ZONCN

变 频 调 速 器
INVERTER

Changes for Better Life

Company Profile

Invotric is located in the scenic town of Maogang, Baohe District, Hefei. It is an industrial equipment manufacturer that focuses on the R&D, production, sales and service of electrical transmission and industrial automation products. It is one of the largest frequency converter manufacturers. The company has advanced production equipment, inspection equipment and office equipment, and has passed ISO9001 quality management system certification and EU CE certification.

The company independently develops and produces 6 series of more than 100 products, covering general and special products such as inverters, servos, permanent magnet motors, and electric vehicle drives. The voltage level is 110V-1140V, and the power range is 0.4KW-2000KW. The products are widely used in textile, printing, CNC machine tools, food packaging machinery, plastic machinery, fans, water pumps, chemicals, air compressors, water treatment, washing equipment, centrifuges, stone cutting equipment and other industries. We serve our customers wholeheartedly, strive to improve the level of equipment automation and meet the requirements of energy conservation and environmental protection. The company has more than 80 offices at home and abroad, and its products are exported to more than 50 countries and regions including Spain, Italy, Russia, Turkey, Egypt, India, Brazil, Canada, Thailand, Malaysia, Chile, etc., and gradually establish and improve the global sales and service system.

Our company is constantly innovating technology to pursue better services. Our professional technical support teams in various offices and after-sales service centers are professional guarantees for providing users with solutions, technical training and service support. The company takes "technological innovation, people-oriented, customer first" as its principle, "unity and cooperation, focus on efficiency, and attention to details" as its mission, adheres to honest management and excellence, and strives to become a leading domestic inverter company with leading products, technologies and markets, efficient management, and strong innovation capabilities!

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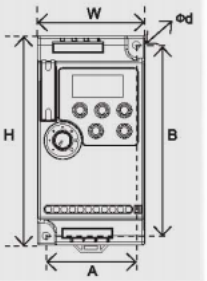
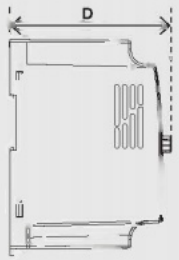
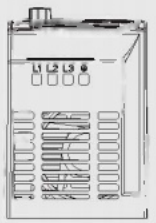
NZ100 series compact frequency converter

Compact size, low cost
External ports for easy wiring
Convenient installation, can be mounted on a DIN rail (up to 5.5kW)
Provides RS485 communication interface
Optional external keyboard
V/F control; built-in PID control
Power range:
220V: 0.42.2kW (3.7 - 18.5kW available for special order)
380V: 0.4~450kW

Technical Specifications

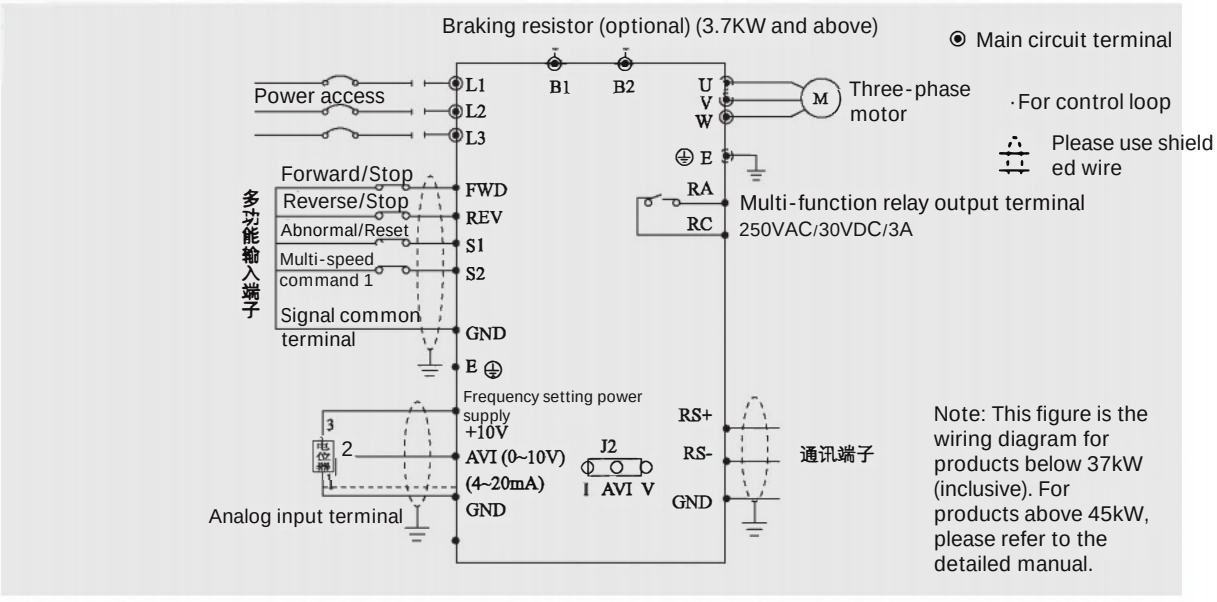
Name		Specifications
input	Rated voltage, frequency	1PH/3PH AC 220V 50/60Hz；3PH AC380V 50/60Hz
	Voltage allowable range	220V:170V～240V；380V：330V～440V
output	Voltage	220V:0~220V;380V:0~380V
	frequency	0.1～400.0Hz
control method		VF control
display		4-digit digital tube display, indicator light display, display of set frequency, output frequency, output current, DC bus, etc.
Control characteristics	Output frequency range	0.1~400.0Hz
	Frequency setting resolution	Digital setting 0.10Hz, analog setting: 0.1% of maximum output frequency
	Output frequency accuracy	0.1Hz
	V/F control	The V/F curve can be set arbitrarily to meet the needs of various loads
	Torque control	Automatic boost: Automatically determine the torque boost according to the load conditions; Manual boost: can set 0.0~20.0% torque boost
	Multi-function input terminal	4 multi-function input terminals, realizing 15-stage speed control, 4-stage acceleration and deceleration switching during program operation, UP/DOWN function, emergency stop and other functions
	Multi-function input terminal	There is 1 multi-function output terminal to realize the indication and alarm output of running, zero speed, external abnormality, program running, etc.
	Acceleration/deceleration time setting	0~999.98 can set acceleration/deceleration time respectively
Other functions	PID Control	Built-in PID control
	RS485	Standard RS485 communication function (MODBUS)
	Frequency setting	Analog 0~10V, 4~20mA, keyboard direct setting, RS485 setting, UPIDOWN setting and other methods Note: The AVI terminal can select analog voltage input (0~10V) and analog current input (4~20mA) by switching the switch. The 4 multi-function input terminals can form 15 speed
	Multi-speed	
	Automatic voltage regulation	Automatic voltage regulation function can be selected as needed
	counter	Built-in 2 sets of counters
Protective function	Overload protection	Constant torque 150%/1 minute, variable torque 120%/1 minute
	Overvoltage protection	Overvoltage protection can be set
	Undervoltage protection	Undervoltage protection can be set
	Other protection	Short circuit protection, over current protection, parameter lock, etc.
environment	Ambient temperature	-10℃ to 40℃ (no freezing)
	environment humidity	Below 95% (no condensation)
	altitude	Below 1000m (if it exceeds 1000m, you need to downshift)
	vibration	0.5G or less
structure	cooling method	Forced air cooling
	Protection level	IP20
	installation method	Wall-mounted, standard 35mm rail installation (below 5.5kW)

Specifications and dimensions

Inverter Model	Output current(A)	Applicable motor (kW)	W	H	D	A	B	Φd	Dimensions: mm
Input voltage：1PHAC220V±15%									
NZ100-0R4G-2	2.5	0.4	68	132	102	57	120	4.5	
NZ100-0R75G-2	5	0.75							
NZ100-1R5G-2	7	1.5							
NZ100-2R2G-2	11	2.2	72	142	112.2	61	130	4.5	
Input voltage：3PH AC380V±15%									
NZ100-0R4G-4	2	0.4	72	142	112.2	61	13	4.5	
NZ100-0R75G-4	2.7	0.75							
NZ100-1R5G-4	4.0	1.5							
NZ100-2R2G-4	5.0	2.2							
NZ100-3R7G/5R5P-4	8.6	3.7	85	180	116	72	167	5.5	
NZ100-5R5G/7R5P-4	12.5	5.5							
NZ100-7R5G/11P-4	17.5	7.5	106	240	153	96	230	4.5	
NZ100-11G/15P-4	24	11							
NZ100-15G/18P-4	33	15							
NZ100-18G/22P-4	40	18.5	151	332	165.5	137	318	7	
NZ100-22G/30P-4	47	22							
NZ100-30G/37P-4	65	30	217	400	201	202	385	7	
NZ100-37G/45P-4	80	37							
NZ100-45G/55P-4	90	45	300	473	240	200	455	9	
NZ100-55G/75P-4	110	55							
NZ100-75G/90P-4	152	75	275	630	311.5	200	612	9	
NZ100-90G/110P-4	176	90							
NZ100-110G/132P-4	210	110							
NZ100-132G/160P-4	255	132	400	715	311.5	320	695	11	
NZ100-160G/185P-4	305	160							
NZ100-185G/200P-4	340	185	400	830	321.5	160+160	810	11	
NZ100-200G/220P-4	380	200							
NZ100-220G/250P-4	425	220							
NZ100-250G/280P-4	480	250	530	970	350	215+215	950	11	
NZ100-280G8315P-4	530	280							
NZ100-315G/350P-4	600	315							
NZ100-350G/400P-4	650	350	550	1180	400	230+230	1150	13	
NZ100-400G/450P-4	720	400							
NZ100-450G/500P-4	790	450							

Note: 55G cannot be G/P combined, please pay attention when ordering.

