ZONCN

CE CAS ISO9001 UKAS QUALITY MANAGEMENT IAF MEMBER OF MULTILATERAL RECOGNITION ARRANGEMENT





Changes for Better Life



Wuhu ZONCN Automation Equipment Co., Ltd.

Company Profile

Wuhu ZONCN Automation Equipment Co.,Ltd. is affiliated with Shanghai Zhongchen Electronic Technology Co., ltd. It takes charges for the exporting business for overseas market. ZONCN was founded in 2006 and listed on Shanghai Stock Exchange (Stock code 603275). We focus on R&D, production, sales and service of VFD, Servo, HMI, PLC industrial automation products. Our factory covers about 200,000㎡, with over 1000 employees (including 290+ professional engineers). We have obtained ISO9001, ISO14001, ISO45001, CE ceritificates, ensuring quality compliance.

Product Portfolio

1.Inverter

Our products include three series: low-voltage, high-voltage, and multi-drive,covering AC220V-10kV (0.4kW-11,000kW). Widely used in air compressors, plastic machinery, construction machinery, water supply, metallurgy,



textiles, machine tools, chemicals, mining, printing & packaging.

2.Servo Systems

Our product covers DC24V~80V(200W~3kW) and AC220V/380V (100W~55kW). Suitable for high-performance precision control scenarios,widely used in fields such as CNC machine tools, industrial robots, textile machine, and packaging machine.

3.PLC

Support popular communication protocols, including Profi-Net, Ether-CAT, and Modbus TCP. Programming environment is based on Codesys platform. Products widely used in fields such as industrial automation, CNC machine tools, process control, new energy, and rail transit.

4.Reducer

Main series are divided into planetary reducers and harmonic reducers,products accuracy 1-3 arcminutes, ultra-quiet (noise reduced by 10%-20%), high rigidity, large torque, compact design, easy installation; lifelong maintenance-free and multi-motor adaptation.And products also passed the IATF16949. Widely used in Robotics, aerospace equipment, CNC machine tools, semiconductor manufacturing equipment, precision machinery automation control equipment, printing industry, automatic packaging machine industry, industrial automation industry, etc.

Vision

ZONCN has around 30+ agents in overseas markets, with products exported to 50+ countries across Asia, Europe, Africa, Americas. We provide timely technical support and after-sales service globally.We stay committed to the electrical drive field, continuing R&D for innovative products. We warmly welcome global partners to explore industrial automation opportunities together.



CONTENTS

04 **NZ100 Series**
Micro & Economic

06 **NZ200 Series**
Mini Simple Vector Control Inverter

08 **T200 Series**
Multi-function and High-performance Vector Frequency Converter

12 **T9000 Series**
Advanced Vector Control Inverter

17 **Z2000 Series**
Compact Vector Control

19 **Z8000 Series**
High Performance Closed Loop Vector Control Inverter

25 **Z5000-BF Series**
IP65 Inverter

29 **SP600 Series**
Air Compressor Integrator Inverter

31 **T800 Series**
Small Multidrive Product

35 **ZCS880**
Large Multidrive Product

37 **ZCH Series**
Medium Voltage Inverter

40 **ZX300 Series**
Compact PLC

41 **ZQ600 Series**
High Performance PLC

42 **QY20 Series**
Remote I/O

44 **US880/US810 Series**
AC Servo System

48 **AHG Series**
Planetary Reducer

49 **A Series**
Planetary Reducer

50 **TD Series**
Planetary Reducer

51 **Harmonic Reducer**



NZ100 Series

Micro & Economic

- Compact size and low cost design
- Terminals uncovered, easy for wiring
- DIN-rail mounting (below 5.5kW)
- Supports MODBUS via RS485
- Maintenance-free
- V/F control; Built-in PID control
- Power range:
  220V 0.4kW~2.2kW
  380V 0.4kW~450kW

Technical Specification

Items		NZ100
Power supply	Rated voltage, frequency	1PH/3PH AC 220V/380V 50/60Hz
	Voltage range	220V: 170~240V 380V: 330V~440V
Output	Voltage range	220V: 0~220V 380V: 0~380V
	Frequency range	0.0~599Hz
Control method		V/F control
Indication		Operating status/Alarm definition/interactive guidance: frequency setting, the output frequency/ current, DC bus voltage and so on.
Control speculations	Output frequency range	0.1Hz~599Hz
	Frequency setting resolution	Digital input: 0.10Hz, analog input: 0.1% of maximum output frequency
	Output frequency accuracy	0.1Hz
	V/F control	Setting V/F curve to satisfy various load requirements.
	Torque boost	Auto increase: auto raise torque by loading Condition; Manual increase: enable to set 0.0~20.0% of raising torque.
	Multifunctional input terminal	Program running, four-section acceleration/deceleration speed switch, UP/ DOWN function and emergency stop and other functions
	Multifunctional output terminal	1 multi-function output terminals for displaying of run, zero speed, external abnormity, program operation and other information and warnings.
	Acceleration/ deceleration time setting	0~999.9s Acceleration/Deceleration time can be set individually.
Other functions	PID control	Built-in PID control
	RS485	Standard RS485 communication function(MODBUS)
	Frequency setting	Analog input: 0 ~ 10 V, 4~20mA Digital input: Operation panel or RS485 or UP/DOWN. Note: AVI terminals can be used to select an Analog voltage input (AV) and analog current input (AI) through the switch J2.
	Multi-speed	4 multifunction input terminals, 15 sections speed can be set
	Automatic voltage regulation	Automatic voltage regulation function can be selected
	Counter	Built-in 2 group of counters
Protection/ warning function	Overload	150%,60s(constant torque); 150%,60s(variable torque)
	Over voltage	Over voltage protection can be set.
	Under voltage	Under voltage protection can be set
	Other protections	Output short circuit, over current, and parameter lock ……

Items		NZ100
Environment	Ambient temperature	-10°C to 40°C(non-freezing)
	Ambient humidity	Below 95% (non-condensing)
	Altitude	Below 1000m
	Vibration	Max.0.5G
Structure	Cooling mode	Forced air cooling
	Protective structure	IP 20
Installation		Wall-mounted or standard 35mm rail mounting (≤5.5kW)

Specification

Model	Input Current (A)	Output Power (kW)	Output Current (A)	Motor (kW)
Input Voltage(V): 1PH AC220V±15%				
NZ100-0R4G-2	5.4	0.4	2.5	0.4
NZ100-0R75G-2	8.2	0.75	5	0.75
NZ100-1R5G-2	14	1.5	7	1.5
NZ100-2R2G-2	23	2.2	11	2.2
Input Voltage(V): 3PH AC380V±15%				
NZ100-0R4G-4	3.4	0.4	2	0.4
NZ100-0R75G-4	3.8	0.75	2.7	0.75
NZ100-1R5G-4	5	1.5	4	1.5
NZ100-2R2G-4	5.8	2.2	5	2.2
NZ100-3R7G/5R5P-4	10.7	3.7	8.6	3.7
NZ100-5R5G-4	14.6	5.5	12.5	5.5
NZ100-7R5G/11P-4	20	7.5	17.5	7.5
NZ100-11G/15P-4	26	11	24	11
NZ100-15G/18P-4	35	15	33	15
NZ100-18G/22P-4	45	18.5	40	18.5
NZ100-22G/30P-4	50	22	47	22
NZ100-30G/37P-4	68	30	65	30
NZ100-37G/45P-4	86	37	80	37
NZ100-45G/55P-4	96	45	90	45
NZ100-55G-4	115	55	110	55
NZ100-75P-4	165	75	152	75
NZ100-75G/90P-4	165	75	152	75
NZ100-90G/110P-4	180	90	176	90
NZ100-110G/132P-4	215	110	210	110
NZ100-132G/160P-4	265	132	255	132
NZ100-160G/185P-4	315	160	305	160
NZ100-185G/200P-4	355	185	340	185
NZ100-200G/220P-4	385	200	380	200
NZ100-220G/250P-4	430	220	425	220
NZ100-250G/280P-4	468	250	480	250
NZ100-280G/315P-4	535	280	530	280
NZ100-315G/350P-4	610	315	600	315
NZ100-350G/400P-4	655	350	650	350
NZ100-400G/450P-4	725	400	720	400
NZ100-450G/500P-4	795	450	790	450



NZ200 Series

Mini Simple Vector Control Inverter

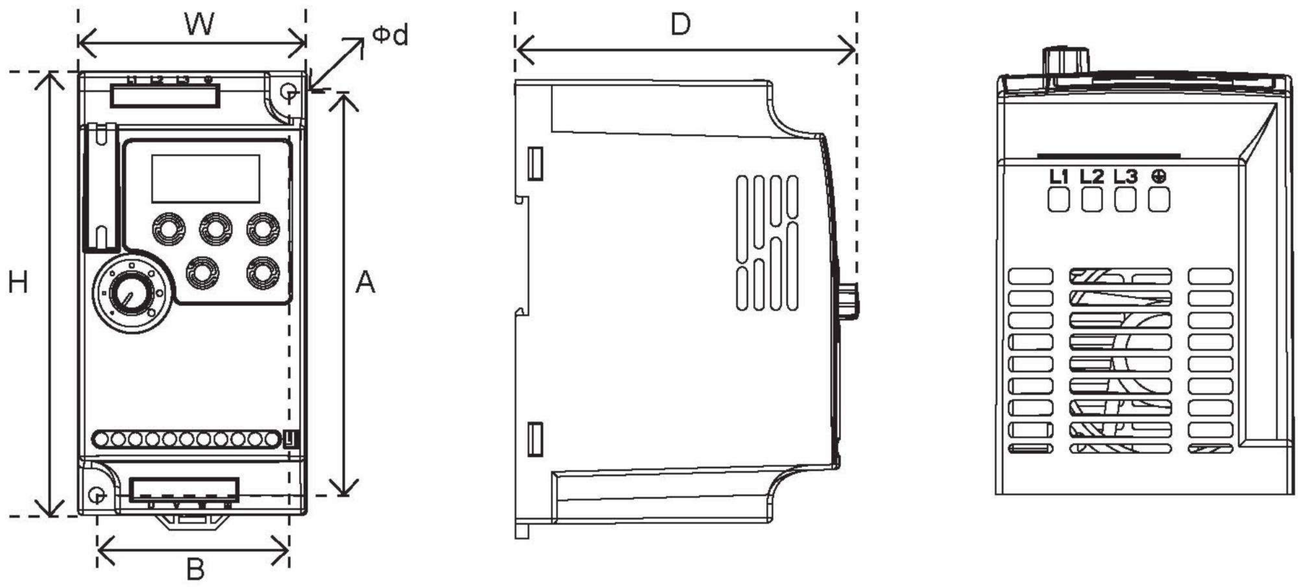
- Open loop vector control, V/F control
- Overload capacity is 60s for 150% of rate current, 3s for 180% of rate current
- High performance; environmental adaptation
- Simple structure; Compact size; Easy install
- Economic vector control inverter, high torque output,
  motor runs smoothly when heavy loading
- Protection function: Output phase loss protection, Over-current protection,
  Over-voltage protection, Overload protection, Over-heat protection etc
- Support PM motor (NZ200T series)
- Power range: 220V 0.4~3.7kW
  380V 0.4~630kW

Specification

Model	Input Current (A)	Output Power (kW)	Output Current (A)	Motor (kW)
Input Voltage(V): 1PH AC220V±15%				
NZ200-0R4G-2	5.4	0.4	2.5	0.4
NZ200-0R75G-2	7.2	0.75	5	0.75
NZ200-1R5G-2	10	1.5	7	1.5
NZ200-2R2G-2	16	2.2	11	2.2
NZ200-3R7G-2	17	3.7	16.5	3.7
Input Voltage(V): 3PH AC380V±15%				
NZ200-0R4G-4	3.4	0.4	1.2	0.4
NZ200-0R75G-4	3.8	0.75	2.5	0.75
NZ200-1R5G-4	5	1.5	3.7	1.5
NZ200-2R2G-4	5.8	2.2	5	2.2
NZ200-3R7G/5R5P-4	10.7	3.7	9	3.7
NZ200-5R5G-4	14.6	5.5	13	5.5
NZ200-7R5G/11P-4	20	7.5	17	7.5
NZ200-11G/15P-4	26	11	25	11
NZ200-15G/18P-4	35	15	32	15
NZ200-18G/22P-4	38	18.5	37	18.5
NZ200-22G/30P-4	46	22	45	22
NZ200-30G/37P-4	62	30	60	30
NZ200-37G/45P-4	76	37	75	37
NZ200-45G/55P-4	92	45	90	45
NZ200-55G-4	113	55	110	55
NZ200-75P-4	157	75	150	75
NZ200-75G/90P-4	157	75	150	75
NZ200-90G/110P-4	180	90	176	90
NZ200-110G/132P-4	214	110	210	110
NZ200-132G/160P-4	256	132	253	132
NZ200-160G/185P-4	307	160	300	160
NZ200-185G/200P-4	355	185	340	185
NZ200-200G/220P-4	385	200	380	200
NZ200-220G/250P-4	430	220	420	220
NZ200-250G/280P-4	475	250	470	250
NZ200-280G/315P-4	525	280	520	280
NZ200-315G/350P-4	610	315	600	315
NZ200-350G/400P-4	650	350	640	350
NZ200-400G/450P-4	696	400	690	400
NZ200-450G/500P-4	795	450	790	450
NZ200-500G/560P-4	865	500	860	500
NZ200-560G/630P-4	960	560	950	560
NZ200-630G-4	1112	630	1100	630

Dimension

Unit: mm



Model	W	H	D	A	B	Φd
Input Voltage(V): 1PH AC220V±15%						
NZ200-0R4G-2	72	142	112.2	130	61	4.5
NZ200-0R75G-2						
NZ200-1R5G-2						
NZ200-2R2G-2	85	180	116	167	72	5.5
NZ200-3R7G-2						
Input Voltage(V): 3PH AC380V±15%						
NZ200-0R4G-4	72	142	112.2	130	61	4.5
NZ200-0R75G-4						
NZ200-1R5G-4						
NZ200-2R2G-4						
NZ200-3R7G/5R5P-4	85	180	116	167	72	5.5
NZ200-5R5G-4						
NZ200-7R5G/11P-4	106	240	153	230	96	4.5
NZ200-11G/15P-4						
NZ200-15G/18P-4	151	332	165.5	318	137	7
NZ200-18G/22P-4						
NZ200-22G/30P-4						
NZ200-30G/37P-4	217	400	201	385	202	7
NZ200-37G/45P-4						
NZ200-45G/55P-4	300	470	240	455	200	9
NZ200-55G-4						
NZ200-75P-4						
NZ200-75G/90P-4	275	630	310	612	200	9
NZ200-90G/110P-4						
NZ200-110G/132P-4						
NZ200-132G/160P-4	400	715	310	695	320	11
NZ200-160G/185P-4						
NZ200-185G/200P-4	400	830	320	810	160+160	11
NZ200-200G/220P-4						
NZ200-220G/250P-4						
NZ200-250G/280P-4	530	970	350	950	215+215	11
NZ200-280G/315P-4						
NZ200-315G/350P-4						
NZ200-350G/400P-4	550	1180	400	1150	230+230	13
NZ200-400G/450P-4						
NZ200-450G/500P-4						
NZ200-500G/560P-4						
NZ200-560G/630P-4	760	1400	450	1370	325+325	13
NZ200-630G-4						



T200 Series

Multi-function and High-performance Vector Frequency Converter

- Economically affordable; Micro compact design
- Easy to use and install: DIN rail installation(below 3.7kW), keyboard cable with RJ45,STO function (support 380V), built-in EMC filter, 24VDC power supply, PID adjustment
- V/F control, open-loop vector control, closed-loop vector control mode
- Power range 0.4~450kW
- Supportingmultiple expansion cards: EtherCAT, Profibus-DP, ProfiNet, ModbusTCP, CAN open, Digital I/O, PG card
- External keyboard parameter copying function

Technical Specification

Item		T200
Basic function	Maximal frequency	0~599Hz
	Carrier frequency	0.5kHz~8kHz Carrier frequency can be adjusted according to the load characteristics.
	Input the frequency resolution	Digital setting: 0.01Hz Analog setting: Maximum frequency x 0.025%
	Control method	V/F control Open-loop vector control (without PG) Closed-loop vector control (with PG)
	Pull-in torque	G-type machine: 0.5Hz / 150% (without PG); P-type machine: 0.5Hz / 100%
	Speed range	1:100 (without PG)
	Torque control accuracy	± 5% (with PG)
	Overload capacity	G-type machine: 150% rated current 60s; 180% rated current 3s. P-type machine: 120% rated current 60s; 150% rated current 3s.
	Recurrent ascension	Automatic torque lifting; manual torque increase 0.1%~30.0%
	V/F curve	3 modes: straight; multipoint; N power V / F curve (1.2 Power, 1.4 power, 1.6 power, 1.8 power, 2 power)
	V/F separation	Voltage and frequency can be controlled separately
	Add deceleration curve	Straight-line or S-curve acceleration and deceleration mode. Four kinds of acceleration and deceleration times, and the acceleration and deceleration time range is 0.0~6500.0s
	DC injection braking	DC braking frequency: 0.00Hz~maximum frequency; Brake time: 0.0s~100.0s; Brake action current value: 0.0%~100.0%
	JOG control	Point movement frequency range: 0.00Hz~50.00Hz. JOG acceleration and deceleration time is 0.0s~6500.0s.
	Simple PLC, multi-segment speed operation	Up to 16 segments are run by the built-in PLC or control terminal
	Built-in PID	Easily realize the process control closed-loop control system
	Automatic Voltage Adjustment (AVR)	When the power grid voltage changes, it can automatically keep the output voltage constant
	Over pressure over pressure loss speed control	Automatic limit current voltage during operation to prevent frequent overflow pressure trip
	Quick flow restriction function	Minimize the overcurrent fault, and protect the normal operation of the frequency converter
	Torque limit and control	Excavator feature automatically limits the torque during operation to prevent frequent overcurrent trip
Individualized functions	Excellent performance	Asynchronous motor is realized with high-performance current vector control technology
	Instantly stop	In case of instantaneous power failure, the inverter is reduced to maintain the operation for a short time
	Fast flow limit	Avoid the frequent overcurrent fault of the frequency converter
	Timing control	Timing control function: set the time range of 0.0Min~6500.0Min
	Communication mode to support	Standard RS485 communication function(MODBUS)

Item		T200
Running	Command source	Operation panel given, control terminal given, serial communication port given. It can be switched in various ways
	Frequency source	10 frequency sources: digital given, analog voltage given, analog current given, pulse given, serial port given. It can be switched in various ways
	Auxiliary frequency source	10 auxiliary frequency sources. Flexibly assist frequency fine-tuning and frequency synthesis
	Input terminal	5 digital input terminals, one of which supports a high-speed pulse input of up to 100kHz; One analog input terminal supports 0 to 10 V, voltage input or 4 to 20 mA current input
	Output terminal	1 collector output terminal 1 relay output terminal 1 analog output terminal to support 0~20mA current output or 0~10V voltage output
Display and operation panel	LED show	Display parameters
	Key lock and function selection	Implement part or all of the keys lock, define the scope of part of the keys to prevent misoperation
	Protective function	Short-circuit detection, output phase deficiency protection, overcurrent protection, overvoltage protection, undervoltage protection, overheating protection, overload protection, etc
Environment	Installation location	Indoor, free from direct sunlight, dust, corrosive gas, combustible gas, oil smoke, vapor, drip or salt.
	Altitude	Below 1000m
	Ambient temperature	-10℃ ~ + 40℃ (de-rated if the ambient temperature is between 40℃ ~50℃)
	Humidity	Below 95% RH (non-condensing)
	Vibration	Below 5.9m / s^2 (0.6g)
	Storage temperature	-20℃~+60℃

Specification

Model	Input Current (A)	Output Power (kW)	Output Current (A)	Motor (kW)
Input voltage: 1PH AC220V±15%				
T200-0R4G-2	5.4	0.4	2.1	0.4
T200-0R75G-2	7.2	0.75	3.8	0.75
T200-1R5G-2	10	1.5	7.2	1.5
T200-2R2G-2	16	2.2	9	2.2
T200-3R7G-2	23	3.7	13	3.7
Input voltage: 3PH AC380V±15%				
T200-0R4G-4	3.4	0.4	1.5	0.4
T200-0R75G-4	3.8	0.75	2.1	0.75
T200-1R5G-4	5.0	1.5	3.87	1.5
T200-2R2G-4	5.8	2.2	5.1	2.2
T200-3R7G/5R5P-4	10/15.0	3.7/5.5	9.0/13	3.7/5.5
T200-5R5G/7R5P-4	15	5.5	13	5.5
T200-7R5G/11P-4	20/26	7,5/11	17/25	7,5/11
T200-11G/15P-4	26/35	11/15.0	25/32	11/15.0
T200-15G/18.5P-4	35/38	15/18.5	32/37	15/18.5
T200-18.5G/22P-4	38/46	18.5/22	37/45	18.5/22
T200-22G/30P-4	46/62	22/30	45/60	22/30
T200-30G/37P-4	62/76	30/37	60/75	30/37
T200-37G/45P-4	76/90	37/45	75/91	37/45
T200-45G/55P-4	92/113	45/55	91/112	45/55
T200-55G-4	113	55	112	55

