

VFD-F

External Dimensions

■ Dimensions

Model	W	W1	H	H1	D	Fan cooled	Mounting
VFD007F23A VFD007F43A VFD015F23A VFD015F43A VFD022F23A VFD022F43A VFD037F23A VFD037F43A	190 (6.911)	135 (5.32)	260 (10.24)	244 (9.63)	160 (6.31)	Yes Yes Yes Yes Yes Yes Yes Yes	A
VFD055F23A VFD055F43B VFD075F23A VFD075F43B VFD110F23A VFD110F43A	200 (7.88)	185 (6.731)	323 (12.72)	303 (11.93)	183 (7.22)	Yes Yes Yes Yes Yes Yes	A
VFD150F23A	250 (9.84)	226 (8.90)	430 (16.90)	384 (15.12)	205 (8.08)	Yes	A
VFD150F43A	200 (7.88)	185 (6.731)	323 (12.72)	303 (11.93)	183 (7.22)	Yes	A
VFD180F23A VFD180F43A VFD220F23A VFD220F43A	250 (9.84)	226 (8.90)	403 (15.90)	384 (15.12)	205 (8.08)	Yes Yes Yes Yes	A
VFD300F23A	370 (14.57)	335 (13.19)	589 (23.19)	560 (22.05)	260 (10.24)	Yes	B
VFD300F43A	250 (9.84)	226 (8.90)	403 (15.90)	384 (15.12)	205 (8.08)	Yes	A
VFD370F23A VFD370F43A VFD400F43A VFD500F43A	370 (14.57)	335 (13.19)	589 (23.19)	560 (22.05)	260 (10.24)	Yes Yes Yes Yes	B
VFD750F43A VFD900F43C	370 (14.57)	335 (13.19)	595 (23.43)	560 (22.05)	260 (10.24)	Yes Yes	B
VFD900F43A VFD1100F43A	425 (16.73)	385 (15.16)	850 (33.46)	831 (32.84)	264 (10.39)	Yes	C
VFD1100F43C VFD1300F43A VFD1900F43A	425 (16.73)	381 (15.00)	850 (33.46)	819 (32.26)	264 (10.39)	Yes Yes Yes	D
VFD1800F43A VFD2000F43A	547 (21.54)	480 (18.90)	1357 (53.45)	1119 (44.06)	360 (14.17)	Yes Yes	E

*We reserve the right to change the information in this catalogue without prior notice



ASIA

Delta Electronics, Inc.

Taoyuan1
31-1, Xingbang Road, Guishan Industrial Zone,
Taoyuan County 33370, Taiwan, R.O.C.
TEL: 886-3-362-6301 / FAX: 886-3-362-7267

Delta Electronics (Jiang Su) Ltd.

Wujiang Plant3
1688 Jiangxing East Road,
Wujiang Economy Development Zone,
Wujiang City, Jiang Su Province,
People's Republic of China (Post code: 215200)
TEL: 86-512-6340-3008 / FAX: 86-769-6340-7290

Delta Electronics (Japan), Inc.

Tokyo Office
Delta Shibadaimon Building, 2-1-14 Shibadaimon,
Minato-Ku, Tokyo, 105-0012, Japan
TEL: 81-3-5733-1111 / FAX: 81-3-5733-1211

Delta Electronics (Korea), Inc.

Donghwa B/D 3F, 235-6, Nonhyun-dong,
Kangnam-gu, Seoul 135-010, Korea
TEL: 82-2-515-5303/5 / FAX: 82-2-515-5302

Delta Electronics (Singapore) Pte. Ltd.

8 Kaki Bukit Road 2, #04-18 Ruby Warehouse Complex,
Singapore 417841
TEL: 65-747-5155 / FAX: 65-744-9228

AMERICA

Delta Products Corporation (USA)

Raleigh Office
P.O. Box 12173, 5101 Davis Drive,
Research Triangle Park, NC 27709, U.S.A.
TEL: 1-919-767-3813 / FAX: 1-919-767-3939

EUROPE

Deltronics (The Netherlands) B.V.

