31)	323(12.72)	303(11.93)	183.2(7.22)	Yes	A
VFD05B43A					Yes	A	
VFD05B53A					Yes	A	
VFD07B23A	200(7.88)	185(6.7.31)	323(12.72)	303(11.80)	183.2(7.22)	Yes	A
VFD07B43A					Yes	A	
VFD07B53A					Yes	A	
VFD110B23A	200(7.88)	185(6.7.31)	323(12.72)	303(11.93)	183.2(7.22)	Yes	A
VFD110B43A					Yes	A	
VFD150B23A	250(9.84)	226(8.90)	430.8(15.90)	384(15.12)	205.4(8.08)	Yes	A
VFD150B43A					Yes	A	
VFD150B53A					Yes	A	
VFD185B23A	250(9.84)	226(8.90)	430.8(15.90)	384(15.12)	205.4(8.08)	Yes	A
VFD185B43A					Yes	A	
VFD185B53A					Yes	A	
VFD220B23A	250(9.84)	226(8.90)	430.8(15.90)	384(15.12)	205.4(8.08)	Yes	A
VFD220B43A					Yes	A	
VFD220B53A					Yes	A	
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	B
VFD300B53A	370(14.57)	335(13.19)	589(23.19)	560(22.55)	260(10.24)	Yes	B
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	B
VFD370B53A	370(14.57)	335(13.19)	589(23.19)	560(22.55)	260(10.24)	Yes	B
VFD450B43A	370(14.57)	335(13.19)	589(23.19)	560(22.55)	260(10.24)	Yes	B
VFD450B53A					Yes	B	
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	C
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	C

unit:mm (inch)

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



ASIA  
DELTA ELECTRONICS, INC.  
Taoyuan Plant\*  
31-1, SHIEN PAN ROAD, KUEI SAN  
INDUSTRIAL ZONE, TAOYUAN SHIEN,  
TAIWAN, R.O.C.  
TEL: 886-3-262-6301  
FAX: 886-3-262-7267  
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: 1-919-767-3913  
FAX: 1-919-767-3969

EUROPE  
DELTRONICS (NETHERLANDS) B.V.  
DE WITBOORT 15  
NL-5652 AG EINDHOVEN  
THE NETHERLANDS  
TEL: 31-40-259-2850  
FAX: 31-40-259-2851

DELTA ELECTRONICS (JAPAN) INC.  
DELTA SHIBADAIMON BLDG.  
2-1-1, SHIBADAIMON, MINATO-KU,  
TOKYO, 105-0012, JAPAN  
TEL: 81-3-6733-1111  
FAX: 81-3-6733-1111



# VFD

## 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)



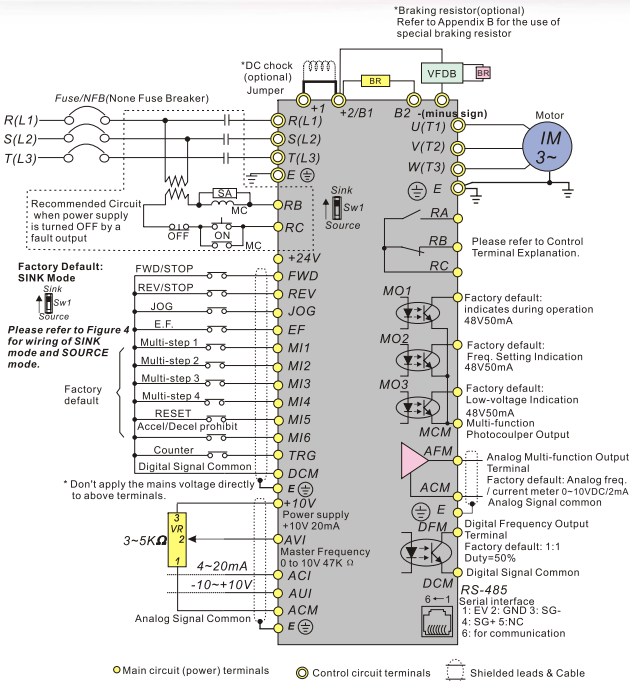
ISO-9001  
REGISTERED

VFD-B series have been approved by CE and UL

[www.delta.com.tw/industrialautomation](http://www.delta.com.tw/industrialautomation)

# 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

	007	015	022	037	055	075	110	150	185	220	300	370
Model Number VFD-□□□□ B	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37
Max. Applicable Motor Output (kW)	1.0	2.0	3.0	5.0	7.5	10	15	20	25	30	40	50
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			3-Phase						1-9		
Rated Input Current (A)	Single/3-Phase			3-Phase						1-9		
Single (3-phase Input Current)	11.9/5.7	15.3/7.6	22/11.5	20.6	26	34	50	60	75	90	110	142
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

	007	015	022	037	055	075	110	150	185	220	300	370	450	550	750	
Model Number VFD-□□□□ B	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 (kW)	1.0	2.0	3.0	5.0	7.5	10	15	20	25	30	40	50	60	75	100	
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			3-Phase						1-9						
Rated Input Current (A)	3-Phase			3-Phase												
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

	007	015	022	037	055	075	110	150	185	220	300	370	450	550	750	
Model Number VFD-□□□□ B	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 (kW)	1.0	2.0	3.0	5.0	7.5	10	15	20	25	30	40	50	60	75	100	
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			3-Phase						1-8						
Rated Input Current (A)	3-Phase			3-Phase												
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 System		SPWM (Sinusoidal Pulse Width Modulation)/control (V/F or sensorless vector control)
Control Characteristics	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/0.5V, 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, AC/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. 1Form C contact or open collector output.
Alarm Output Contact	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, abnormal 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	
Environmental 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/s <sup>2</sup> (1G) less than 20Hz, 5.88m/s <sup>2</sup> (0.6G) at 20 to 50Hz	
Approvals		