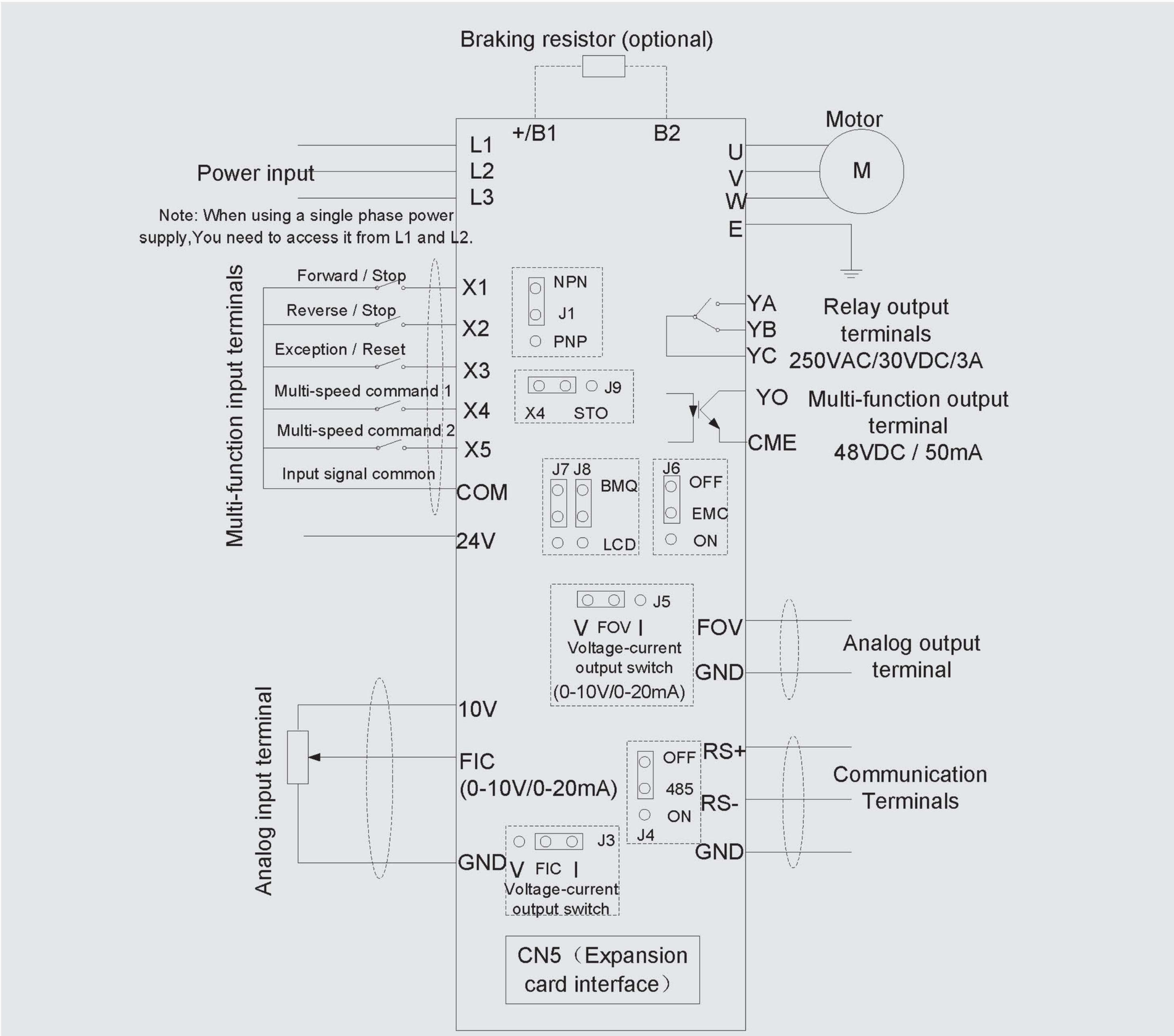
Above 75 kW please contact our sales for detailed information.

Expansion card

Number	Expansion card external model	Function Description	Applicable Models
1	PG-T11-01	ABZ-Differential Input PG Card-5V	T200 0.4~450kW
2	PG-T11-02	ABZ-OC&Push Pull Input PG Card-24V	
3	ET-T11-01	1 normally open/normally closed relay 2 DI, 1 FIV, 1 FOC	
4	ET-T11-02	1 high-speed pulse output 2 DI, 1 FIV. 1 FOC	
5	CM-T11-01	Profibus DP communication card	
6	CM-T11-02	EtherCAT communication card	
7	CM-T11-03	CANopen	
8	CM-T11-04	Modbus TCP communication card	
9	CM-T11-05	Profinet communication card	

Note: T200 support only 1 expansions cards.

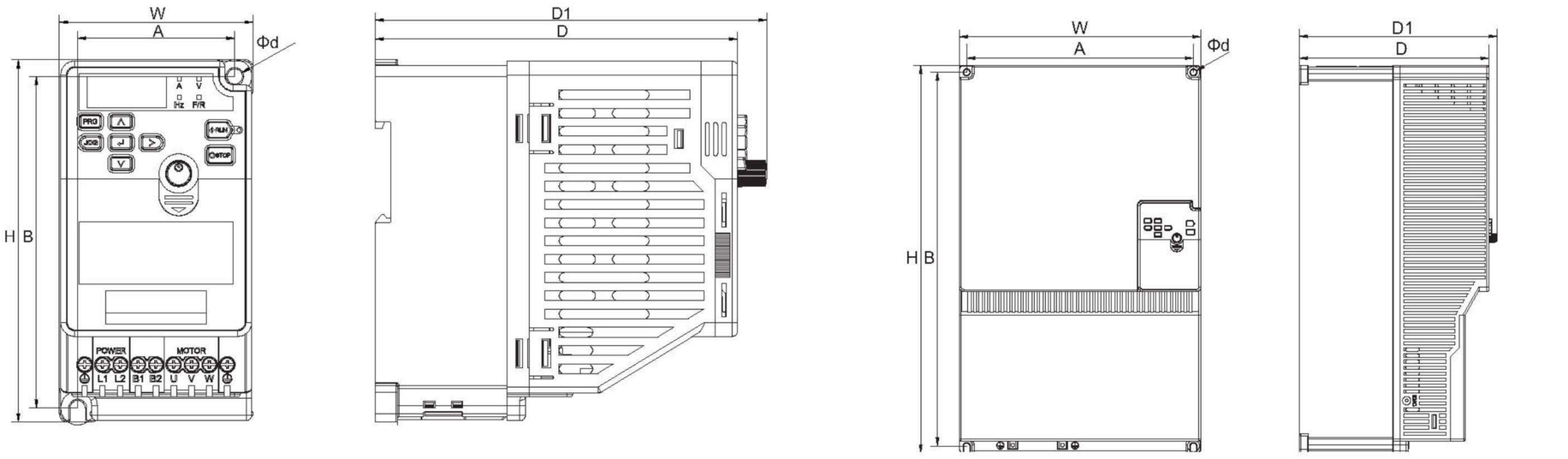
Basic wiring diagram



Note: Built-in braking unit for 55kW, the braking unit is optional for 75~450kW.

Dimension

Unit: mm



SIZE	Model	External dimensions				Installation dimensions			Unit: mm
		W	H	D	D1	A	B	Φd	Installation method
A	T200-0R4G-2	69	149	142	152.5	56	138	5.5	Wall mounting
	T200-0R75G-2								
	T200-1R5G-2								
B	T200-0R4G-4-D	69	129	129	139.5	56	118	5.5	
	T200-0R75G-4-D								
	T200-1R5G-4-D								
	T200-2R2G-4-D								
C	T200-0R4G-4	109	129	133	142	96	118	5.5	
	T200-0R75G-4								
	T200-1R5G-4								
	T200-2R2G-4								
	T200-3R7G/5R5P-4								
	T200-2R2G-2								
D	T200-5R5G/7R5P-4	125	185	165	174	113	175	5.5	
	T200-7R5G/11P-4								
E	T200-11G/15P-4	138	260	165	174	126	250	5.5	
	T200-15G/18.5P-4								
F	T200-18.5G/22P-4	168	282	165	174	152	268	7	
	T200-22G/30P-4								
G	T200-30G/37P-4	205	364	197	206	189	350	7	
	T200-37G/45P-4								
H	T200-45G/55P-4	262	420	205.5	214.5	246	405	7	
	T200-55G-4								



T9000 Series

Advanced Vector Control Inverter

- Open loop/closed loop vector control,
  V/F control (built-in PID) of synchronous and asynchronous motors
- Large torque output, which can ensure smooth starting of motor under heavy load
- Powerful function and outstanding performance,
  suitable for most general occasions
- Support multiple types of PG cards
- Support instant stop and instant start
- Compact structure, easy to install
- Power range:
  220V: 0.4~3.7kW
  380V: 0.4~450kW

Technical Specification

Item		T9000
Basic function	Control Mode	V/F control Sensorless flux vector control (SVC) Close-loop vector control (FVC)(Above 3.7kW)
	Maximum frequency	599Hz
	Carrier frequency	0.5kHz~8kHz The carrier frequency is automatically adjusted based on the load features.
	Input frequency resolution	Digital setting: 0.01Hz Analog setting: Maximum frequency x 0.025%
	Start torque	G Type: 0.5Hz/150%(SVC) P Type: 0.5Hz/100%
	Speed range	1: 100 (SVC)
	Speed stability accuracy	±0.5%(SVC)
	Overload capacity	G Type: 60s for 150% of the rated current, 3s for 180% of the rated current. P Type: 60s for 120% of the rated current, 3s for 150% of the rated current.
	Torque boost	Auto-boost; Customized boost: 0.1%~30.0%
	V/F Curve	Straight-line V/F curve Multi-point V/F curve N-power V/F curve (1.2-power, 1.4-power, 1.6-power, 1.8-power, square)
	V/F separation	2 types: complete separation; half separation
	Ramp Mode	Straight-line ramp. Four groups of acceleration/deceleration time with the range of 0.00`6500.0s
	DC braking	DC braking frequency: 0.00Hz~Maximum frequency Braking time: 0.0s~36.0s 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, Multiple preset speeds	Implements up to 16 speeds via the simple PLC function or combination of terminal states

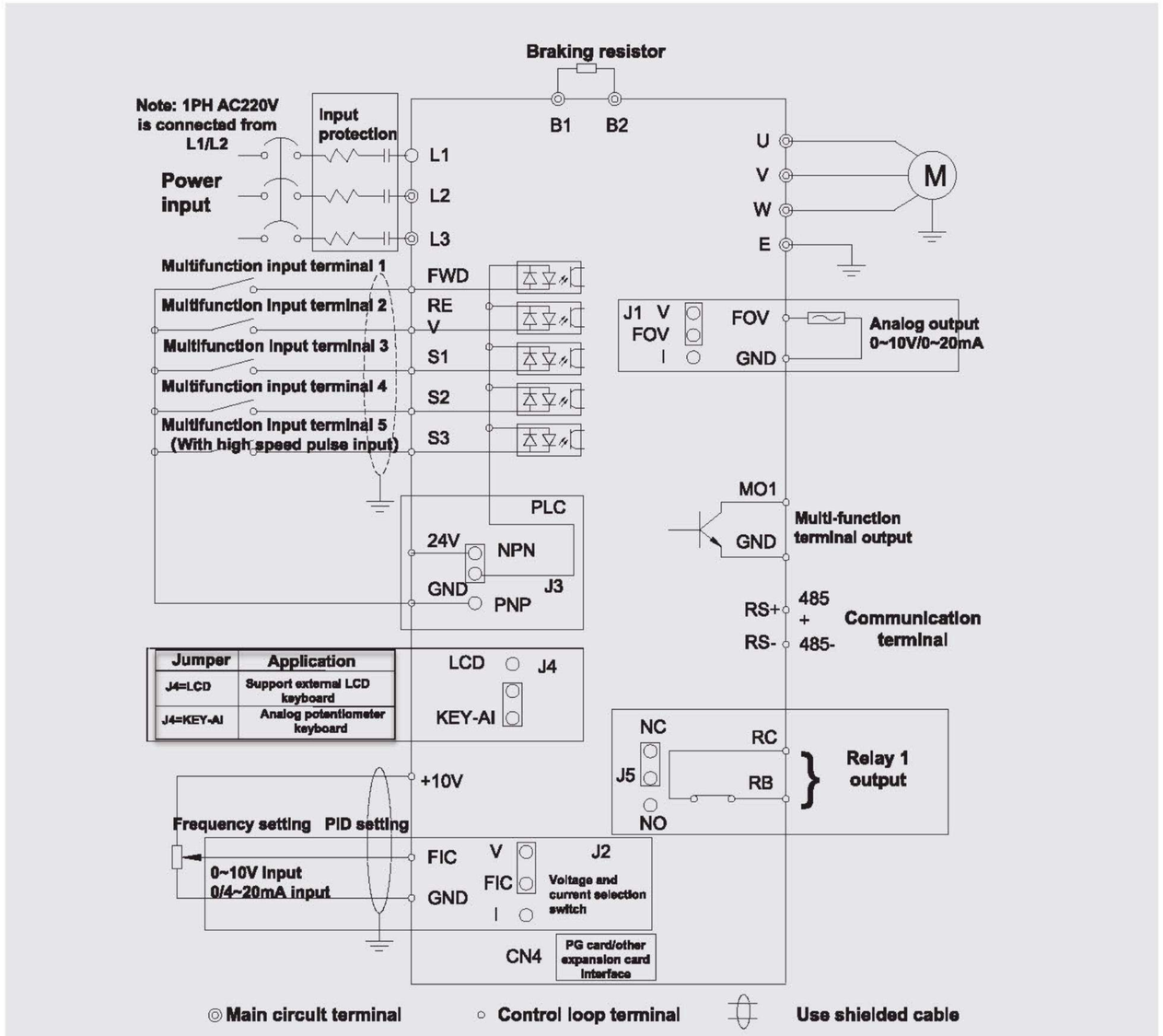
Item		T9000
Basic function	Onboard PID	Realizes process-controlled closed loop control system easily
	Auto voltage regulation(AVR)	Keep constant output voltage automatically when the mains voltage changes
	Overvoltage/overcurrent stall control	Current and voltage are limited automatically during the running process so as to avoid frequent tripping due to over voltage/over current
	Rapid current limit	Avoid frequent over current faults of the AC drive.
	Torque limit and control	Limit the torque automatically and prevent frequent over current tripping during the running process. Torque control can be implemented in the FVC mode.
Individualized functions	High performance	Control of asynchronous motor are implemented through the high-performance current vector control technology
	Rapid dip ride through	Load feedback energy compensates the voltage reduction so that the AC drive can continue to run for a short time
	Support for multiple PG card	Support for differential input PG card,resolver PG card,rotating transformer PG card…
	Rapid current limit	Avoid frequent over current faults of the AC drive.
	Timing control	Timing range: 0.0Min~6500.0Min
	Communication methods	RS - 485
Running	Command source	Operation panel/Control terminals/Serial communication port You can perform switchover between these sources in various ways.
	Frequency source	10 frequency sources. Digital setting, analog voltage setting, analog current setting, pulse setting, serial port setting. You can perform switchover in various ways.
	Auxiliary frequency source	10 auxiliary frequency sources. It can implement fine tuning of auxiliary frequency and frequency synthesis.
	Input terminal	Standard: 4 digital input terminals(Below 5.5kW) /6 digital input terminals(Above 7.5kW); 1 analog input terminal(Below 5.5kW)/2 analog input terminals(Above 7.5kW); 1 voltage input (only support for 0~10V, above 7.5kW), 1 voltage input(0~10V) or current input (4~20mA)
	Output terminal	1 High-speed pulse output terminal (Open-collector) (Above 3.7kW) 1 replay output terminal (Below 5.5kW)/2 replay output terminals(Above 7.5kW) 1 analog output terminal(3.7kW~5.5kW)/2 analog output terminal(Above 7.5kW), Support for 4~20mA current output or 0~10V voltage output
Display and operation panel	LED display	Displays the parameters
	Key locking and function selection	Lock the keys partially or completely and define the function range of some keys so as to prevent mal-function.
	Protection mode	Motor short-circuit detection at power-on, input/output phase loss protection, over current protection, over voltage protection, under voltage protection, overheat protection and overload protection
Environment	Installation location	Indoor, free from direct sunlight, dust, corrosive gas, combustible gas, oil smoke, vapor, drip or salt.
	Altitude	Below 1000m
	Ambient temperature	-10°C ~+ 40°C (de-rated if the ambient temperature is between 40°C ~50°C)
	Humidity	Below 95%RH (non-condensing)
	Vibration	Below 5.9m/s^2(0.6g)
	Storage temperature	-20°C ~+ 60°C

Specification

Model	Input Current (A)	Output Power (kW)	Output Current (A)	Motor (kW)
Input Voltage(V): 1PH AC220V±15%				
T9200-0R4G	5.4	0.4	2.1	0.4
T9200-0R75G	7.2	0.75	3.8	0.75
T9200-1R5G	10	1.5	7.2	1.5
T9200-2R2G	16	2.2	9	2.2
T9200-3R7G	17	3.7	17	3.7
Input Voltage(V): 3PH AC380V±15%				
T9400-0R4G	3.4	0.4	2	0.4
T9400-0R75G	3.8	0.75	2.5	0.75
T9400-1R5G	5	1.5	3.7	1.5
T9400-2R2G	5.8	2.2	5	2.2
T9400-3R7G/5R5P	10/15.0	3.7/5.5	9.0/13	3.7/5.5
T9400-5R5G	15	5.5	13	5.5
T9400-7R5G/11P	20/26	7.5/11	17/25	7,5/11
T9400-11G/15P	26/35	11/15.0	25/32	11/15.0
T9400-15G/18.5P	35/38	15/18.5	32/37	15/18.5
T9400-18.5G/22P	38/46	18.5/22	37/45	18.5/22
T9400-22G/30P	46/62	22/30	45/60	22/30
T9400-30G/37P	62/76	30/37	60/75	30/37
T9400-37G/45P	76/90	37/45	75/91	37/45
T9400-45G/55P	92/113	45/55	91/112	45/55
T9400-55G	113	55	112	55
T9400-75P	157	75	150	75
T9400-75G/90P	157/180	75/90	150/176	75/90
T9400-90G/110P	180/214	90/110	176/210	90/110
T9400-110G/132P	214/256	110/132	210/253	110/132
T9400-132G/160P	256/307	132/160	253/304	132/160
T9400-160G/185P	307/355	160/185	304/340	160/185
T9400-185G/200P	355/385	185/200	340/377	185/200
T9400-200G/220P	385/430	200/220	377/426	200/220
T9400-220G/250P	430/475	220/250	426/465	220/250
T9400-250G/280P	475/525	250/280	465/520	250/280
T9400-280G/315P	525/610	280/315	520/585	280/315
T9400-315G/350P	610/665	315/350	585/650	315/350
T9400-350G/400P	665/730	350/400	650/725	350/400
T9400-400G/450P	730/830	400/450	725/820	400/450
T9400-450G/500P	830/885	450/500	820/880	450/500

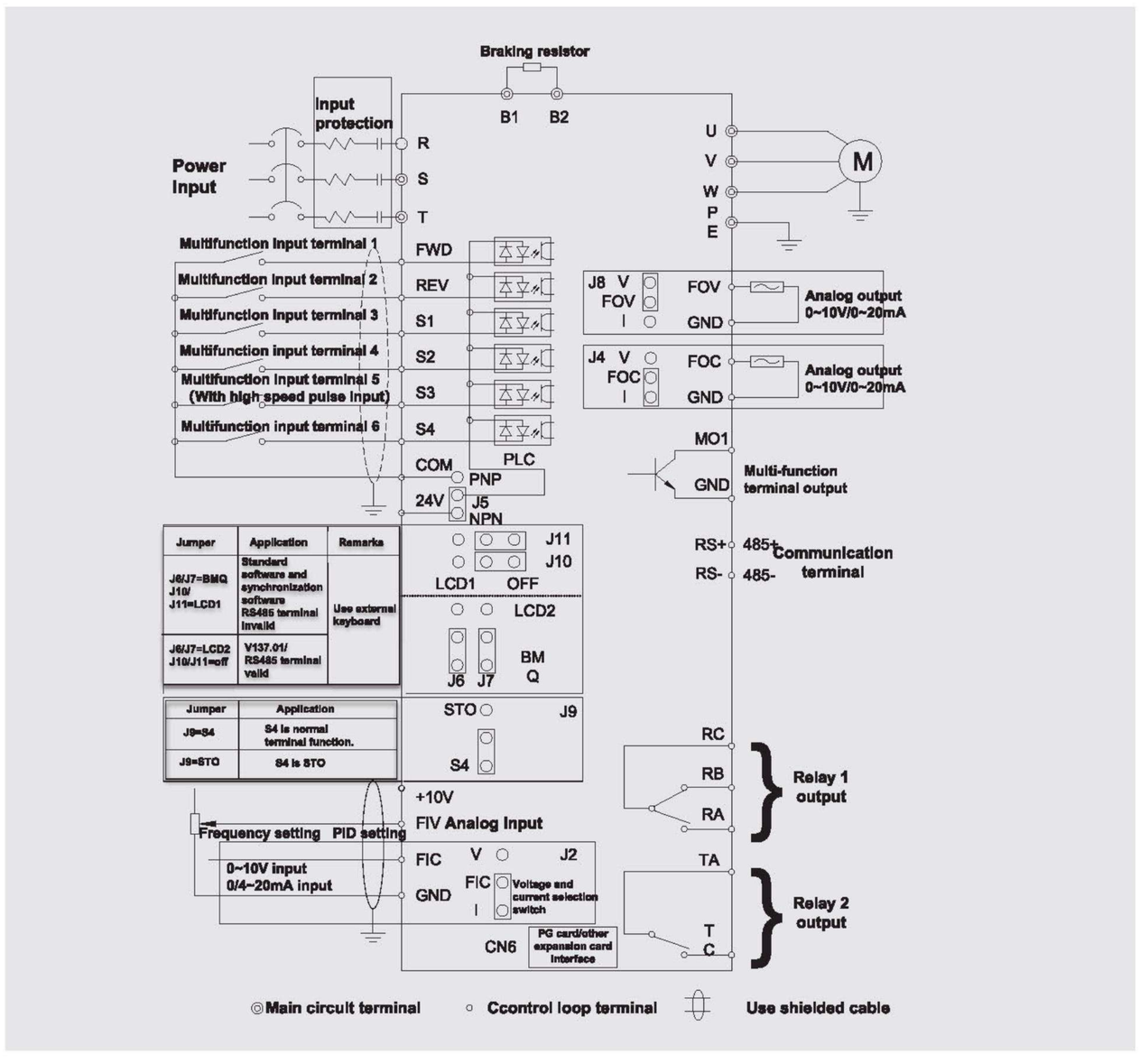
Wiring Diagram

1. 1PH/220V 0.4-3.7kW & 3PH/380V 0.4-5.5kW (vector control)



Note: Terminals B1 and B2 are only available for products above 220V/2.2kW & 380V/3.7kW.

