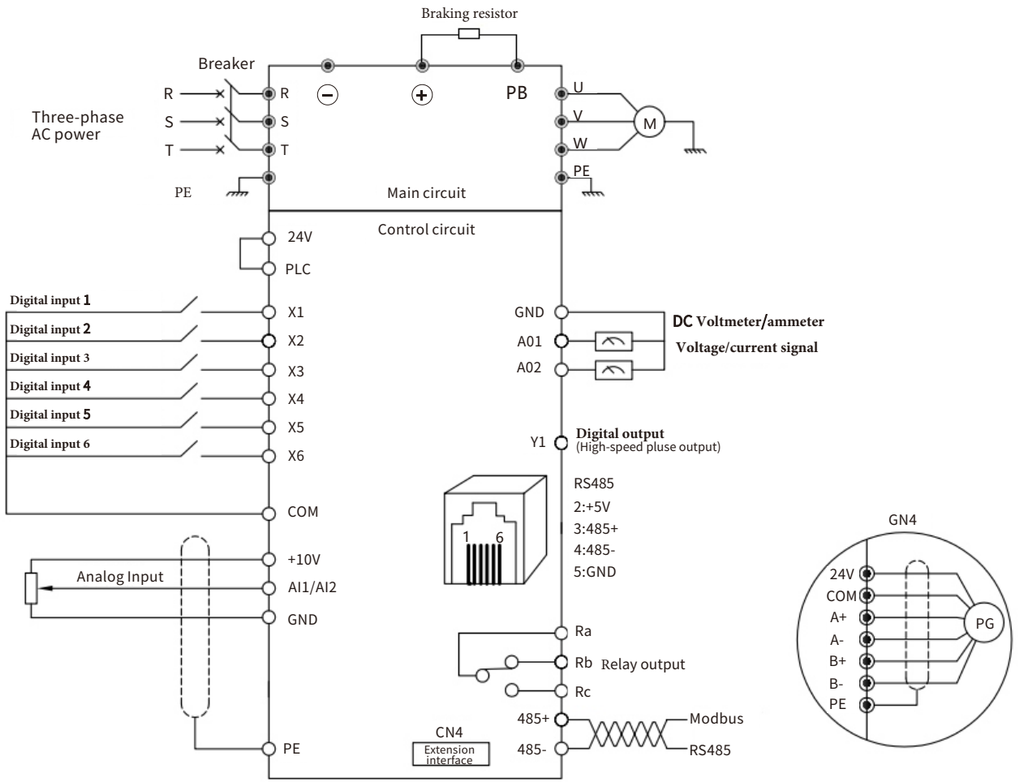
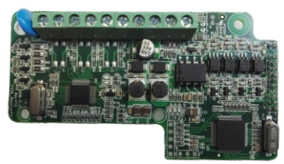
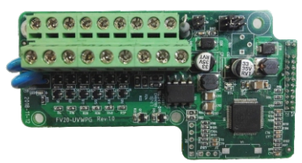
Wiring Diagram of Product Terminal



FV20 optional expansion card

Figure	Name	Describe
	Resolver PG card	Support rotary encoder, also support PT100 / PT1000 temperature detection, and support CAN function
	Collector, differential encoder	Support ABZ UVW encoder, support CAN function

