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Version V4.0

# ZHYI

**Zhejiang Zhongyi Automation Technology Co., Ltd.**

Add: No. 120, Xinguang Avenue, Xinguang Industrial Zone, Liushi  
Town, Yueqing City, Wenzhou City, Zhejiang Province, China

Tel: +86-577-57576686 +86-13867781210

E-mail: [zyinverter@163.com](mailto:zyinverter@163.com)

<https://www.zyinverter.com>

# EXPERT *in intelligent control drives*

*Specializing in providing overall solutions for  
industrial automation*

## Medium and high voltage solid state soft starter / Frequency Inverter

ZYMV standard / all-in-one machine

ZY-BP37/38 High Voltage Frequency Inverter

# ZHYI

# Focus on industrial automation

Zhongyi Electric regards scientific and technological innovation as the source of enterprise development

Intelligent, systematic, and integrated

It is the development direction of Zhongyi Electric's product system

Let customers feel more comprehensively

A new experience brought by Zhongyi Electric's innovation





## About us

Zhejiang Zhongyi Automation Technology Co., Ltd. is a technology-based enterprise in the field of electrical automation focusing on the design, research and development, manufacturing and sales of high, medium and low voltage soft starters and inverter products. We have a group of professional and technical personnel with nearly 15 years of industry experience.

The soft starters and inverters produced by the company are widely used in metallurgy, chemical industry, water conservancy, papermaking, mining, machine tools, mechanical equipment supporting, automation and other fields.

At present, our business covers Southeast Asia, America, Africa, the Middle East and other countries and regions, providing competitive, safe and reliable products and services to global customers.





# Medium and high voltage solid state soft starter ZYMV

## Product Introduction

ZYMV series medium and high voltage solid state soft starter, its voltage covers the range of 3.0kV-11kV, the current covers the range of 30A-1000A, and the power covers the range of 280kW-15000kW, which can basically meet the starting requirements of AC motors in most industrial and agricultural production.

ZYMV series medium and high voltage solid state soft starter uses high-voltage and high-power thyristor components as power regulation and conversion components, so that the product is small in size and low in heat generation, and there is no mechanical transmission mechanism and liquid component in the product, and there is no electromagnetic conversion device. This product has a fast response time, good starting consistency, and almost zero maintenance.

The control core of the ZYMV series medium and high voltage solid state soft starter adopts the current advanced motor control chip - pure 32-bit ARM MCU, which has high computing accuracy, fast response, small size, strong control function and high reliability.

This product adopts Chinese design, intuitive display, easy operation, complete control and protection functions

## Technical features

- High-voltage thyristor, modular structure and modular design are adopted, which is convenient for the installation and maintenance of the whole machine.
- The thyristor assembly has a self-triggering function in the case of missing pulses.
- One drag more soft up, one drag more soft stop function.
- The starting current is controllable (1.5~4Ie), and the soft start function is realized, which can avoid the sudden drop of power supply voltage.
- The starting torque is controllable, and the linear and smooth start of the motor is realized.
- For the occasion of heavy load starting, this device has pulse start function (also known as sudden start function).
- It has a soft stop function to prevent water hammer effect.
- It has a direct start function.
- The combination of single-phase optical fiber and electromagnetic trigger technology realizes the isolation between the trigger detection of the high-voltage thyristor and the low-voltage control loop, and the product is safe and reliable.
- It has the function of pre-commissioning of low-voltage (380VAC) motor.
- Parameterization of the debugging process.
- Support multi-point communication of RS-485 remote terminal equipment, embedded standard Modbus protocol, convenient configuration connection.
- Chinese character display function, intuitive and convenient operation.

## Industry applications

This product can be widely used in AC motors in power systems, machinery manufacturing, building materials, metallurgy, petrochemical, mining, papermaking, thermopower, water treatment and other industries, as a three-phase 3.0kV-11kV medium and high voltage motor start and stop control protection.

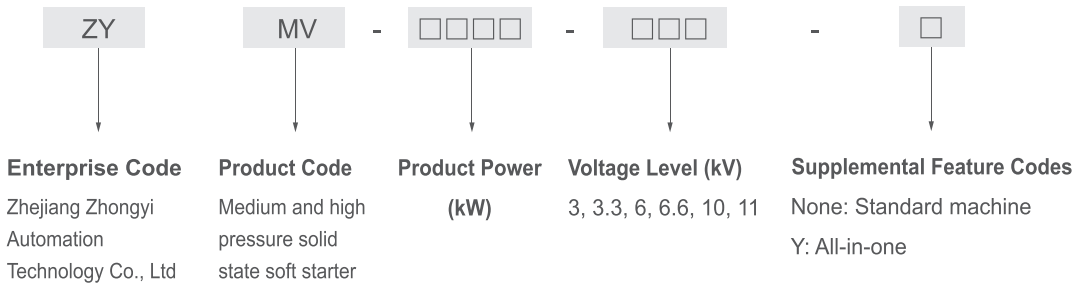
## Conditions apply

- Main circuit voltage: 3.0kV-11kV (+10%, -15% fluctuation allowed).
- Motor type: squirrel cage asynchronous motor, synchronous motor.
- Number of starts: ≤6 times/hour.
- Storage and transportation ambient temperature: -25°C +70°C.
- Operating ambient temperature: the average temperature within 24h is not higher than +45°C, not lower than -20°C; When the operating ambient temperature exceeds +45°C, the specific temperature value should be provided to the manufacturer for derating and selection.
- The altitude ≤ 1000 meters;
- Protection level: IP4X.
- Wiring method: bottom in and bottom out (standard configuration); Other options are available.
- Cooling method: self-air cooling (standard configuration); Other cooling options are available.
- Environment: No fire, explosion, chemical corrosion, serious dust and violent vibration.