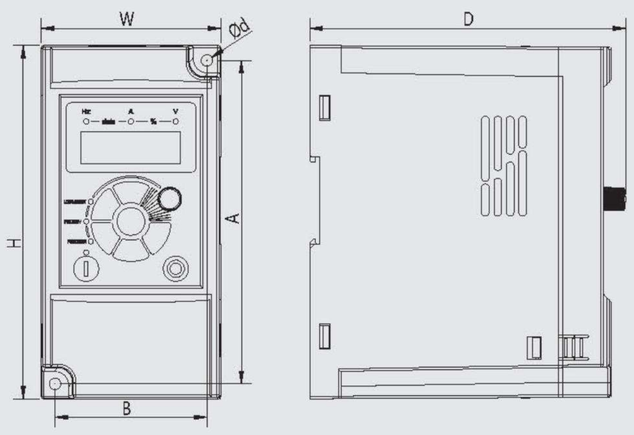
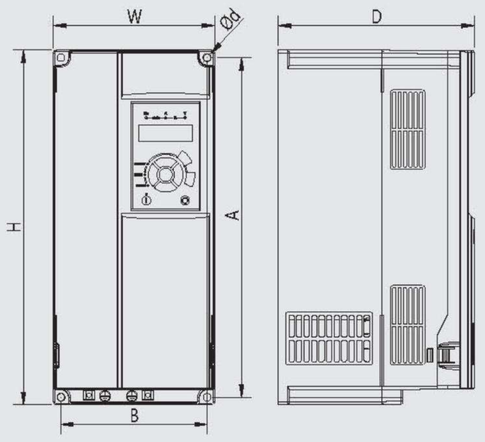
2. 380V/7.5kW-450kW

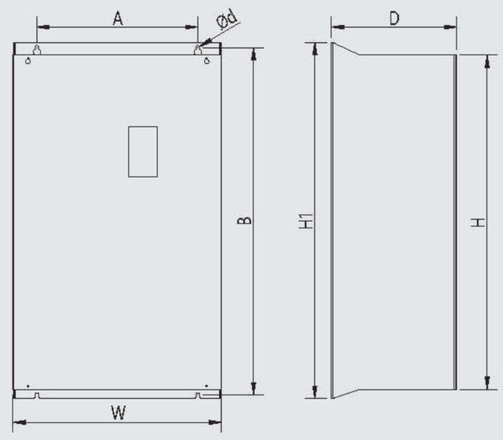


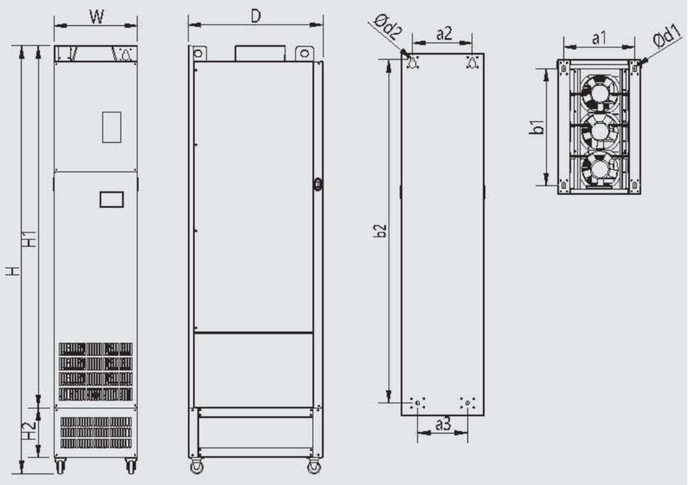
Note: Built-in braking unit for 3.7-37kW, the braking unit is optional for 45-450kW

Dimension

Unit: mm

SIZE	Model	W	H	D	A	B	Φd	Installation
A	T9200-0R4G	72	142	127	130	61	4.5	
	T9200-0R75G							
	T9200-1R5G							
	T9200-2R2G-VF							
	T9400-0R4G							
	T9400-0R75G							
	T9400-1R5G							
	T9400-2R2G							
	T9200-2R2G	85	180	131	167	72	5.5	
	T9200-3R7G							
	T9400-3R7G/5R5P							
	T9400-5R5G							
B	T9400-7R5G/11P	106	240	168	230	96	4.5	
	T9400-11G/15P							
	T9400-15G/18.5P	151	332	183	318	137	7	
	T9400-18.5G/22P							
	T9400-22G/30P							
	T9400-30G/37P	217	400	216	385	202	7	
	T9400-37G/45P							

SIZE	Model	W	H	H1	D	A	B	Φd	Installation
C	T9400-45G/55P	300	440	470	240	200	455	9	
	T9400-55G								
	T9400-75P								
	T9400-75G/90P	275	590	630	310	200	612	9	
	T9400-90G/110P								
	T9400-110G/132P								
	T9400-132G/160P	400	675	715	310	320	695	11	
	T9400-160G/185P								

SIZE	Model	Outline dimention (mm)					Installation Size (mm)			Wall-mounting Size (mm)				Installation
		W	H	H1	H2	D	a1	b1	d1	a2	a3	b2	d2	
D	T9400-185G/200P	300	1445	1180	200	220	150	430	14	1135	13	13	13	
	T9400-200G/220P													
	T9400-220G/250P													
	T9400-250G/280P	330	1595	1330	200	220	185	475	14	1275	13	13	13	
	T9400-280G/315P	325	1495	1230	200	225	185	470	14	1175	14	14	14	
	T9400-315G/350P													
	T9400-350G/400P	335	1720	1455	200	240	200	470	14	1380	14	14	14	
	T9400-400G/450P													
	T9400-450G													



Z2000 Series

Compact Vector Control

- Senseless flux vector control (VC) , V/F (Voltage/Frequency) Control
- Overload capacity is 60s for 150% of the rated current,
  3s for 180% of the rated current
- Ten auxiliary frequency sources
- Implement fine tuning of auxiliary frequency and frequency synthesis
- Support PM motor (Z2000 T series)
- Power range:
  220V 0.4~7.5kW
  380V 0.4~450kW

Technical Specification

Item		Z2000
Standard function	Control mode	Senseless flux vector control(SFVC) Voltage/Frequency (V/F) control
	Maximum frequency	Vector control: 0~320Hz V/F control: 0~599Hz
	Carrier frequency	1kHz~8kHz The carrier frequency is automatically adjusted based on the load features
	Input frequency solution	Digital setting: 0.01Hz Analog setting: maximum frequency x 0.025%
	Startup torque	G type: 0.5Hz/150%(SFVC) P type: 0.5Hz/100%
	Speed range	1:100
	Speed stability accuracy	±0.5%
	Overload capacity	G type: 60s for 150% of the rated current, 3s for 180% of the rated current. P type: 60s for 120% of the rated current, 3s for 150% of the rated current
	Torque boost	Auto boost; Customized boost 0.1%-30.0%
	V/F curve	3 types: line V/F curve; Multi-point V/F curve; N-power V/F curve
	V/F separation	2 types: complete separation; half separation
	Ramp mode	Straight-line ramp; S-curve ramp; 4 groups of acceleration/deceleration time with the range of 0.0-6500.0s
	DC braking	DC braking frequency: 0.0Hz to maximum frequency Braking time: 0.0~100.0s Braking action current value: 0.0%~100.0%
	JOG control	JOG frequency range: 0.00~50.00Hz JOG acceleration/deceleration time: 0.0~6500.0s
	Onboard multiple preset speeds	Implement up to 16 speeds via the simple PLC function or combination of X terminal states.
	Onboard PID	Realizes process-controlled closed loop control system easily
	Auto voltage regulation (AVR)	Keep constant output voltage automatically when the mains voltage changes.
	Auto voltage/ Over current stall control	Current and voltage are limited automatically during the running process so as to avoid frequent tripping due to overvoltage/ over current
	Rapid current limit	Avoid frequent over current faults of the AC drive
	Torque limit and control	Keep constant output voltage automatically when the mains voltage changes

Specification

Model	Input Current (A)	Output Power (kW)	Output Current (A)	Motor (kW)
Input Voltage(V): 1PH AC220V±15%				
Z2000-0R4G	5.4	0.4	2.5	0.4
Z2000-0R75G	7.2	0.75	5	0.75
Z2000-1R5G	10	1.5	7	1.5
Z2000-2R2G	16	2.2	11	2.2
Z2000-3R7G	23	3.7	16.5	3.7
Z2000-5R5G	27	5.5	25	5.5
Z2000-7R5G	31	7.5	32	7.5
Input Voltage(V): 3PH AC380V±15%				
Z2400-0R4G	3.4	0.4	2	0.4
Z2400-0R75G	3.8	0.75	2.5	0.75
Z2400-1R5G	5	1.5	3.7	1.5
Z2400-2R2G	5.8	2.2	5	2.2
Z2400-3R7G/5R5P	10/15.0	3.7/5.5	9.0/13	3.7/5.5
Z2400-5R5G	15	5.5	13	5.5
Z2400-7R5P	20	7.5	17	7.5
Z2400-7R5G/11P	20/26	7,5/11	17/25	7,5/11
Z2400-11G/15P	26/35	11/15.0	25/32	11/15.0
Z2400-15G/18.5P	35/38	15/18.5	32/37	15/18.5
Z2400-18.5G/22P	38/46	18.5/22	37/45	18.5/22
Z2400-22G/30P	46/62	22/30	45/60	22/30
Z2400-30G/37P	62/76	30/37	60/75	30/37
Z2400-37G/45P	76/90	37/45	75/90	37/45
Z2400-45G/55P	92/113	45/55	90/110	45/55
Z2400-55G	113	55	110	55
Z2400-75P	157	75	150	75
Z2400-75G/90P	157/180	75/90	150/176	75/90
Z2400-90G/110P	180/214	90/110	176/210	90/110
Z2400-110G/132P	214/256	110/132	210/253	110/132
Z2400-132G/160P	256/307	132/160	253/300	132/160
Z2400-160G/185P	307/355	160/185	300/340	160/185
Z2400-185G/200P	355/385	185/200	340/380	185/200
Z2400-200G/220P	385/430	200/220	380/420	200/220
Z2400-220G/250P	430/475	220/250	420/470	220/250
Z2400-250G/280P	475/525	250/280	470/520	250/280
Z2400-280G/315P	525/610	280/315	520/600	280/315
Z2400-315G	610	315	600	315
Z2400-350G/400P	665/700	350/400	640/690	350/400
Z2400-400G/450P	700/800	400/450	690/790	400/450
Z2400-450G	800/865	450/500	790/860	450/500



Z8000 Series

High Performance Close loop Vector Control

- The carrier frequency is automatically adjusted based on the load features
- Wide Frequency range, adapt to most applications
- V/F control, On board PID control;
  Modbus communication (Optional parts)
- Support for various PG card; Special for kinds of industries,
  with tension control, spindle servo, support for PM motor ect
- Power range:
  220V 0.4kW~3.7kW
  380V 0.75kW~1000kW
  690V 11kW~1400kW

Technical Specification

Item		Z8000
Based Function	Control mode	Senseless flux vector control (SFVC) Closed-loop vector control (CLVC) V/F(Voltage/Frequency) control
	Maximum frequency	Vector control: 0~320 Hz V/F control: 0~599Hz
	Carrier frequency	1kHz~8kHz The carrier frequency is automatically adjusted based on the load features.
	Input frequency resolution	Digital setting: 0.01 Hz ; Analog setting: 0.025% of maximum frequency
	Startup torque	G type: 0.5 Hz/150% (SFVC); 0 Hz/180% (CLVC) P type: 0.5 Hz/100%
	Speed range	1:100 (SFVC); 1:1000 (CLVC)
	Speed stability accuracy	± 0.2% (SFVC); ± 0.02% (CLVC)
	Torque control accuracy	± 5% (CLVC)
	Overload capacity	G type: 60s for 150% of the rated current, 3s for 180% of the rated current. P type: 60s for 120% of the rated current, 3s for 150% of the rated current.
	Torque boost	Auto boost Customized boost 0.1%–30.0%
	V/F curve	3 types: line V/F curve; Multi-point V/F curve N-power V/F curve (1.2-power, 1.4-power, 1.6-power,1.8-power, square)
	V/F separation	2 types: complete separation; half separation
	Ramp mode	Straight-line ramp; S-curve ramp; Four groups of acceleration/deceleration time with the range of 0.0–6500.0s
	DC braking	DC braking frequency: 0.00 Hz to maximum frequency: Braking time: 0.0~100.0s Braking action current value: 0.0%~100.0%
	JOG control	JOG frequency range: 0.00–50.00 Hz JOG acceleration/deceleration time: 0.0~6500.0s
	Onboard multiple preset speeds	Implement up to 16 speeds via the simple PLC function or combination of terminal states

Item		Z8000
Based Function	Onboard PID	Realize process-controlled closed loop control system easily.
	Auto voltage regulation (AVR)	Keep constant output voltage automatically when the mains voltage changes.
	Overvoltage/ Overcurrent stall control	Current and voltage are limited automatically during the running process so as to avoid frequent tripping due to overvoltage/over current.
	Rapid current limit	Avoid frequent over current faults of the AC drive.
	Torque limit and control	Limit the torque automatically and prevent frequent over current tripping during the running process. Torque control can be implemented in the CLVC mode.

PG card

Model	Description	Suitable inverter
PG-B1	ERN1387_SIN&COS input PG card_DB15	Z8400-5.5kW and above
PG-B2	ABZ_ different input PG card _terminal connector	Z8400-3.7kW and above
PG-B3	Rotating PG card _terminal connector	Z8400-3.7 kW and above
PG-B4	ABZ_OC input PG card_ terminal connector	Z8400-3.7 kW and above
PG-B5	ABZUVW_ different input PG card_DB15	Z8400-5.5 kW and above
PG-B8	CARD0_with PT100_fan output_485 transformer connect	Z8400-3.7 kW and above
PG-B9	Profibus card	Z8400-5.5 kW and above
PG-B10	ABZ_ different input PG card_DB9	Z8400-5.5 kW and above
PG-B11	Rotating PG card_DB9	Z8400-5.5 kW and above
PG-B12	1A input connector_ Plastic Injection Application	Z8400-3.7 kW and above
PG-B13	GPRS expansion card_ with connector_485 or 232 connector are optional	30kW and below need to external
PG-D1	Double ABZ_OC input PG card_ terminal connector	Z8400D-3.7 kW and above
PG-D2	Double ABZ_ different input PG card _ terminal connector	Z8400D-3.7 kW and above

Specification

1.Voltage: 1PH AC 220V ± 15% 3PH AC 380V ± 15%

Model	Rated Output Power (kW)	Rated Input Current(A)	Rated 0utput Current(A)	Motor (kW)
Input Voltage(V): 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

Model	Rated Output Power (kW)	Rated Input Current(A)	Rated 0utput Current(A)	Motor (kW)
Input Voltage(V): 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
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

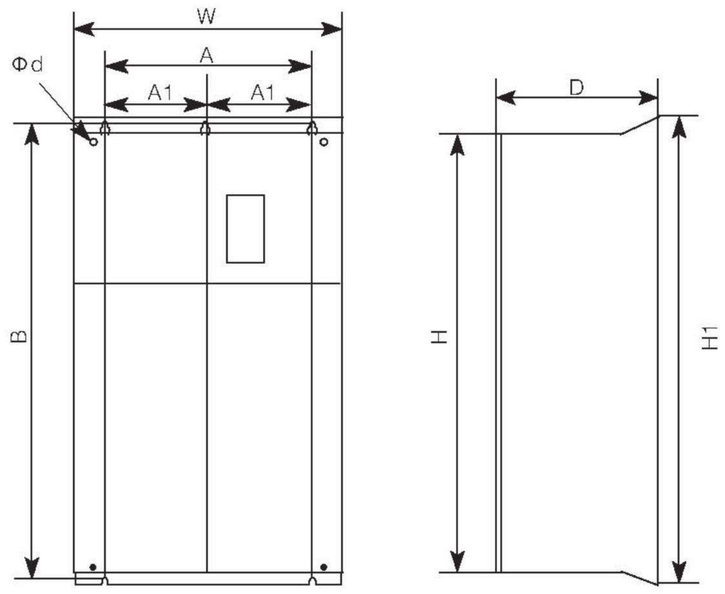
2.Input Voltage(V): 3PH AC (660V-690V) ±15%

Model	Power (kW)	Output Current (A)	Outline Dimension (mm)			Install Dimension(mm) A*B*Φd	Remark
			H	W	D		
Input Voltage(V): 3PH AC(660V~690V)±15%							
Z8600-11G/15P	11	12	410	277	189	390*262*Φ6.5	Wall mounting
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	595	300	236	573*200*Φ9	Wall mounting
Z8600-75G/90P	75	85					
Z8600-90G/110P	90	102					
Z8600-110G/132P	110	125	620	380	290	595*250*Φ9	Wall mounting
Z8600-132G/160P	132	150					
Z8600-160G/185P	160	175	880	380	358	840*250*Φ13	Wall mounting
Z8600-185G/200P	185	198					
Z8600-200G/220P	200	215					
Z8600-220G/250P	220	245					
Z8600-250G/280P	250	260					
Z8600-280G/315P	280	299	995	630	350	971*500*Φ11	Wall mounting
Z8600-315G/350P	315	330					
Z8600-350G/400P	350	374					
Z8600-400G/450P	400	410	1040	680	400	1016*520*Ø11	Wall mounting
Z8600-450G/500P	450	465					
Z8600-500G/560P	500	510					
Z8600-560G/630P	560	540	1150	680	400	1126*520*Ø11	Wall mounting
Z8600-630G/710P	630	570					
Z8600-710G/800P	710	646	1800	650	920	610*620*Ø17	Cabinet
Z8600-800G/900P	800	728					
Z8600-900G/1000P	900	819	1800	750	920	710*620*Ø17	Cabinet
Z8600-1000G/1100P	1000	910					
Z8600-1100G/1250P	1100	1000	1800	900	920	860*620*Ø17	Cabinet
Z8600-1250G/1400P	1250	1137					
Z8600-1400G	1400	1273	2000	1050	930	1010*630*Ø17	Cabinet

