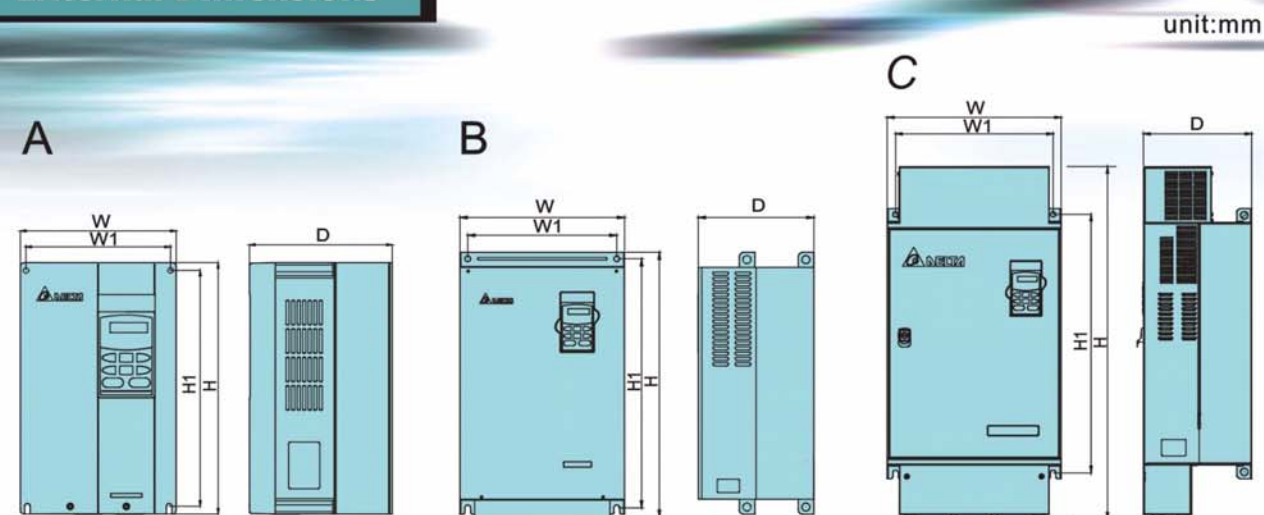


VFD-F

External Dimensions



■ Dimensions

Model	W	W1	H	H1	D	Fan cooled	Fig
VFD007F23A	150.0(5.91)	135.0(5.32)	260.0(10.24)	244.3(9.63)	160.2(6.31)	Yes	A
VFD007F43A						Yes	
VFD015F23A						Yes	
VFD015F43A						Yes	
VFD022F23A						Yes	
VFD022F43A						Yes	
VFD037F23A						Yes	
VFD037F43A						Yes	
VFD055F23A	200.0(7.88)	185.6(7.31)	323.0(12.72)	303.0(11.93)	183.2(7.22)	Yes	A
VFD055F43B						Yes	
VFD075F23A						Yes	
VFD075F43B						Yes	
VFD110F23A						Yes	
VFD110F43A						Yes	
VFD150F23A	250.0(9.84)	226.0(8.90)	430.8(15.90)	384.0(15.12)	205.4(8.08)	Yes	A
VFD150F43A	200.0(7.88)	185.6(7.31)	323.0(12.72)	303.0(11.93)	183.2(7.22)	Yes	A
VFD185F23A	250.0(9.84)	226.0(8.90)	403.8(15.90)	384.0(15.12)	205.4(8.08)	Yes	A
VFD185F43A						Yes	
VFD220F23A						Yes	
VFD220F43A						Yes	
VFD300F23A	370.0(14.57)	335.0(13.19)	589.0(23.19)	560.0(22.05)	260.0(10.24)	Yes	B
VFD300F43A	250.0(9.84)	226.0(8.90)	403.8(15.90)	384.0(15.12)	205.4(8.08)	Yes	A
VFD370F23A	370.0(14.57)	335.0(13.19)	589.0(23.19)	560.0(22.05)	260.0(10.24)	Yes	B
VFD370F43A						Yes	
VFD450F43A						Yes	
VFD550F43A						Yes	
VFD750F43A	370.0(14.57)	335.0(13.19)	595.0(23.43)	560.0(22.05)	260.0(10.24)	Yes	B
VFD900F43A	425.0(16.73)	385.0(15.16)	850.0(33.46)	631.0(24.84)	264.0(10.39)	Yes	C
VFD1100F43A						Yes	

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



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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)