## Meets standards

- GB/T11022-2020 《Common technical requirements for high-voltage AC switchgear and control equipment standards》
- GB/T311.1-2012 《Insulation Fit Part 1: Definitions, Principles and Rules》
- GB/T3906-2020 《3.6kV-40.5kV AC metal-enclosed switchgear and control equipment》
- GB/T13422-2013 《Electrical test method for semiconductor converters》
- GB/T3859.1-2013 《Specification of basic requirements for semiconductor alternators》
- GB/T3859.2-2013 《Guidelines for the application of semiconductor alternators》
- GB/T 4208-2017 《Enclosure Rating (IP Code) 》
- GB/T14808-2016 《High-voltage AC contactors, contactor-based controllers, and motor starters》
- JB/T10251-2001 《AC motor power electronics soft start device》

## Model description





# Medium and High Voltage Solid State Soft Starter (Standard Machine)

## ZYMV



### Features

- The cabinet body adopts standard KYN28 structure, coated with aluminum-zinc plate and metal armor.
- The cabinet should be used with a wire inlet cabinet equipped with a vacuum circuit breaker.
- High and low pressure separation, the cabinet is composed of three parts: relay instrument room, main circuit connection room, and valve group room.
- The cabinet is mainly composed of bypass vacuum contactors, thyristor components, etc.
- Housing protection level: IP4X.

### Technical Notes

1. The bypass vacuum contactor in the high-voltage solid-state starting cabinet is controlled by AC or DC power supply, and the control power supply is connected by the external terminal provided by the user.
2. The required voltage signal in the high-voltage solid-state soft start cabinet is provided by the upper PT cabinet (optional).
3. The high-voltage solid-state starter cabinet is protected with the high-voltage switchgear during the start-up process, and the protection is mainly completed by the high-voltage switchgear after the start-up is completed.

### System diagram of the primary scheme of the standard machine

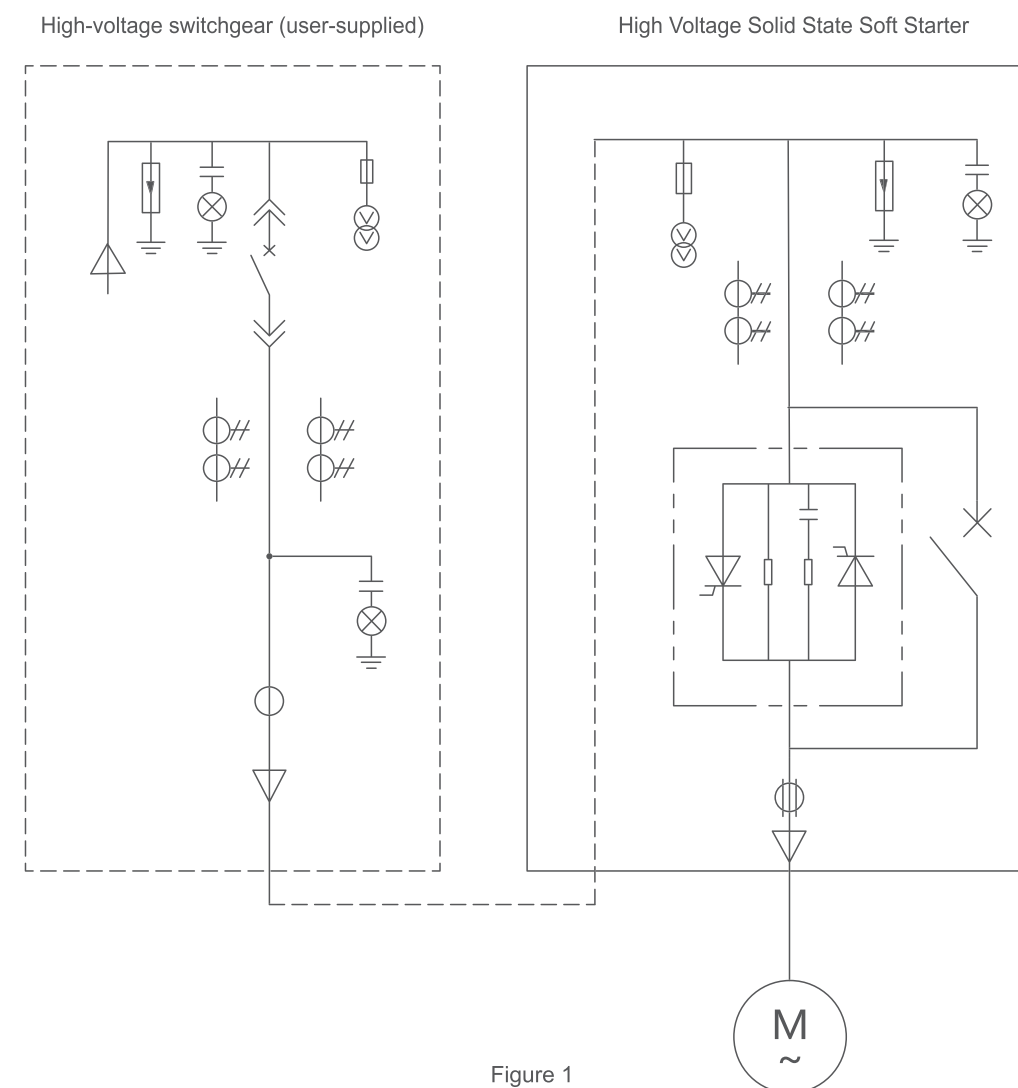


Figure 1



# Medium and High Voltage Solid State Soft Starter (All-in-one machine )

## ZYMV-Y



### Features

- The cabinet body adopts standard KYN28 structure, coated with aluminum-zinc plate and metal armor.
- Three-in-one integrated design of soft start cabinet, switch cabinet and bypass cabinet, small size.
- The cabinet is divided into four separate compartments: relay instrument room, busbar isolation room, circuit breaker room, and valve group room.
- The cabinet is mainly composed of vacuum circuit breaker, bypass vacuum contactor, thyristor components, comprehensive protectors, etc.
- Housing protection level: IP4X.