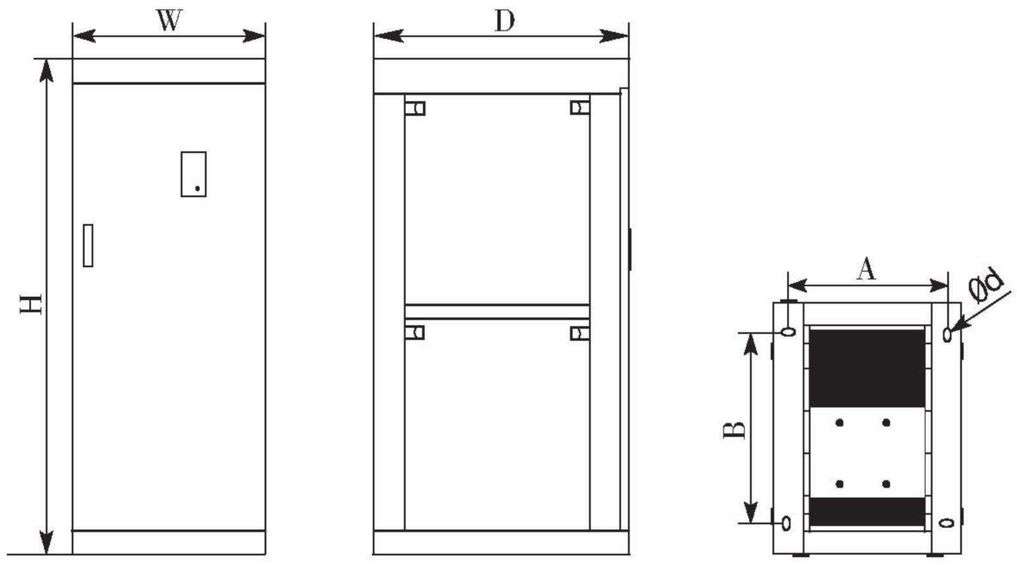
Dimension

Unit: mm

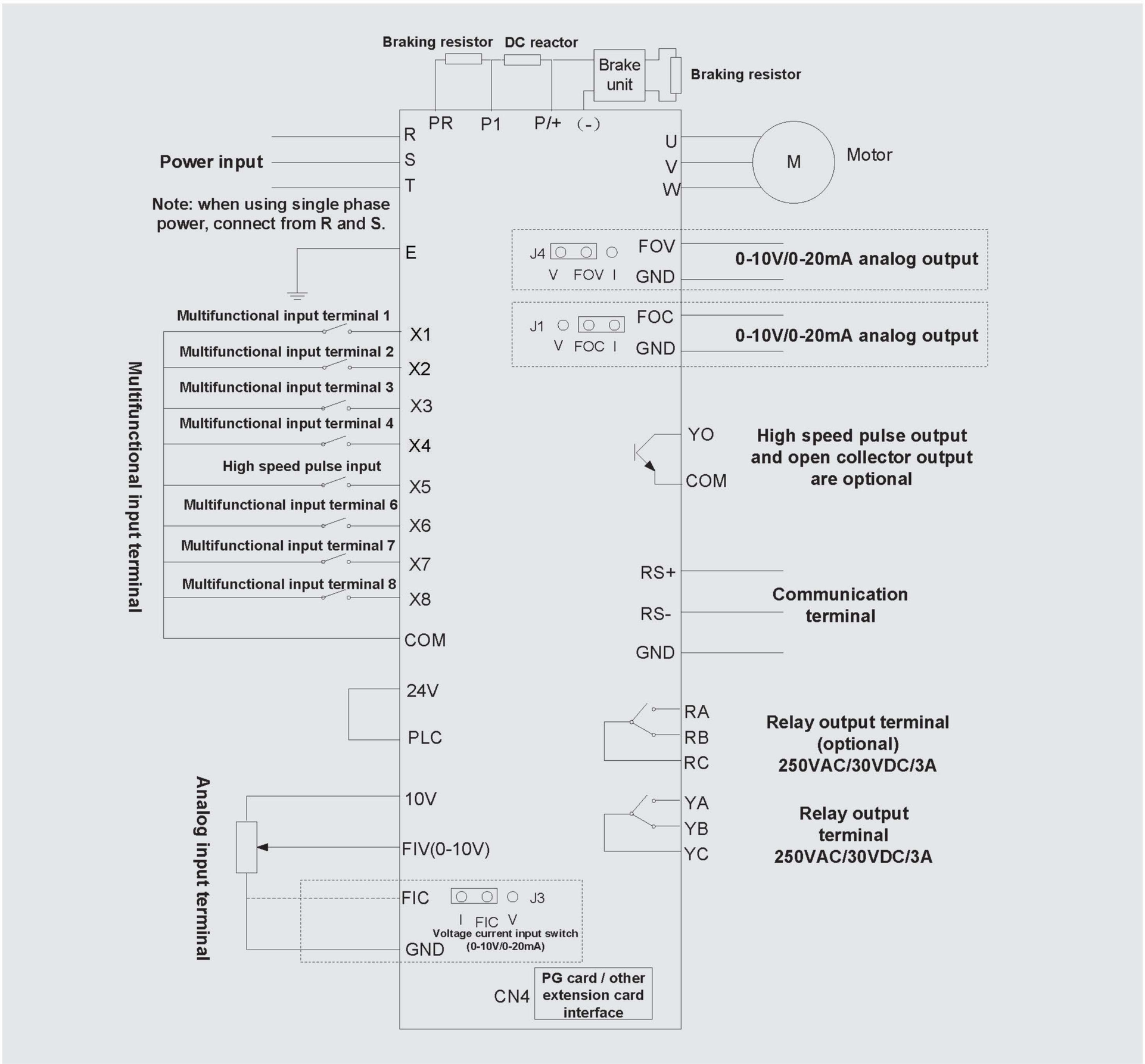
1. Wall Mounting



2. Cabinet Mounting



Typical Wiring diagram



Model	Outline Dimension(mm)				Install Dimension (mm)A*B*Φd	Unit: mm	
	W	H	H1	D		Install Method	Remark
Z8200-0R4G	125	170	—	140	117*160*Φ5		Plastic
Z8200-0R75G							
Z8200-1R5G							
Z8200-2R2G							
Z8200-3R7G	120	225	—	143	105*208*Φ5		Semi-plastic
Z8400-0R4G	125	170	—	140	117*160*Φ5	Wall mounting	Semi-plastic
Z8400-0R75G							
Z8400-1R5G							
Z8400-2R2G							
Z8400-3R7G/5R5P	120	225	—	143	105*208*Φ5		Semi-plastic
Z8400-5R5G/7R5P	185	260	—	170	168*248*Φ6.5		Plastic
Z8400-7R5G/11P							
Z8400-11G/15P	210	330	—	190	195*310*Φ6.5		Semi-plastic
Z8400-15G/18.5P							
Z8400-18.5G/22P	277	410	—	189	262*390*Φ6.5		
Z8400-22G/30P							
Z8400-30G/37P							
Z8400-37G-NN							
Z8400-37G/45P	300	430	455	212	200*433*Φ9		
Z8400-45G/55P	300	535	560	236	200*538*Φ9		Metal
Z8400-55G							
Z8400-75P							
Z8400-75G/90P	338	546	576	256.5	270*560*Φ9		Metal (NEW)
Z8400-90G/110P	338	550	580	300	270*564*Φ9		
Z8400-110G/132P							
Z8400-132G/160P	420	Wall: 730 Cabinet: 1130	Wall: 790 Cabinet: 1165	330	Wall: 300*765*Φ11 Cabinet: 250*350*Φ12	Wall mounting /Cabinet Install	Metal
Z8400-160G/185P							
Z8400-185G/200P	530	Wall: 800 Cabinet: 1300	Wall: 860 Cabinet: 1335	335	Wall: 400*835*Φ11 Cabinet: 250*450*Φ12		
Z8400-200G/220P							
Z8400-220G/250P							
Z8400-250G/280P	700	Wall: 880 Cabinet: 1380	Wall: 940 Cabinet: 1415	350	Wall: 600*915*Φ11 Cabinet: 250*620*Φ12		
Z8400-280G/315P							
Z8400-315G/350P							
Z8400-350G/400P	600	1600	——	800	550*700*Φ13	Cabinet Install	Metal
Z8400-400G/450P							
Z8400-450G/500P							
Z8400-500G/560P	650	1600	——	800	600*700*Φ13		
Z8400-560G/630P							
Z8400-630G/710P							
Z8400-710G/800P	700	2200	——	1000	650*900*Φ13		
Z8400-800G/900P							
Z8400-900G/1000P							
Z8400-1000G							



Z5000-BF Series

IP65 Inverter

- Mounted directly on the motor or to the wall
- Allow for heavy load equipment
- Vector Control mode (Z5000 Series)
- Function: no water stop, timing, antifreeze, change pump when fault, water supply alarm, ect; IP65, allows to use in kinds of bad environment
- Power range

  220V: 0.75~2.2kW

  380V: 0.75~132kW

Technical Specification

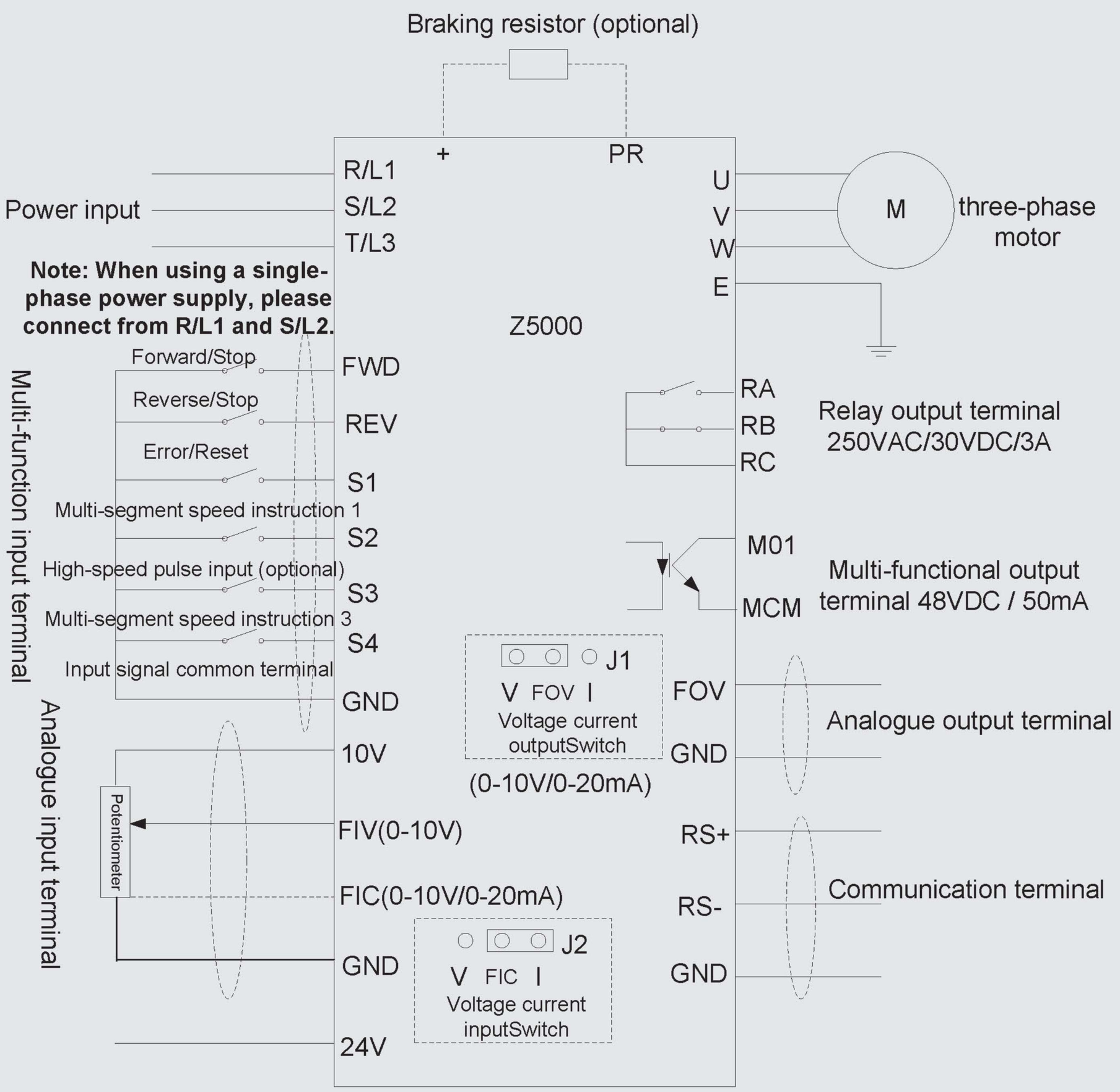
Project name		Specifications
Basic control function	Control method	Voltage/Frequency (V/F) control Senseless flux vector control(SFVC)
	Maximal frequency	V/F control: 0~599Hz Vector control: 0~320Hz
	Carrier frequency	1kHz~8kHz The carrier frequency can be adjusted according to the load characteristics.
	Input the frequency resolution	Number setting: 0.01Hz Simulation setting: maximum frequency 0.025%
	Start torque	G-type machine: 0.5Hz/150% (no PG); P-type machine: 0.5Hz/100%
	Speed range	1: 100 (no PG)
	Steady speed accuracy	±0.5% (with PG)
	Overload capacity	G-type machine: 150% rated current 60s; 180% rated current 3s. P-type machine: 120% rated current 60s; 150% rated current 3s.
	Torque boost	Automatic-boost; Customized boost 0.1%~30.0%
	V/F curve	3 ways: straight; multipoint; N power V / F curve (1.2 Power, 1.4 power, 1.6 power, 1.8 power, 2 power)
	V/F separation	2 ways: total separation, half separation
	Add deceleration curve	Straight-line or S-curve acceleration and deceleration mode. 4 kinds of acceleration and deceleration times, and the acceleration and deceleration time range is 0.0~6500.0s
	DC braking	DC brake frequency: 0.00Hz~ Maximum frequency Brake time: 0.0s~36.0s Brake action current value: 0.0%~100.0%
	JOG control	Point movement frequency range:0.00Hz~50.00Hz.Tap-acceleration and deceleration time 0.0s~6500.0s.
	Simple PLC, multi-segment speed operation built-in PID	Up to 16 segments can be run through the built-in PLC or control terminal It can easily realize the process control closed-loop control system
	Automatic Voltage Adjustment (AVR)	When the power grid voltage changes, it can automatically keep the output voltage constant
	Over pressure over loss speed control	Automatic limit current voltage during operation to prevent frequent overflow pressure trip
	Fast flow limit	Minimize the overcurrent fault, and protect the normal operation of the frequency converter
	Torque limit and control	Characteristic of "excavator" automatically limits the torque during operation and prevents frequent excessive current trip; the closed-loop vector mode can realize torque control
	Protection mode	Short-circuit detection of the upper electric motor, input and output phase deficiency protection, overcurrent protection, overvoltage protection, undervoltage protection, overheat protection, and overload Protection et al

Project name		Specifications
Running	Command source	Operation panel given, control terminal given, serial communication port given. It can be switched in various ways
	Frequency source	10 frequency sources: digital given, analog voltage given, analog current given, pulse given, serial port given. It can be switched in various ways
	Auxiliary frequency source	Of the 10 auxiliary frequency sources. It can flexibly assist frequency fine-tuning and frequency synthesis
	Input terminal	Standard: 6 digital input terminals, where S3 supports high speed pulse input up to 100kHz (optional) 2 analog input terminals, one supports only 0-10 V voltage input, the other supports 0-10 V, voltage input or 4 to 20 mA current input
	Output terminal	1 high-speed pulse output (optional) and 1 collector output terminal 1 relay output terminal 1 analog output terminal, supporting 4 to 20 mA current output or 0 to 10 V voltage output
	Communication support	RS-485
Environment	Ambient temperature	-10℃~+ 40℃ (ambient temperature is 40℃~50℃, please decrease for use)
	Humidity	Below 95% RH, and the anhydrous beads were condensed
	Storage temperature	-20℃~+60℃
	Vibration	Below 5.9m/s^2(0.6g)
	Levels of protection	IP65 for 3.7kW and below, IP54 for 5.5kW and above
	Aititude	Below 1000m

Specification

Model	Input Current (A)	Output Power(kW)	Output Current (A)	Motor (kW)
Input Voltage(V): 1PH AC220V±15%				
Z5200A0D75-BF	7.2	0.75	5	0.75
Z5200A1D5-BF	10	1.5	7	1.5
Z5200A2D2-BF	16	2.2	11	2.2
Input Voltage(V): 3PH AC380V±15%				
Z5400A0D75-BF-V	3.8	0.75	2.5	0.75
Z5400A1D5-BF-V	5	1.5	3.7	1.5
Z5400A2D2-BF-V	5.8	2.2	5	2.2
Z5400A3D7-BF-V2	10.0	3.7	9	3.7
Z5400A5D5-BF-V2	15.0	5.5	13	5.5
Z5400A7D5-BF-V2	20.0	7.5	17	7.5
Z5400A0011K-BF-V	26.0	11	25	11
Z5400A0015K-BF	35.0	15	32	15
Z5400A0018K-BF	38.0	18.5	37	18.5
Z5400A0022K-BF	46.0	22	45	22
Z5400A0030K-BF	62.0	30	60	30
Z5400A0037K-BF	76.0	37	75	37
Z5400A0045K-BF	92.0	45	90	45
Z5400A0055K-BF	113.0	55	110	55
Z5400A0075K-BF	157.0	75	150	75
Z5400A0090K-BF	180.0	90	176	90
Z5400A00110K-BF	214.0	110	210	110
Z5400A00132K-BF	256.0	132	253	132

