

**HBD ECH**  
**SHENZHEN HBDTECH TECHNOLOGY CO., LTD**

**HBD ECH**



Address: 4th Floor, Building A, Main garden of science & technology innovation park of Taohuayuan  
Xixiang street, Bao'an district, Shenzhen city, Guangdong, China ,518000

Fax: 0086-0755-29666485

Tel: 0086-0755-29630738

Email: [hbdtech@hbdtech.com](mailto:hbdtech@hbdtech.com)



## Company introduction

Shenzhen HBDTECH technology Co., Ltd focused on development, production, sales and service of Industrial automation and drive products, we have a strong independent research and development of high-performance inverters, transformers, and integration of electrical transmission products, through listen and understand our clients requirement, by improving and upgrading our product functions and performance continuously , we provide and develop perfect products and solutions according to different requirement of the industry. The company's strong R & D team can quickly provide customers with tailor-made technology solutions.

Our products have been used and applied successfully in packing, printing, textiles, plastic injection, elevator, machine tool, robot, wood cutting, stone carving, ceramic, glass, paper making industry, crane, fan & pump, new energy resources etc.

Our production strictly through the ISO9000 quality management system and CE certification, the modern assembly line production, independent development of computer automated testing equipment, high-temperature aging machine automation equipment, the whole load of rigorous testing machine debugging automation equipment, aging, testing, to ensure product quality and reliable.

Shenzhen HBDTECH technology Co., Ltd has been searching for capable companies as our business partners, product agents and distributors, bringing good product quality and professional service to our clients globally. Up until now, we have already got customers and business partnerships built up in over 20 countries, which include Europe, North America, South America, Asian-pacific region, Middle East and Australia etc.

Trust born hope, unity cohesion strength! HBDTECH is your professional electrical partner!

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## 500 SERIES HIGH-PERFORMANCE VECTOR CONTROL INVERTER

### Voltage level:

**Power Range:**0.4KW/220V-200KW/220V 0.75KW/380V-500KW/380V/440V

**Output Frequency:**0Hz-500Hz

**Control method:** V/F Control SVC Vector Control

- Torque characteristics: 1Hz Rated Output Torque 150%
- Overload: 150% 1min., 180% 1sec., 200% instant protection
- Protective functions: Overcurrent protection, Overvoltage, Undervoltage protection, Overheating protection, Overload
- Basic Interface: Reversible instruction, 5 Programmable digital inputs, 2 Analog signal inputs, 2 Analog signal outputs, 2 Programmable open collector outputs, 2 Programmable relay outputs.
- Communication Interface: Standard RS485 communication interface

### FEATURE OF PRODUCT

- Compact size and structure, Stable performance
- Built-in PID, Auto sleep/ wake-up function, Multi-speed operation
- Designs are adapted to a wide range of wide-voltage changes, especially adapted to domestic low-voltage special occasions
- Built-in brake unit, convenient interfaces braking resistor, users can choose braking resistor refer to manual
- Panel mount assembly to facilitate the formation of a remote control, Panel potentiometer easy to use and operate
- Perfect protection, Efficient radiation design
- Any acceleration and deceleration curve settings, V/F curves are available.
- Three anti-optimization
- Programmable relay output, Output signal reaches 16 states.

### APPLICATION FIELDS

Products are widely used in mechanicals, Textile Machinery, Packaging Machinery, Plastic robot, Rubber Machinery, Printing machinery, Construction Machinery, Logistics and warehousing, Motor Machine, Metallurgy, Car, Electronic, Building Materials, Papermaking, Mining, Water Industry, Security, Petrification, Electricity, Wind power, Solar, Railway, Track Traffic, and other Industrial Automation industry.