### Technical Notes

1. The vacuum circuit breaker and bypass vacuum contactor in the high voltage solid state starting cabinet are controlled by AC or DC power supply, and the control power supply is provided by the user terminal access.
2. The required voltage signal in the high voltage solid state soft start cabinet is provided by the upper PT cabinet.
3. The high voltage solid state starting cabinet is protected with the high-voltage switch during the start-up process, and the protection is mainly completed by the high-voltage switch after the start-up is completed.

### System diagram of the primary scheme of the All-in-one machine

Medium and High Voltage Solid State Soft Starter (All-in-one machine )

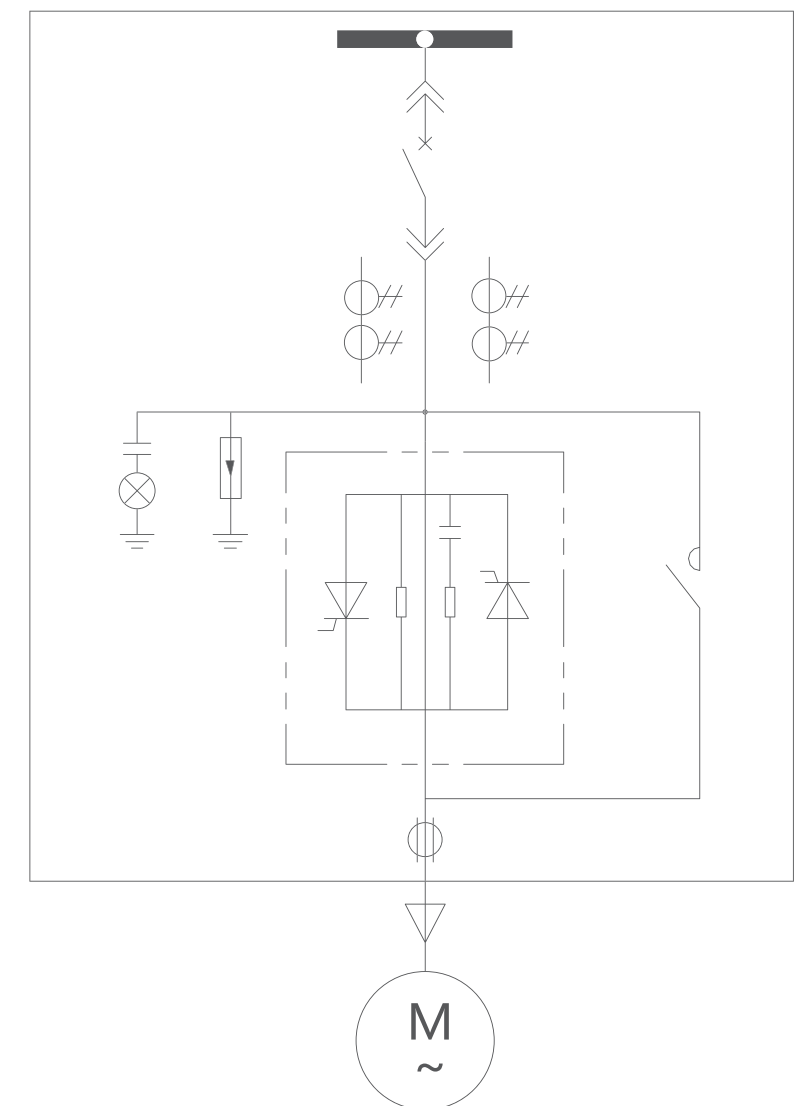


Figure 2



# Medium and high voltage solid state soft starters ZYMV

## How it works

ZYMV series medium and high voltage solid state soft starter is connected in series between the three-phase AC phase voltage and the input terminal of the three-phase AC asynchronous motor, and changes the AC input voltage amplitude of the three-phase asynchronous and synchronous motor by adjusting the delay conduction angle of three independent anti-parallel thyristor valve components at the same time, so as to change the effective value of the three-phase input AC current, so as to achieve the purpose of constant current start or start (stop) according to the curve of a certain slope change. When the start is completed, the output voltage of this product reaches the rated value, for the ZYMV series of medium and high voltage solid-state soft starter, then the three-phase bypass contactor will be automatically controlled, and the motor will be put into the power grid operation as shown in Figure 3, and the waveform of input and output voltage waveforms and current changes will be shown in Figure 4.