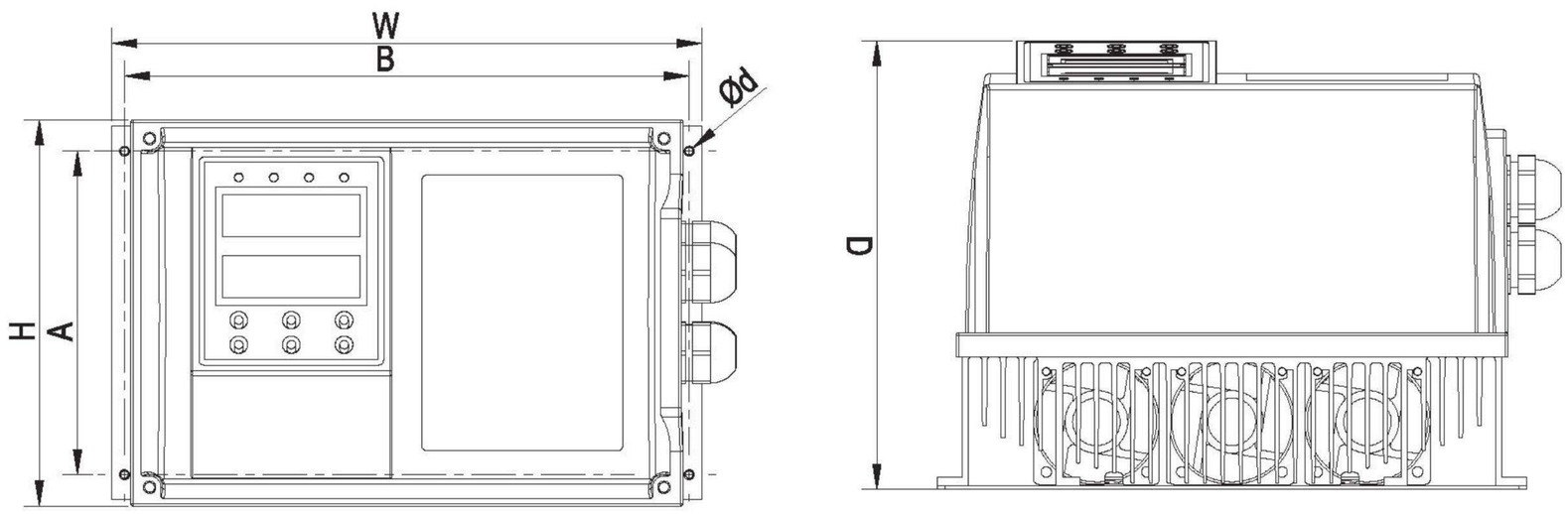
Typical Wiring diagram



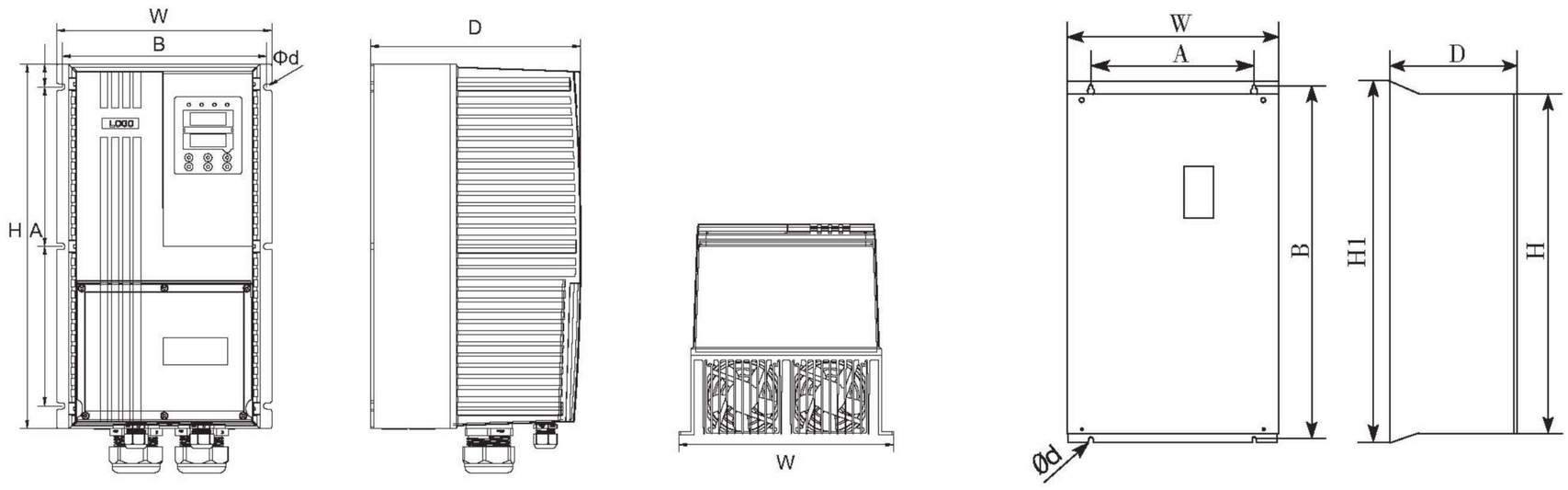
Dimension

Unit: mm

Horizontal installation outline drawing



Vertical Installation Outline Drawing



Model	Power (kW)	Output Current (A)	Outline Dimension(mm)				Install Dimension(mm) A*B*Ød
			W	H	H1	D	
Input Voltage(V): 3PH AC380V±15%							
Z5200A0D75-BF	0.75	5	188	122	-	134	178*105*Ø4
Z5200A1D5-BF	1.5	7					
Z5200A2D2-BF	2.2	11					
Z5400A0D75-BF	0.75	2.5					
Z5400A1D5-BF	1.5	3.7					
Z5400A2D2-BF	2.2	5					
Z5400A3D7-BF	3.7	9	235	154	-	179	225*129*Ø4
Z5400A5D5-BF	5.5	13					
Z5400A7D5-BF	7.5	17					
Z5400A0011K-BF	11	25					
Z5400A0D75-BF-V	0.75	2.5	140	190	-	138	130*160*Ø4.5
Z5400A1D5-BF-V	1.5	3.7					
Z5400A2D2-BF-V	2.2	5					
Z5400A3D7-BF-V2	3.7	9	140	225	-	139	130*160*Ø4.5
Z5400A5D5-BF-V2	5.5	13					
Z5400A7D5-BF-V2	7.5	17					
Z5400A0011K-BF-V	11	25	192	280	-	178	180*200*Ø5.5
Z5400A0015K-BF	15	32					
Z5400A0018K-BF	18.5	37	236	300	-	204	225*250*Ø7
Z5400A0022K-BF	22	45					
Z5400A0030K-BF	30	60	236	400	-	231	225*(175+175)*Ø7
Z5400A0037K-BF	37	75					
Z5400A0045K-BF	45	90	300	450	482	278	210*465*Ø9
Z5400A0055K-BF	55	110					
Z5400A0075K-BF	75	150	400	520	560	275	300*535*Ø9
Z5400A0090K-BF	90	176					
Z5400A00110K-BF	110	210					
Z5400A00132K-BF	132	253	400	760	800	321.5	330*780*Ø11
Z5400A00160K-BF	160	300					



SP600 Series

Air Compressor Integrator Inverter

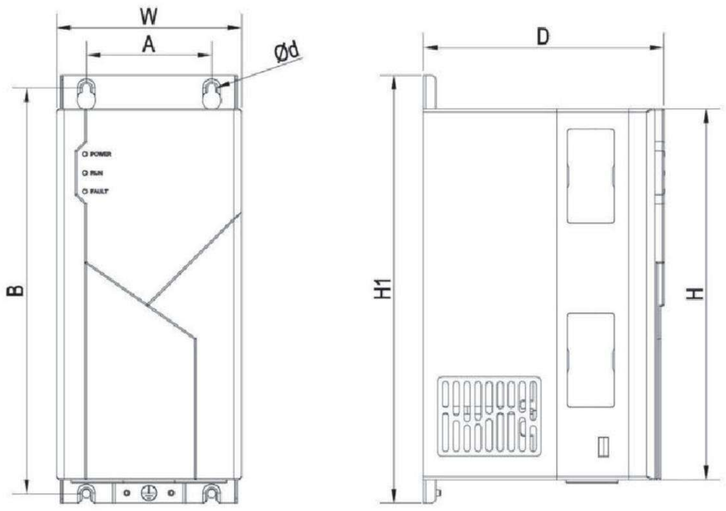
- Supprot wall mounting or floor standing
- We using pluggable terminals with Error-proof design
- Built in integrated PT100 and PTC, pressure sensors, solenoid valves, fans, and other detection and protection circuits
- Standard 2-channel RS485 (Modbus RTU), supporting HMI and IoT expansion, achieving one click start
- Power range:
  220V: 3.7~75kW (special order)
  380V: 5.5~132kW

Technical Specification

Item		SP600
Basic control functions	Control mode	Open loop vector control, V/F control, Support PM
	Maximum frequency	0~599Hz
	Carrier frequency	0.5kHz~8kHz, carrier frequency is automatically adjusted based on the load features.
	Input frequency resolution	Digital setting: 0.01Hz Analog setting: maximum frequency x 0.025%
	Startup torque	0.5 Hz/150%
	Speed range	1:100
	Speed stability accuracy	± 0.2%
	Torque control accuracy	±10%
	Overload capacity	60s for 150% of the rated current, 3s for 180% of the rated current.
	Communication methods	RS485
Input and output interfaces	Analog Input	1 pressure sensor: 4 ~ 20mA input 2 temperature sensor: PT100
	Digital input	2 digital input 1 PTC circuit protection (compatible with normal digital inputs)
	Digital Output	1 normally open relay output (built in 220VAC voltage)
	LED diode display	Standard 3 LED display
Protection	Motor overheating protection (PTC), the power-to-ground short-circuit protection, inverter over-current, overload, over voltage, under voltage, over temperature, output phase, communication fault, fault current detection, EEPROM write failure and so on.	
Environment	Installation location	Indoor, free from direct sunlight, dust, corrosive gas,combustible gas, oil smoke, vapor, drip or salt.
	Altitude	Below 1000m
	Ambient temperature	-10°C~40°C (de-rating if the ambient temperature is between 40°C and 50°C)
	Humidity	Below 95%RH, (non-condensing)
	Vibration	Below 5.9 m/s^2 (0.6 g)
	Storage temperature	-20°C~60°C

Dimension

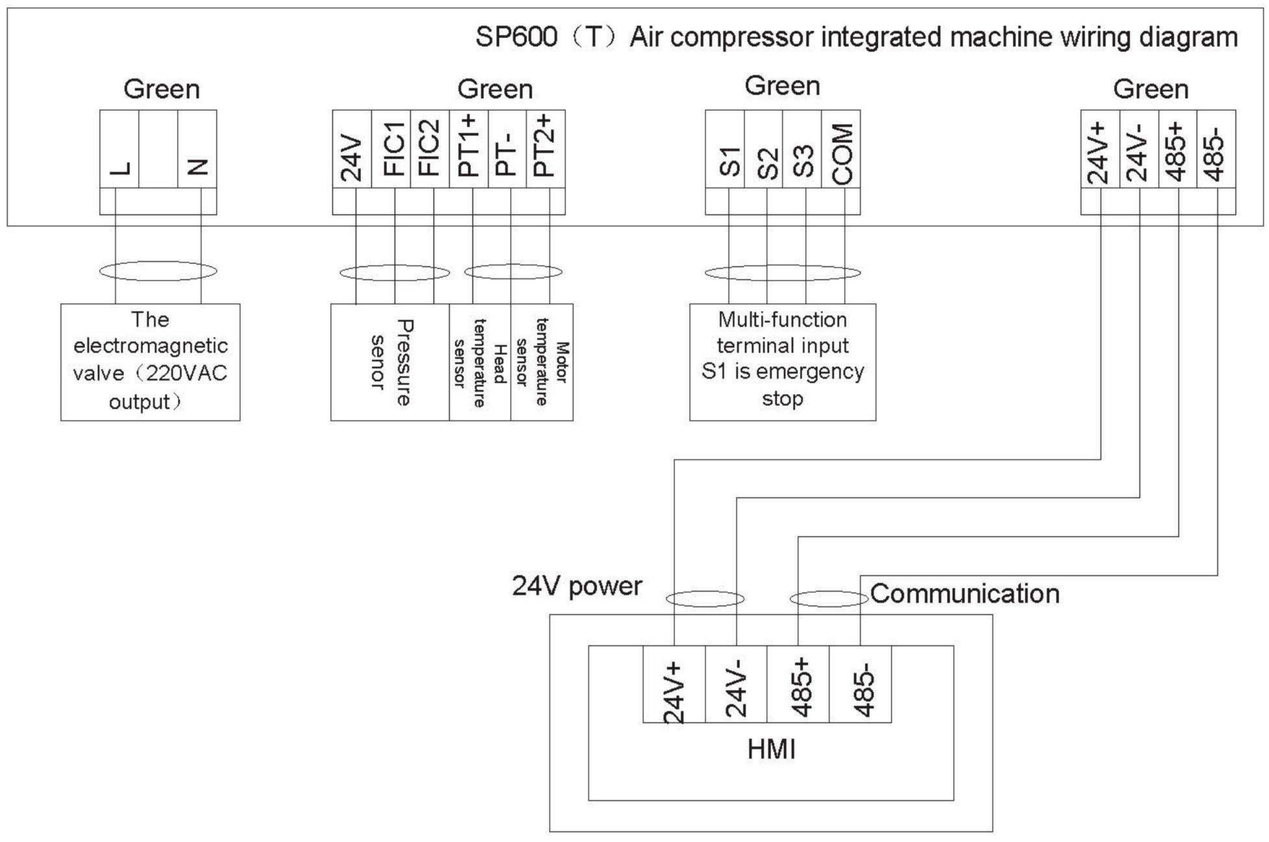
Unit: mm



Model	HMI-600	HMI-600S	HMI-600T	HMI-680T
Picture				
W	164	116	164	217
H	100	83	100	160
D	45	45	25	27

Model	W	H	H1	D	A	B	Φd
SP600T-5R5KY-4	118	238	274	154	80	260	5.5
SP600T-7R5KY-4							
SP600T-011KY-4	145	293	335	172	100	320	7
SP600T-015KY-4							
SP600T-018KY-4	168	338	380	172	100	365	7
SP600T-022KY-4							
SP600T-030KY-4	217	400	--	216	202	385	7
SP600T-037KY-4							
SP600T-045KY-4	300	440	470	275	210	455	9
SP600T-055KY-4							
SP600T-075KY-4	338	455	485	240	270	470	9
SP600T-090KY-4	275	590	630	310	200	612	9
SP600T-110KY-4							
SP600T-132KY-4	300	610	650	310	200	633	9

Typical Wiring diagram





T800 Series

Small Multidrive Product

- Reduce size and wiring.
- Common DC bus, can share the braking resistor, realizing energy saving and cost reduction.
- Possible to use setup software via Type C cable.
- Support external 24V power supply.
- Optional common input filter.
- Support dual-channel STO
- Both power and control signals use pluggable terminals.
- Support CanOpen, ProfiNet, EtherCat, Modbus TCP, EtherNet/IP fieldbuses, greatly decrease the cost of using communication control for multiple inverters.

Model Description

Rectifier module: T800 - 0 - 4T 12 B - E

①　②　③　④　⑤　⑥

①Product name T800: Inverter series	④Rated input current 12:12A
②Product type 0: Rectifier module	⑤Braking function Empty: Without unit B: With unit
③Output voltage level 4T: Three-phase 380V~480V 2T: Three-phase 200V~240V 2S: Single-phase 200V~240V	⑥Communication protocol E:EtherCAT P:Profinet C:Canopen T:Modbus-TCP

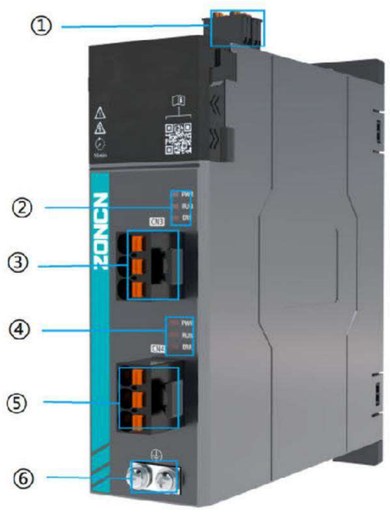
Inverter module: T800 - 2 - 4T 1R8 - T

①　②　③　④　⑤

①Product name T800: Inverter series	④Rated input current 1R8:1.8A, R means the decimal point 17:17A
②Product type 1: Single axis inverter module 2: Dual-axis inverter module	⑤Functional safety Empty: Without STO S: With STO
③Output voltage level 4T: Three-phase 380V~480V 2T: Three-phase 200V~240V	

Technical specifications

Project			Specification
Rectifier module	Defencive function		Overtemperature protection, power phase loss protection, overvoltage protection, undervoltage protection detection, etc
	Interface	Communication/Highway	Support Modbus-RTU, CAN, Profinet RT, EtherCAT, EtherNet/IP communication
		Programmable	①AI1-AI2: programmable, support-10V~+10V/0mA~20mA ②support PT100, PT1000, KTY-84-130, PTC-130 temperature detection
		Digital input and output	DI1-DI4: Standard DI opto-isolation with dual-polarity input compatibility. DIO1-DIO4: Standard multi-function input/output terminals, selectable via function codes. When functioning as digital inputs, they comply with specifications of DI1-DI4; when used as outputs, they provide standard collector-drain output functionality. These terminals must not be directly connected to power sources and require pull-up resistors whose values are determined by load requirements
		Relay output	TA-TB: Normal close; TA-TC: Normally open
		Keypad	Standard 7-bit LED digital display, multiple symbol display and 9 function keys. Among them, the 2-bit single digital indicator shows the axis number, and the 5-bit white digital indicator shows the content.
	Quantity of inverters		8 shafts (the number of inverter units that one rectifier unit can drive satisfies this formula: the number of single-axis inverter units + 2× the number of double-axis inverter units ≤ 8); for example, a rectifier unit of 15kW can carry 2 single-axes of 7.5kW, or 2 double-axes of 3.7kW, or 4 double-axes of 1.5kW
Inverter module	Essential parameter	Motor type	Motor type: Synchronous/Asynchronous
		Output frequency resolution	Digital setting: 0.01Hz Simulated setting: Maximal frequency×0.025%
		Control mode	3PH asynchronous motor: V/f、SVC Permanent magnet synchronous motor: SVC
		Speed Range	1: 50 (Asynchronous machine V/f) 1: 100 (Asynchronous machine SVC)
		Speed control accuracy	±1.0% (V/f) ±0.5% (SVC)
		Speed vibration	± 0.5% (SVC)
		Torque control mode	SVC
	Defencive function		Overhead-to-ground short circuit, phase-to-phase short circuit, driver overcurrent, driver overload (output power limit), motor overload, driver overvoltage, driver undervoltage, driver SVC stall, driver overheating, output phase loss, communication fault, current detection fault, motor parameter identification fault, EEPROM read/write fault, rotor lockout protection, excessive speed deviation, stall alarm

	Number	Part name	Iinstruction
Inverter module components (single axis) 	①	STO terminal	STO terminal is not standard, and can be identified whether it has this terminal through the product model: inverter single-axis module with STO function: the product model ends with the letter "S" inverter single-axis module without STO function: the product model ends without the letter "S" inverter single-axis module
	②	Pilot lamp	Output terminal indicator light
	③	U/V/W output terminals	Output terminal of the frequency converter is connected to the three-phase motor
	④	2xM4 screw grounding terminal	Two grounding terminals (PE) for protective grounding
	⑤	Cooling fan	Cooling fan
Inverter module components (double axis) 	①	STO terminal	STO terminal is not standard. You can identify whether the terminal is available or not by the product model: ● Inverter dual-axis module with STO function: the product model ends with the letter "S" ● Inverter dual-axis module without STO function: the product model ends without the letter "S":
	②	Output shaft 1 indicator light	Output terminal 1 indicator light
	③	U1/V1/W1 axis 1 output terminal	Output terminal 1 of the frequency converter is connected to the three-phase motor
	④	Output shaft 2 indicator light	Output terminal 2 indicator light
	⑤	U2/V2/W2 axis 2 output terminal	Output terminal 2 of the frequency converter is connected to the three-phase motor
	⑥	Nut screw grounding terminal	2 grounding terminals (PE) for protective grounding
	⑦	Cooling fan	Used for equipment heat dissipation

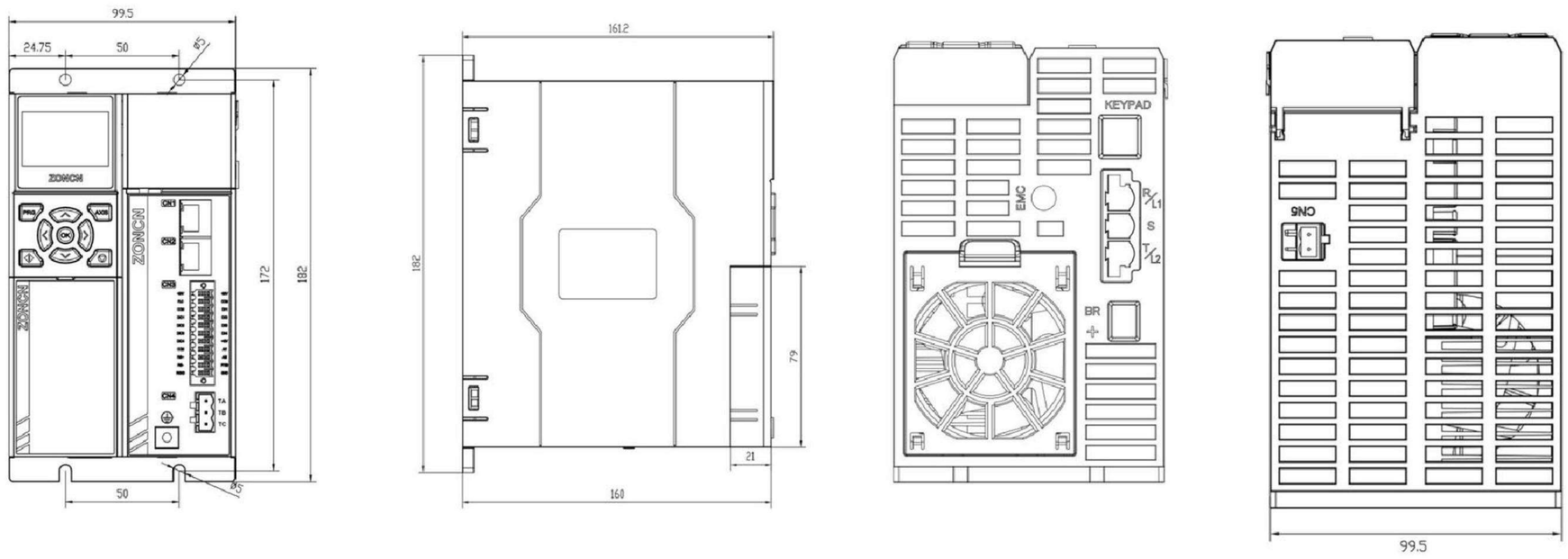
Product model

Input voltage level	Power (kW)	Product model	
Rectifier unit model			
Three-phase 380V~480V	3.7	T800-0-4T12	T800-0-4T12B
	7.5	T800-0-4T22	T800-0-4T22B
	15	T800-0-4T41	T800-0-4T41B
Three-phase 200V~240V	3.7	T800-0-2T22	T800-0-2T22B
	7.5	T800-0-2T41B	T800-0-2T41B
Single-phase 200V~240V	2.2	T800-0-2S24	T800-0-2S24B
	3.7	T800-0-2S40	T800-0-2S40B
Inverter unit (single axis) model			
Three-phase 380V~480V	0.4	T800-1-4T1R8	T800-1-4T1R8S
	0.75	T800-1-4T3R4	T800-1-4T3R4S
	1.5	T800-1-4T4R8	T800-1-4T4R8S
	2.2	T800-1-4T5R5	T800-1-4T5R5S
	3.7	T800-1-4T9R5	T800-1-4T9R5S
	5.5	T800-1-4T13	T800-1-4T13S
	7.5	T800-1-4T17	T800-1-4T17S