Basic wiring diagram



NZ200 series universal vector inverter

- Open-loop vector control, V/F control
- Strong overload capacity, 150% rated current/60s, 180% rated current/3s
- Excellent performance, good environmental adaptability
- Simple structure, compact size, easy to install
- Universal vector inverter, large torque output, can ensure smooth motor start under heavy load
- With instantaneous stop and fast current limiting functions, can reduce the probability of frequent fault alarms of the inverter •Complete protection functions, with output phase loss protection, overcurrent/overvoltage/ overload/overheating protection and other functions
- Support permanent magnet synchronous motor control (NZ200T series)
- Power range:

220V:0.4~3.7kW (5.5 and above can be specially ordered)
380V:0.4~630kW

Technical indicators

project name		specification
basic skills	control method	VF control Open loop vector control (without PG)
	Maximum frequency	Vector control, O~320HZ V/F control: 0~3200Hz
	Carrier frequency	1kHz ~ 16kHz The carrier frequency can be automatically adjusted according to the load characteristics.
	Input frequency resolution	Digital setting: 0.01Hz Analog setting: Maximum frequency × 0.025%
	Starting torque	G type: 0.5Hz/150% (without PG); P-type machine: 0.5Hz/100%
	Speed range	1:100 (no PG)
	Steady speed accuracy	±0.5%(no PG)
	Overload capacity	G type machine: 150% rated current 80s; 180% rated current 3s, P-type machine: 120% rated current for 60s; 150% rated current for 3s.
	Torque boost	Automatic torque boost; manual torque boost 0.1%~30.0%
	V/F Curve	Three modes: linear type; multi-point type; N-power VF curve (1.2, 1.4, 1.6, 1.8, 2)
	V/F separation	2 methods: full separation, semi-separation
Personalization	Acceleration and deceleration curve	Straight or S-curve acceleration and deceleration mode. Four acceleration and deceleration times, acceleration and deceleration time range 0.0~6500.0s
	DC braking	DC braking frequency: 0.00Hz~maximum frequency; braking time: 0.0s~100.0s; braking action current value: 0.0%~100.0%
	Jog control	Jog frequency range: 0.00Hz~50.00Hz. Jog acceleration and deceleration time 0.0s~6500.0s,
	Simple PLC, Multi-speed operation	A maximum of 16 speed steps can be achieved through built-in PLC or control terminals
	Built-in PID	It is easy to realize the closed-loop control system of process control
	Automatic voltage regulation(AVR)	When the grid voltage changes, it can automatically keep the output voltage constant
	Overvoltage and overspeed stall control	Automatically limit current and voltage during operation to prevent frequent over-current and over-voltage tripping
	Fast current limiting function	Minimize overcurrent faults and protect the normal operation of the inverter
	Torque limitation and control	"Excavator" feature automatically limits the torque during operation to prevent frequent overcurrent tripping
	Excellent performance	Asynchronous motor control with high-performance current vector control technology
	Stop instantly	During a momentary power outage, the load feedback energy compensates for the voltage drop, allowing the inverter to continue running for a short period of time.
	Fast current limiting	Avoid frequent overcurrent faults in inverters
	Timing control	Timing control function: Setting time range 0.0Min~6500.0Min
	Communication method support	RS-485
run	Run command channel	Keyboard setting, control terminal setting, serial communication port setting. Can be switched in a variety of ways
	Frequency Source	10 frequency sources: digital setting, analog voltage setting, analog current setting, pulse setting, serial port setting. Can be switched in a variety of ways
	Auxiliary frequency source	10 auxiliary frequency sources. Flexible auxiliary frequency fine-tuning and frequency synthesis
	Input Terminals	standard: 6 digital input terminals, 1 of which supports high-speed pulse input up to 100KHz (optional for S3); 2 analog input terminals, 1 only supports 0~10V voltage input (FIN), 1 supports 0~10V voltage input or 4~20mA current input (FIC)
	Output Terminalsa	1 digital output terminal (MO1) 1 relay output terminal (RA, RB, RC) 1 analog output terminal, supporting 0~20mA current output or 0~10V voltage output (FOV)
	Remark	The X terminal is NPN type by default, if PNP type is required, it needs to be customized

project name		Specification
Display and keyboard operation	LED Display	Display parameters
	Key lock and function selection	Lock some or all of the keys and define the range of some keys to prevent misoperation.
	Protective function	Power-on motor short circuit detection, output phase loss protection, overcurrent protection, overvoltage protection, undervoltage protection, overheating protection, overload protection, etc.
environment	Place of use	Indoors, away from direct sunlight, dust, corrosive gas, flammable gas, oil mist, water vapor, dripping water or salt, etc.
	Altitude	Less than 1000m (downshift is required if the speed is higher than 1000m)
	Ambient temperature	-10℃～+40℃ (When the ambient temperature is 40℃~50℃, please use it at a lower gear)
	humidity	Less than 95% RH, no condensation
	vibration	Less than 5.9m/s²(0.6g)
	storage temperature	-20℃~+60℃

Note: For specific functions of each power segment, please refer to the basic wiring diagram