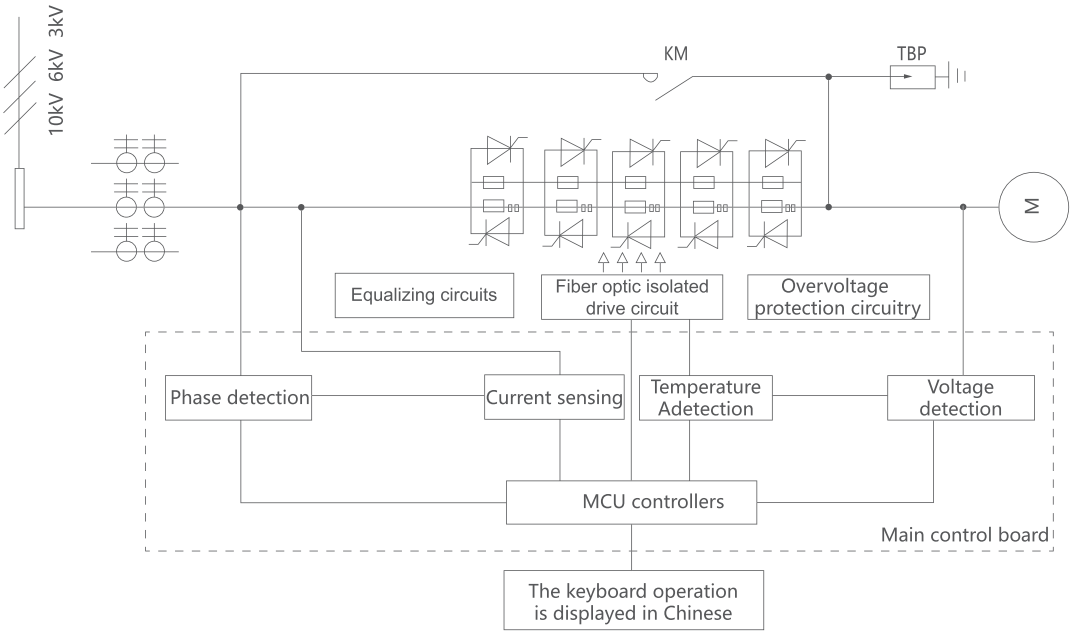


Figure 3

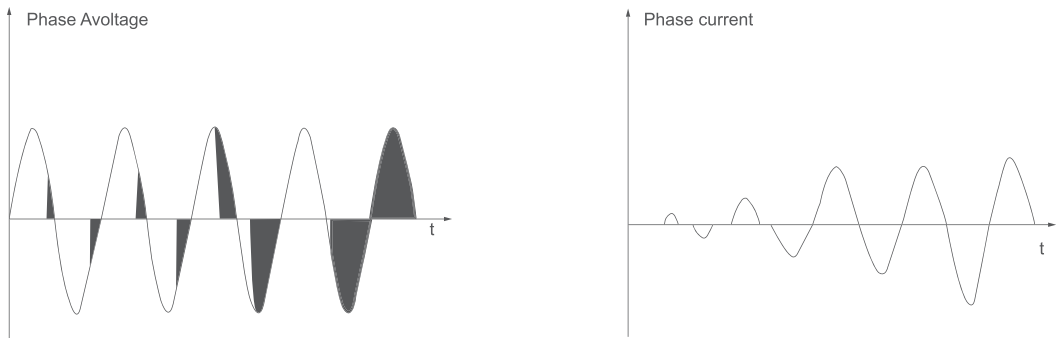


Figure 4

## Main technical parameters

Project	Technical Parameters
Load type	Three-phase medium and high voltage asynchronous squirrel cage motor, synchronous motor
Supply voltage	3.0kV~11kV Allowable Fluctuation +10%, -15%
Mains frequency	50Hz
Power range	280kW~15000kW
Control the power supply	Three-phase 380VAC, 220VAC
Display panel	Chinese or English operation interface
Signal isolation	Fiber optic circuit or magnetic circuit
Cooling method	Natural cooling
Initial voltage	20~100% of the rated voltage is adjustable
Initial current	0~400(500)% of rated current is adjustable
Current limiting start	100~400(500)% of rated current is adjustable
Impulse voltage	20~100% of the rated voltage is adjustable
Pulse time	0.1~3 seconds adjustable
Soft start time	1~90 seconds adjustable
Soft stop time	1~120 seconds adjustable
Energy consumption time	0.1~10 seconds adjustable
Protection features	Overcurrent protection Undervoltage protection Current unbalance protection The bypass does not close the alarm function Phase sequence error protection Motor stall protection
	Overvoltage protection Overload protection Grounding protection Thyristor damage alarm function Phase-loss protection Short-circuit protection
	Undercurrent protection Overheat protection Number of starts protection High-voltage chamber door opening and power-off protection Start timeout alarm function External fault chaining function
Control functions	Current limiting start function Torque ramp start function Multi-group parameter configuration function
	Voltage ramp start function Pump control function Energy-saving operation function (optional)
	Current ramp start function Pulse start function Energy braking function (optional)
Communication features	RS-485 interface with standard Modbus protocol embedded
Gauge display	Displays the three-phase main power supply voltage and three-phase main circuit current
Fault logging	Record the last 15 faults
Number of starts	Record the number of starts of this product



# Medium and high voltage solid state soft starter ZYMV

Selection Table				
	Voltage(kV)	Current(A)	Power(kW)	Specifications and models
	H×W×D(mm)			
3	100	400	ZYMV-400-3	2300×1000×1510
	150	630	ZYMV-630-3	2300×1000×1510
	170	710	ZYMV-710-3	2300×1000×1510
	250	1100	ZYMV-1100-3	2300×1000×1510
	320	1300	ZYMV-1300-3	2300×1000×1510
	400	1600	ZYMV-1600-3	2300×1150×1510
	450	2000	ZYMV-2000-3	2300×1150×1510
	600	2500	ZYMV-2500-3	Scheduled
	800	3500	ZYMV-3500-3	Scheduled
6	50	420	ZYMV-420-6	2300×1000×1510
	75	630	ZYMV-630-6	2300×1000×1510
	150	1250	ZYMV-1250-6	2300×1000×1510
	160	1400	ZYMV-1400-6	2300×1000×1510
	200	1600	ZYMV-1600-6	2300×1000×1510
	300	2500	ZYMV-2500-6	2300×1000×1510
	400	3300	ZYMV-3300-6	2300×1000×1510
	500	4200	ZYMV-4200-6	Scheduled
	600	5000	ZYMV-5000-6	Scheduled
10	45	630	ZYMV-630-10	2300×800×1510
	60	800	ZYMV-800-10	2300×800×1510
	90	1250	ZYMV-1250-10	2300×800×1510
	110	1500	ZYMV-1500-10	2300×800×1510
	130	1800	ZYMV-1800-10	2300×800×1510
	160	2250	ZYMV-2250-10	2300×800×1510
	180	2500	ZYMV-2500-10	2300×800×1510
	200	2800	ZYMV-2800-10	2300×1000×1510
	250	3500	ZYMV-3500-10	2300×1000×1510
	280	4000	ZYMV-4000-10	2300×1000×1510
	320	4500	ZYMV-4500-10	2300×1000×1510
	400	5500	ZYMV-5500-10	2300×1000×1510
	430	6000	ZYMV-6000-10	2300×1000×1510
	500	7000	ZYMV-7000-10	2300×1000×1510
	600	8500	ZYMV-8500-10	2300×1000×1510