Input voltage level	Power (kW)	Product model	
Three-phase 200V~240V	0.2	T800-1-2T1R7	T800-1-2T1R7S
	0.4	T800-1-2T3	T800-1-2T3S
	0.75	T800-1-2T5	T800-1-2T5S
	1.5	T800-1-2T8	T800-1-2T8S
	2.2	T800-1-2T11	T800-1-2T11S
	3.7	T800-1-2T17	T800-1-2T17S
Inverter unit (dual axis) model			
Three-phase 380V~480V	0.4	T800-2-4T1R8	T800-2-4T1R8S
	0.75	T800-2-4T3R4	T800-2-4T3R4S
	1.5	T800-2-4T4R8	T800-2-4T4R8S
	2.2	T800-2-4T5R5	T800-2-4T5R5S
	3.7	T800-2-4T9R5	T800-2-4T9R5S
Three-phase 200V~240V	0.2	T800-2-2T1R7	T800-2-2T1R7S
	0.4	T800-2-2T3	T800-2-2T3S
	0.75	T800-2-2T5	T800-2-2T5S
	1.5	T800-2-2T8	T800-2-2T8S
	2.2	T800-2-2T11	T800-2-2T11S

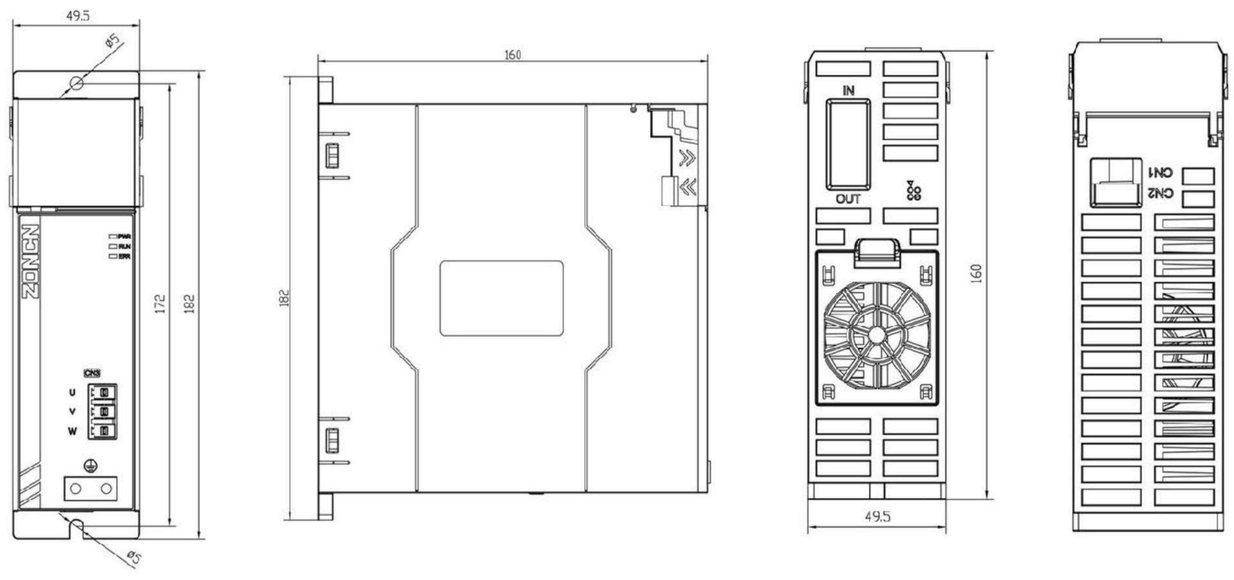
Installation size

Rectifier module:



Size of the rectifier module (unit: mm)

Inverter module:



Size of inverter module (single axis) (unit: mm)

ZCS880

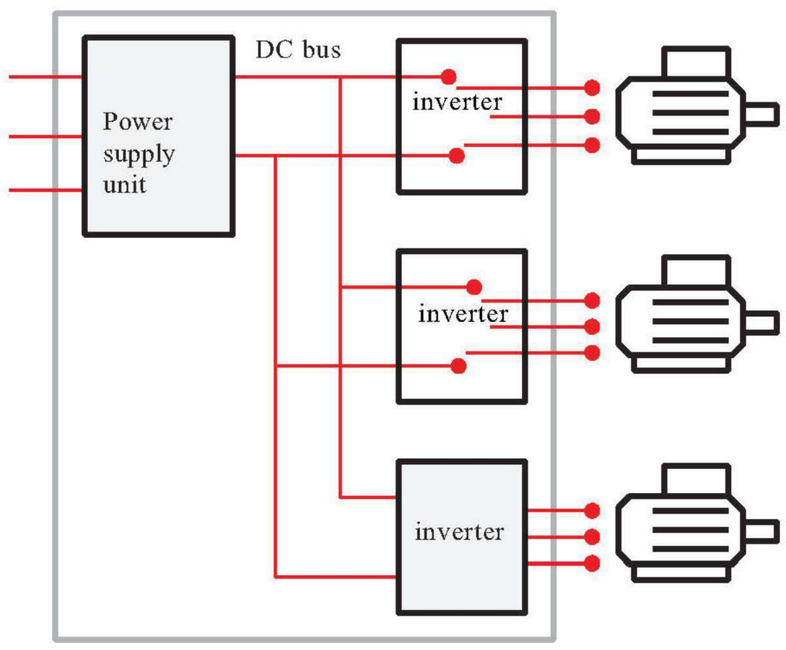
Large Multidrive Product

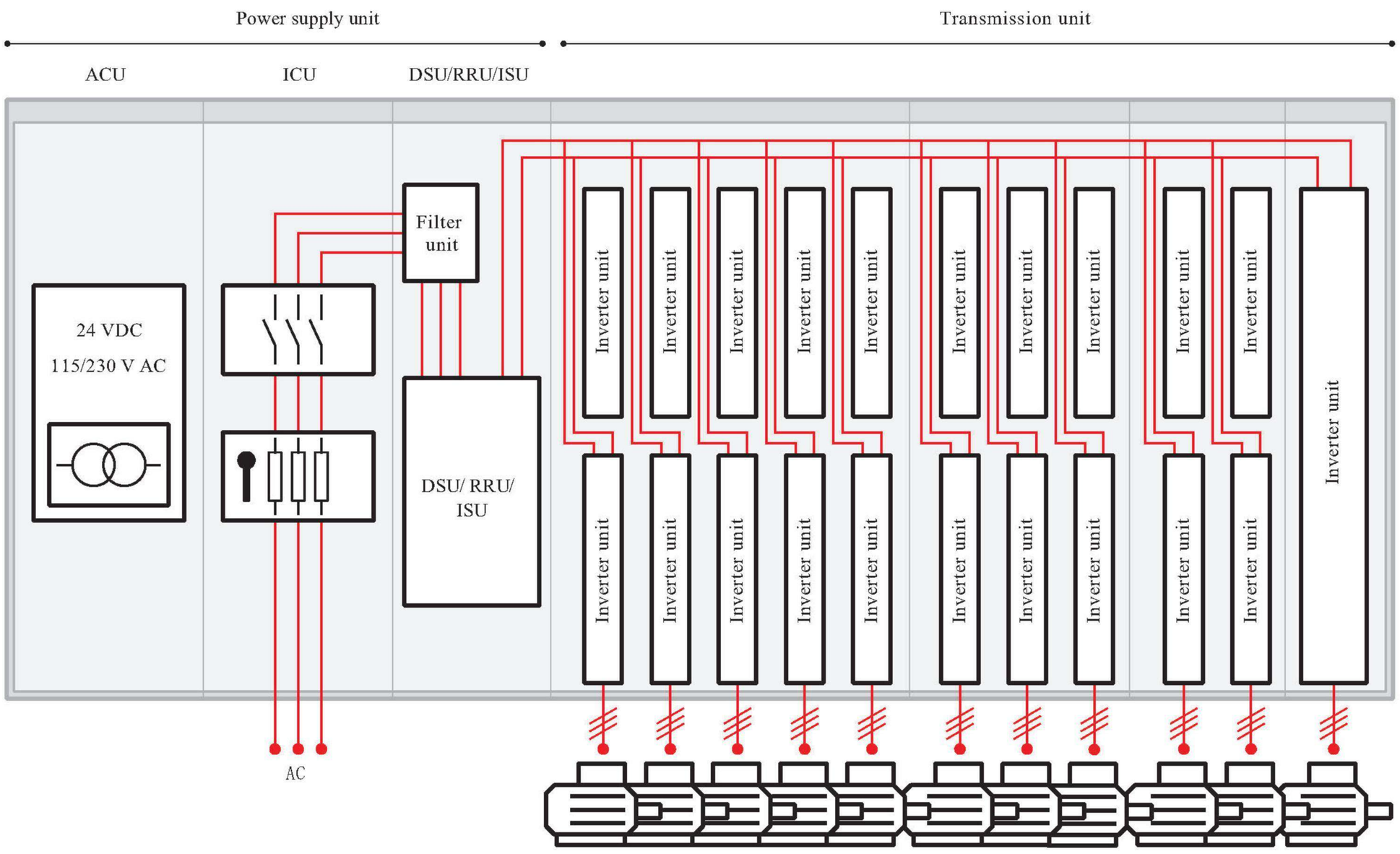
ZCS880 Multidrive system

- Rated Power:
  - Inverter unit (INU): 1.5~5600 kW
  - Diode-supply units (DSU): 50~5500 kVA
  - IGBT-supply unit (ISU): 300~6100 kVA
- Regenerative rectifier unit(RRU):
  - 416~6100 kVA
- DC-DC Converter (DDC):
  - 305~1146 kW
- Voltage range:
  - 380~690 V
- Protection rating:
  - IP22 (Standard): IP42 and IP54

01 Multidrive configuration with power supply unit, DC bus and multiple inverters

02 The multidrive is to control multiple motors. The more important units are: the drive unit (inverter unit (INU)) and the power supply unit (DSU/RRU/ISU)





Multi-drive systems come with a wide range of built-in features and optional selections.

Highlights

- Compact design for easy cabinet assembly and maintenance
- High assembly density, 16 inverters up to A2i can be installed in a one-meter wide cabinet.
- High power density and reliable diode rectifier bridge.
- Quick-connect motor cable connectors at the bottom of the cabinet for easy installation.
- Protection ratings of IP22, IP42, and IP54 suitable for various environments
- Optional equipment control panel with switches and indicators
- Optional cabinet lighting and heater
- Efficient heat management as each inverter's dissipated heat is directed to the rear of the cabinet, with all cabinets being individual compartments.
- Long-life capacitors and high-efficiency cooling fans with speed or switch control

Standard interfaces and expansion interfaces

Control Unit ZCU
Example of a typical multi-drive input/output connection diagram.
Subject to change.
For detailed information, please refer to the ZCS880 user manual.

ZCS880 multi-drive offers a variety of standard interfaces. Additionally, the drive control units (ZCU/BCU) provide three optional slots for expansion, including fieldbus adapter modules, input/output expansion modules, feedback modules, and safety function modules.

Control unit ZCU for inverters (A1i to A7i) and diode-supply units (D6D to D8D) are equipped with three optional slots for expansion modules.

Control unit BCU is used for inverters (NXA8i), IGBT-supply units, regenerative rectifier units, and diode -supply units (DXT series). The BCU equipped an integrated branch unit, three optional slots, and an additional slot for DDCS communication options.

ZCH Series

Medium Voltage Inverter

Product Structure

Power cell

Each phase is composed of 3~9 power cells, forming a 4N+1 ladder PWM wave, three-phase Y connection, direct output 3~11kV.

Air cooling

Adopt centrifugal fans from internationally renowned brands in the industry.Large air volume, sufficient margin, long life, and high stability.This ensures the heat dissipation needs of the high-voltage inverter itself.Improved product stability.



Control system

Intelligent controller based on high-speed ARM, DSP, and FPGA;
Flux closed-loop vector control technology, optimized stacked wave PWM Control technology to achieve high-quality sinusoidal voltage and current output.



HMI

Using a well-known brand touch screen with a novel interface,Rich interfaces facilitate on-site expansion and user system and system connection.

Bypass cabinet Cable connecting cabinet

Transformer cabinets and power cell cabinets are arranged in front and back program, through advanced thermal design, ensures on the basis of satisfying heat dissipation, it reduces the safety of the site. installation space to reduce infrastructure costs for customers.



Transformer cabinet

Transformer cabinets and power cell cabinets are arranged in front and back program, through advanced thermal design, ensures on the basis of satisfying heat dissipation, it reduces the safety of the site. installation space to reduce infrastructure costs for customers.

Model Definition

ZCH100 - T - 10 - 1000kW - 9-AP

① ② ③ ④ ⑤

①ZCH100: Zhongchen MV inverter series	④Rated power: (standard load)
②Default: None T:Synchronous motor	⑤Options:None by default (Multiple options can be expanded) 9:Level 9 Unit; F:Four quadrant feedback; AP:Automatic bypass cabiner; MP:Manual bypass cabiner; L:water cooling; DB:dynamic braking; C:Internal circulation is afraid of water cooling; KF:Mining fans; SS:Soft start; Please inquire for more options……
③Voltage level: 10:10kV; 06:6kV; 07:6.9kV; 1006:10kV input 6kV output; 1007:10kV input 6.9kV output;	

Installation Specification Sheet

VFD Model	Motor power (kW)	VFD Capacity (kVA)	Rated Current (kg)	Cabinet type	Cabinet Dimension (W×D×H)
ZCH100-06-250kW	250	320	35		
ZCH100-06-280kW	280	350	38		
ZCH100-06-315kW	315	400	40		
ZCH100-06-355kW	355	450	44	Cabinet A1	2150×1400×2400
ZCH100-06-400kW	400	500	48		
ZCH100-06-450kW	450	560	55		
ZCH100-06-500kW	500	630	61		
ZCH100-06-560kW	560	700	68		
ZCH100-06-630kW	630	800	77		
ZCH100-06-710kW	710	900	86		
ZCH100-06-800kW	800	1000	96	Cabinet B1	3450×1600×2250
ZCH100-06-900kW	900	1150	115		
ZCH100-06-1000kW	1000	1250	130		
ZCH100-06-1120kW	1120	1400	154		
ZCH100-06-1250kW	1250	1600	154		
ZCH100-06-1400kW	1400	1800	173		
ZCH100-06-1600kW	1600	2000	192	Cabinet C1	4150×1600×2250
ZCH100-06-1800kW	1800	2250	217		
ZCH100-06-2000kW	2000	2500	241		
ZCH100-06-2250kW	2250	2800	269		
ZCH100-06-2500kW	2500	3200	308		
ZCH100-06-2800kW	2800	3500	337	Cabinet D1	5400×1400×2400
ZCH100-06-3200kW	3200	4000	385		
ZCH100-06-3600kW	3550	4500	433		
ZCH100-06-4000kW	4000	5000	481		
ZCH100-06-4500kW	4500	5650	544	Cabinet E1	6850×1400×2400
ZCH100-06-5000kW	5000	6300	606		
ZCH100-10-315kW	315	400	23		
ZCH100-10-355kW	355	450	26		
ZCH100-10-400kW	400	500	31		
ZCH100-10-450kW	450	560	33	Cabinet A	2000×1500×2000
ZCH100-10-500kW	500	630	40		
ZCH100-10-560kW	560	700	42		
ZCH100-10-630kW	630	800	48		

VFD Model	Motor power (kW)	VFD Capacity (kVA)	Rated Current (kg)	Cabinet type	Cabinet Dimension (W×D×H)
ZCH100-10-710kW	710	900	52	Cabinet A	2000×1500×2000
ZCH100-10-800kW	800	1000	61		
ZCH100-10-900kW	900	1150	65	Cabinet B	2500×1650×2200
ZCH100-10-1000kW	1000	1250	77		
ZCH100-10-1120kW	1120	1400	86		
ZCH100-10-1250kW	1250	1600	96		
ZCH100-10-1400kW	1400	1800	104		
ZCH100-10-1600kW	1600	2000	115		
ZCH100-10-1800kW	1800	2250	130		
ZCH100-10-2000kW	2000	2500	154	Cabinet C	4000×1500×2200
ZCH100-10-2250kW	2250	2800	162		
ZCH100-10-2500kW	2500	3150	182		
ZCH100-10-2800kW	2800	3500	202		
ZCH100-10-3200kW	3200	4000	231		
ZCH100-10-3600kW	3550	4500	260	Cabinet D	6925×1500×2455
ZCH100-10-4000kW	4000	5000	289		
ZCH100-10-4500kW	4500	5600	323		
ZCH100-10-5000kW	5000	6300	364		
ZCH100-10-5500kW	5600	7000	404		
ZCH100-10-6300kW	6300	8000	462	Cabinet E	9100×1650×2455
ZCH100-10-7100kW	7100	9000	520		
ZCH100-10-8000kW	8000	10000	577	Cabinet F	9200×1700×2800

VFD Model	Motor power (kW)	VFD Capacity (kVA)	Rated Current (kg)	Cabinet Dimension (W×D×H)
ZCH100S-10-315kW	315	400	23	1600*1400*2558
ZCH100S-10-355kW	355	450	26	
ZCH100S-10-400kW	400	500	31	
ZCH100S-10-450kW	450	560	33	
ZCH100S-10-500kW	500	630	40	
ZCH100S-10-560kW	560	710	42	
ZCH100S-10-630kW	630	800	48	
ZCH100S-10-710kW	710	900	52	
ZCH100S-10-800kW	800	1000	61	
ZCH100S-06-250kW	250	355	35	
ZCH100S-06-315kW	315	400	40	
ZCH100S-10-355kW	355	450	43	
ZCH100S-06-400kW	400	500	48	
ZCH100S-06-450kW	450	560	55	
ZCH100S-06-500kW	500	630	61	
ZCH100S-06-560kW	560	710	68	
ZCH100S-06-630kW	630	800	77	

Remarks:

- Above dimensions and weight are for reference only, the specific dimensions and weight are subject to the technical agreement;
- Input voltage and output voltage of the standard series are the same;
- Height of the overall size does not include the height of the fan, which requires an additional 300mm to 600mm;
- Above overall machine size and weight refer to the sum of the control cabinet, unit cabinet, and transformer cabinet, excluding the power frequency bypass cabinet;
- Distance between the front of the device and the wall s no less than 1500mm, the distance between the back and the wall is no less than 1000mm, the distance between the sides and the wall is no less than 800mm, and the distance between the top and the roof is no less than 1000mm.
- Standard overload capacity is 120%/1 minute, overload is allowed for 1 minute every 10 minutes; overload capacity of 125%, 150%, and 200% can be selected to meet the needs of different applications;
- Applicable motor power may change due to differences in the form and structure of the motorand is for reference only.