ISO-9001
REGISTERED

VFD-F series have been approved by CE and UL

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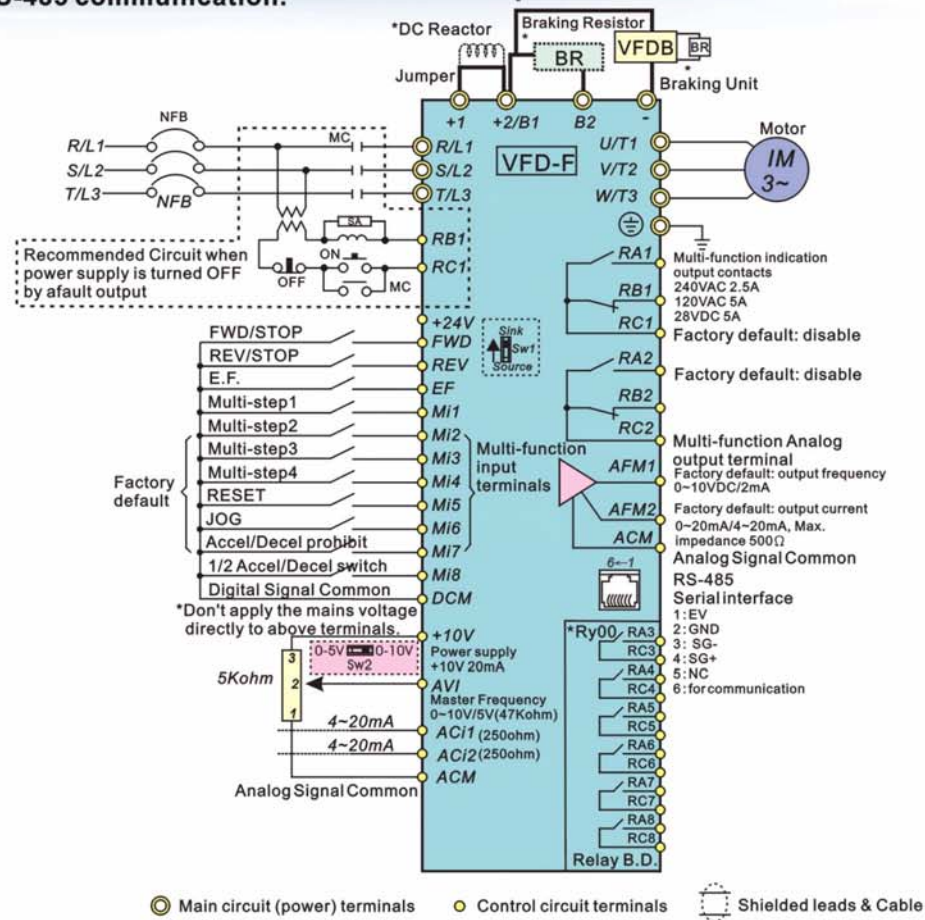


VFD-F

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		
Output Rating	Rated Output Capacity (KVA)	2.3	3.2	4.2	6.5	10	14	18	25	29	34	46	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	170	208	260	310	370	430	
	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							
Input Rating	Rated Input Current (A)	3-Phase																					
	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 1.0Hz		
Overload Endurance	120% of rated current for 1 minute		
Skip Frequency	Three zones, setting range 0.1-120Hz		
Accel/Decel Time	1-36000/0.1-3600.0/0.01-360.00 seconds (3 Independent settings for Accel/Decel Time)		
Stall Prevention Level	20 to 150%, Setting of Rated Current		
DC Injection Braking	Operation frequency 0-120Hz, 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, 1-20HP braking transistor built-in)		
V/F Pattern	Adjustable V/F pattern		
Operating Characteristics	Frequency Setting	Keypad Setting by ▲ ▼	
		External Signal Potentiometer-5kΩ/0.5W, 0 to +10/0 to +5VDC; 2stes of 4 to 20mA, RS-485 interface; Multi-Function Inputs 1 to 6(15steps, 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), Process Logic Control	
	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 I/AVI selections, driver 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	2 sets Analog frequency/current/voltage/freq. Command/power factor signal output.(0-10VDC/4-20mA)		
Analog Output contact	2 Form C contact or open collector output		
Other 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&PumpControl, PLC, MODBUS Communication, Reverse Inhibition, abnormal reset, abnormal re-start, digital frequency output, sleep/revival function		
Protection 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 unites, parameter values for setup, review and faults, RUN, STOP, RESET, FWD/REV, JOG		
Environmental Conditions	Protection Level	IP 20	
	Pollution Degree	2	
	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/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 cULus		

*:Under development

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	
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	
	Rated Output Current (A)	5.0	7.0	11	17	25	33	49	65	75	90	120	
	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			
Input Rating	Rated Input Current (A)	3-Phase											
	Rated Voltage, Frequency	3-phase 200-240 V, 50/60Hz											
	Voltage Tolerance	±10%(180-264V)											
	Frequency Tolerance	±5%(47-63Hz)											
	Cooling Method	Fan Cooled											