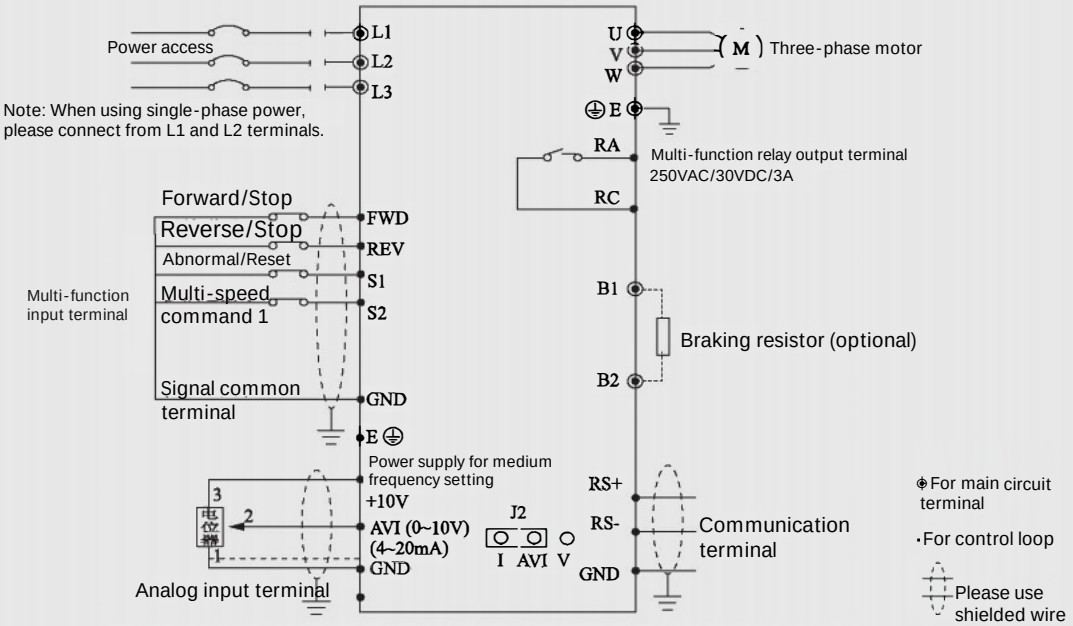
Specifications

Inverter Model	Input Current (A)	Output Power (kW)	Customer volume (kVA)	Output current (A)	Overload capacity (60sIA)	Overload capacity (kW)
Input voltage: 1PH AC220V±15%						
NZ200-0R4G-2	5.4	0.4	1	2.5	3.75	0.4
NZ200-0R75G-2	7.2	0.75	2	5	7.5	0.75
NZ200-1R5G-2	10	1.5	2.8	7	10.5	1.5
NZ200-2R2G-2	16	2.2	4.5	11	16.5	2.2
NZ200-3R7G-2	17	3.7	7.2	16.5	24.75	3.7
Input voltage：3PH AC380V±15%						
NZ200-0R4G-4	3.4	0.4	2	1.2	1.8	0.4
NZ200-0R75G-4	3.8	0.75	2.2	2.5	3.75	0.75
NZ200-1R5G-4	5	1.5	3.2	3.7	5.55	1.5
NZ200-2R2G-4	5.8	2.2	4	5	7.5	2.2
NZ200-3R7G/5R5P-4	10.7	3.7	6.8	9	13.5	3.7
NZ200-5R5G/7R5P-4	14.6	5.5	10	13	19.5	5.5
NZ200-7R5G/11P-4	20	7.5	11.2	17	25.5	7.5
NZ200-11G/15P-4	26	11	17	25	37.5	11
NZ200-15G/18P-4	35	15	26	32	48	15
NZ200-18G/22P-4	38	18.5	32	37	55.5	18.5
NZ200-22G/30P-4	46	22	37	45	67.5	22
NZ200-30G/37P-4	62	30	52	60	90	30
NZ200-37G/45P-4	76	37	64	75	112.5	37
NZ200-45G/55P-4	92	45	72	90	135	45
NZ200-55G/75P-4	113	55	84	110	165	55
NZ200-75G/90P-4	157	75	115	150	225	75
NZ200-90G/110P-4	180	90	135	176	264	90
NZ200-110G/132P-4	214	110	160	210	315	110
NZ200-132G/160P-4	256	132	193	253	379.5	132
NZ200-160G/185P-4	307	160	230	300	450	160
NZ200-185G/200P-4	355	185	260	340	510	185
NZ200-200G/220P-4	385	200	290	380	570	200
NZ200-220G/250P-4	430	220	320	420	630	220
NZ200-250G/280P-4	475	250	365	470	705	250
NZ200-280G/315P-4	525	280	427	520	780	280
NZ200-315G/350P-4	610	315	460	600	900	315
NZ200-350G/400P-4	620	350	516	640	960	350
NZ200-400G/450P-4	670	400	600	690	1035	400
NZ200-450G/500P-4	790	450	638	790	1185	450
NZ200-500G/560P	865	500	725	860	1290	500
NZ200-560G/630P	960	560	812	950	1425	560
NZ200-630G/710P	1112	630	913	1100	1650	630

Note: 55G/630G cannot be G/P combined, please pay attention when ordering.

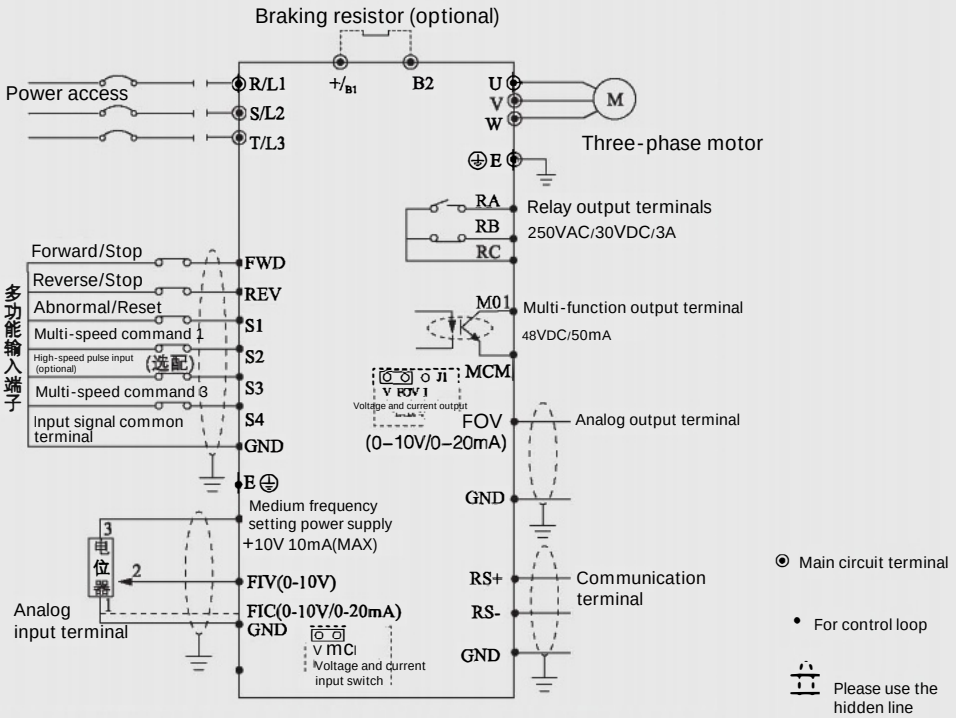
Basic wiring diagram

(1)0.75-37kW



Note: 220V/0.4~1.5kW and 380V/0.4~2.2kW do not include a brake unit;
220V/2.2~3.7KW and 380V/3.7~37kW have a built-in brake unit.

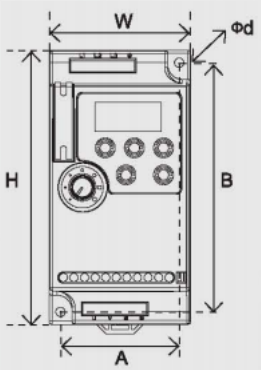
(2)45-630kW

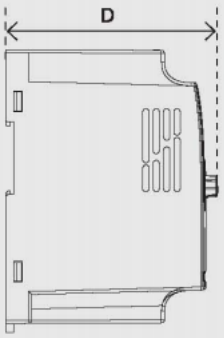


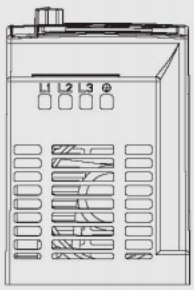
**Note 1: 45--500KW can be equipped with an optional built-in brake unit;

外形尺寸

Inverter Model	Dimensions (mm)			Installation size (mm)			Dimensions Unit: mm
	W(width)	H(High)	D(thick)	A	B	φd	
Input voltage：1PHAC220V±15%							
NZ200-0R4G-2	72	142	112.2	61	130	4.5	
NZ200-0R75G-2							
NZ200-1R5G-2							
NZ200-2R2G-2	85	180	116	72	167	5.5	
NZ200-3R7G-2							
Input voltage：3PHAC380V±15%							
NZ200-0R4G-4	72	142	112.2	61	130	4.5	
NZ200-0R75G-4							
NZ200-1R5G-4							
NZ200-2R2G-4							
NZ200-3R7G/5R5P-4	85	180	116	72	167	5.5	
NZ200-5R5G/7R5P-4							
NZ200-7R5G/11P-4	106	240	153	96	230	4.5	
NZ200-11G/15P-4							
NZ200-15G/18P-4	151	332	165.5	137	318	7	
NZ200-18G/22P-4							
NZ200-22G/30P-4							
NZ200-30G1-4							
NZ200-30G/37P-4	217	400	201	202	385	7	
NZ200-37G/45P-4							
NZ200-45G-4-6							
NZ200-45G/55P-4	300	473	240	200	455	9	
NZ200-55G/75P-4							
NZ200-75G1-4	338	470	240	270	455	9	
NZ200-75G/90P-4	275	630	311.5	200	612	9	
NZ200-90G/110P-4							
NZ200-110G/132P-4							
NZ200-132G2-4	300	650	310	200	633	9	
NZ200-132G/160P-4	400	715	311.5	320	695	11	
NZ200-160G/185P-4							
NZ200-185G/200P-4	400	830	321.5	160+160	810	11	
NZ200-200G/220P-4							
NZ200-220G/250P-4							
NZ200-250G/280P-4	530	970	350	215+215	950	11	
NZ200-280G/315P-4							
NZ200-315G/350P-4							
NZ200-350G/400P-4	550	1180	400	230+230	1150	13	
NZ200-400G/450P-4							
NZ200-450G/500P-4							
NZ200-500G/560P							
NZ200-560G/630P	760	1400	450	325+325	1370	13	
NZ200-630G/710P							







Note: 55G/630G cannot be G/P.combined, please pay attention when ordering.

Z2000 Series High Performance Vector Inverter

- Open-loop vector control, V/F control
- Strong overload capacity, 150% rated current/60s, 180% rated current/3s
- Excellent performance, good environmental adaptability
- Simple structure, small size, easy to install
- High-performance vector inverter, large torque output, can ensure smooth motor start under heavy load
- With instantaneous stop and fast current limiting functions, can reduce the probability of frequent fault alarms of the inverter
- Complete protection functions, with output phase loss protection, overcurrent/overvoltage/overload/overheating protection and other functions
- Support permanent magnet synchronous motor control (Z2000T series)
- Power range:
220V:0.4~7.5kW
380V:0.4~450kW

