

LOW VOLTAGE INVERTER

FD100

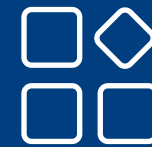


The FD100 series uses DSP control system as the platform, current vector control technology, and multiple protection methods, which can be applied to asynchronous motors to provide excellent driving performance.

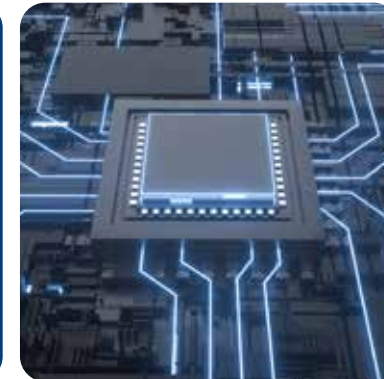
◆ Products features



Book style structural design



Modular structural layout



60% year-on-year reduction in volume



Supports dual row display



Technical specifications

Item	Technical Index	Specification
Input	Input voltage	3AC 380-480V ±15% 3AC 220V ±15%
	Input frequency	50/60Hz±5%
Output	Output voltage	0~rated input voltage
	Output frequency	Vector control: 0~500Hz
Control Features	Control mode	V/f control Sensorless vector control (SVC) Close-loop vector control (FVC)
	Operation command mode	Keypad control Terminal control Serial communication control (Modbus)
	Frequency setting mode	Digital setting, analog setting, pulse frequency setting, serial communication setting, multi-step speed setting & simple PLC, PID setting, etc. These frequency settings can be combined & switched in various modes.
	Overload capacity	G model: 130%/30s, 120%/60s P model: 110%/30s, 100%/60s
	Starting torque	0.25Hz/150% (SVC); 0.5Hz/150% (V/f), 0Hz/180% (FVC)
	Speed control precision	±0.5% (SVC)
	Carrier frequency	0.5~16.0kHz, automatically adjusted according to temperature and load characteristics
	Frequency accuracy	Digital setting: 0.01Hz Analog setting: maximum frequency ×0.025%
	Torque boost	Automatically torque boost; manually torque boost: 0.1%~30.0%
	V/f curve	Three types: linear, multiple point and square type (1.2 power, 1.4 power, 1.6 power, 1.8 power, square)
	Acceleration / deceleration mode	Straight line/S curve; four kinds of acceleration/deceleration time, range: 0.0~6500.0s
	Braking unit	75kW, optional for build-in
	DC braking	DC braking when starting and stopping DC braking frequency: 0.0Hz~maximum frequency, braking time: 0.0s~36.0s

Item	Technical Index	Specification
Control Features	Jog operation	Jog operation frequency: 0.0Hz~maximum frequency Jog acceleration/deceleration time: 0.1s~6500.0s
	Simple PLC & multi-step speed operation	It can realize a maximum of 16 multi-step speeds running via the built-in PLC or control terminal.
	Built-in PID	Built-in PID control to easily realize the close loop control of the process parameters (such as pressure, temperature, flow, etc.)
	Automatic voltage regulation	Keep output voltage constant automatically when input voltage fluctuating
Control Function	Torque limit	"Rooter" characteristics, limit the torque automatically and prevent frequent over-current tripping during the running process
	Wobble frequency control	Multiple triangular-wave frequency control, special for textile
	Timing/length/counting control	Timing/length/counting control function
	Over-voltage & over-current stall control	Limit current & voltage automatically during the running process, prevent frequent over-current & over-voltage tripping
	Fault protection function	Comprehensive protections include over-current, over-voltage, under-voltage, overheating, default phase, overload, shortcut, etc., can record the detailed running status during failure & has fault automatic reset function
Input / output terminals	Input terminals	Programmable digital inputs: DI1~DI6, DI5 can be used as high-speed pulse input terminal. Programmable analog inputs: AI1, AI2 (compile with both 0~10V & 4~20mA).
	Output terminals	Programmable digital outputs: 2 relay outputs 2 open-collector outputs, FM can be set as high speed pulse output terminal (0~100kHz). Programmable analog outputs: AO1, AO2:(compile with both 0~10V & 4~20mA).
	Communication terminals	Standard RS485 communication interface, support MODBUS-RTU communication protocol
	Human machine interface	LED display Multi-function key
Environment	Ambient temperature	-10℃~40℃ (>40℃, output derated), without direct sunshine.
	Humidity	95%RH or less (non-condensing)
	Altitude	≤1000M: output rated power, >1000M: output derated
	Storage temperature	-20℃~60℃