Kinco® Automation

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K1C20-1812

Kinco

High Performance VFD

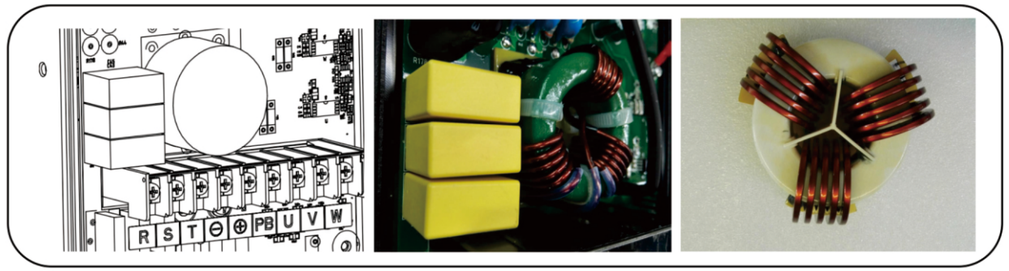
Kinco FV20 Series

Product Positioning

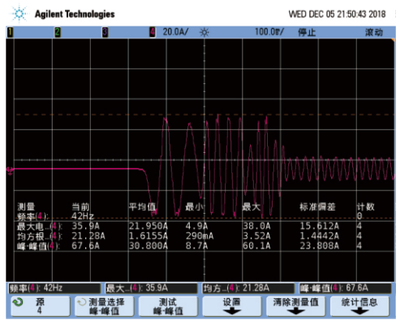
FV20 ： The cost-effective high-performance vector inverter, gradually replacing the FV100 series

Feature

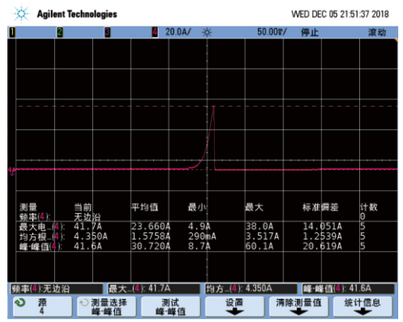
- Built-in EMC filter to optimize the electrical environment of EMC field equipment.



- Low speed and high torque, small torque ripple, automatic limiting current, could avoid overcurrent faults caused by sudden load or other causes



Automatic current limiting function open



Automatic current limiting function close

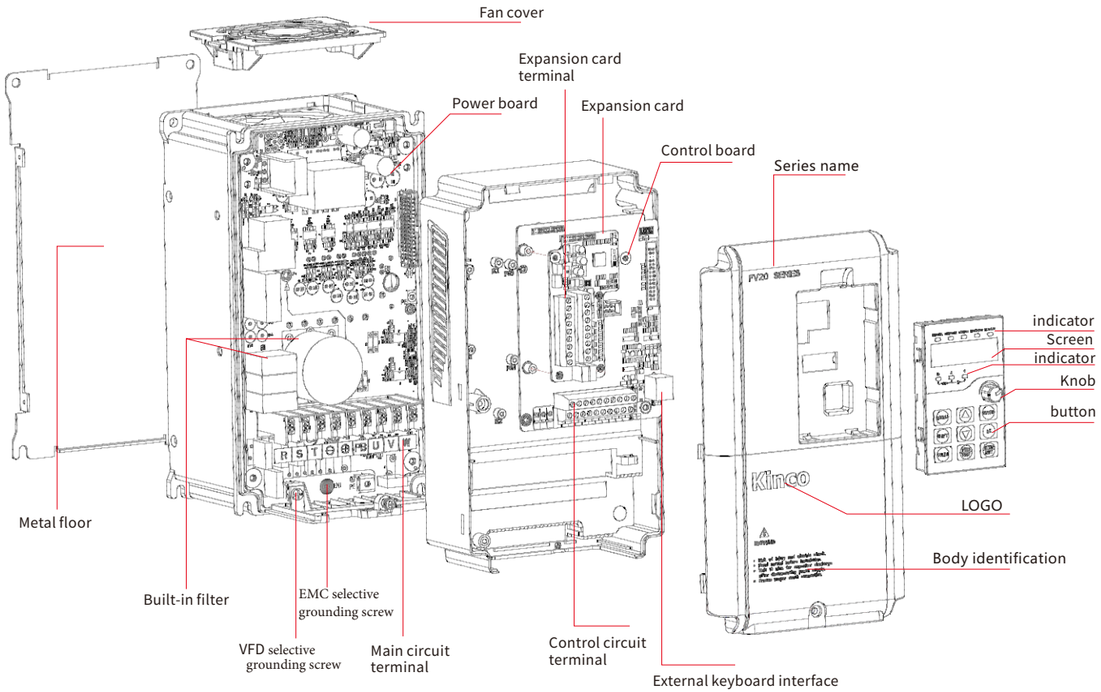
- Optimized structural design and high power density,Built-in braking unit for inverters of 45KW and below
- Strictly reliable design,support monitoring software launch by Kinco