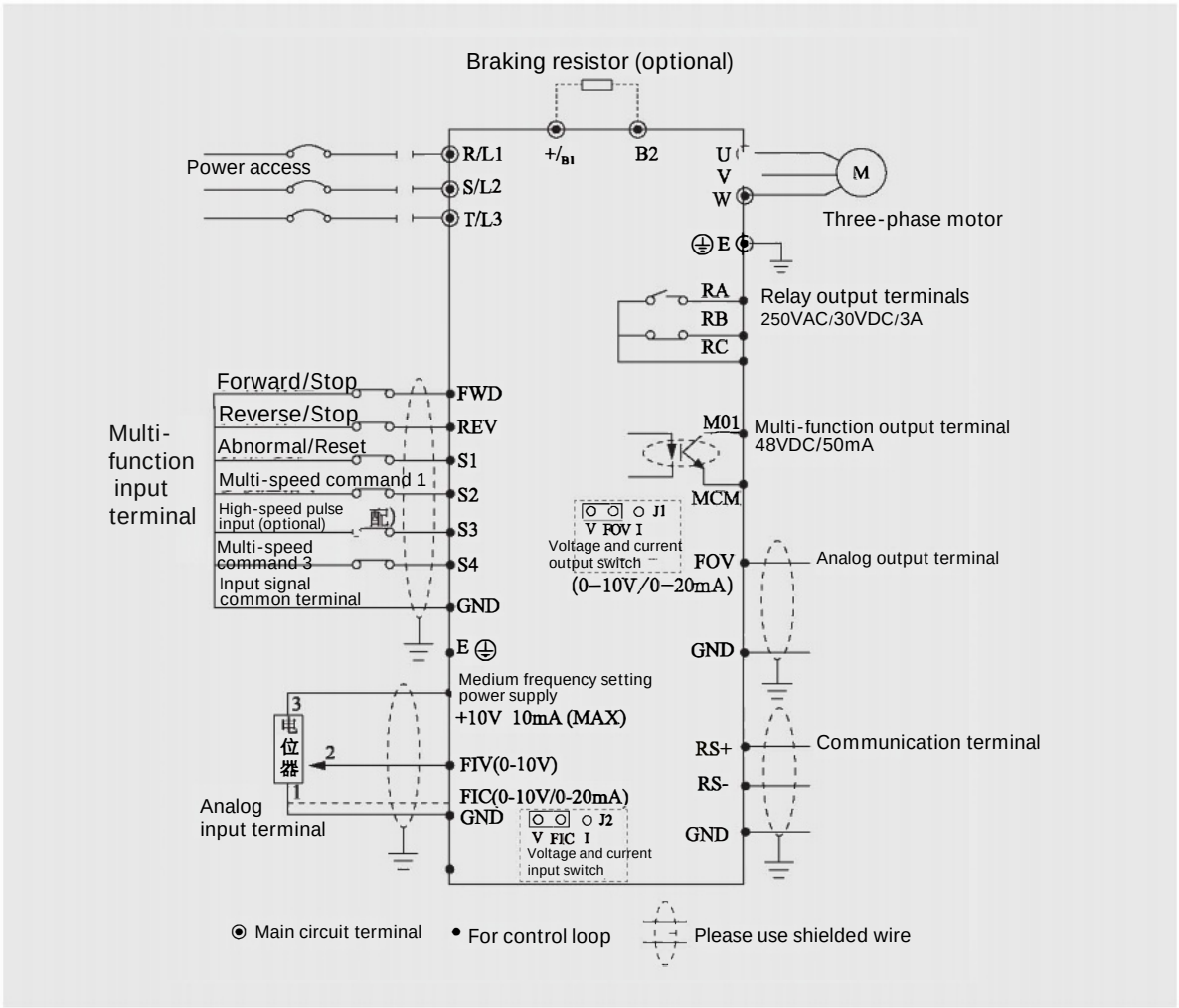
Technical indicators

	project name	Specification
Basic control functions	control method	V/F control Open loop vector control
	Maximum frequency	Vector control：0~320Hz V/F control：0~3200Hz
	Carrier frequency	1KHz~16kHz The carrier frequency can be automatically adjusted according to the load characteristics
	Input frequency resolution	Digital setting: 0.01Hz Analog setting: Maximum frequency × 0.025%
	Starting torque	G type: 0.5Hz/150%; P-type machine: 0.5Hz/100%
	Speed range	1:100
	Steady speed accuracy	±0.5%
	Overload capacity	G type machine: 150% rated current 608; 180% rated current 3s P-type machine: 120% rated current for 60s; 150% rated current for 3s
	Torque boost	Automatic torque boost; manual torque boost 0.1%~30.0%
	VF Curve	3 types: linear type; multi-point type; N-th power type VF curve
	VF separation	2 methods: full separation, semi-separation
	Acceleration and deceleration curve	Straight or S-curve acceleration and deceleration mode. 4 acceleration and deceleration time, acceleration and deceleration time range 0.0~6500.0s
	DC braking	DC braking frequency: 0.00Hz~maximum frequency; braking time: 0.0s~100.0s; Braking action current value: 0.0%~100.0%
	Jog control	Jog frequency range: 0.00Hz~5000Hz. Jog acceleration/deceleration time: 00s~6500.0s.
	Simple PLC, Multi-speed operation	A maximum of 16 speed steps can be achieved through built-in PLC or control terminals
	Built-in PID	It is easy to realize the closed-loop control system of process control
	Automatic Voltage Regulation (AVR)	When the grid voltage changes, it can automatically keep the output voltage constant
	Overvoltage and overspeed stall control	Automatically limit current and voltage during operation to prevent frequent over-current and over-voltage tripping
	Fast current limiting function	Minimize overcurrent faults and protect the normal operation of the inverter
	Torque limitation and control	"Excavator" feature automatically limits the torque during operation to prevent frequent overcurrent tripping

Specifications

Inverter Model	Rated output power (kW)	Rated input current A)	Rated output current (A)	Applicable motor (kW)
Input voltage：1PH/3PH AC220V±15%				
Z2200-0R4G	0.4	5.4	2.5	0.4
Z2200-0R75G	0.75	7.2	5	0.75
Z2200-1R5G	1.5	10	7	1.5
Z2200-2R2G	2.2	16	11	2.2
Z2200-3R7G	3.7	23	16.5	3.7
Z2200-5R5G	5.5	21	25	5.5
Z2200-7R5G	7.5	31	32	7.5
Input voltage：3PHAC380V±15%				
Z2400-0R4G	0.4	3.4	2	0.4
Z2400-0R75G	0.75	3.8	2.5	0.75
Z2400-1R5G	1.5	5	3.7	1.5
Z2400-2R2G	2.2	5.8	5	2.2
Z2400-3R7G/5R5P	3.7/5.5	10/15.0	9.0/13	3.7/5.5
Z2400-5R5G	5.5	15	13	5.5
Z2400-7R5P	7.5	20	17	7.5
Z2400-7R5G/11P	7.5/11	20/26	17/25	7.5/11
Z2400-11G/15P	11/15.0	26/35	25/32	11/15.0
Z2400-15G/18.5P	15/18.5	35/38	32/37	15/18.5
Z2400-18.5G/22P	18.5/22	38/46	37/45	18.5/22
Z2400-22G/30P	22/30	46/62	45/60	22/30
Z2400-30G/37P	30/37	62/76	60/75	30/37
Z2400-37G/45P	37/45	76/90	75/90	37/45
Z2400-45G/55P	45/55	92/113	90/110	45/55
Z2400-55G	55	113	110	55
Z2400-75P	75	157	150	75
Z2400-75G/90P	75/90	157/180	150/176	75/90
Z2400-90G/110P	90/110	180/214	176/210	90/110
Z2400-110G/132P	110/132	214/256	210/253	110/132
Z2400-132G/160P	132/160	256/307	253/300	132/160
Z2400-160G/185P	160/185	307/355	300/340	160/185
Z2400-185G/200P	185/200	355/385	340/380	185/200
Z2400-200G/220P	200/220	385/430	380/420	200/220
Z2400-220G/250P	220/250	430/475	420/470	220/250
Z2400-250G/280P	250/280	475/525	470/520	250/280
Z2400-280G/315P	280/315	525/610	520/600	280/315
Z2400-315G/350P	315/350	610/665	600/640	315/350
Z2400-350G/400P	350/400	665/700	640/690	350/400
Z2400-400G/450P	400/450	700/800	690/790	400/450
Z2400-450G/500P	450/500	800/865	790/860	450/500

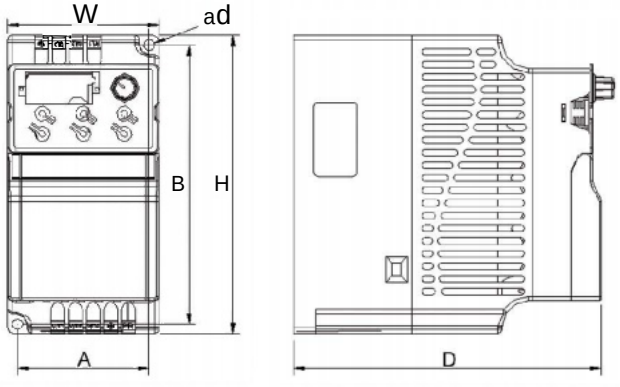
Basic wiring diagram



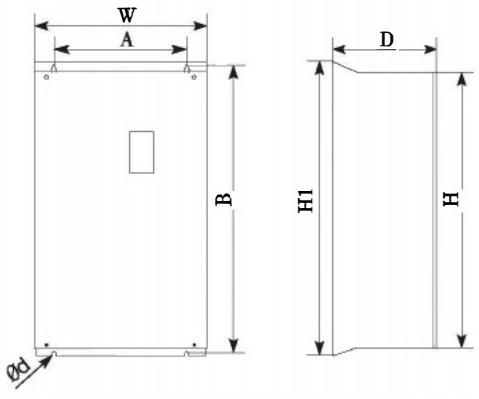
*Note 1: 37KW and below (inclusive) have built-in brake unit. 45--160KW can be equipped with built-in brake unit as an option;
**Note 2: 30--220kW can be equipped with built-in DC reactor as an option;