Product Model Description

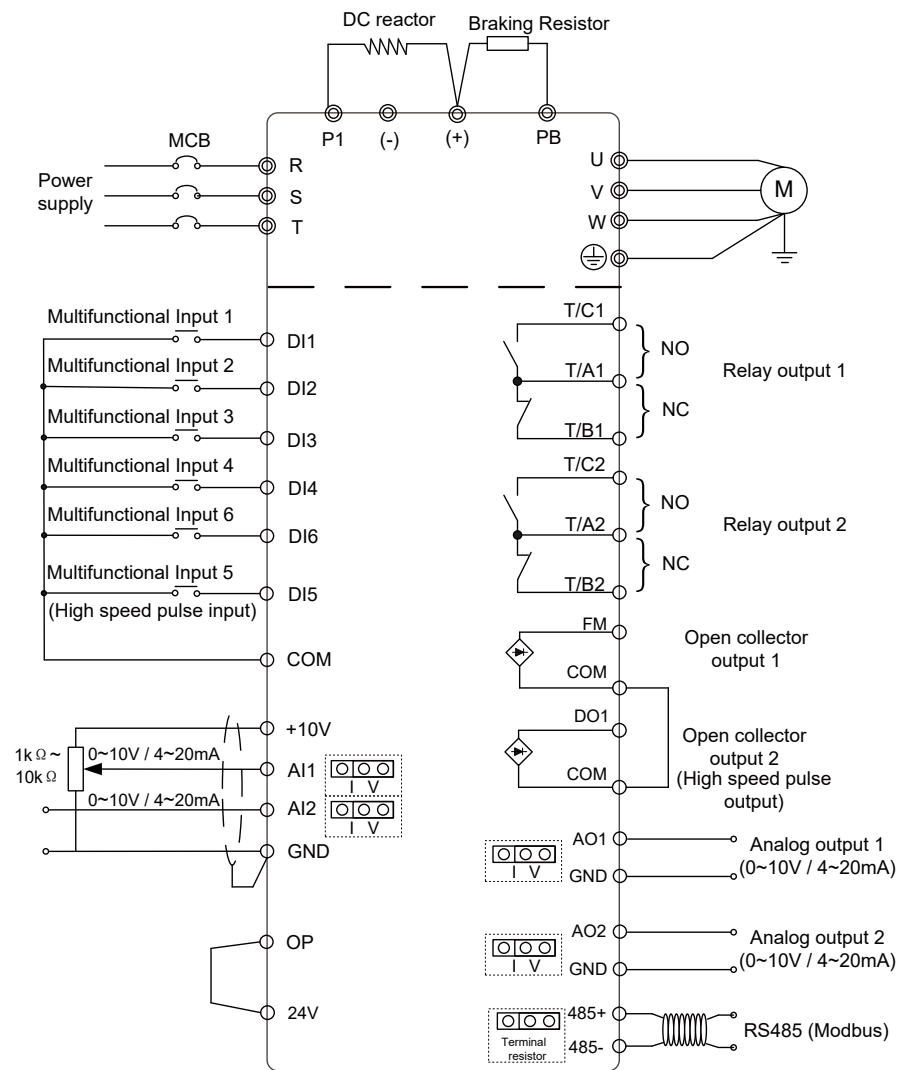
FD100 – 90G/110P – T4

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1	Series code	FD100: High performance variable frequency drive
2	Rated power	90G: Constant torque load 90kW 110P: Variable torque load 110kW
3	Rated Voltage	T2: 220V ± 15% T4: 380V ± 15%