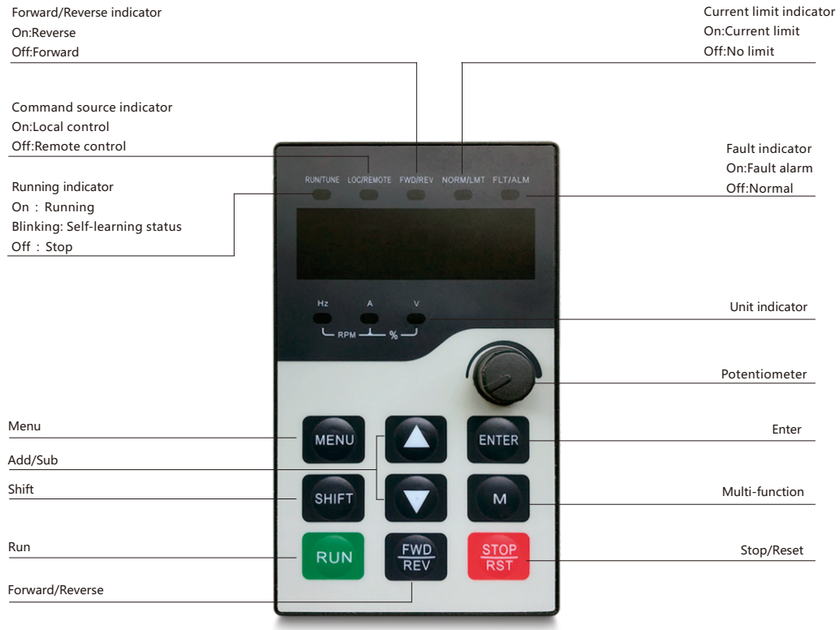
Model description

FV20-4T-0150G/0185L-A-037

FV	Closed loop vector
2	The second generation product
0	Standard model
…	other type
4T	Three-phase 380V
2s	Single-phase 220V

