

VFD-V

Specifications

230V Series

Output Rating	Model Type VFD-xxxV23A	230V Series										
		007	015	022	037	055	075	110	150	185	220	370
Applicable with the 3- ϕ motor rating (KW)		0.7	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	37
Applicable with the 3- ϕ motor rating (HP)		1	2	3	5	7.5	10	15	20	25	30	50
Constant Torque Output Current (A)		5.0	7.5	11	17	25	33	49	65	75	90	146
Variable Torque Output Current (A)		6.25	9.4	13	21	31	41	61	81	93	112	182
Rated Output Capacity kVA		1.9	2.7	4.2	6.5	9.5	12.5	19	25	29	34	55
Maximum Output Voltage (V)		Proportional to the input voltage										
Rated Input Voltage/Frequency		200/208/220/230VAC 3 Phase, 50/60 Hz										
Operation Voltage Range/Frequency		180~265VAC, 47~63 Hz										
Input Current		6.4	10	14.9	21.2	25.2	33.2	58	69	83	100	146
Weight (Kg)		4.7	5.5	5.7	7.7	10.5	10.5	13.5	13.5	13.5	36	36

460V Series

Output Rating	Model Type VFD-xxxV43A	460V Series														
		007	015	022	037	055	075	110	150	185	220	300	370	450	550	750
Applicable with the 3- ϕ motor rating (KW)		0.7	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75
Applicable with the 3- ϕ motor rating (HP)		1	2	3	5	7.5	10	15	20	25	30	40	50	60	75	100
Constant Torque Output Current (A)		3.0	4.2	6	8.5	13	18	24	32	38	45	60	73	91	110	150
Variable Torque Output Current (A)		3.8	5.3	7.5	10	16	22	30	40	47	56	75	91	113	138	188
Rated Output Capacity kVA		2.3	3.2	4.6	6.5	9.9	13.7	18	24	29	34	46	56	69	84	114
Maximum Output Voltage (V)		Proportional to the input voltage														
Rated Input Voltage/Frequency		380/400/415/460 VAC 3 Phase, 50/60 Hz														
Operation Voltage Range/Frequency		340~500VAC, 47~63 Hz														
Input Current		4.0	5.7	7.3	9.9	12.2	17.2	25	32	39	49	60	73	91	130	175
Weight (Kg)		4.7	5.7	5.7	7.7	10.5	13.5	13.5	13.5	13.5	36	36	36	60	60	60

Model Explanation

VFD	007	V	23	IA
Version				
Input Voltage 23: 230V 3-Phase 43: 460V 3-Phase				
VFD-V Series				
Maximum Applicable Motor Capacity 007: (1HP) (0.75KW) ~ 750: (100HP) (75KW)				
Product Series				

VFD-V

Characteristics

Control Characteristics	Control Systems	The sinusoidal wave PWM selections include: 1. vector control; 2. torque control; 3. V/F control
	Torque Start-Up	Torque start-up is above 0.5 Hz 150%
	Speed Control Range	1:100 (could reach 1:1000 if connects externally with PG)
	Speed Control Accuracy	0.5% (could reach 0.02% if connects externally with PG)
	Speed Respond Ability	5Hz (vector control reaching 30Hz)
	Maximum Output Frequency (Hz)	0.00 to 600.00 Hz
	Frequency Output Accuracy	Digital command: $\pm 0.005\%$, analog command: $\pm 0.5\%$
	Frequency Setting Resolution	Digital command: 0.01Hz, analog command: 1/1000 (10bit) of the maximum output frequency
	Torque Limits	200% torque current as the maximum
	Torque Accuracy	$\pm 5\%$
Protection Characteristics	Accel/Decel Time	0.00~600.00/0.0~6000.0 second
	V/F Curve	The 4-point desired V/F curve & the square wave
	Frequency Setting Signal	+10V, $\pm 10V$, 4~20mA, pulse wave input
	Power Braking	About 20%
	Motor Protection	Electronic thermal relay protection
	Over-Current Protection	Current control: 220% over-current protection; 300% rated current
	Grounding Current-Leakage Protection	50% rated current
	Over-Load Capability	Constant/Variable Torque: 150% for 60 seconds; 200% for 2 seconds
	Voltage Protection	Over-voltage level: Vdc<400/800 V Low-voltage level: Vdc<200/400 V
	Input Power Over-Voltage Protection	Varistor (MOV)
Environment	Over-Heat Protection	Built-in temperature sensor
	Momentary Power Loss Compensation	The setting could be as long as 5 seconds
	Protection Level	NEMA 1/IP20
	Operation Temperature	-10°C~40°C for UL & -10°C~50°C for CE
	Storage Temperature	-20°C~60°C
	Humidity	Below 90% RH (non-condensing)
	Vibration	If it is below 20Hz, it is 1.0G; if between 20~60 Hz, it is then 0.6G
	Cooling System	Forced wind cooling (RUN, STOP)
Installation	Installation Height	If under 1,000m, be advised to stay from corrosive gasses, liquid and dust



