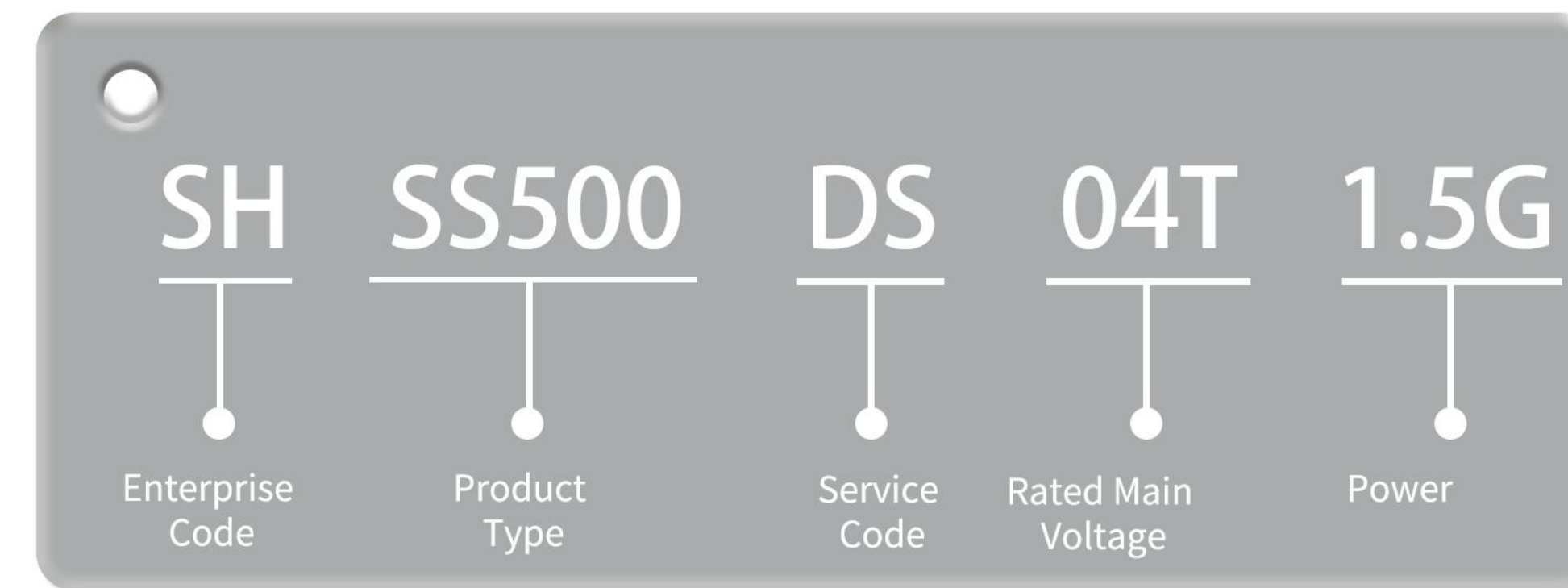


SHSS500 High-performance Vector Frequency Inverter



Feature Description:



Note:

1. Rated voltage of the main power supply: 02: 220V; 04: 400V; 05: 500V;
2. Rated current: 1.5~1100A;
3. Service code: D:Single tube ; M:Module ;S:Plastic shell ;T:Iron shell
4. Rated main voltage: 04T:Three-phase 380V;02T:Three-phase 220V;02S:Single-phase 22V
5. Power: 1.5G:1.5KW

Reliability

Multiple protection functions: overvoltage, overcurrent, overload, overheating, etc.
Setting of the protection level for overvoltage and overcurrent stall
Two-segment jump frequency can effectively avoid the mechanical resonance point

High performance

Automatic torque boost: The starting torque can reach 150% at 0.5Hz
Automatic slip compensation: Makes the speed more accurate
Non-stop during momentary power outage: Maintains operation for a short time during momentary power failure
Low noise: The motor runs more smoothly
Overload capacity: Can operate at 150% of the rated torque for 60 seconds

Multifunction

Main/auxiliary frequency addition and subtraction control mode
Pulse input for frequency control
The maximum pulse output can reach 100KHZ
Can display voltage, current, set frequency, output frequency, rotation speed, etc. according to user definition
Swing frequency, fixed length and counting functions
Built-in PLC can operate at 16 speed segments
Supports a variety of frequency settings: digital setting, analog quantity setting, PID setting, multi-segment speed setting, simple PLC setting, PULSE pulse setting, RS485 communication setting
Embedded RS485 communication interface, supports Modbus protocol

Input and output

Input functions: two-wire/three-wire control mode, external EF, UP/DOWN, automatic program operation control, counting, pulse input, etc.
Output functions: indication of counting arrival, indication of frequency arrival, indication of over-torque, overload warning, etc.