037	No.37 non-standard software
none	RS485
A	CAN communication
0150G	Heave load 15KW
0185L	Light load18.5KW





Technical Specifcations

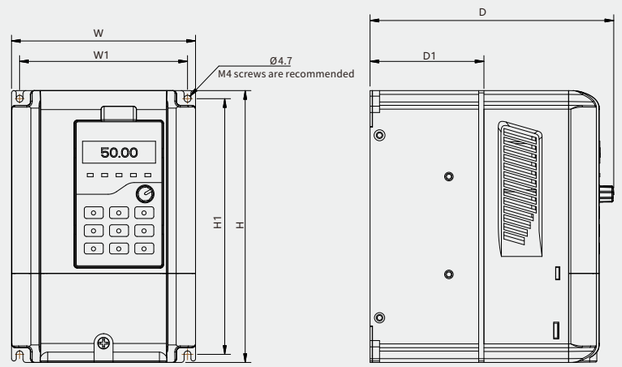
Item		Description
Input	Rated voltage and frequency	Single-phase 220V 50Hz/60Hz; Three-phase 380V 50Hz/60Hz; Three-phase 220V 50Hz/60Hz;
Output	Allowable voltage range	4T：320V～460V AC;　2T/2S：180V～260V; Voltage tolerance:less than 3%;　Frequency:±5%
	Voltage	0~Rated input voltage
	Frequency	0Hz～300Hz（0Hz~3000Hz is customized）
	Overload capacity	G type:allow 150%Rated current for 1 minute,180%Rated current for 10 sec; L type:allow 110% Rated current for 1 minute,150% Rated current for 1 sec;
Main control function	Control mode	Three types:sensor-less flux vector control; closed-loop flux vector control; V/F control.
	Modulation mode	Space vector PWM modulation
	Starting torque	150% rated torque at 0.5 Hz (sensor-less PG flux vector control), 200% rated torque at 0.0 Hz (closed-loop flux vector control)
	Frequency accuracy	Digital setting: Max. frequency × ± 0.01%;　　Analog setting: Max. frequency × ± 0.2%
	Frequency resolution	Digital setting: 0.01Hz; Analog setting: Max. frequency × 0.1%
	Torque boost	Manual torque boost 0% to 30.0% (only valid in V/F mode)
	V/F curve	Four pattern: 3 kinds of torque-derating mode (2.0 order, 1.7 order, 1.2 order); 1 kind of V/F curve mide set by user.
	Acc./Dec. curve	Linear or S-curve acceleration / deceleration, Four kinds of acceleration or deceleration time.
	Auto current limit	Limit current during the operation automatically to prevent frequent overcurrent trip.
Customize function	Inching	Inching frequency range: 0.00Hz~50.00Hz; Inching acceleration/deceleration time 0.1~60.0 s can be set.
	Multi-speed operation	Multi-speed operation through control terminals
Operation function	Running Command	Operation panel,Terminal setting, Communication control.
	Frequency setting	Support Digital,Analog voltage,Analog current,Pulse setting
	Auxiliary frequency	Support auxiliary frequency fine-tuning and frequency synthesis
	Pulse output terminal	The pulse square wave signal output is 0.1 kHz to 100 kHz, and can output physical quantities, such as setting frequency and output frequency
	Analog output terminal	2 channels Analog output, can be selected from 0/4～20mA or 0/2～10V.
Operational panel	LED Display	Display setting frequency, output frequency, output voltage,output current and so on.about 20 parameters.
	Parameter copy	Quickly copy parameters by using the operator panel
	Key locking and function selection	Lock partial key or all keys, Define the function of partial key to prevent misoperation
	Protective function	Overcurrent protection, overvoltage protection, undervoltage protection, overheat protection, overload protection, phase-loss protection (optional),etc
Environment	Installation location	Indoor, free from direct sunlight,dust,corrosive gas,combustible gas, oil mist,steam,drip and salt.
	Altitude	lower than 1000m
	Ambient Temperature	-10°C～+40°C
	Humidity	5% to 95% RH, without condensing
	vibration	Less than 5.9 m / s 2 (0.6 g)
	storage temperature	- 40°C～+ 70°C
Structure	IP level	IP20
	cooling method	Self-cooling, air cooling, with fan control
	Installation method	Wall-mounted, closet
	Efficiency	45KW and below :≥93%; 55KW and above: ≥95%

Technical Parameter

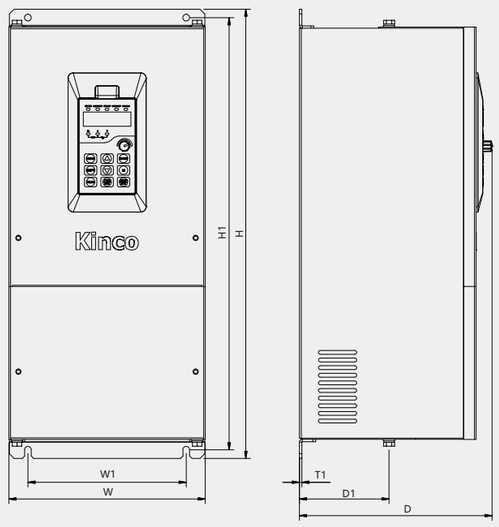
Model	Power capacity KVA	Input current A	Output current A	Adapter motor KW
	Three-phase 380v, 50/60Hz			
FV20-2S-0004G	1.0	5.3	2.5	0.4
FV20-2S-0007G	1.5	8.2	4.0	0.75
FV20-2S-0015G	3.0	14.0	7.5	1.5
FV20-2S-0022G	4.0	23.0	10.0	2.2
FV20-4T-0007G/0015L	1.5	3.4	2.3	0.75
FV20-4T-0015G/0022L	3.0	5.0	3.7	1.5
FV20-4T-0022G/0037L	4.0	5.8	5.5	2.2
FV20-4T-0037G/0055L	5.9	10.5	8.8	3.7
FV20-4T-0055G/0075L	8.5	14.5	13.0	5.5
FV20-4T-0075G/0110L	11.0	20.5	17.0	7.5
FV20-4T-0110G/0150L	17.0	26.0	25.0	11
FV20-4T-0150G/0185L	21.0	35.0	32.0	15
FV20-4T-0185G/0220L	24.0	38.5	37.0	18.5
FV20-4T-0220G/0300L	30.0	46.5	45.0	22.0
FV20-4T-0300G/0370L	40.0	62.0	60.0	30.0
FV20-4T-0370G/0450L	50.0	76.0	75.0	37.0
FV20-4T-0450G/0550L	60.0	92.0	90.0	45.0
FV20-4T-0550G/0750L	72.0	113.0	110.0	55.0
FV20-4T-0750G/0900L	100.0	157.0	152.0	75.0
FV20-4T-0900G/1100L	116.0	180.0	176.0	90.0
FV20-4T-1100G/1320L	138.0	260.0	210.0	110.0
FV20-4T-1320G/1600L	167.0	232.0	252.0	132.0
FV20-4T-1600G/1850L	200.O	282.0	304.0	160.0
FV20-4T-1850G/2000L	230.O	326.0	350.0	185.0
FV20-4T-2000G/2200L	250.0	352.0	380.0	200.0
FV20-4T-2200G/2500L	280.0	385.0	426.0	220.0
FV20-4T-2500G/2800L	320.0	437.0	470.0	250.0
FV20-4T-2800G/3150L	445.0	491.0	520.0	280.0
FV20-4T-3150G/3550L	500.0	580.0	600.0	315.0
FV20-4T-3550G/4000L	565.0	624.0	665.0	355.0
FV20-4T-4000G/4500L	630.0	670.0	690.0	400.0
FV20-4T-6000G	990.0	1035.0	1050.0	600.0
FV20-4T-8000G	1250.0	1300.0	1350.0	800.0
FV20-4T-10000G	1500.0	1650.0	1725.0	1000.0