Dimensions

(1) 0.4--22kW

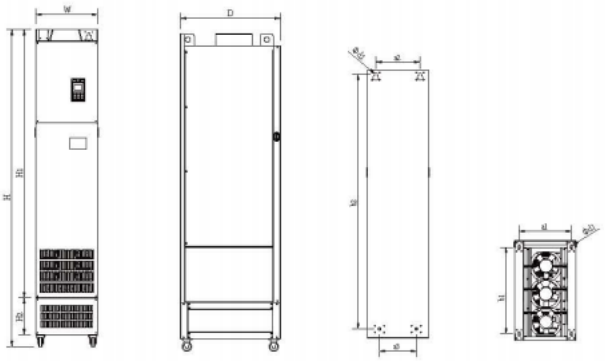


(2) 30--160kW



Inverter Model	Dimensions (mm)				Installation size (mm)			Remark
	W(width)	H(High)	H1	D(thick)	A	B	φd	
Z2200–0R4G Z2200–0R75G Z2200–1R5G	72	142	—	152	62.7	132.7	5	—
Z2200–2R2G Z2200–3R7G	100	183	—	143	90	173	5	--
Z2400–0R4G Z2400–0R75G Z2400–1R5G Z2400–2R2G	72	142	—	152	62.7	132.7	5	—
Z2400–3R7G/5R5P Z2400–5R5G	100	183	—	143	90	173	5	—
Z2400–7R5P Z2400–7R5G/11P Z2400–11G/15P Z2400–15G/18.5P–1	130	260	—	184	120	250	5	—
Z2400–15G/18.5P Z2400–18.5G/22P Z2400–22G/30P	195	280	—	179	182.5	266	7	—
Z2400–30G/37P Z2400–37G/45P	245	390	425	193	180	410	7	Optional built-in DC reactor
Z2400–45G/55P Z2400–55G Z2400–75P	300	500	540	254	200	522	9	
Z2400–75G/90P	338	546	576	258	270	560	9	
Z2400–90G/110P Z2400–110G/132P	338	550	580	301.5	270	564	9	
Z2400–132G/160P Z2400–160G/185P	400	675	715	310	320	695	11	No built-in DC reactor
Z2400–132G/160PZ Z2400–160G/185PZ	400	871.5	915	310	320	895	11	Built-in DC reactor

(3)185--450kW



Inverter Model	Dimensions (mm)					Floor installation dimensions (mm)			Wall mounting dimensions (mm)			
	W(width)	H(High)	Hn	H2	D(thick)	a1	b1	d1	a2	a3	b2	d2
Z2400–185G/200P Z2400–200G/220P Z2400–220G/250P	300	1445	1180	200	500	250	430	14	220	150	1135	13
Z2400–250G/280P	330	1595	1330	200	545	280	475	14	220	185	1275	13
Z2400–280G/315P Z2400-315G/350P	325	1495	1230	200	545	275	470	14	225	185	1175	14
Z2400–350G/400P Z2400-400G/450P Z2400–450G/500P	335	1720	1455	200	545	285	470	14	240	200	1380	14

Keyboard opening size

(1) 04--22kW 68.5mm*39mm (with retaining ring)

(2) 30--450kW external pull-out tray opening size: 70mm*119mm

Unit: mm

Z8000 series high performance closed loop vector inverter

- Can automatically adjust the carrier frequency according to the load characteristics
- Wide range of functions, suitable for most applications
- Built-in PID control
- Support Profibus communication protocol (option)
- Support various types of PG cards
- Various industry-specific models, can realize tension control, spindle servo, permanent magnet motor and other functions •

Power range:
220V:0.4~3.7kW
380V:0.75~1000 kW
690V: 11~1000 kW

Technical indicators

	project name	Specification
Basic control functions	control method	Open loop vector control (without PG), closed loop vector control (with PG), VF control
	Upper frequency	Vector control: 0~320Hz VF control: 0~3200Hz
	Carrier frequency setting	1KHz~16KHz The carrier frequency can be automatically adjusted according to the load characteristics
	Input frequency resolution	Digital setting: 0.01Hz Analog setting: Maximum frequency × 0.025%
	Starting torque	G type: 0.5Hz/150% (without PG); 0Hz/180% (with PG) P-type machine: 0.5Hz/100%
	Speed range	1:100 (no PG) 1:1000 (with PG)
	Steady speed accuracy	±0.2% (without PG) ±0.02% (with PG)
	Torque control accuracy	Torque control accuracy
	Overload capacity	G type machine: 150% rated current for 60s; 180% rated current for 3s P-type machine: 120% rated current for 60s; 150% rated current for 3s
	Torque boost	Automatic torque boost; manual torque boost 0.1%~30.0%
	VF Curve	Three modes: linear type; multi-point type; N-th power VF curve (1.2th power, 1.4th power, 1.6th power, 1.8th power, 2nd power)
	V/F separation	2 methods: full separation, semi-separation
	Acceleration and deceleration curve	Straight or S-curve acceleration and deceleration mode. Four acceleration and deceleration times. Acceleration and deceleration time range 0.0—6500.0S
	DC braking	True flow braking frequency: 0.00Hz—maximum frequency Braking time: 0.0S~100.0S Braking action current value: 0.0%~100.0%
	Jog control	Jog frequency range: 0.00Hz—50.00Hz Jog acceleration and deceleration time 0.0S~6500.0S
	PLC multi-speed operation	A maximum of 16 speed steps can be achieved through built-in PLC or control terminals
	Built-in PID	It is easy to realize the closed-loop control system of process control
	Automatic Voltage Regulation (AVR)	When the grid voltage changes, it can automatically keep the output voltage constant
	Overvoltage and overspeed stall control	Automatically limit current and voltage during operation to prevent frequent over-current and over-voltage tripping
	Fast current limiting function	Minimize overcurrent faults and protect the normal operation of the inverter
	Torque limitation and control	"Excavator" feature, automatically limits torque during operation to prevent frequent overcurrent tripping, closed-loop vector mode can achieve torque control

Expansion Card

Expansion card external model	name	Applicable models
PG-B1	ERN1387_SIN&COS input PG card_DB15	Z8400-5.5 and above
PG-B2	ABZ differential input PG card terminal interface	Z8400-3.7 and above
PG-B3	Resolver PG card_terminal interface	Z8400-3.7and above
PG-B4	ABZ_OC input PG card_terminal interface	Z8400-3.7and above
PG-B5	ABZUVW_Differential input PG card_DB15	Z8400-5.5and above
PG-B8	CARDO_with PT100_fan output_485 adapter	Z8400-3.7and above
PG-B9	Profibus Card	Z8400-5.5and above
PG-B10	ABZ_Differential Input PG Card_DB9	Z8400-5.5and above
PG-B11	Resolver PG Card_DB9	Z8400-5.5and above
PG-B12	1A input interface board injection molding machine	Z8400-3.7and above
PG-B13	GPRS expansion card_with network port_485 or 232 interface optional	30kW and below need external
PG-D1	Dual ABZ_OC input PG card terminal interface	Z8400D-3.7 and above
PG-D2	Dual ABZ differential input PG card terminal interface	Z8400D-3.7 and above