Note: The size of the all-in-one machine can be consulted by the manufacturer

### Selection guide

Before consulting with the manufacturer, please prepare the following information:  
Motor rated power (kW), motor rated current (A), motor rated voltage (kV), load type (pump, compressor, conveyor belt, etc.), altitude, ambient temperature, etc.  
Since the motor current is related to the power factor and the number of poles, the quotation will be subject to the rated current of the motor provided by the customer.

# High Voltage Frequency Inverter ZY-BP37/38

### Product category

**Model no.: G7 series general purpose high voltage frequency inverter**  
**Power range:** 6kV:200kW-5000kW(Two quadrant)  
10kV:200kW-9000kW(Two quadrant)  
6kV:200kW-2500kW(Four quadrant)  
10kV:200kW-3250kW(Four quadrant)  
**Cooling mode:** forced air cooling  
**Performance features:** Based on two / four quadrant synchronous(including permanent magnet synchronous motor) / asynchronous motor platform design and unit sealing design, the whole machine adopts modular design idea and high production efficiency.  
**Competitive advantage:** modular design of control system, small harmonic, accurate speed regulation, good sealing of power unit and strong environmental adaptability.  
**Load type:** fan and water pump load; Hoist and belt conveyor loads

**Model no.: G7 series integrated high voltage frequency inverter**  
**Power range:** 6kV: 200kW-560kW / 10kV: 200kW-1000kW  
**Cooling mode:** forced air cooling  
**Performance features:** Based on the design of two quadrant synchronous (including permanent magnet synchronous motor)/ asynchronous motor platform, the whole machine integrates control cabinet, power cabinet, transformer cabinet and switching cabinet, which is convenient for on-site installation.  
**Competitive advantage:** small size, saving space; Overall transportation, convenient installation.  
**Load type:** fan and water pump load

**Model no.: G7 series water cooling high voltage frequency inverter**  
**Power range:** 6kV: 6000kW-12000kW / 10kV: 10500kW-20000kW  
**Cooling mode:** Water cooling  
**Performance features:** Based on the design of two quadrant synchronous (including permanent magnet synchronous motor) / asynchronous motor platform, reliable high-power power electronic devices and water cooling and heat dissipation mode are adopted, with high power density and strong environmental adaptability.  
**Competitive advantage:** high reliability design, water cooling and heat dissipation, low noise, high efficiency and stronger environmental adaptability.  
**Load type:** blast furnace blower, oxygen compressor, boiler induced draft fan, sintering main exhaust fan, fan and water pump.





# High Voltage Frequency Inverter

## ZY-BP37/38

### Product structure



Transformer cabinet

It contains phase-shifting transformer, temperature sensor, current and voltage detection device. Phase -shifting transformer provides independent three-phase input power supply for power unit; The temperature sensor monitors the internal temperature of the transformer in real time to realize the functions of over temperature alarm and over temperature protection; The current and voltage detection device can monitor the input current and voltage of the transformer in real time to realize the protection function of the frequency converter. Independent air duct design reduces transformer temperature rise and prolongs service life.



Switching cabinet

When the frequency inverter fails, the motor can be switched to the grid power from the frequency conversion to continue operation. There are two types of switching: automatic and manual. The difference is that the manual switching cabinet needs to switch the main circuit according to the operating procedures; aAnd the automatic switching cabinet can automatically switch the main circuit under the system control, except during maintenance. The switching cabinet is non-standard and needs to be customized according to the user's on-site requirements.



Power unit cabinet

There are power units inside. Each power unit is completely consistent in structure and can be interchanged. Its shell adopts mold integrated design and has good sealing performance. It is suitable for occasions with high tide humidity, multi dust and multi corrosive gas. The power cabinet communicates with the control cabinet through optical fiber, which can effectively suppress electromagnetic interference.



Control cabinet

It contains HMI, armARM, FPGA, DSP and other high-precision chips. Multi language human-machine interface, less parameters and easy operation; Rich external interfaces, convenient for connection with user system and field expansion. The main controller uses the self-developed box structure for packaging. The box has passed the strict EMC certification and the treatment of temperature cycle and vibration test, with high reliability.