System wiring



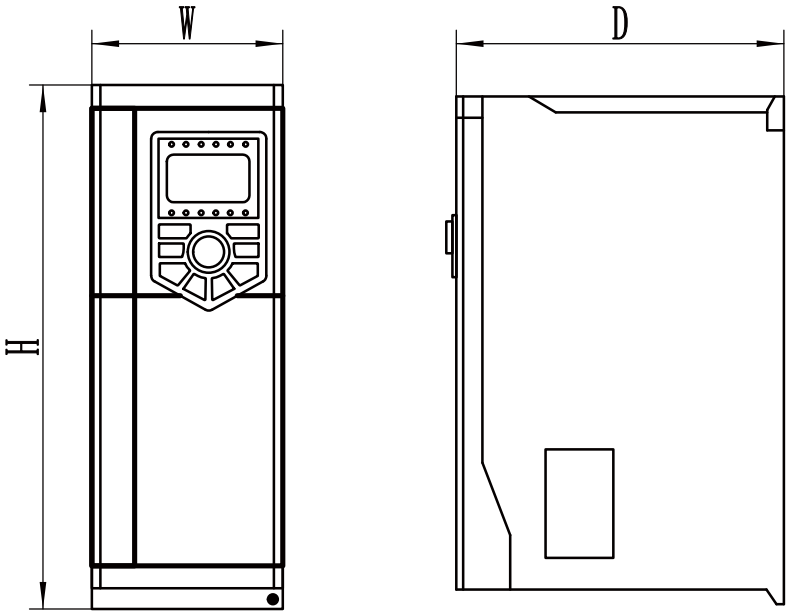
◇ Selection Guide

Power	Suitable Motor (kW)	Rated Output Current (A)
3AC380V-480±15%		
FD100-1R5G/2R2P-T4	1.5/2.2	3.8/5.1
FD100-2R2G/4P-T4	2.2/4	5.1/9
FD100-4G/5R5P-T4	4/5.5	9/13
FD100-5R5G/7R5P-T4	5.5/7.5	13/17
FD100-7R5G/11P-T4	7.5/11	17/25
FD100-11G/15P-T4	11/15	25/32
FD100-15G/18R5P-T4	15/18.5	32/37
FD100-18R5G/22P-T4	18.5/22	37/45
FD100-22G/30P-T4	22/30	45/60
FD100-30G/37P-T4	30/37	60/75
FD100-37G/45P-T4	37/45	75/91
FD100-45G/55P-T4	45/55	91/112
FD100-55G/75P-T4	55/75	112/152
FD100-75G/90P-T4	75/90	152/176
FD100-90G/110P-T4	90/110	176/210
FD100-110G/132P-T4	110/132	210/253
FD100-132G/160P-T4	132/160	253/304
FD100-160G/185P-T4	160/185	304/350
FD100-185G/200P-T4	185/200	350/380
FD100-200G/220P-T4	200/220	380/426
FD100-220G/250P-T4	220/250	426/465
FD100-250G/280P-T4	250/280	465/520
FD100-280G/315P-T4	280/315	520/585
FD100-315G/355P-T4	315/355	585/650
FD100-355G1400P-T4	355/400	650/725
FD100-400G/450P-T4	400/450	725/820
FD100-450G/500P-T4	450/500	820/860
FD100-500G/560P-T4	500/560	860/950
FD100-630G710P-T4	630/710	950/1100
FD100-710G/800P-T4	710/800	110/1250