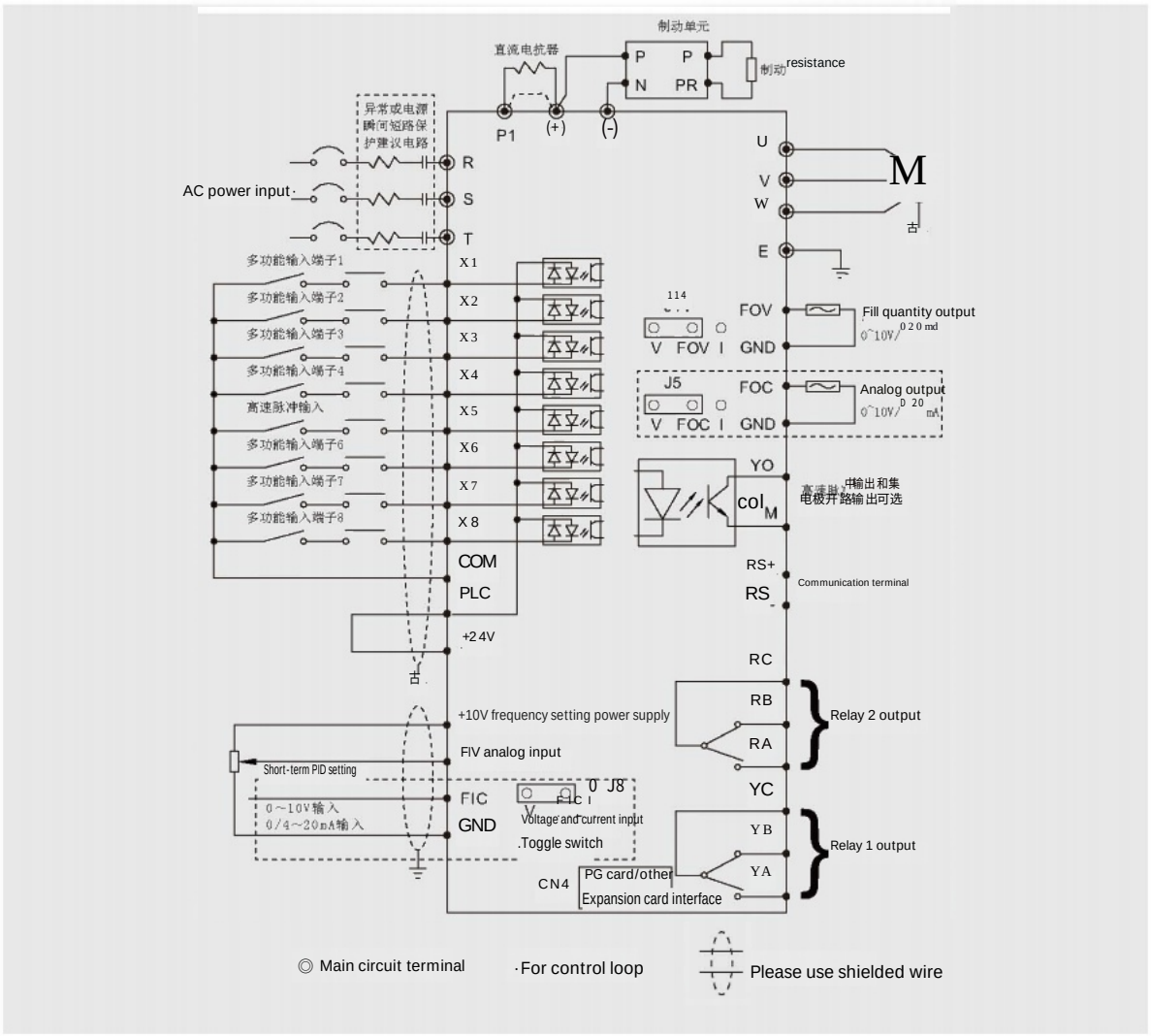
Specifications

Inverter Model	Rated output power (kW)	Rated input current(A)	Rated output current(A)	Applicable motor (kW)
Input voltage: 1PH AC220V±15%				
Z8200-0R4G	0.4	5.4	2.5	0.4
Z8200-0R75G	0.75	7.2	5	0.75
Z8200-1R5G	1.5	10	7	1.5
Z8200-2R2G	2.2	16	11	2.2
Z8200-3R7G	3.7	23	16.5	3.7
Input voltage: 3PH AC380V±15%				
Z8400-0R75G	0.75	3.8	2.5	0.75
Z8400-1R5G	1.5	5	3.7	1.5
Z8400-2R2G	2.2	5.8	5	2.2
Z8400-3R7G/5R5P	3.7/5.5	10/15.0	9.0/13	3.7/5.5
Z8400-5R5G/7R5P	5.5/7.5	15/20	13/17	5.5/7.5
Z8400-7R5G/11P	7.5/11	20/26	17/25	7.5/11
Z8400-11G/15P	11/15	26/35	25/32	11/15.0
Z8400-15G/18.5P	15/18.5	35/38	32/37	15/18.5
Z8400-18.5G/22P	18.5/22	38/46	37/45	18.5/22
Z8400-22G/30P	22/30	46/62	45/60	22/30
Z8400-30G/37P	30/37	62/76	60/75	30/37
Z8400-37G/45P	37/45	76/90	75/90	37/45
Z8400-45G/55P	45/55	92/113	90/110	45/55
Z8400-55G	55	113	110	55
Z8400-75P	75	157	150	75
Z8400-75G/90P	75/90	157/180	150/176	75/90
Z8400-90G/110P	90/110	180/214	176/210	90/110
Z8400-110G/132P	110/132	214/256	210/253	110/132
Z8400-132G/160P	132/160	256/307	253/300	132/160
Z8400-160G/185P	160/185	307/355	300/340	160/185
Z8400-185G/200P	185/200	355/385	340/380	185/200
Z8400-200G/220P	200/220	385/430	380/420	200/220
Z8400-220G/250P	220/250	430/475	420/470	220/250

Inverter Model	Rated output power (kW)	Rated input current(A)	Rated output current(A)	Applicable motor (kW)
Z8400-250G/280P	250/280	475/525	470/520	250/280
Z8400-280G/315P	280/315	525/610	520/600	280/315
Z8400-315G/350P	315/350	610/665	600/640	315/350
Z8400-350G/400P	350/400	665/700	640/690	350/400
Z8400-400G/450P	400/450	700/800	690/790	400/450
Z8400-450G/500P	450/500	800/865	790/860	450/500
Z8400-500G/560P	500/560	865/960	860/950	500/560
Z8400-560G/630P	560/630	960/1112	950/1100	560/630
Z8400-630G/710P	630/710	1112/1290	1100/1280	630/710
Z8400-710G/800P	710/800	1290/1472	1280/1380	710/800
Z8400-800G/900P	800/900	1472/1680	1380/1640	800/900
Z8400-900G/1000P	900/1000	1680/1800	1640/1720	900/1000
Z8400-1000G	1000	1800	1720	1000

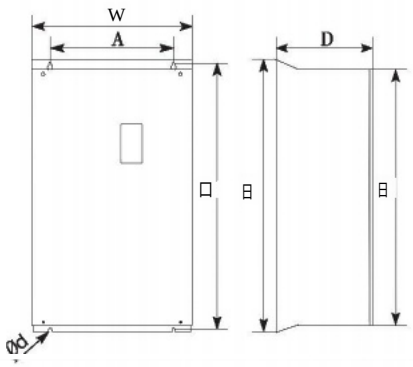
Inverter Model	power (kw)	Output current (A)	Dimensions (mm)			Installation size (mm) A*B*φd	remark
			W(width)	H(High)	D(thick)		
Input voltage：3PH AC(660V~690V)±15%							
Z8600-11G/15P	11	12	277	410	189	262*390*φ6.5	Wall Mount
Z8600-15G/18D5P	15	16					
Z8600-18GD5/22P	18.5	20					
Z8600-22G/30P	22	24					
Z8600-30G/37P	30	33					
Z8600-37G/45P	37	41					
Z8600-45G/55P	45	50					
Z8600-55G/75P	55	62	300	595	236	200*573*φ9	Wall Mount
Z8600-75G/90P	75	85					
Z8600-90G/110P	90	102					
Z8600-110G/132P	110	125	380	620	290	250*595*09	Wall Mount
Z8600-132G/160P	132	150					
Z8600-160G/185P	160	175	380	880	358	250*840*Φ13	Wall Mount
Z8600-185G/200P	185	198					
Z8600-200G/220P	200	215					
Z8600-220G/250P	220	245					
Z8600-250G/280P	250	260	630	995	350	500*971*φ11	Wall Mount
Z8600-280G/315P	280	299					
Z8600-315G/350P	315	330					
Z8600-350G/400P	350	374	680	1040	400	520*1016*φ11	Wall Mount
Z8600-400G/450P	400	410					
Z8600-450G/500P	450	465					
Z8600-500G/560P	500	510					
Z8600-560G/630P	560	540	650	1800	920	620*610*φ17	Cabinet
Z8600-630G/710P	630	570					
Z8600-710G/800P	710	646					
Z8600-800G/900P	800	728					
Z8600-900G/1000P	900	819	750	1800	920	620*710°φ17	Cabinet
Z8600-1000G/1100P	1000	910					
Z8600-1100G/1250P	1100	1000	900	1800	920	620*860*φ17	Cabinet
Z8600-1250G/1400P	1250	1137					
Z8600-1400G/1600P	1400	1273	1050	2000	930	630*1010*φ17	Cabinet
Z8600-1600G	1600	1500					