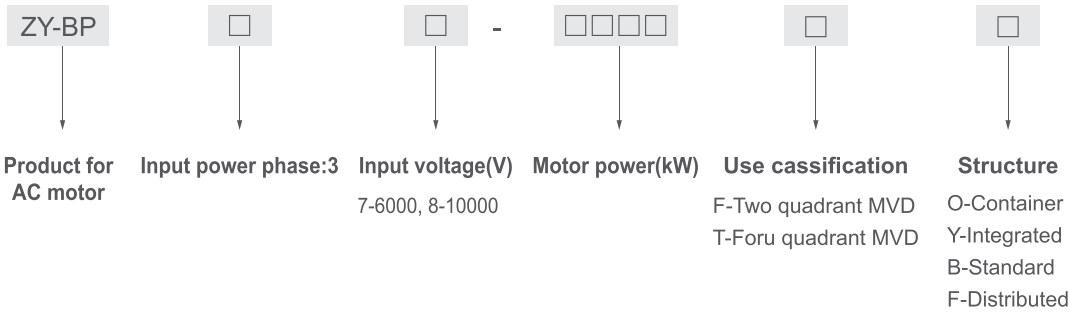
### Product technical characteristics

Product specifications			
Model no.		ZY-BP37/38-F	ZY-BP37/38-F
Output	Power range(kW)	200kW-20000kW	200kW-3250kW
	Output voltage(kV)	3AC 0-6kV/10kV	
	Output waveform	SPWM	
	Overload capacity	105% continuously; 130% 1min; 150% 3s	
Input	Voltage	3AC 6kV/6.6kV / 10kV/11kV ; -10%~+10% (-10% ~ -35% derating)	
	Frequency	50Hz/60Hz ±5%	
	Starting frequency	0-10Hz Settable	
Basic function	Accuracy	Analog: 0.3% max frequency (25±10℃ and below) Digital: 0.02% max frequency (-10~+50℃ and below)	
	Resolution	Analog: 0.05% max frequency Digital: 0.01Hz(100Hz below); 0.1Hz(100Hz above)	
	Efficiency	98% (rated load)	
	Power factor	0.95	
Control function	ACC/DEC time	0.1-6000.0S	
	V/F feature	Curve selectable	
	PID	Manual setting PID	
	Auxiliary function	Low frequency compensaton, current protection eta.	
	HV isolation	Eectromagnetic coupling, mulfi-channel optical fiber transmission	
Running function	Control power supply	AC 220V 2kVA	
	Running mode	Local,remote,PC software(Optional)	
	Frequency setting	Digital, Multi-step speed,Analog(4~20mA)	
	Running status	Relay output: fault, alarm, running/stop ping etc.	
	HMI	Input / output voltage, input / output current, set value, fault status of each unit, operation status, transformer status, bus voltage of each unit, etc	
Environment	Protection	Overcurrent, overvoltage, under-voltage, unit overcurrent, unit overvoltage, unit overheating, unit input phase loss, optical fiber communication failure, etc	
	Installation	Indoor( No corrosive or conductive gases, dust, direct sunlight)	
	Temperature	-10℃ ~+40℃	
	Humidity	20~90%RH, no condensation	
	Vibration	5m/ s2 (0.6g and below)	
	Storage	-20~+65℃	
	Altitude	1000m, derate above 1000m	
	Cooling mode/ IP degree	Forced air cooling IP31 / water cooling IP40	

# High Voltage Frequency Inverter

## ZY-BP37/38

### Model description



Example:  
JD-BP37-560FY1A 6kV 560kW one drive one auto bypass integrated high voltage inverter  
JD-BP38-1600FB2M 10kV 1600kW one drive two manual bypass standard cabinet high voltage inverter  
JD-BP38-2500FONAW 10kV 2500kW one drive three auto bypass container type water cooling high voltage inverter

G7 series general purpose high voltage frequency inverter



### Specifications dimensions

ZY-BP37-F series (6kV) Model no. and dimension(without switching/incoming cabinet)

	Model no.	Power rating	Dimension and weigh			
			Width (mm)	Depth (mm)	Height (mm)	Weight(kg)
	ZY-BP37-225F~ZY-BP37-560F	225kW/6kV~560kW/6kV	1700	1500	1900	1900~2410
	ZY-BP37-630F~ZY-BP37-1120F	630kW/6kV~1120kW/6kV	2200	1700	2120	3250~4000
	ZY-BP37-1250F~ZY-BP37-1400F	1250kW/6kV~1400kW/6kV	3300	1700	2420	4950~5600
	ZY-BP37-1600F~ZY-BP37-2800F	1600kW/6kV~2800kW/6kV	3600	1700	2420	6900~7300
	ZY-BP37-3250F	3250kW/6kV	4600	1700	2420	11750
	ZY-BP37-4000F	4000kW/6kV	5900	1700	2420	11800
	ZY-BP37-4500F~ZY-BP37-5000F	4500kW/6kV~5000kW/6kV	6500	1700	2620	12950~13600

- Note:
- The above dimensions are for reference only. Please refer to the project drawings and physical objects for details;
  - Due to product upgrading, the contents of this manual will be updated regularly. If you need to buy our products, please refer to the latest product manual.

ZY-BP38-F series (10kV) Model no. and dimension(without switching/incoming cabinet)

	Model no.	Power rating	Dimension and weigh			
			Width (mm)	Depth (mm)	Height (mm)	Weight(kg)
	ZY-BP38-250F~ZY-BP38-1000F	250kW/10kV~1000kW/10kV	2000	1500	1900	2160~3100
	ZY-BP38-1120F~ZY-BP38-2000F	1120kW/10kV~2000kW/10kV	2800	1700	2120	4320~5720
	ZY-BP38-2250F~ZY-BP38-2500F	2250kW/10kV~2500kW/10kV	4100	1700	2420	9380
	ZY-BP38-2800F~ZY-BP38-4500F	2800kW/10kV~4500kW/10kV	4400	1700	2420	10900~12500
	ZY-BP38-5000F~ZY-BP38-5600F	5000kW/10kV~5600kW/10kV	6200	1700	2620	14000~16500
	ZY-BP38-5900F~ZY-BP38-6800F	8000kW/10kV~9000kW/10kV	8100	1700	2620	17600~20350
	ZY-BP38-8000F~ZY-BP38-9000F	4500kW/6kV~5000kW/6kV	8300	1800	2820	21500~22800

- Note:
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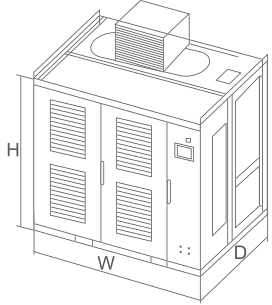