Shape and Size

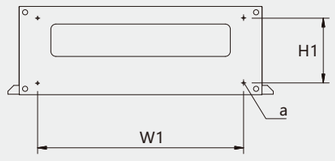
The external dimensions of the inverter are as follows



Applicable models: FV20-4T-0185G/0220L and below



Applicable models: FV20-4T-0220G/0300L~FV20-4T-8000G



Applicable models： FV20-4T-10000G

Mechanical parameters

Inverter model (G: constant torque load; L: fan pump load)	Shape and installation dimensions (mm)							Approximate weight (gross weight ， kg)
	W	H	D	W1	H1	D1	Mounting hole d	
FV20-2S(2T)-0004G	126	186	167	115	175	78	4.7	2
FV20-2S(2T)-0007G								
FV20-2S(2T)-0015G								
FV20-2S(2T)-0022G								
FV20-4T-0007G/0015L								
FV20-4T-0015G/0022L								
FV20-4T-0022G/0037L								
FV20-4T-0037G/0055L								
FV20-4T-0055G/0075L	146	256	181	131	243	95	5.8	6
FV20-4T-0075G/0110L								
FV20-4T-0110G/0150L	170	320	207	151	303	118.5	5.8	8
FV20-4T-0150G/0185L								
FV20-4T-0185G/0220L								
FV20-4T-0220G/0300L	214	410	230	166	393	109	7	18
FV20-4T-0300G/0370L								
FV20-4T-0370G/0450L	240	460	238	190	442	120	7	31
FV20-4T-0450G/0550L								
FV20-4T-0550G/0750L	373	649	262	240	628	102.5	10	42
FV20-4T-0750G/0900L								
FV20-4T-0900G/1100L	440	758	285	340	737	102	11	73
FV20-4T-1100G/1320L	430	780	330	280	755	168	11	76
FV20-4T-1320G/1600L								
FV20-4T-1600G/1850L	530	940	380	340	910	206	14	114
FV20-4T-1850G/2000L								
FV20-4T-2000G/2200L								
FV20-4T-2200G/2500L	690	1006	380	500	974	207	14	156
FV20-4T-2500G/2800L								
FV20-4T-2800G/3150L								
FV20-4T-3150G/3550L	810	1228	400	520	1196	209	14	225
FV20-4T-3550G/4000L								
FV20-4T-4000G/4500L								
FV20-4T-6000G	810	1328	400	520	1296	/	14	450
FV20-4T-8000G								
FV20-4T-10000G	1480	1807	600	Pedestal installation W1*H1=1040*440 d=14				460