Basic wiring diagram

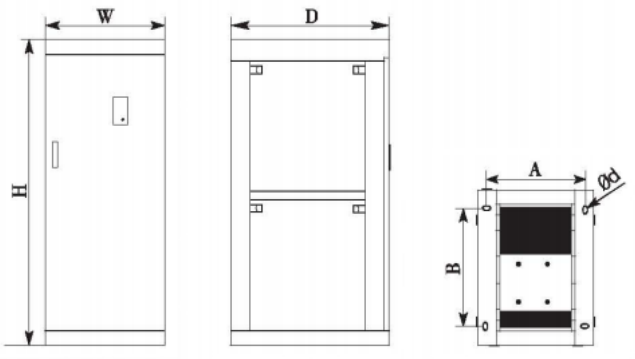


Dimensions

(1) Wall-mounted installation diagram



(2) Cabinet installation diagram



Unit: mm

model	Dimensions (mm) W(width)	H(High)	Hl (High)	D(thick)	Installation size (mm) A*B*d	Installation	Remark
Z8200-0R4G Z8200-0R75G Z8200-1R5G Z8200-2R2G	125	170	—	140	117*160*Φ5	Wall-mounted	Full plastic
Z8200-3R7G	120	225	—	143	105*208*Φ5		Semi-plastic
Z8400-0R4G Z8400-0R75G Z8400-1R5G Z8400-2R2G	125	170	—	140	117*160*Φ5		Full plastic
Z8400-3R7G/5R5P	120	225	--	143	105*208*Φ5		Semi-plastic
Z8400-5R5G/7R5P Z8400-7R5G/11P	185	260	—	170	168*248*Φ6.5		Full plastic
Z8400-11G/15P Z8400-15G/18.5P	210	330	—	190	195*310*Φ6.5		Semi-plastic
Z8400-18.5G/22P Z8400-22G/30P Z8400-30G/37P Z8400-37G-NN	277	410	—	189	262*390*Φ6.5		
Z8400-37G/45P	300	430	455	212	200*433*Φ9		Iron shell type
Z8400-45G/55P Z8400-55G Z8400-75P	300	535	560	236	200*538*Φ9		
Z8400-75G/90P	338	546	576	258	270*560*Φ9		Iron shell type (new product)
Z8400-90G/110P Z8400-110G/132P	338	550	580	301.5	270*564*Φ9		
Z8400-132G/160P Z8400-160G/185P	420	Wall-mounted: 730 Cabinet type: 1130	Wall-mounted: 790 Cabinet type: 1165	330	Wall-mounted: 300~765*11 Cabinet type: 250*350*φ12	Wall-mounted or cabinet-mounted	Iron shelltype
Z8400-185G/200P Z8400-200G/220P Z8400-220G/250P	530	Wall-mounted: 800 Cabinet type: 1300	Wall-mounted: 860 Cabinet type: 1335	335	Wall-mounted: 400°835'011 Cabinet: 250·450·Φ12		
Z8400-250G/280P Z8400-280G/315P Z8400-315G/350P	700	Wall-mounted: 880 Cabinet type: 1380	Wall-mounted: 940 Cabinet type: 1415	350	Wall-mounted: 600*915*φ11 Cabinet: 250~620°Φ12	Wall-mounted or cabinet-mounted	Iron shell type
Z8400-350G/400P-N Z8400-400G/450P-N Z8400-450G/500P-N Z8400-500G/560P-N	550	1120	1180	400	(230+230)*1150*Φ13	Wall Mount	
Z8400-560G/630P-N Z8400-630G/710P-N	760	1330	1400	450	(325+325)*1370*Φ13		
Z8400-350G/400P Z8400-400G/450P Z8400-450G/500P	600	1600	——	800	550*700*Φ13	Cabinet	
Z8400-500G/560P Z8400-560G/630P Z8400-630G/710P	650	1600	——	800	600*700*Φ13		
Z8400-710G/800P Z8400-800G/900P Z8400-900G/1000P Z8400-1000G	700	2200	——	1000	650*900*Φ13		

Note: Keyboard pull-out tray opening size: 3.7kW (inclusive) and below: 99.5mm*56mm
5.5kW (inclusive) and above: 141.5mm*79.5mm

Z5000-BF Series (H5000-BF) High Protection Grade Inverter

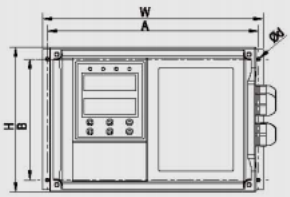
- Motor end cover installation
- Can be used for heavy-duty equipment
- V/F control version (H5000P series) available
- With waterless shutdown function
- With timing/antifreeze/fault pump replacement/waterless alarm functions
- IP65 protection, suitable for use in harsh environments
- Power range:
  220V: 0.75~2.2kW
  380V: 0.75~110kW

Technical indicators

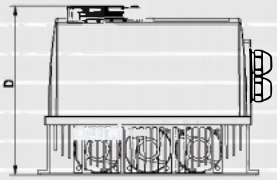
project name		Specification
Basic control functions	control method	V/F control; open loop vector control
	Maximum frequency	Vector control: 0~320Hz; VF control: 0~3200Hz
	Carrier frequency	1KHZ~16KHz The carrier frequency can be automatically adjusted according to the load characteristics
	Input frequency resolution	Digital setting: 0.01Hz Analog setting: Maximum frequency × 0.025%
	Starting torque	G type: 0.5Hz/150%; P type: 0.5Hz/100%
	Speed range	1:100
	Steady speed accuracy	±0.5%
	Overload capacity	G type machine: 150% rated current for 60s; 180% rated current for 3s P-type machine: 120% rated current for 60s; 150% rated current for 3s
	Torque boost	Automatic torque boost; manual torque boost 0.1%~30.0%
	V/F Curve	3 types: linear type; multi-point type; N-th power type VF curve
	V/F separation	2 methods: full separation, semi-separation
	Acceleration and deceleration curve	Straight or S-curve acceleration and deceleration mode. 4 acceleration and deceleration time, acceleration and deceleration time range 0.0~6500.0s
	DC braking	True flow braking frequency: 0.00Hz~maximum frequency; braking time: 0.0s~100.0s; Braking action current value: 0.0%~100.0%
	Jog control	Jog frequency range: 0.00Hz~50.00Hz. Jog acceleration/deceleration time: 0.0s~6500.0s.
	Simple PLC, multi-speed operation	A maximum of 16 speed steps can be achieved through built-in PLC or control terminals
	Built-in PID	It is easy to realize the closed-loop control system of process control
	Automatic Voltage Regulation (AVR)	When the grid voltage changes, it can automatically keep the output voltage constant
	Overvoltage and overspeed stall control	Automatically limit current and voltage during operation to prevent frequent over-current and over-voltage tripping
	Fast current limiting function	Minimize overcurrent faults and protect the normal operation of the inverter
	Torque limitation and control	"Excavator" feature automatically limits the torque during operation to prevent frequent overcurrent tripping

Specifications and dimensions

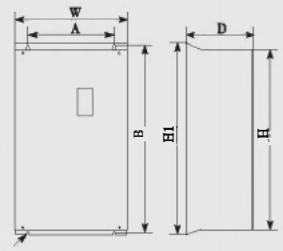
model	Applicable motor (kw)	Output current (A)	External shadow ruler (mm) W(width)	H(High)	D(thick)	Installation size (mm) A	B	φd	Dimensions Unit: mm
Z5200A0D75K-BF	0.75	5	188	122	134	178	105	4	
Z5200A01D5K-BF	1.5	7							
Z5200A02D2K-BF	2.2	11							
Z5400A0D75K-BF	0.75	2.5	188	122	134	178	105	4	
Z5400A01D5K-BF	1.5	3.7							
Z5400A02D2K-BF	2.2	5							
Z5400A03D7K-BF	3.7	9	235	154	179	225	129	4	
Z5400A05D5K-BF	5.5	13							
Z5400A07D5K-BF	7.5	17							
Z5400A0011K-BF	11	25							
Z5200A0D75K-BF-V	0.75	5	140	190	138	130	160	4.5	
Z5200A01D5K-BF-V	1.5	7							
Z5400A0D75K-BF-V	0.75	2.5							
Z5400A01D5K-BF-V	1.5	3.7							



model	Applicable motor (kw)	Output current (A)	Dimensions (mm) W(width)	H(High)	D(thick)	Installation size (mm) A	B	φd	Dimensions Unit: mm
Z5400A02D2K-BF-V	2.2	5	140	190	138	130	160	4.5	
Z5400A03D7K-BF-V2	3.7	9							
Z5400A05D5K-BF-V2	5.5	13	140	225	139	130	160	4.5	
Z5400A07D5K-BF-V2	7.5	17							
Z5400A03D7K-BF-V	3.7	9	192	280	178	180	200	5.5	
Z5400A05D5K-BF-V	5.5	13							
Z5400A07D5K-BF-V	7.5	17	192	280	178	180	200	5.5	
Z5400A0011K-BF-V	11	25							
Z5400A0015K-BF	15	32							
Z5400A0018K-BF	18.5	37	236	300	204	225	250	7	
Z5400A0022K-BF	22	45							
Z5400A0030K-BF	30	60	236	400	231	225	175+175	7	
Z5400A0037K-BF	37	75							