# High Voltage Frequency Inverter

## ZY-BP37/38

### Specifications dimensions

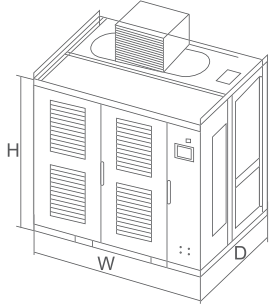
ZY-BP37-T series (6kV) Model no. and dimension(without switching/incoming cabinet)

	Model no.	Power rating	Dimension and weigh			
			Width (mm)	Depth (mm)	Height (mm)	Weight(kg)
	ZY-BP37-280T~ZY-BP37-1000T	280kW/6kV~1000kW/6kV	2200	1700	2120	2400~4430
	ZY-BP37-1120T~ZY-BP37-1400T	1120kW/6kV~1400kW/6kV	3300	1700	2420	5520~5600
	ZY-BP37-1600T~ZY-BP37-2000T~	1600kW/6kV~2000kW/6kV~	3600	1700	2420	5850~6090
	ZY-BP37-2500T	2500kW/6kV	5550	1700	2420	10000

Nate:

1. The above dimensions are for reference only. Please refer to the project drawings and physical objects for details;
2. Due to product upgrading, the contents of this manual will be updated regularly. if you need to buy our products. pleaserefer to the latest product manuat.

ZY-BP38-T series (10kV) Model no.and dimension(without switching/incoming cabinet)

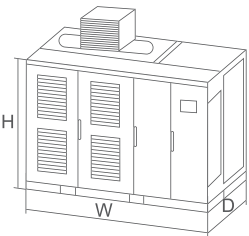
	Model no.	Power rating	Dimension and weigh			
			Width (mm)	Depth (mm)	Height (mm)	Weight(kg)
	ZY-BP38-250T~ZY-BP38-1600T	250kW/10kV~1600kW10kV	2800	1700	2120	3500~6450
	ZY-BP38-1800T~ZY-BP38-2500T	1800kW/10kV~2500kW/10kV	4100	1700	2420	9250~9400
	ZY-BP38-2800T~ZY-BP38-3250T	2800kW/10kV~3250kW/10kV	4400	1700	2420	9900~9950

Nate:

- 1.The above dimensions are for reference only. Please refer to the project drawings and physical objects for details;
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### Specifications dimensions

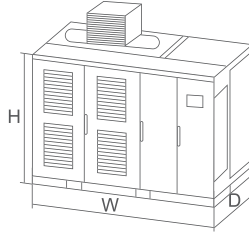
ZY-BP37-F series (6kV) Model no. and dimension(with switching cabinet)

	Model no.	Power rating	Dimension and weigh			
			Width (mm)	Depth (mm)	Height (mm)	Weight(kg)
	ZY-BP37-225F~ZY-BP37-560F	ZY-BP37-225F~ZY-BP37-560F	2700	1500	1900	1900~2420

Nate:

1. The above dimensions are for reference only. Please refer to the project drawings and physical objects for details; refer to the latest product manual;
- 2.Due to product upgrading, the contents of this manual will be updated regularly. If you need to buy our products, please.

ZY-BP37-F series (6kV) Model no. and dimension(with switching cabinet)

	Model no.	Power rating	Dimension and weigh			
			Width (mm)	Depth (mm)	Height (mm)	Weight(kg)
	ZY-BP38-250F~ZY-BP38-1000F	250kW10kV~1000kW/10kV	2700	1500	1900	2620~3100

Nate:

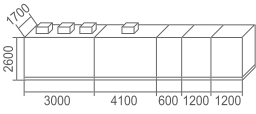
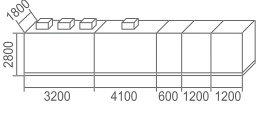
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# High Voltage Frequency Inverter

## ZY-BP37/38

### Specifications dimensions

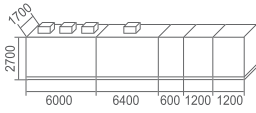
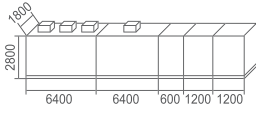
ZY-BP37-Wseries (6kV) Model no. and dimension (with switching cabinel)

Dimensioning	Model no.	Power raling	Dimension and weight W*D*H(mm)	Weight(g)
	ZY-BP37-6000FF1MW ~ZY-BP37-7000FF1MW	6000~7000	10100*1700*2600	16800~17700
	ZY-BP37-8000FF1MW ~ZY-BP37-11500FF1MW	8000~11500	10300*1800*2800	21300~26500

Note:

1. The above dimensions are for reference only. Please refer to the project drawings and physical objects for details;
2. Due to product upgrading, the contents of this manual will be updated regularly. If you need to buy our products, please refer to the latest product manual.

ZY-BP38-W series(10kV) Model no. and dimension(with switching cabinet)

Dimensioning	Model no.	Power raling	Dimension and weight W*D*H(mm)	Weight(g)
	ZY-BP38-10500FF1MW~ ZY-BP38-11500FF1MW	10500~11500	15400*1700*2600	26500~27900
	ZY-BP38-14000FF1MW~ ZY-BP38-19000FF1MW	14000~19000	15800*1800*2800	32100~39100

Note:

1. The above dimensions are for reference only. Please refer to the project drawings and physical objects for details;
2. Due to product upgrading, the contents of this manual will be updated regularly. If you need to buy our products, please refer to the latest product manual.