Inverter model	Motor adapter		Rated output A	Rated input A	Shape DIM
	KW	HP			
1PH Single phase input: AC 220V, 50/60Hz					
500-Y0004M1	0.4	0.5	5.9	2.5	001M
500-Y0007M1	0.75	1	8.3	4	001M
500-Y0015M1	1.5	2	14.1	7	001M
500-Y0022M1	2.2	3	24.2	10	001M
1PH Single phase input: AC 220V, 50/60Hz					
500-Y0007G1	0.75	1	5.3	4	001
500-Y0015G1	1.5	2	8	7	001
500-Y0022G1	2.2	3	11.8	10	001
3PH 3-phase input: AC 380V, 50/60Hz					
500-Y0007G3	0.75	1	5.3	2.5	001
500-Y0015G3	1.5	2	8	3.7	001
500-Y0022G3	2.2	3	11.8	5.1	001
500-Y0040G3	4	5.5	18.1	8.5	002
500-Y0055G3	5.5	7.5	21	13	002
500-Y0075G3	7.5	10	33.1	16	002
500-Y0110G3	11	15	43.8	25	003
500-Y0150G3	15	20	57.4	32	003
500-Y0185G3	18.5	25	71.6	38	003
500-Y0220G3	22	30	81.7	45	004
500-Y0300G3	30	40	112.1	60	004
500-Y0370G3	37	50	137.4	75	004
500-Y0450G3	45	60	165.3	90	005
500-Y0550G3	55	70	205.8	110	005
500-Y0750G3	75	100	150		006
500-Y0930G3	93	125	170		006
500-Y1100G3	110	150	210		007
500-Y1320G3	132	175	250		007
500-Y1600G3	160	210	300		007
500-Y1850G3	185	245	340		007
500-Y2000G3	200	260	380		008
500-Y2200G3	220	300	415		008
500-Y2500G3	250	350	470		008
500-Y2800G3	280	370	520		008
500-Y3150G3	315	400	600		009
500-Y3550G3	355	420	650		009
500-Y4000G3	400	530	725		009
500-Y4500G3	450	595	820		009

## 580 SERIES CLOSED LOOP VECTOR INVERTER

### Voltage level:

**220V (SINGLE PHASE POWER): 0.4KW – 202KW**

**380V(THREE PHASE POWER): 0.75KW – 400KW**

### New speed sensorless vector control

1. No speed sensor vector control, you can stumble movement, output at 0.5hz 150 5 rated torque
2. Sensorless vector control reduces the sensitivity to motor parameters and improves off-the-shelf applicability
3. Can be applied to winding control, multi-motor drag the same load under the load distribution and other occasions.

### High starting torque characteristics, superior response

1. At 0.5hz 150% of the starting torque (no sensor vector control), at 0hz can provide 180% of the 0 speed torque (with sensor vector control)
2. No sensor vector control, torque response < 20ms, sensor vector control, torque response < 5ms.

### APPLICATION FIELDS

Equipment, plastic machinery, woodworking machinery, mining, air compressor, ball mill, centrifugal dehydration machine, beam pumping unit for textile machinery, CNC lathes, papertowels machinery, printing and packaging machinery Suitable for other industrial applications where high-performance closed-loop vector control is Required



Type	Power capacity KVA	Input current A	Output current A	Applicable motor		Heating power KW
				KW	HP	
Single-phase power supply: 220V, 50/60Hz						
580-0.4GS2-5010	1	5.4	2.3	0.4	0.5	0.016
580-0.7GS2-5010	1.5	8.2	4	0.75	1	0.030
580-1.5GS2-5010	3	14	7	1.5	2	0.055
580-2.2GS2-5020	4	23	9.6	2.2	3	0.072
Three-phase power supply: 380V, 50/60Hz						
580-0.7G4-5010	1.5	3.4	2.1	0.75	1	0.027
580-1.5G4-5010	3	5	3.8	1.5	2	0.050
580-2.2G4-5010	4	5.8	5.1	2.2	3	0.066
580-4G-4-5020	5.9	10.5	9	3.7	5	0.120
580-5.5G4-5020	8.9	14.6	13	5.5	7.5	0.195
580-7.5G4-5020	11	20.5	17	7.5	10	0.262
580-11G4-5030	17	26	25	11	15	0.445
580-15G4-5030	21	35	32	15	20	0.553
580-18.5G4-1040	24	38.5	37	18.5	25	0.651
580-22G4-1040	30	46.5	45	22	30	0.807
580-30G4-1040	40	62	60	30	40	1.01
580-37G4-1050	57	76	75	37	50	1.20
580-45G4-1050	69	92	91	45	60	1.51
580-55G4-1050	85	113	112	55	75	1.80
580-75G4-1060	114	157	150	75	100	1.84
580-90G4-1060	134	180	176	90	125	2.08
580-110G4-1070	160	214	210	110	150	2.55
580-132G4-1070	192	256	253	132	200	3.06
580-160G4-1080	231	307	304	160	250	3.61
580-200G4-1080	250	385	377	200	300	4.42
580-220G4-1090	280	430	426	220	300	4.87
580-250G4-1090	355	468	465	250	400	5.51
580-280G4-1090	396	525	520	280	370	6.21
580-315G4-1090	445	590	585	315	500	7.03



510 SERIES VECTOR CONTROL GENERAL INVERTER

Voltage level:

Power Range:0.4KW/220V-200KW/220V 0.75KW/380V-500KW/380V/440V

Output Frequency:0Hz-500Hz

Control method: V/F Control SVC Vector Control

- 1.The new 510 Series is a versatile, highly converged current vector control for general purpose converters
- 2.With the industry's leading drive performance and function control, using a unique current vector control algorithm, you can efficiently drive the induction motor IM and synchronous motor PM, to achieve high precision, high torque and other high-performance control feature of Product

APPLICATION FIELDS

Equipment, manufacturing, energy saving and environmental protection, new energy three major areas, widely used in oilfield, chemical, machine tools, die-casting and metal products, air compressor energy saving, wire and cable, injection molding machine energy and EV shoes, vulcanization machine, printing and packaging, textile Chemical fiber, building materials, metallurgy, coal, municipal and so on



Inverter model	Motor adapter		Rated input A	Rated output A	Shape DIM
	KW	HP			
3PH 3-phase input: AC 460V, 50/60Hz					
DNV510R75G4	0.75	1	4.1	2.5	1H3
DNV5101R5G4	1.5	2	4.9	3.7	1H3
DNV5102R2G4	2.2	3	5.7	5	1H3
DNV510004G4	4.0	5	9.4	8	1H3
DNV5105R5G4	5.5	7.5	12.5	11	1H4
DNV5107R5G4	7.5	10	18.3	15	1H5
DNV510011G4	11.0	15	23.1	22	2H1
DNV510015G4	15.0	20	29.8	27	2H1
DNV510018G4	18.5	25	35.7	34	2H2
DNV510022G4	22	30	41.7	40	2H2
DNV510030G4	30	40	57.4	55	2H3
DNV510037G4	37	50	66.5	65	2H3
DNV510045G4	45	60	81.7	80	2H4
DNV510055G4	55	70	101.9	100	2H4
DNV510075G4	75	100	137.4	130	2H5
DNV510093G4	93	125	151.8	147	2H5
DNV510110G4	110	150	185.3	180	2H6
DNV510132G4	132	175	220.7	216	2H6
DNV510160G4	160	210	264.2	259	2H7
DNV510187G4	187	245	309.4	300	2H7
DNV510200G4	200	260	334.4	328	2H8
DNV510220G4	220	300	363.9	358	2H8
DNV510250G4	250	350	407.9	400	2H8
DNV510280G4	280	370	457.4	449	2H8
DNV510315G4	315	500	533.2	516	2H9
DNV510355G4	355	420	623.3	570	2H9
DNV510400G4	400	530	706.9	650	2H9
DNV510450G4	450	595	760.0	700	2H9
3PH 3-phase input: AC 460V, 50/60Hz					
DNV510055G6	55	70	68.5	63	2H5
DNV510075G6	75	100	90.9	86	2H5
DNV510093G6	93	125	103.9	98	2H5
DNV510110G6	110	150	132.4	121	2H6
DNV510132G6	132	175	171.7	150	2H6
DNV510160G6	160	210	202.0	175	2H6
DNV510187G6	187	245	228.5	198	2H8
DNV510200G6	200	260	222.0	218	2H8
DNV510220G6	220	300	247.1	240	2H8
DNV510250G6	250	350	278.2	270	2H9
DNV510280G6	280	370	353.5	330	2H9
DNV510315G6	315	500	355.9	345	2H9
DNV510355G6	355	420	396.5	370	2H9
DNV510400G6	400	530	457.6	430	2H9
DNV510450G6	450	595	535.4	490	2H9
DNV510500G6	500	660	573.9	540	2H9