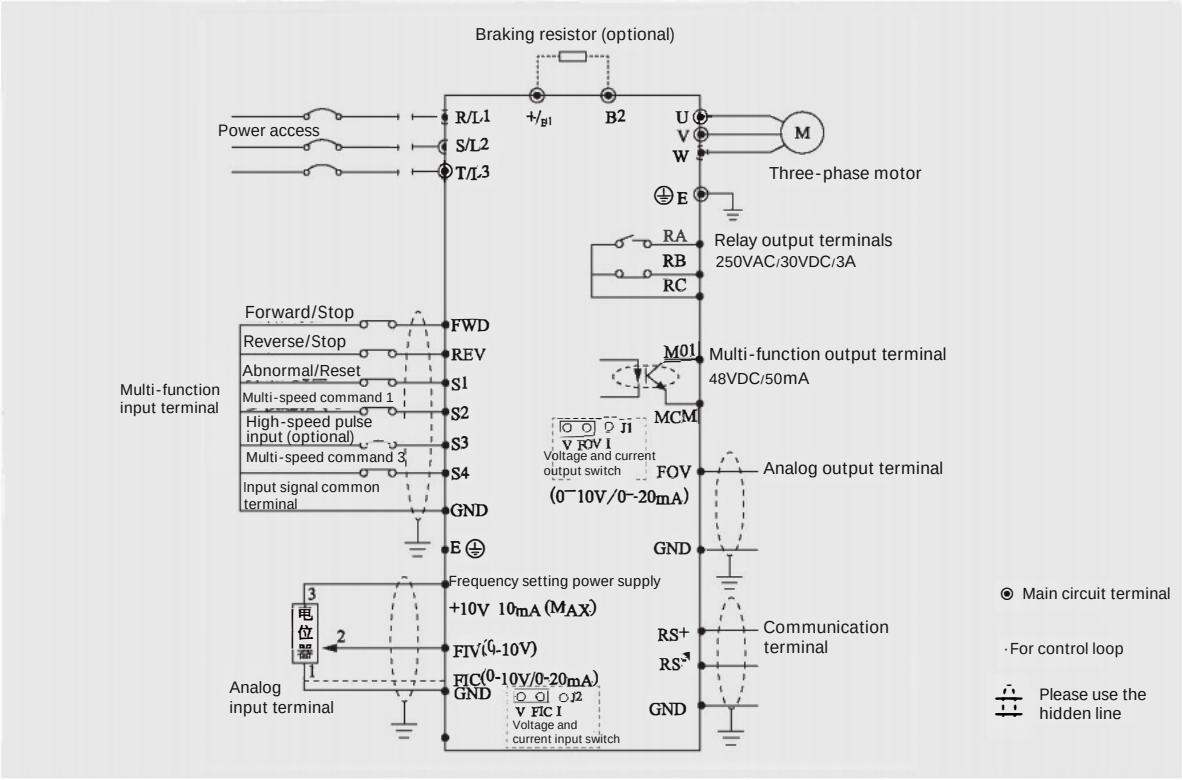


model	Applicable motor (kw)	Output current (A)	Dimensions (mm) W(width)	H(High)	H	D(thick)	Installation size (mm) A	B	φd	Dimensions Unit: mm
Z5400A0045K-BF	45	90	300	450	482	278	210	465	9	
Z5400A0055K-BF	55	110								
Z5400A0075K-BF	75	150	400	520	560	275	300	535	9	
Z5400A0090K-BF	90	176								
Z5400A0110K-BF	110	210								



Note: 380V/0.75-11KW has both horizontal and vertical installations, -V is vertical installation. 15kW and above are vertical installations.

Basic wiring diagram



H5000 series constant pressure water supply dedicated inverter

- Energy saving and environmental protection
- Simple operation, flexible control
- V/F control, built-in PID control
- Standard RS485 communication function
- Automatic "sleep" and "wake up"
- Overvoltage and undervoltage protection can be set
- Power range:

380V:5.5~250kW

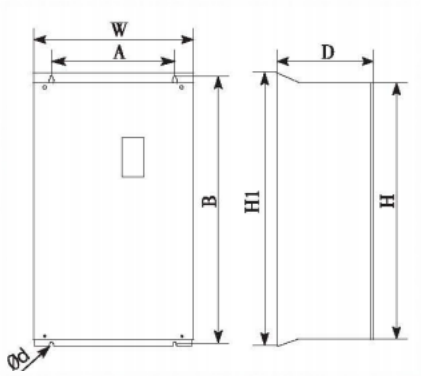
Technical indicators

project name		Specification
input	Rated voltage, frequency	1PH/3PH 220V 50/60Hz;3PH380V 50/60Hz
	Voltage allowable range	220V:170V~240V;380V:330V~440V
output	Voltage	220V:0～220V；380V:0～380V
	frequency	0.10~400.0Hz
control method		Space vector, VF control
display		Five-digit digital tube display, indicator light display, display of set frequency, output frequency, output current, DC bus voltage, module temperature, operating status, fault, etc.
Control characteristics	Output frequency range	0.10~400.0Hz
	Frequency setting resolution	Digital setting 0.01Hz, analog setting: 0.1% of maximum output frequency
	Output frequency accuracy	0.01Hz
	V/F control	The VF curve can be set arbitrarily to meet the needs of various loads
	Torque control	Automatic boost: Automatically determine the torque boost according to the load conditions; Manual boost: can set 0.0~20.0% torque boost
	Multi-function input terminal	8 multi-function input terminals, realizing 15-speed control, program operation, 4-speed acceleration and deceleration switching, UP/DOWN function, emergency stop and other functions
	Multi-function output terminal	There are 3 multi-function output terminals to realize the indication and alarm output of running, zero speed, external abnormality, program running, etc. There are 8 special contacts for water supply, which are used for switching between variable frequency and industrial frequency, and can realize the dragging of 4 combined variable frequency pumps.
	Acceleration/deceleration time setting	0~6000s can set acceleration/deceleration time separately
Other functions	PID Control	Built-in PID control
	RS485	Standard RS485 communication function (MODBUS)
	Frequency setting	Analog 0~10V, 0~20mA, operator direct setting, RS485 setting, UP/DOWN
	Multi-speed	8 multi-function input terminals, can form 15 speed levels
	Automatic voltage regulation	Automatic voltage regulation function can be selected as needed
	counter	Built-in 2 sets of counters
	Keyboard parameter copy	Optional DP-LEDO5/DP-LEDO6 keyboard can realize this function

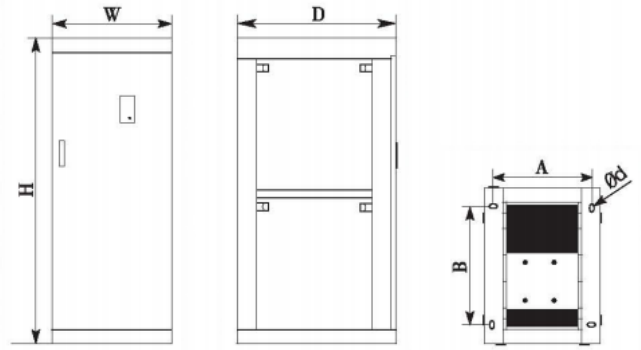
project name		specification
Protective functiona	Overload protection	Constant torque 150%/1 minute, variable torque 120%/1 minute
	Overvoltage protection	Overvoltage protection can be set
	Undervoltage protection	Undervoltage protection can be set
	Other protection	Overheat protection, short circuit protection, overcurrent protection, parameter lock, etc.
environment	Ambient temperature	-10℃ to 40℃ (no freezing)
	environment humidity	Below 95% (no condensation)
	altitude	Below 1000m (if it exceeds 1000m, you need to downshift)
	vibration	0.5G or less
structure	cooling method	Forced air cooling
	Protection level	IP20
Installation		132KW and below are wall-mounted, 160-250KW are wall-mounted or floor-standing

Dimensions

(1) Wall-mounted installation diagram



(2) Cabinet installation diagram



Specifications

model	Applicable motor (kW)	Output current (A)	Dimensions (mm) W(width)	H(High)	H1	D(thick)	Installation size (mm) A	B	d
Input voltage: 3PHAC380V±15%									
H5400P05D5K	5.5	12.5	185	260	_	170	168	248	6.5
H5400P07D5K	7.5	17.5							
H5400P0011K	11	24							
H5400P0015K	15	33	210	330	_	190	195	310	6
H5400P0018K	18.5	40							

model	Applicable motor (kW)	Output current (A)	Dimensions (mm)				Installation size (mm)		
			W(width)	H(High)	H1	D(thick)	A	B	φd
H5400P0022KN	22	47	277	410	-	189	262	390	5
H5400P0030KN	30	65							
H5400P0037KN	37	80							
H5400P0045KN	45	90	300	430	455	212	200	435	5
H5400P0055KN	55	110	300	535	560	236	200	538	9
H5400P0075KN	75	152							
H5400P0090KN1	90	176	338	546	576	258	270	560	9
H5400P0110KN1	110	210	338	550	580	301.5	270	564	9
H5400P0132KN1	132	255							
H5400P0160KN1	160	305	420	Wall-mounted: 730 Cabinet type: 1130	Wall-mounted: 790 Cabinet type: 1165	330	Wall-mounted: 300 Cabinet type: 250	Wall-mounted: 765 Cabinet type: 350	Wall-mounted: 11 Cabinet type: 12
H5400P0185KN1	185	340							
H5400P0200KN1	200	380	530	Wall-mounted: 800 Cabinet type: 1300	Wall-mounted: 860 Cabinet type: 1335	335	Wall-mounted: 400 Cabinet type: 250	Wall-mounted: 835 Cabinet type: 450	Wall-mounted: 13 Cabinet type: 12
H5400P0220KN1	220	425							
H5400P0250KN1	250	480							

Application Diagram