ZX300 Series
Compact PLC

- Compact PLC system that uses the ZX Works programming Environment. (compatible with the Mitsubishi FX3U series)
- Primarily used for general logic control and simple motion control

Product Features

Diverse Input and Output Configurations

• Main unit supports up to 4 channels of high-speed pulse output, 4 channels of single-phase high-speed input counting, or 1 channel of AB phase + 2 channels of single-phase high-speed input

Convenient Programming Platform

• Self-developed programming environment ZXWorks also compatible with Mitsubishi programming software, enabling seamless program transfer, with programming instructions similar to those of most small PLCs

Rich storage communication

• 64K or 16,000-step program storage unit and 4K power-failure data retention, meeting most logic control needs
• RS232/RS485 communication port:Supports Modbus RTU master-slave communication
• USB communication port: Supports Type-C for downloading and monitoring user programs

Flexible Expansion Modules

• Support up to 12 X10 series expansion modules and 1 E10 series expansion module (E10 series is restricted to be connected to the first position on the right)

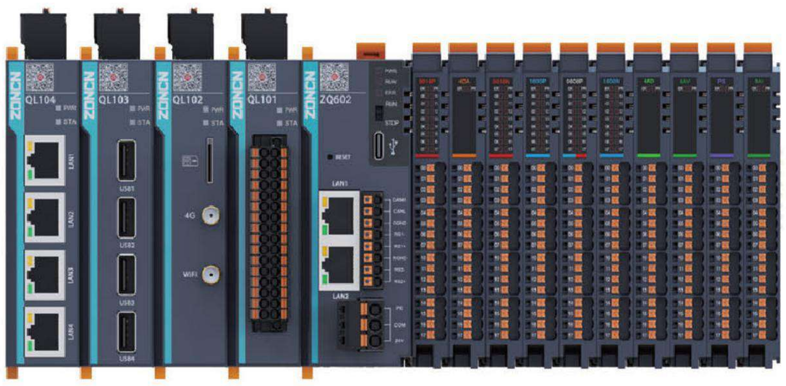
Model Description

Host: ZX 3 01 - 08 08 T
①②③④⑤⑥

①ZX: Zhongchen small PLC	③01: fundamental form PLC	⑤08: Output quantity
②3: 300 series PLC	④08: Enter the quantity	⑥T: 2 high speed input, 2 high speed output R: 2 high speed input, relay output F: 4 high speed input, 4 high speed output

Extended Modules: E 10 - 08 08 T
①②③④⑤

①E: Direct host connection IO X: Bus extended IO	③08: Enter the quantity	⑤T: Optocoupler output R: Relay output
②10:10 series IO	④08: Output quantity	



ZQ600 Series

High Performance PLC

- High-performance mid-range PLC,its design and development fully comply with PLCopen specifications and the IEC 61131-3 standard, supporting multiple programming languages such as ST, LD, SFC, and CFC
- Primarily used in motion control applications and complex production line networking scenarios,particularly suited for multi-axis servo control and multi-bus protocol environments (PROFINET,EtherCAT,Modbus TCP)

Product Specification

Model		ZQ601	ZQ602
product picture			
Input power supply		DC 24V±10%, maximum 4A, typical 2.4A support short circuit/reverse connection protection, no external UPS required	
Memory		4G	
Data/Storage Capacity		128M program capacity, 128M data capacity (1M power failure retention space +64K M device Non-Volatile Memory)	
Communication specifications	EtherCAT	One channel, support for expansion	One channel, support for expansion
	RS485	2 Road	2 Road
	CAN communication	1 CAN (up to 8 slave stations) and supports CANopen and CAN free protocols	
	USB communication	Support	
EtherCAT communication	Number of EtherCAT shafts	16+16	32+32
	EtherCAT from the station	A maximum of 256 can be supported	
	Communication cycle	2ms 4-axis synchronization	1ms 4-axis synchronization
PROFINET communication		Support PROFINET master and slave	
Extended capabilities	Right expansion	Support 32 QY20 series blade modules	
	Left expansion	EtherCAT redundancy, EtherCAT splitter, 4-way routing, high-speed pulse, 4G/5G, remote debugging/monitoring, MQTT cloud, EtherCAT slave functions (under development)	
RUN/STOP		PLC stop/run can be implemented	
RESET	Restored to factory	Clear the user program and restore the initial IP address	
programming language		IEC61131-3	



QY20 Series
Remote I/O

- Plug-in I/O modules include of coupler module, I/O function modules, and relay power module
- I/O function modules are available in various types and point counts,including digital,analog, pulse output,encoder, and temperature modules.Customers can configure these modules according to specific on-site requirements
- Support mainstream communication protocols such as EtherCAT, PROFINET, and CC-Link IE TSN, making it widely suitable for various bus-type application scenarios.

Product Specification

Model	QY20-ECT	QY20-PN	QY20-CCT	QY20-EIP
Bus protocol	EtherCAT	PROFINET	CC-Link IE TSN	EtherNET/IP
Number of expandable IO modules	32			
Input power supply	24V DC (±20%) 0.5A			
output characteristic	5V 2A			
Working temperature	-20℃~55℃			
Levels of protection	IP20			

Product Order Information

Product model	Describe
CPU: ZX300 Series PLC	
ZX301-0808F	8-bit DI, 8-bit DO (4 high-speed input, 4 high-speed output), supports RS232/RS485 extensible
ZX301-0808T	8-bit DI, 8-bit DO (2 high-speed input, 2 high-speed output), supports RS232/RS485 extensible
ZX301-0806T	8-bit DI, 6-bit DO (2 high-speed input, 2 high-speed output), supports RS232/RS485 extensible
E10Series Direct Connection Expansion Module	
E10-0808T	8-bit DI, 8-bit DO/NPN type drain output
E10-0808R	8 channel DI, 8 relay output
X10 Series Communication Expansion Module	
X10-0808T	8-bit DI, 8-bit DO/NPN type drain output
X10-0808R	8 channel DI, 8 relay output
X10-0402A	4 analog input and 2 analog output
X10-4PT	4 resistance thermometers input/three lines
X10-4TC	4 thermocouple inputs/ two wires
X10-4AD	4 channel analog input, compatible with voltage and current
X10-8TC	8 channel RTD input / 2-wire
X10-1600T	16 channel DI, compatibleNPN/PNP
X10-0016P	16 channelDO, PNP
X10-0016N	16 channel DO, NPN
X10-2A2PT	2 channel analog input, 2 temperature
QY20 Series Coupler Module	
QY20-ECT	EtherCAT bus coupler
QY20-PN	PROFINET bus coupler
QY20-CCT	CC-Link IE TSN bus coupler
QY20-EIP	EtehrNET IP bus coupler

Product model	Describe
ZQ600 series PLC	
ZQ601	32 ECT axes, RS485*2+EtherCAT, and up to 32 QY20 modules locally
ZQ602	64 ECT axes, RS485*2+EtherCAT, and up to 32 QY20 modules locally
ZQ501	Domestic PLC, low-cost solution
ZQ502	Domestic PLC, low-cost solution

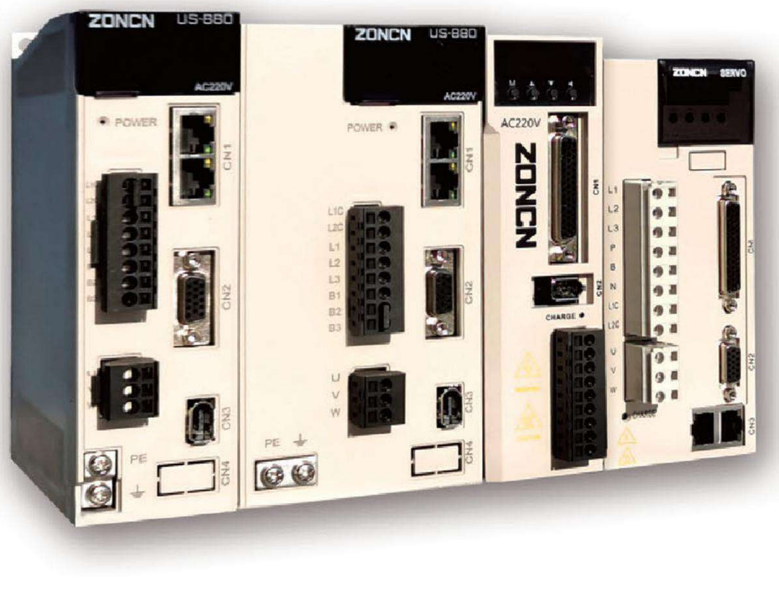
Product model	Describe
Left extension function module	
QL10	WiFi/4G expansion module
QL22	EtherCAT slave module
QL23	EtherCAT ring network module
QL24	EtherCAT branch module
QL41	Router expansion module

Product model	Describe
Stand-alone functional module	
QL101	WiFi/4G module
QL221	EtherCAT slave module
QL241	EtherCAT branch device
QL411	Router

Product model	Describe
QY20 series IO	
QY20-0016P	16 channel digital output module, PNP
QY20-0016N	16 channel digital output module, NPN
QY20-1600P	16 channel digital input module, PNP
QY20-1600N	16 digital input module, NPN
QY20-0808P	8 digital input +8 digital output, PNP
QY20-0808N	8 channel digital input +8 channel digital output, NPN
QY20-4AD	4 analog input module (16 bits), ±10V/0~10V/±5V/0~5V/1~5V/0~20mA/4~20mA
QY20-4DA	4 analog output module (16 bits), ±10V/0~10V/±5V/0~5V/1~5V/0~20mA/4~20mA
QY20-8AI	8 analog input module is current type (16 bits), 0~20mA/4~20mA
QY20-8AV	8 analog input module is voltage type (16 bits), ±10V/0~10V/±5V/0~5V/1~5V
QY20-8AI-L	8 analog input module is current type (12 bits), 0~20mA/4~20mA
QY20-8AV-L	8 analog input module is voltage type (12 bits), 0~10V/0~5V/1~5V
QY20-4PT	4 thermal resistance temperature detection modules, PT100, PT500, PT1000, CU100, KTY84, NTC5K, NTC10K
QY20-4TC	4 thermocouple temperature detection modules, B, E, N, J, K, R, S, T
QY20-2HC	2-bit encoder high-speed counting module, 5V differential or 24V single end
QY20-4PO	4-pulse output module, 24V NPN type
QY20-PS	Backup power module, 5V 2A

Product model	Describe
QY10 Fixed Cost IO Solution	
QY10-ECT	EtherCAT bus coupler
QY10-PN	ProfiNET bus coupler
QY10-0032T	32 point output module
QY10-3200T	32 point input module
QY10-1616T	16 point input 16-point output module
QY10-0016R	16 point relay output module
QY10-8AD	8 channel analog input module
QY10-8DA	8 channel analog output module
EtherCAT standalone module	
ECT-0032T	32 point output module
ECT-3200T	32 point input module
ECT-1616T	16 point input 16-point output module
ECT-0016R	16 point relay output module
ECT-8AD	8 channel analog input module
ECT-8DA	8 channel analog input module

Product model	Describe
Profinet standalone module	
PN-0032T	32 point output module
PN-3200T	32 point input module
PN-1616T	16 point input 16-point output module
PN-0016R	16 point relay output module
PN-8AD	8 channel analog input module
PN-8DA	8 channel analog output module



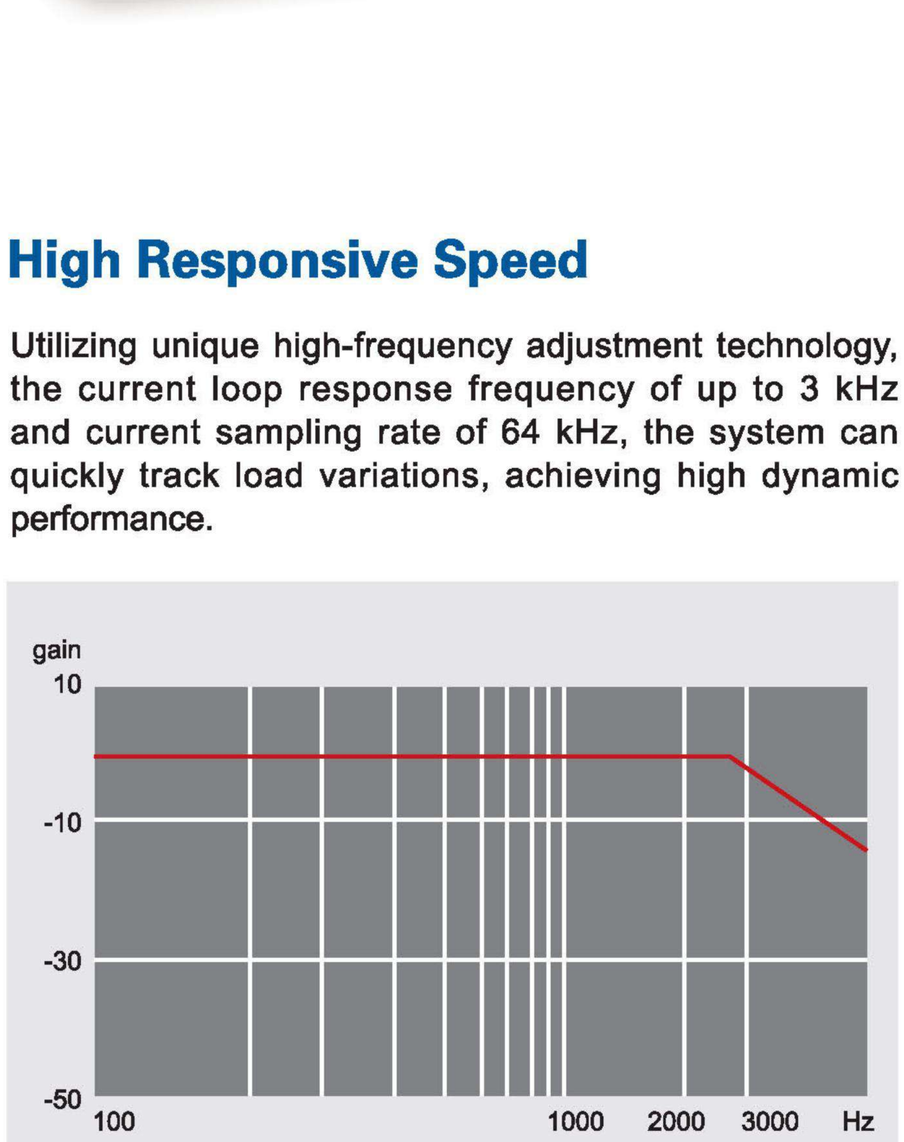
US880/US810 Series

AC Servo System

- Position/Velocity/Torque Control
- Speed/Torque Limit Function
- Home Search Function
- Zero-Speed Lock Function
- Smooth Speed Command Ramp Function
- Dynamic Brake and Energy Consumption Brake
- Soft Reset Function
- Support EtherCAT, PROFINET, Mechatrolink III

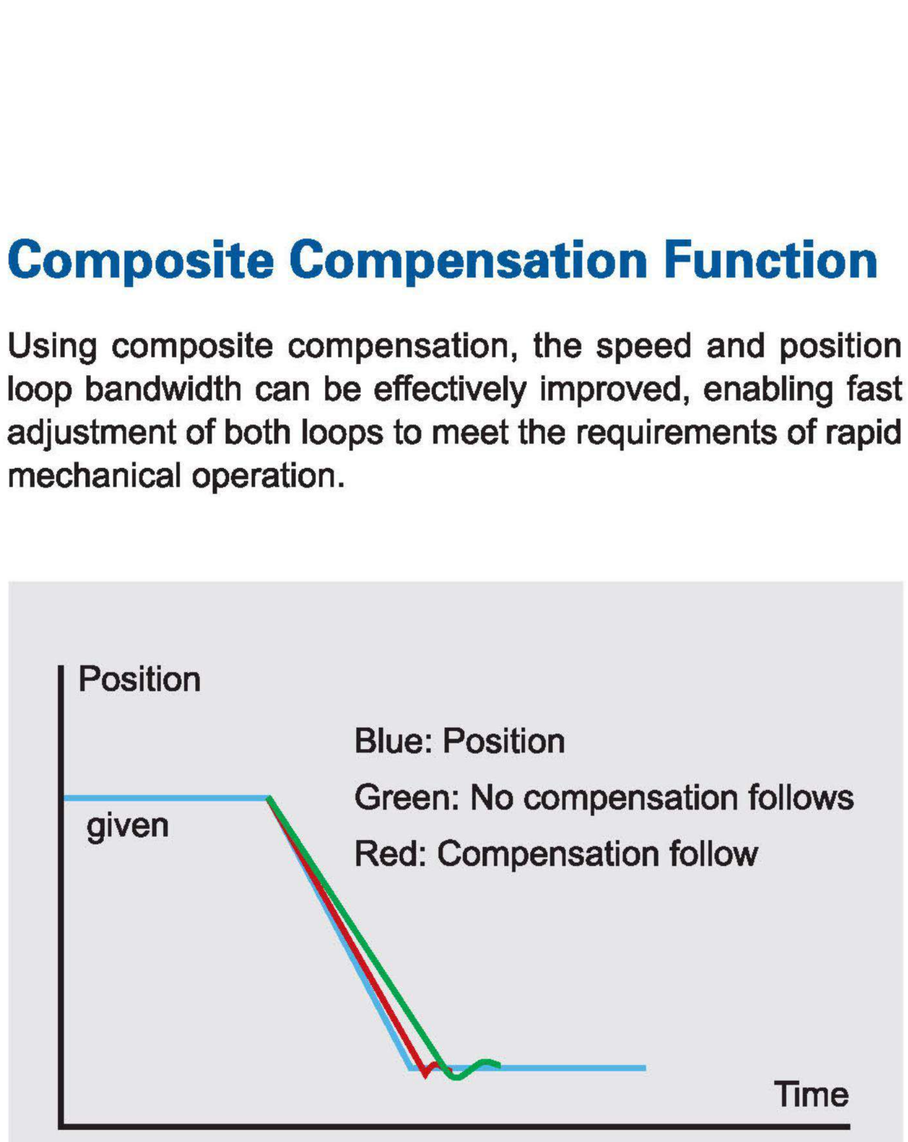
High Responsive Speed

Utilizing unique high-frequency adjustment technology, the current loop response frequency of up to 3 kHz and current sampling rate of 64 kHz, the system can quickly track load variations, achieving high dynamic performance.



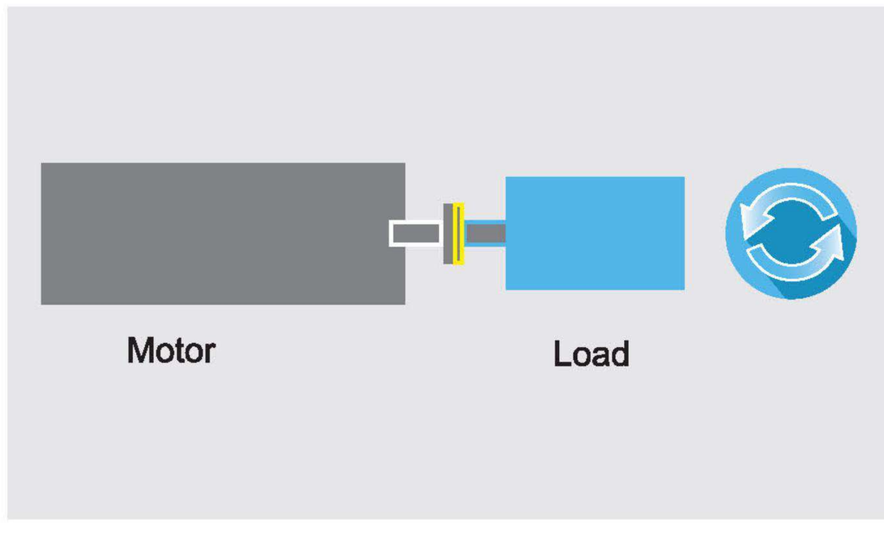
Composite Compensation Function

Using composite compensation, the speed and position loop bandwidth can be effectively improved, enabling fast adjustment of both loops to meet the requirements of rapid mechanical operation.



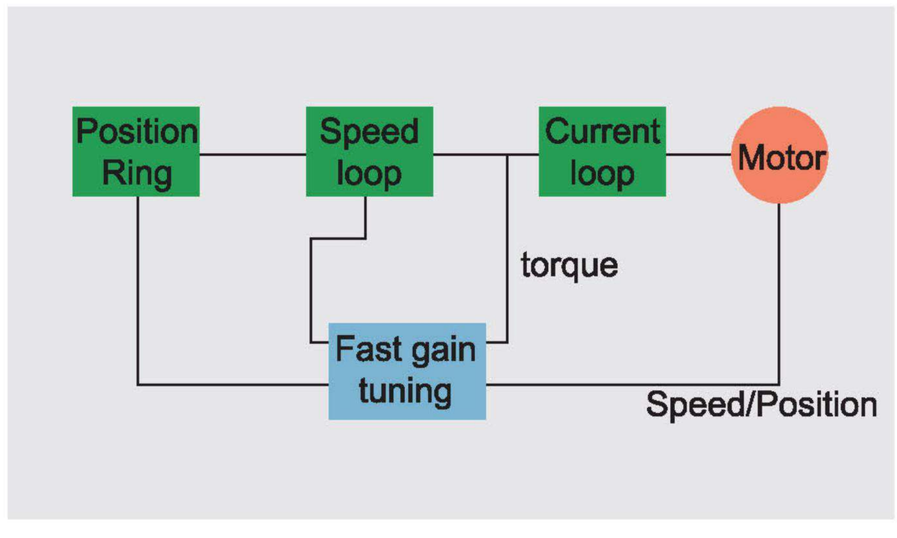
Quick Inertia Identification

Easy operate the driver's keypad or a computer interface, the inertia ratio can be identified within 100 ms.



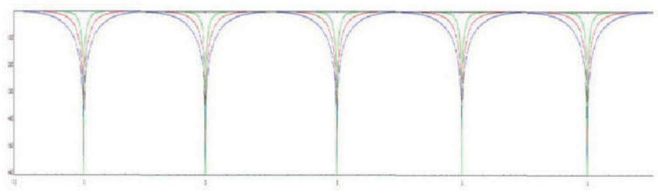
Fast Gain Tuning

Operate the driver's keypad or a computer interface, the control gain and integral time constant can be tuned within 0.5-2 minutes, meeting the optimization requirements for various rigid and inertia devices.



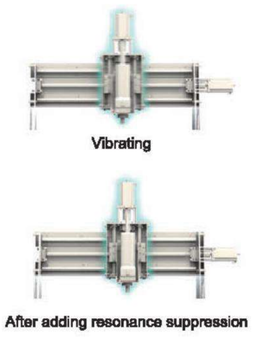
Multiple Sets of Notch Filters

Setting multiple sets of notch filters,can filter out multiple high-frequency resonance points in the machinery, eliminating resonance.