Eindhoven Office
De Witbogt 15, 5652 AG Eindhoven, The Netherlands
TEL: 31-40-2592850 / FAX: 31-40-2592851



VFD

Delta VFD-F Series High Performance User-friendly Multi-function Fan & Pump AC Motor Drives

Features

- ▶ 16-bit microprocessor controlled PWM output
- ▶ Automatic torque boost & slip compensation
- ▶ Output frequency 0.1-120Hz
- ▶ 16-step speed control & 15-step preset speed
- ▶ PID feedback control
- ▶ 2 accel./decel. times & S-curve settings
- ▶ Pump control & automatic energy-saving
- ▶ Communication interface RS-485 (Baud rate 38400)
- ▶ Free run or ramp stop. Controlled reversing
- ▶ Adjustable V/F curve. Automatic voltage regulation



Voltage Range:

3 Phase 230V Series : 0.75~37KW (1~50HP)
3 Phase 430V Series : 0.75~220KW (1~300HP)



VFD-F series have been approved by CE and UL

www.delta.com.tw/industrialautomation

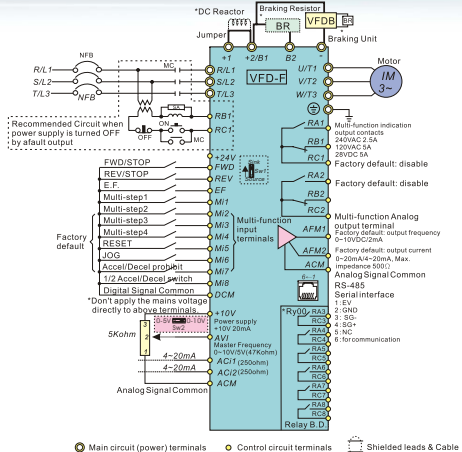
VFD-F

Basic wiring diagram

Users must connect wires according to the following circuit diagram shown below.

Do not plug a Modem or telephone line to the RS-485 communication port, permanent damage may result. Terminals 2 & 5 are the power sources for the optional copy keypad and should not be used while using RS-485 communication.

Note *is optional



● Main circuit (power) terminals ● Control circuit terminals ○ Shielded leads & Cable