### Applications

Power generation	Boiler feed pump, forced draft fan, induced draft fan, condensate pump, circulating water pump, mortar pump, compressor, dust suction fan and booster fan. There are more than 2000 sets of high-voltage frequency converters in the power generation industry.
Petroleum, petrochemical and natural gas	Air compressor, induced draft fan, pipeline pump, water injection pump, oil transfer pump, feed pump, submersible pump, circulating water pump and brine pump. Daqing Oilfield, Shengli Oilfield, Qinghai Oilfield, Liaohe Oilfield and other groups continue to cooperate, and the number of high and low voltage frequency converters exceeds 2500 sets.
Coal and mine	Mine hoist, counter-rotating fancouver cyclone, axial flow fan, descaling pump, mixing pump, dust removal fan, mud pump, slurry pump, clean water pump, feed pump, drainage pump and medium pump. Shenhua Ningxia coal industry group has more than 100 high-voltage frequency converters.
Metallurgy	Dust removal fan, blast furnace blower, induced draft fan, compression fan, oxygen compressor, forced draft fan, feed pump, feed pump, descaling pump, SO2 fan, slag flushing machine, converter, electric furnace, blast furnace, descaling pump and gas compressor.
Cement, building materials	Raw meal grinding induced draft fan, cement grinding fan, sorter fan, kiln induced draft fan, kiln air supply fan, kiln tail exhaust fan, high temperature fan, coal mill, dust removal fan, circulating fan and pressure supply fan.
Municipal	Booster pump, hot water circulating pump, sewage pump, clean water pump, water supply pump, induced draft fan, forced draft fan.
Light industry, chemical industry	Booster pump, compressor, axial flow pump, soft water pump, water supply pump, blower, induced draft fan.
Others	Air pump test bench, wind tunnel test device.





# High Voltage Frequency Inverter ZY-BP37/38

## Main circuit of high voltage inverter

There are 5 kinds of typical main circuit for two quadrant general purpose high voltage inverter (ratings above 2000kW/10kV and 1250kW/6kV with buffer circuit). And there are 2 kinds of main circuit for four quadrant general purpose high voltage inverter. They can meet most of the site requirement.

Note:  -----Inverter; QS-----Isolator; KM-----Vacuum contactor;  -----buffer resistor.

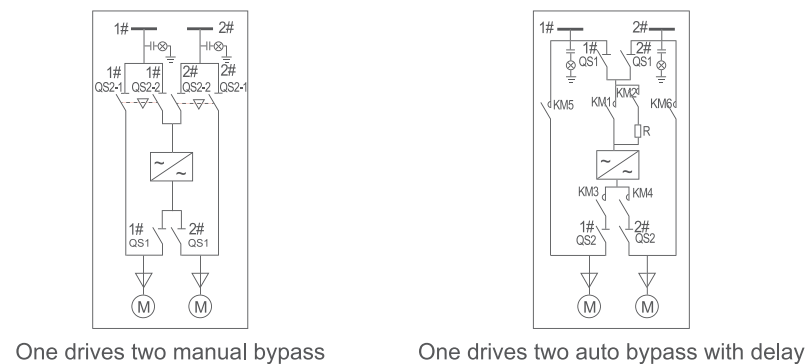
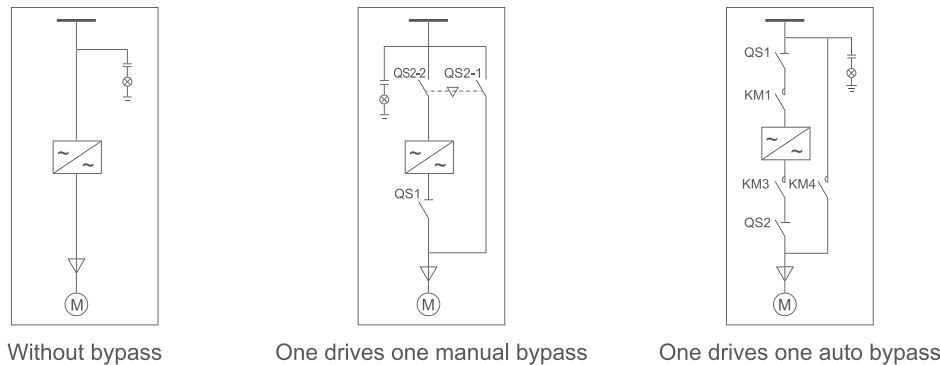


Fig 5 Main circuit of two quadrant general purpose high voltage inverter

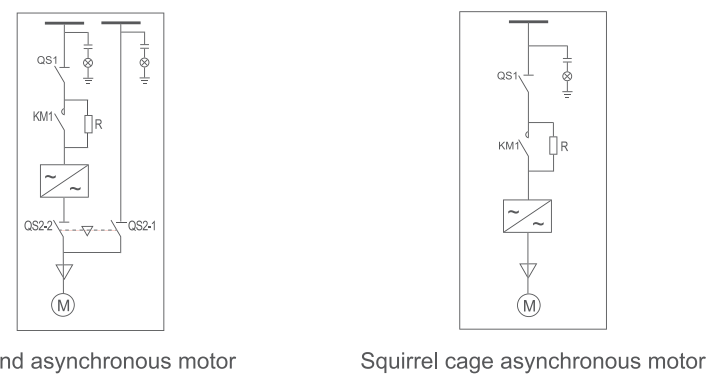


Fig 6 Main circuit of four quadrant general purpose high voltage inverter

Note:

The manufacturer reserves the right to modify the product. According to the user's requirements and different options, the size and weight will change accordingly.

The performance and overall dimensions of the products will change after the manufacturer's products are upgraded without notice.

## Classic case



PetroChina Tower Southwest natural gas comprehensive utilization project



CNOOC Uganda Kingfisher oil field facility project



Anhui section of the South-to-North Water diversion project



Baowu Group



Russia's Novokuznetsk iron and steel company



Vietnam Lao Cai Mineral company