Mid–Low Frequency Oscillation Suppression

Calculate vibration suppression algorithms for mid and low frequencies, can suppress low-frequency mechanical vibrations, promote stable equipment operation.



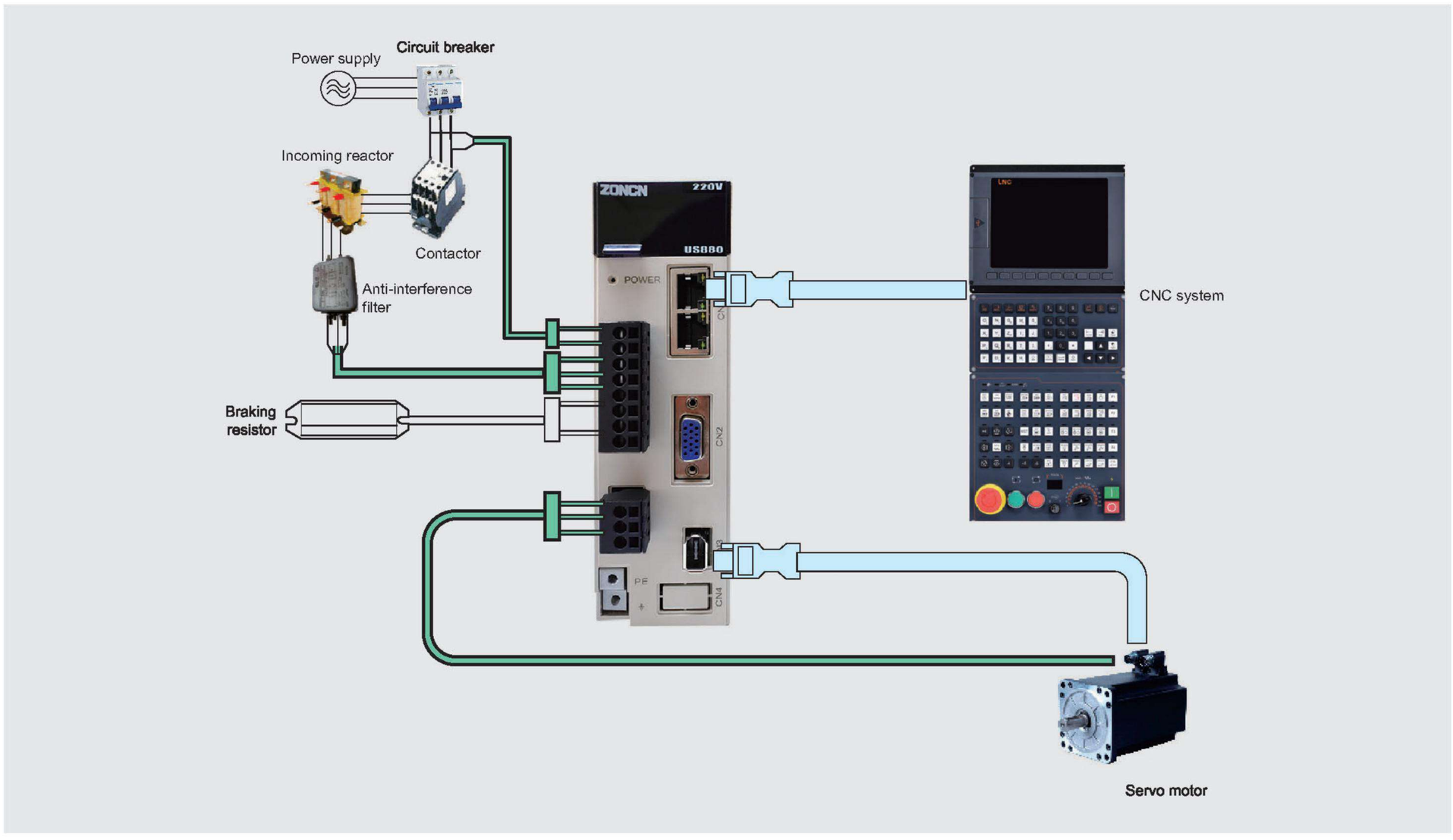
Communication

EtherCAT® Mechatrolink III PROFINET

Typical Applications:

CNC lathes: Excellent product quality, high precision, fast speed, smooth surface, smooth and precise contouring of 3D surfaces, right angles and straight lines, chip cutting functionality.
Precision engraving machines: High resolution, precise positioning, matching of rotational inertia, high overload capacity.
Engraving and milling machines: Good speed stability, high precision, fast response frequency, wide speed range, low-speed high torque.
Engraving machines: Fast speed response, good product smoothness, minimal patterns, smooth curve cutting.
Drilling and tapping machines: High-speed and low-speed machining with high precision, wide adjustment range, adaptable to different product requirements.
Machining centers: Rich parameter settings, combined with debugging frequency division coefficients, inertia friction compensation, gain filter, and other parameters to accomplish various complex machining tasks.

Peripheral device structure



Drive Model Description

US - 880 - 0R4 - C 02

① ② ③ ④ ⑤

①ZONCN Servo
AC Servo System

②Product series
880: 880 Series; 810: 810 Series

③Rated power
0R2:0.2kW; 0R4:0.4kW;
0R7:0.75kW; 1R0:1.0kW;
1R5:1.5kW; 2R5:2.5kW;
3R0:3.0kW; 4R0:4.0kW;
5R0:5.0kW; 7R5:7.5kW;
11:11kW; 15:15kW

④Product Type:
A:Absolute+485 communication;
C:Absolute+EtherCAT;
D:Absolute+Mechatrolink Ⅲ;
G:Incremental(ABZ)
P:PROFINET

⑤Voltage:
02:3PH 220V; 04:3PH 380V

Motor Model Description

ZCM1 - 060 - K L 013 30 - 5 E P

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

①Series
ZC:High performance motor;
US:Economic motor

②Encoder type
M1:Photoelectric encoder;
M2:Magnetoelectric encoder

③Flange
040:40; 060:60; 080:80;
110:110; 130:130; 180:180;
220:220

④Encoder type
N:Absolute 24-bit Multi-turn
K:Absolute 23-bit Multi-turn
K1:Absolute 23-bit Multi-turn Split Type
C:Absolute 17-bit single turn
C1:Absolute 17-bit Multi-turn

⑤Phase/Voltage
L:3 phase 220V; S: 3 phase 380V

⑥Rated torque
003:0.32N.m; 006:0.64N.m; 013:1.27N.m;
024:2.39N.m; 032:3.2N.m; 042:4.2N.m;
054:5.4N.m; 060:6N.m; 077:7.7N.m;
083:8.3N.m; 115:11.5N.m; 146:14.6N.m;
186:18.6N.m; 284:28.4N.m; 350:35N.m;
480:48N.m; 830:83N.m; 955:95.5N.m

⑦Rated speed
15:1500rpm; 20:2000rpm;
25:2500rpm; 30:3000rpm

⑧Polar logarithm
4:4 pole; 5:5 pole

⑨Brake
E:No brake; B:Brake

⑩Waterproof/Oil seal
Y:With oil seal; W:Without oil seal;
P:Waterproof and oil seal

Technical Specification

Item				
Basic specification	Input power	Control Circuit Power	1PHAC200V~AC240V 50/60Hz	
		Main Circuit Power	US880	US810
			3PH220V: 0.2kW~5.5kW 3PH380V: 1.5kW~11kW	1PH220V: 0.2kW~1.0kW 3PH220V: 1.5kW~2.0kW 3PH380V: 2.0kW~15kW
	Environment Condition	Temperature	Environment temperature 0℃~55℃ (without condensing) Storage temperature -20℃~65℃ (Maximum temperature 87℃ 72 hours)	
		Humidity	Both using and storage need to keep below 90%RH(without condensing)	
		Altitude	Below 1000m	
		Vibration	Below 5.88m/S^2, 10-60Hz(Can not continuous use under resonance frequency)	
	Control mode		IGBT PWM type sine wave drive	
	Encoder feedback		24Bit(16777216)Absolute encoder 23Bit(8388608)Absolute encoder 17Bit(131072)Absolute encoder	
	Communication	EtherCAT/M3	Industrial Ethernet bus (COE)	
	Operation panel		1.4 keys 2.LED light 5 bits 3.CPU workable light 4.Vector signal monitor output	
	Brake resistor		Built-in regenerative resistor (Can be external)	
	Dynamic brake		Built in	
Function	Position control	Signal input	US880 series support EtherCAT.M3 US810 series support EtherCAT.Pulse signal input	
		Resistance to vibration	Support	
	Speed control	Signal input	US880 series support EtherCAT.M3 US810 series support EtherCAT.External speed input	
		Zero speed dead zone	According to zero speed dead zone input	
		Instantaneous velocity observer	Support	
		Speed command filter	Support	
	Torque control	Signal input	US880 series support EtherCAT.M3 US810 series support EtherCAT.External torque input	
	General	Protection – Hardware error	Over voltage, under voltage, over speed, overload, over heat, over current,encoder fault	
		Protection – Software error	Position deviation too large, command pulse frequency division, EEROM fault	
		Alarm data track	Refer to alarm data list	



AHG Series
Planetary Reducer

- Low-noise
  Planetary reducer: low-noise, low-vibration, and helical gear design reduces the noise value by 20% compared with previous products.
- High Rigidity
  Main shaft adopts crossed roller bearings, and the gear ring adopts an integrated design to achieve compactness and high rigidity, as well as large torque.
- High Precision
  High-precision series with a low backlash of 1 minute and 3 minutes, combined with high-precision servo motors, realizes high-precision positioning.
- Compact Type
  Small in size, it dramatically improves the freedom of equipment design by saving space and is easy to install.

Model Description

A HG - B - 5 - S3 - Model Type
① ② ③ ④ ⑤

①Name of reducer	③Size of reducer: B/C/D/E	⑤Backspace accuracy 3 Points
②Model: HG/HGS Model Series	④Reduction ratio: Level 1 4~10 Level 2 11~100	



N Series
Planetary Reducer

- Low-noise
  Planetary reducer with low-noise, low-vibration, and helical gear design reduces the noise value by 20% compared with previous products.
- High Rigidity
  Main shaft adopts integral cylindrical roller bearings and deep groove ball bearings. and the gear ring adopts an integrated design to achieve compactness and high rigidity, as well as large torque.
- High Precision
  High-precision series with a low backlash of 1 minute and 3 minutes, combined with high-precision servo motors, realizes high-precision positioning.
- Compact Type
  Small in size, it dramatically improves the freedom of equipment design by saving space and is easy to install.

Model Description

N HB - 042 - 5 - S3 - Model Type
① ② ③ ④ ⑤

①Name of reducer	③Size of reducer: 042/060/090/115/142/180/220	⑤Backspace accuracy 3 Points
②Model:HB Model Series	④Reduction ratio: Level 1 3~10 Level 2 12~100	



A Series

Planetary Reducer

- Low-noise

  Anti-vibration and low-noise planetary reduction mechanism and helical gears are adopted to maximize their strength and achieve quiet operation. Compared with the previous spur gears, the noise is reduced by 10%.

- High Rigidity

  Main body is machined directly from high-strength steel, enabling maximum output torque in a compact and robust main body.

- High Precision

  The high-precision series with a backlash of 0.05° (3 minutes) exerts great power in precise positioning and can fully utilize the characteristics of high-precision servo motors.

- Long Service Life

  High-grade grease with good durability and low wear is used, requiring no long-term maintenance.

- Easy Installation

  The spline connection flange and keyless locking bushing are adopted, which are not only suitable for the servo motors of various companies but also facilitate the installation of the motor and the reducer.

Model Description

A HB - 042 - 5 - S3 - Model Type

① ② ③ ④ ⑤

①Name of reducer	③Size of reducer: 042/060/090/115/140/180	⑤Backspace accuracy 3 points (1 to 3 points)
②Model: HB Model Series	④Reduction ratio: Level 1 3~10 Level 2 15~100	

AHB series:



AHL series:



AHS series:



AHT series:



ABR series:



ALR series:



ASR series:



ATR series:





TD Series
Planetary Reducer

TD Series Reversing Reducer

It features high precision, high rigidity, high load, high efficiency, high speed ratio, long service life, low inertia, low vibration, low noise, low temperature rise, beautiful appearance, light structure, easy installation, and accurate positioning. Suitable for speed increasing and reducing transmission of AC servo motors, DC servo motors, stepping motors, and hydraulic motors.

Model Description

TD - 075 - L1 - 5 - RF - S9 -19 -303
① ② ③ ④ ⑤ ⑥ ⑦ ⑧

①Model
TD Model Series

②075
065/075/090/110/140/170/210

③Gear Ratio Type
L1 (1-stage ratio)
L2 (2-stage ratio with double-stage reducer)
L3 (3-stage ratio with single-stage reducer)

④Reducer Ratio: AT065 ~ AT210
L1 (1-stage ratio): 1, 2, 3, 4, 5
L2 (2-stage ratio): 12 ~ 50
L3 (3-stage ratio): 50 ~ 500

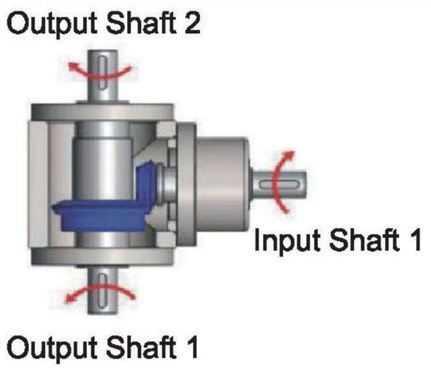
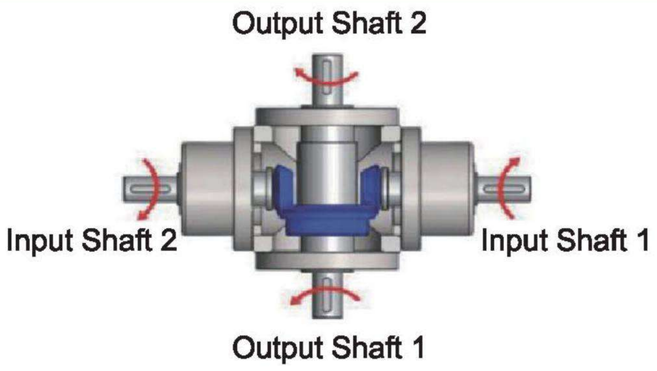
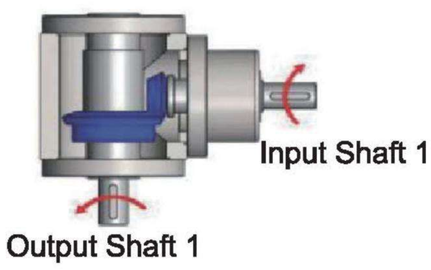
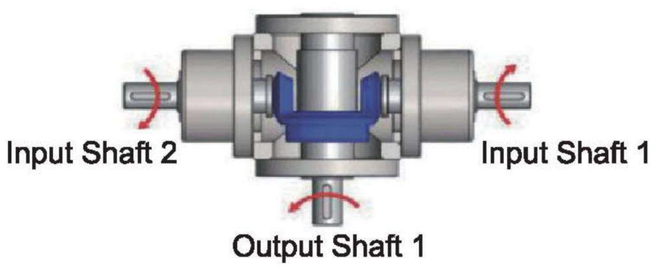
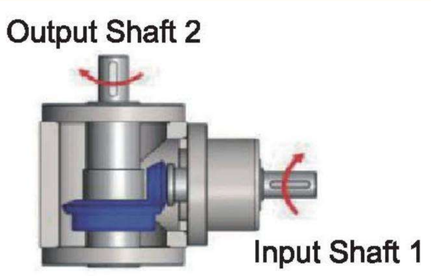
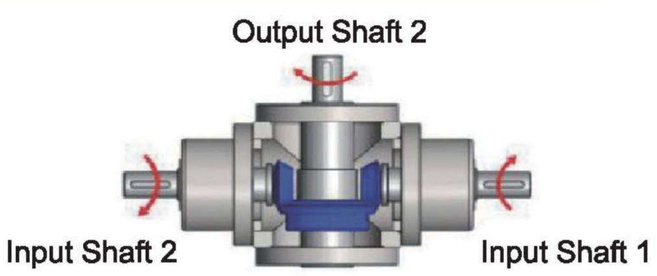
⑤Output Type
P: Single solid output shaft
2P: Double solid output shaft
CR: Hollow shaft with keyway
RF: Hollow shaft rotating flange
RF-K: Hollow shaft rotating flange + keyway
RFHP: Hollow shaft + tapered lock ring
HR: Hollow rotating platform
BS: Ball screw type
When the output type is single output, there is an output direction, followed by "L" (Left) or "R" (Right)

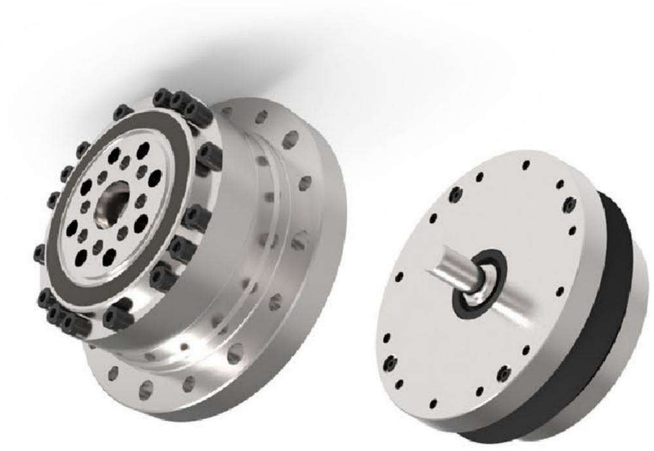
⑥Backlash: ≤ 9 arcminutes
Precision: ≤ 6 arcminutes
Ultra-precision: ≤ 3 arcminutes

⑦Servo Motor Output Shaft Diameter Φ19
Marked as "38/35, 19/16..." when a shaft sleeve is installed

⑧Servo motor
Marked as "D" for customer-customized input type

Rotation Direction Description

L Axial Direction		
L Axial Direction		
R Axial Direction		



Harmonic Reducer

- Harmonic reducers can be divided into three categories according to the structural shape of the external gear: cup-shaped, hollow-shaped, and cylindrical-shaped. Each category is further divided into standard length and short cylinder models according to the length of the external gear.
- Type Ⅰ: Standard type, the input shaft is matched with the inner hole of the elliptical cam and connected by screw fastening or flat key.
- Type Ⅱ: Cross slider coupling type, the input shaft and the cam are connected by a cross slider coupling.
- Type Ⅲ: Hollow shaft type, the input end component is connected with the hollow elliptical shaft by screws.
- Type Ⅳ: Solid shaft input type, the shaft is directly connected with the servo motor.

Model Example

BCSG - 17 - 80 - Type - Special Specification

① ② ③ ④ ⑤

①Model Name	④Type (Standard)
②Specification Code	⑤Special Specification
③Ratio	

Model Name	Specification Code	Ratio					Type (Standard)	Special Specification
BCSF/ BCSG	14	50	80	100			2A = Component type 2UH = Combined type I: Standard type II: Cross - slide coupling type	SP = Special specification such as shape and performance Blank = Standard product
	17	50	80	100	120			
	20	50	80	100	120	160		
	25	50	80	100	120	160		
	32	50	80	100	120	160		
	40	50	80	100	120	160		
BSHF/ BSHG	14	50	80	100			2A = Component type 2UH = Combined type I: Standard type II: Cross - slide coupling type III: Hollow shaft type IV: Shaft input type	SP = Special specification such as shape and performance Blank = Standard product
	17	50	80	100	120			
	20	50	80	100	120	160		
	25	50	80	100	120	160		
	32	50	80	100	120	160		
	40	50	80	100	120	160		

Explanation:

It is represented by the first letter “B” of the abbreviation of our company, Beitto Transmission Technology Co., Ltd., plus the traditional structure symbol (as shown in Example ① in the diagram). The form code of the product consists of three parts: the shape of the flexspline, its length, and the load torque of the reducer.

The shapes of the flexspline are divided into cup type (CUP) and hollow type (HOLLOW). The cup type is represented by “C”, and the hollow type is represented by “H”.

The lengths of the flexspline are divided into standard (STANDARD) and dwarf (DWARF). The standard length is represented by “S”, and the dwarf length is represented by “D”.

Wuhu ZONCN Automation Equipment Co., Ltd.
Factory Add.: No.168,Sunshine Avenue,Xinwu Economic Development Zone
Wuhu City,Anhui Province,P.R.China
Whatsapp/Wechat: +86-17858950809
E-mail: jenny@whzoncn.com . Web: www.zoncn.cn/www.whzoncn.com

No.25.09.02