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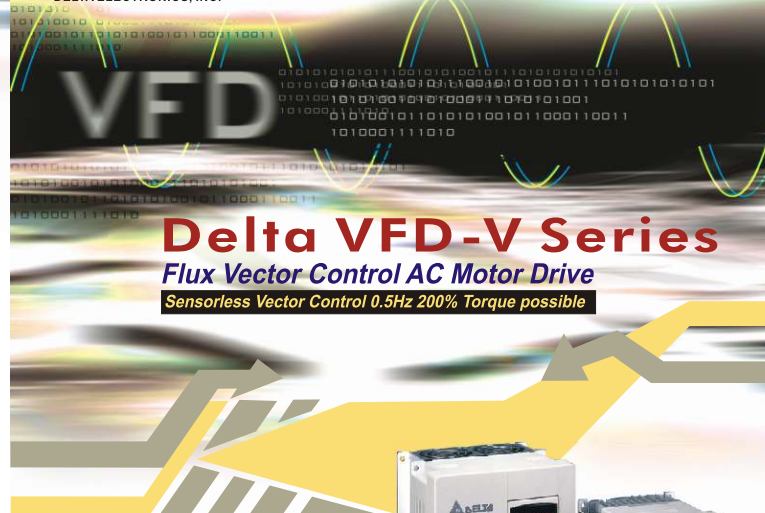
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DELTA ELECTRONICS, INC.



Delta VFD-V Series

Flux Vector Control AC Motor Drive

Sensorless Vector Control 0.5Hz 200% Torque possible

Features

- ▶ Sensorless vector control, speed control rate: 1:100
- ▶ PG closed-Loop control, speed control rate: 1:1000
- ▶ Built-in PID feedback control
- ▶ V/F, vector control, torque control and 3 position control mode
- ▶ Zero-speed that holds the torque stay at above 150%(PG)
- ▶ MODBUS communication Baud rate reaching 115200
- ▶ Soft-PWM with the carrier frequency reaching 15kHz
- ▶ Auto-Tuning motor parameter
- ▶ 4 independent S-curve/accel/decel time setting
- ▶ Dual ratings
- ▶ Sleep function and energy-saving operation



Voltage Range:

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



VFD-V series have been approved by CE and UL

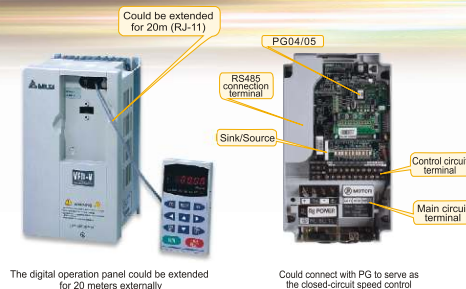
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VFD-V

The Exterior and Characteristics of the Drive

Best with:

- ◆ Transmission devices
- ◆ Elevators
- ◆ Crane
- ◆ CNC machine center
- ◆ Extrusion molding
- ◆ Injection molding
- ◆ Auto storage system