VFD-F

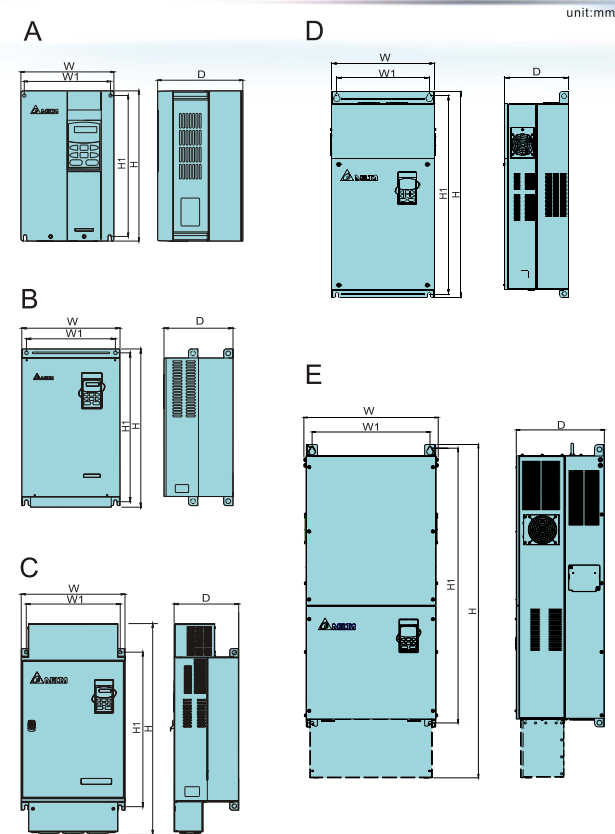
Standard specifications

460V Series 3-Phase

Model Number	VFD□□□F	007	015	022	037	055	075	110	150	185	220	300	370	450	550	750	900	1100	1320	1600	1850	2200	
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	90	110	132	160	185	220	
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	125	150	175	215	250	300	
Rated Output Capacity (kVA)		2.3	3.2	4.2	6.5	10	14	18	25	29	34	48	56	69	84	114	137	168	198	236	282	328	
Rated Output Current (A)		2.7	4.2	5.5	8.5	13	18	24	32	38	45	60	73	91	110	150	180	220	260	310	370	460	
Maximum Output Voltage (V)		3-Phase Proportional to Input Voltage																					
Output Frequency (Hz)		0.10-120Hz																					
Carrier Frequency (kHz)		4-10							3-9							2-6							
Rated Input Current (A)		3.2	4.3	5.9	11.2	14	19	25	33	46	56	70	75	95	110	150	180	200	240	300	380	400	
Rated Voltage, Frequency		3-phase 380 to 480 V, 50/60Hz																					
Voltage Tolerance		±10%(342-528V)																					
Frequency Tolerance		±5%(47-63Hz)																					
Cooling Method		Fan Cooled																					
Control System		SPWM (Sinusoidal Pulse Width Modulation/control carrier (V/F 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 Hz																					
Overload Endurance		120% of rated current for 1 minute																					
Skip Frequency		Three zones, setting range 0.1-120Hz																					
Accel./Decel. Time		1-3600/0.1-3600/0.01-360.0 seconds (3 Independent settings for Accel/Decel Time)																					
Stall Prevention Level		20 to 150%, Setting of Rated Current																					
Frequency Setting		0 to 150%, Setting of Rated Current																					
DC Injection Braking		Operation frequency 0-120Hz/output 0-100% rated current/Start time 0-40 seconds, stop time 0-40 seconds																					
Braking Torque		Approx. 20%(up to 125% possible with option braking resistor or braking unit externally mounted, 1-20HP braking transistor built-in)																					
V/F Pattern		Adjustable V/F pattern																					
Frequency Setting	Keypad	Setting by ▲▼																					
Operation	External Signal	Potentiometer-SA□□0.5W, 0 to +10V to +5VDC, 2sets of 4 to 20mA, RS-485 interface; Analog Frequency Inputs 1 to 6(15steps, Jog, up/down)																					
Multi-Function Input Signal	Keypad	Set by RUN, STOP and JOG																					
Multi-Function Output Indication	External Signal	2 wires/3 wires (Fwd, Rev, E.F.), JOG operation, RS-485 serial interface(MODBUS), Process Logic Control																					
Analog Output Signal		Multi-step selection 0 to 15, Jog, accel/decel inhibit, First to fourth accel/decel switches, counter, PLC operation, external Base Block (NC, NO), auxiliary motor control is invalid, AC I/WH selections, driver reset, UP/DOWN key settings, sink/source selection																					
Analog Output contact		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																					
Other Functions		2 sets analog frequency/current/voltage/freq. Command/power factor signal output (0-10VDC/4-20mA)																					
Protection Functions		2 Form C contact or open collector output																					
Display Keypads		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, abnormal reset, abnormal re-start, digital input/output, sleep/revival function																					
Protection Level		Self-testing, Over Voltage, Over Current, Under Voltage, Overload, Overheating, External Fault, Electronic thermal, Ground Fault																					
Pollution Degree		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																					
Installation Location		IP 20																					
Ambient Temperature		-10°C to 40°C Non-Condensing and not frozen																					
Storage/Transportation 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 (0.6G) at 20 to 50Hz																					
Approvals		CE, UL, C																					

VFD-F

External Dimensions



Standard specifications

230V Series 3-Phase

Model Number	VFD□□□F	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
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											
Rated Frequency (Hz)		0.10-120.0Hz											
Carrier Frequency (kHz)		4-10				3-9				2-6			
Rated Input Current (A)		5.7	7.6	15.5	20.6	26	34	50	60	75	90	110	142
Rated Voltage, Frequency		3-phase 200-240 V, 50/60Hz											
Voltage Tolerance		±10%(180-284V)											
Frequency Tolerance		±5%(47-63Hz)											
Cooling Method		Fan Cooled											