# PV580 SERIES FOR SOLAR WATER PUMP INVERTER

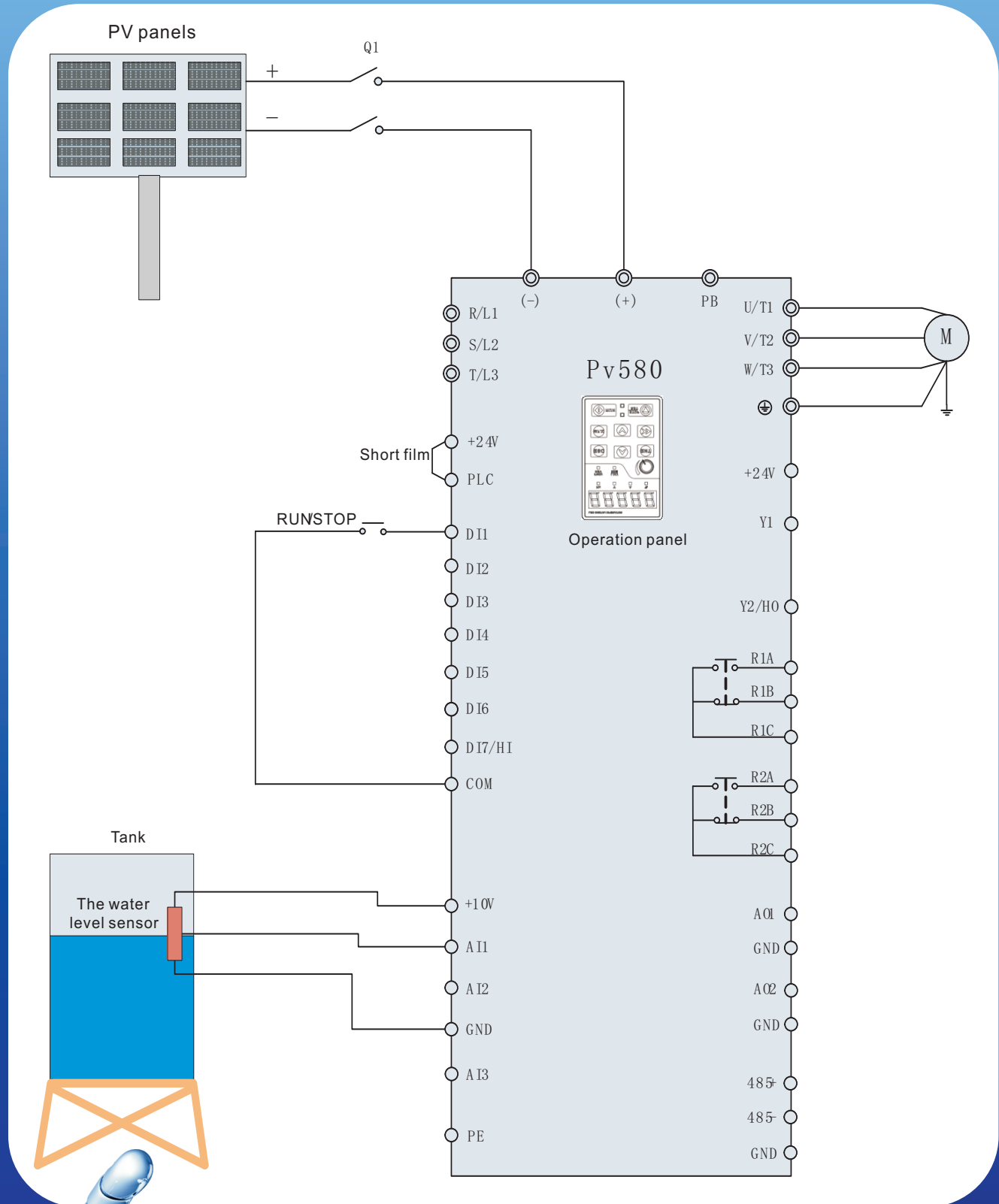
## Voltage level:

Provide two voltage classes:220V and 380V,voltage parameter as follow:

Voltage classes	Voltage range	Recommend work voltage
200V	150V-400V	200V-350V
400V	250V-800V	450V-650V

## Function and features introduction:

- 1.Accurate and quickly MPPT algorithm tracking PV battery maximum power point;
- 2.Running voltage can be set manual or MPPT automatic tracking;
- 3.Can all-weather auto running, also can manual to realize “the sunrise and sunset”
- 4.Can AC mains power supply or PV battery power supply switch;
- 5.Auto sleep function/ light loading protection/weak light detection and other functions;
- 6.Water level test function, support terminal/ analog quantity test;
- 7.The controller perfect protection function, over voltage/ over current/default test ;
- 8.Exactly shows PV frequency,PV DC current and other running parameters ;
- 9.Support general converter basic functions,such as circuit start/stop,RS485/Modbus communication;





**580L SERIES DRAWING MACHINE SPECIFIC FREQUENCY CONVERTER****VOLTAGE LEVEL:****220V (SINGLE-PHASE POWER): 0.4KW-2.2KW****380V (THREE -PHASE POWER): 0.75KW-400KW****FEATURES**

1. Control Mode: vector control (FVC, SVC), torque control, V / F control technology, and at the same time, designed to facilitate the closing line using synchronization control and tension control function
2. Tension control: PID tension control alone or master drive + PID tension control
3. According to different groups of users accustomed to setting parameters macros, reducing the workload of user settings
4. Dynamic parameter control: volume diameter, gear ratio, diameter, Kongpan, half plate, full plate, low, medium, high speed, tension, short all handled automatically by the inverter
5. Do not need PID board, PLC, external controller, you only need a small amount of external operation switch intermediate relay, LEDs, and display instruments
6. System more compact, lower cost, easier to maintain, the same time, better control, equipment operation and more stable
7. Tension balance bar next stop, in the middle or upper limit position, can start running. Automatic Updates drawing line speed, tension balance bar will remain at the focus position.