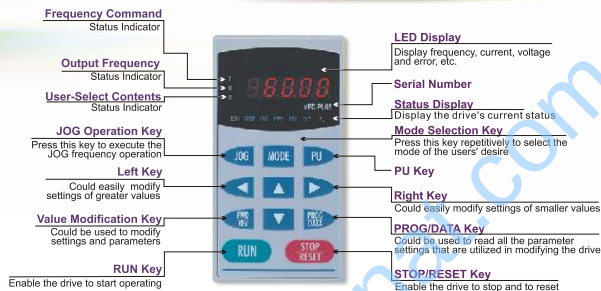


The digital operation panel could be extended for 20 meters externally

Could connect with PG to serve as the closed-circuit speed control

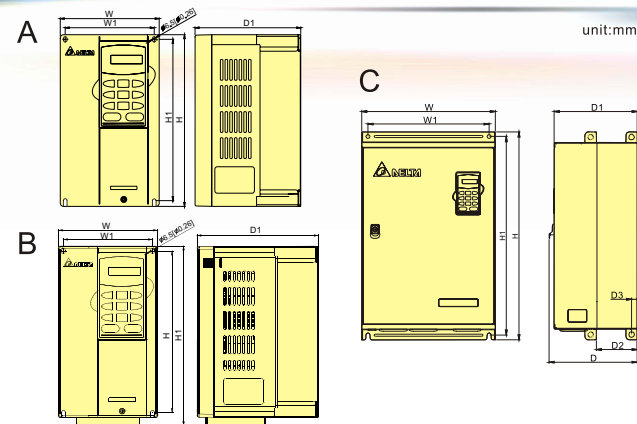
VFD-V

VFD-PU05 Digital Keypad Operation



VFD-V

Dimensions



Accessories (Optional)



VFDB Series Braking Unit



EMI FILTER



BR-Series Braking resistor



PG03 CARD

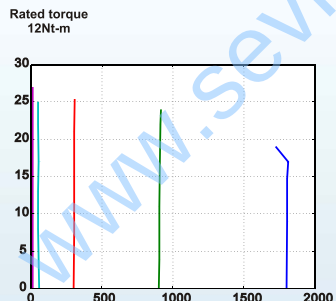


PG04 CARD

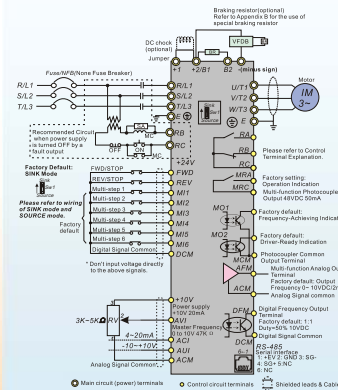


PG05 CARD

T-N Curve (Sensorless Vector Control)



Basic Wiring Diagram



Dimensions

Model	W	W1	H	H1	D	D1	D2	D3	Fig
VFD007V23A	150.0(5.91)	135.0(5.32)	260.0(10.24)	244.3(9.63)	-	160.2(6.31)	-	-	A
VFD007V43A	150.0(5.91)	135.0(5.32)	272.1(10.72)	244.3(9.63)	-	183.7(7.24)	-	-	B
VFD015V23A	200.0(7.88)	185.0(7.31)	323.0(12.73)	303.0(11.94)	-	183.2(7.22)	-	-	A
VFD015V43A	200.0(7.88)	185.0(7.31)	323.0(12.73)	303.0(11.94)	-	183.2(7.22)	-	-	A
VFD015V23A	250.0(9.84)	226.0(8.90)	403.0(15.90)	384.0(15.12)	-	205.4(8.08)	-	-	A
VFD015V43A	250.0(9.84)	226.0(8.90)	403.0(15.90)	384.0(15.12)	-	205.4(8.08)	-	-	A
VFD030V23A	370.0(14.57)	335.0(13.19)	595.0(23.43)	560.0(22.05)	-	260.0(10.24)	132.5(5.22)	18.0(0.71)	C
VFD030V43A	370.0(14.57)	335.0(13.19)	595.0(23.43)	560.0(22.05)	-	260.0(10.24)	132.5(5.22)	18.0(0.71)	C
VFD075V23A	370.0(14.57)	335.0(13.19)	595.0(23.43)	560.0(22.05)	-	260.0(10.24)	132.5(5.22)	18.0(0.71)	C
VFD075V43A	370.0(14.57)	335.0(13.19)	595.0(23.43)	560.0(22.05)	-	260.0(10.24)	132.5(5.22)	18.0(0.71)	C
VFD150V23A	425.0(16.73)	385.0(15.16)	660.0(25.98)	631.0(24.84)	280.0(11.02)	264.0(10.39)	130.0(5.13)	18.0(0.71)	C
VFD150V43A	425.0(16.73)	385.0(15.16)	660.0(25.98)	631.0(24.84)	280.0(11.02)	264.0(10.39)	130.0(5.13)	18.0(0.71)	C

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