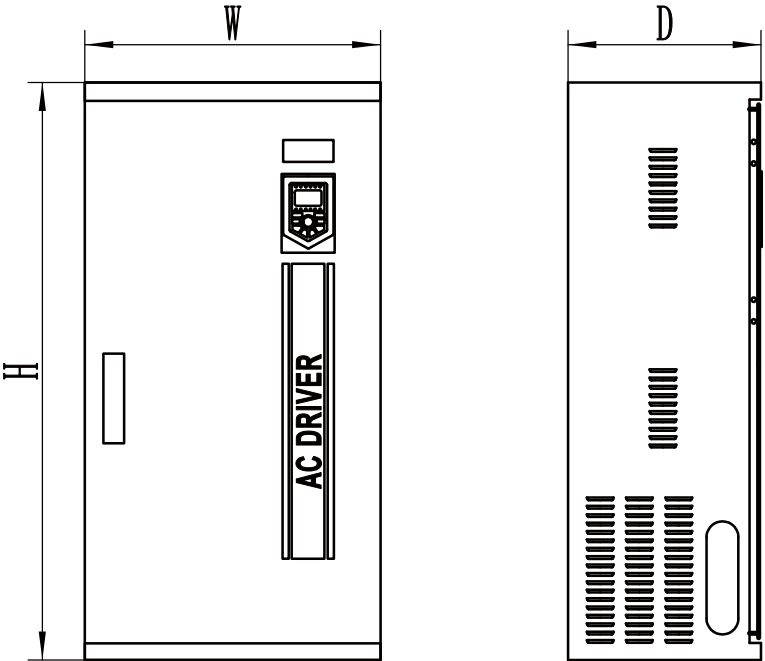
Power	Suitable Motor (kW)	Rated Output Current (A)
3AC220V±15%		
FD100-1R5G/2R2P-T2	1.5/2.2	7.0/10.0
FD100-2R2G/4P-T2	2.2/4	10.0/16
FD100-4G/5R5P-T2	4/5.5	16/20
FD100-5R5G/7R5P-T2	5.5/7.5	20/30
FD100-7R5G/11P-T2	7.5/11	30/45
FD100-11G/15P-T2	11/15	45/60
FD100-15G/18R5P-T2	15/18.5	60/75
FD100-18R5G/22P-T2	18.5/22	75/90
FD100-22G/30P-T2	22/30	90/112
FD100-30G/37P-T2	30/37	112/152
FD100-37G/45P-T2	37/45	152/176
FD100-45G/55P-T2	45/55	176/210
FD100-55G/75P-T2	55/75	210/304
FD100-75G/90P-T2	75/90	304/350

◇ External and keypad dimensions

A: Product outlook (1.5~132kW):

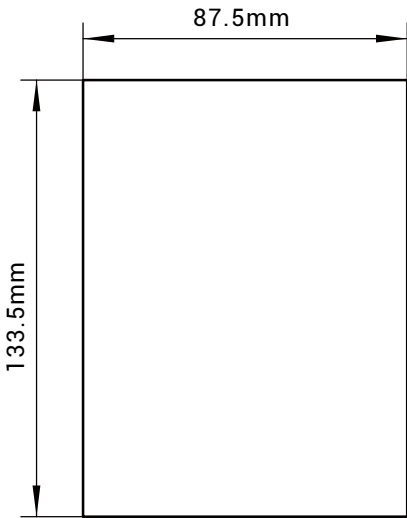


B: Product outlook (≥160kW):



Power (kW)	Outlook dimensions (mm)		
	H	W	D
Dimension (3AC380V-480±15%)			
1.5~2.2	200	86	185
4~5.5	238	97	185
7.5~11	320	116	210
15~22	383	142	257
30~37	445	189	252
45~75	565	240	315
90~110	638	268	350
132~160	738	350	405
185~220	1025	525	350
250~315	1150	555	355
355~450	1450	650	390
500~560	1800	800	550
630 ~710	1800	800	700

C: Extension keypad bracket hole size



Power (kW)	Outlook dimensions (mm)		
	H	W	D
Dimension (3AC 220V ±15%)			
1.5~2.2	238	97	185
4~5.5	320	116	210
7.5~11	383	142	257
15~18.5	445	189	252
22~37	565	240	315
45~55	638	268	350
160	738	350	405

Optional PG card

Typical Applications



> Petrochemical



> Urban substation



> Wood processing



> Power station



> Lithium current waterline



> Logistics transportation



> Food processing



> Metallurgy



> Packaging assembly line