**580M SERIES PROFESSIONAL DRIVE SPINDLE CNC****VOLTAGE LEVEL:****220V (SINGLE-PHASE POWER): 0.4KW-2.2KW****380V (THREE -PHASE POWER): 0.75KW-37KW**

1. Excellent speed sensorless vector algorithms. Spindle-specific macro parameters, simplified parameter settings.
2. Truly decoupled AC motor, DC motor control of the test run.
3. Precise speed and rotor flux oriented identification.
4. 16 segment programmable control speed, each adjustable acceleration and deceleration, improve efficiency.
5. Leaving the low-torque running 1HZ to 0.5HZ can produce enough torque to ensure strong cutting ability when roughing.
6. Fast dynamic torque response, steady speed precision high speed to give the actual motor speed. to ensure high-speed linear.
7. Overload, 150% of rated output current for one minute, to meet the processing load impact.
8. Protection function, high reliability, easy operation and maintenance.
9. Noise smoothing function, quieter.
10. Using an independent duct design, thicker three anti-paint, a variety of oil, dust, humidity, and other harsh environment adaptability.





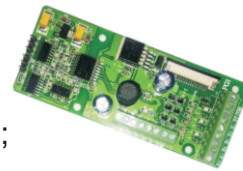
## ► Optional accessories ◀

**580 series standard keyboard with potentiometer, more convenient to use.**



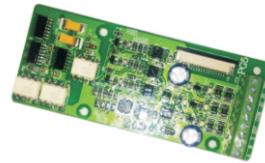
### 580PG1

Differential PG card: external 5V power supply; support A, B, Z three differential inputs, of which A, B input signal can be up to 500kHz; there is divided output (1:1 resolution output differential signal; encoder interface is terminal).



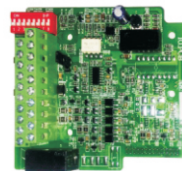
### 580PG5

Collector open circuit PG card, external 15V power supply; support A, B, Z three open collector input, of which A, B two signals up to 100kHz input; with frequency output (1:1 resolution output open collector signal).



### 580IO1

3 digital signal input, voltage range when level input: 9~30V. One analog voltage signal input (input voltage DC-10V~10V, optocoupler isolation PT100, PT1000 (temperature sensor), one relay signal output, one digital signal output (output voltage 0V~24V, output current 0mA~50mA) one analog signal Output (output voltage 0V~10V output current amount 0mA~20mA). (Applicable to 4kW or more)



**Keyboard extension cable**



The fifth type of network cable is used, and the length is 1 meter, 1.5 meters, 2 meters and other specifications, which can be customized.



## ► Product applications and cases ◀

**Special inverter for photovoltaic water pump:** According to the output characteristics of photovoltaic panel, set the sleep and auto wake-up working mode, automatically detect the photovoltaic output voltage and power, automatically start the pump for pumping, and control the working time of the inverter according to the feedback signal of the water level gauge to ensure that the water demand is met.

**Application on wire drawing machine:** According to the characteristics of wire drawing machine, the special frequency converter of wire drawing machine has added tension control parameter group, which can set parameters such as winding and unwinding more conveniently, and the operation is more stable and the precision is better.

**CNC spindle inverter industry application:** CNC spindle inverter, which increases the position control related parameters frequently used by numerical control equipment, realizes the precise positioning function of the spindle and meets the requirements of numerical control equipment.

### Excellent performance

Excellent torque and speed control

The speed control accuracy can reach plus or minus 1 rpm at 100% torque. Under sensorless vector control, the torque response is <20ms. With sensor vector control, the torque response is <5ms;

Suitable for high speed CNC spindles above 10,000 rpm;

Deceleration and shutdown, superior performance, fast and accurate parking in 0.1 seconds;

### High starting torque characteristics

The frequency converter provides 150% starting torque (sensorless vector control) at 0.5 Hz and 180% zero speed torque at 0 Hz (with sensor vector control);

### Widely used in the following industries and equipment:

Central air conditioning pump energy saving scheme

Frequency converter is applied in the transformation of cement industry

Application of frequency converter in textile

Application of frequency converter on injection molding machine

Application of frequency converter on refrigeration unit

Application of frequency converter in the control of beam pumping unit

Application of frequency converter on paper machine -

Fine powder production line control system

MDF factory frequency conversion design

Application on boiler powder feeder

Application on transformer winding machine