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Model Selection:

Model	voltage(V)	Power(Kw)	Current(A)	Dimension(mm)
SHSS500DS-04T1.5G	Three-phase input: 380V three-phase output: 380V	1.5Kw	3.8A	165*106*142
SHSS500DS-04T2.2G		2.2Kw	5.1A	165*106*142
SHSS500DS-04T4.0G		4Kw	9A	185*125*175
SHSS500DS-04T5.5G		5.5Kw	13A	185*125*175
SHSS500DS-04T7.5G		7.5Kw	17A	258*146*190
SHSS500MS-04T1.5G		1.5Kw	3.8A	165*106*142
SHSS500MS-04T2.2G		2.2Kw	5.1A	165*106*142
SHSS500MS-04T4.0G		4Kw	9A	185*125*175
SHSS500MS-04T5.5G		5.5Kw	13A	185*125*175
SHSS500MS-04T7.5G		7.5Kw	17A	258*146*190
SHSS500MS-04T11G		11Kw	25A	258*146*190
SHSS500MS-04T15G		15Kw	32A	322*171*215
SHSS500MS-04T18.5G		18.5Kw	37A	322*171*215
SHSS500MS-04T22G		22Kw	45A	322*171*215
SHSS500MT-04T7.5G		7.5Kw	17A	258*146*190
SHSS500MT-04T11G		11Kw	25A	258*146*190
SHSS500MT-04T15G		15Kw	32A	322*171*215
SHSS500MT-04T18.5G		18.5Kw	37A	322*171*215
SHSS500MT-04T22G		22Kw	45A	322*171*215
SHSS500MT-04T30G		30Kw	60A	435*230*230
SHSS500MT-04T37G		37Kw	75A	435*230*230
SHSS500MT-04T45G		45Kw	90A	410*260*252
SHSS500MT-04T55G		55Kw	110A	590*270*300
SHSS500MT-04T75G		75Kw	150A	590*270*330
SHSS500MT-04T90G		90Kw	176A	620*320*300
SHSS500MT-04T110G		110Kw	210A	620*320*300
SHSS500MT-04T132G		132Kw	260A	800*400*350
SHSS500MT-04T160G		160Kw	305A	800*400*350
SHSS500MT-04T185G		185Kw	340A	950*500*360
SHSS500MT-04T200G		200Kw	380A	950*500*360
SHSS500MT-04T220G	220Kw	425A	950*500*360	
SHSS500MT-04T250G	250Kw	480A	950*500*360	
SHSS500MT-04T280G	280Kw	530A	950*500*360	
SHSS500MT-04T315G	315Kw	600A	1060*650*360	
SHSS500MT-04T355G	355Kw	650A	1060*650*360	
SHSS500MT-04T400G	400Kw	720A	1200*860*380	
SHSS500MT-04T450G	450Kw	820A	1200*860*380	
SHSS500MT-04T500G	500Kw	860A	1360*1000*390	
SHSS500MT-04T630G	630Kw	1100A	1360*1000*390	

Technical Specifications:

• Control Characteristics

Output frequency:	0 - 500Hz
Carrier frequency:	The carrier frequency can be automatically adjusted from 0.8kHz to 12kHz according to the load characteristics.
Output frequency resolution:	Digital setting: 0.01Hz; Analog setting: up to 0.025% of the maximum frequency.
Control mode:	Open-loop vector control (SVC); V/F control; Closed-loop vector control (FVC)
Torque characteristics:	It has torque compensation and slip compensation. The starting torque can reach 150% at 0.25Hz (SVC).
Torque control accuracy:	SVC: $\pm 5\%$ above 5Hz; FVC: $\pm 3\%$
Overvoltage and overcurrent stall prevention protection:	During operation, the voltage and current are automatically limited to prevent frequent tripping due to overvoltage and overcurrent.
Speed regulation range:	1:200 (SVC); 1:1000 (FVC)
Speed stabilization accuracy:	$\pm 0.5\%$ (SVC); $\pm 0.02\%$ (FVC)
Overload capacity:	150% of the rated output current for one minute.
V/F curve:	Four modes: linear type; multi-point type; complete V/f separation; incomplete V/f separation.
Acceleration and deceleration curve:	Linear or S-curve acceleration and deceleration mode; Four kinds of acceleration and deceleration times; The acceleration and deceleration time range is 0.1 ~ 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 ~ maximum frequency; Jog acceleration and deceleration time: 0.1s ~ 6500.0s
Simple PLC, multi-segment speed operation:	It can achieve up to 16-segment speed operation through the built-in PLC or control terminals.
Built-in PID:	It can easily realize the closed-loop control system for process control.
Automatic voltage regulation (AVR):	When the grid voltage changes, it can automatically maintain the constant output voltage.
Fast current limiting function:	Minimize the overcurrent fault to protect the normal operation of the frequency converter.

• Display and Keyboard Operation

LED display: There are 8 function keys, a 5-digit 7-segment LED, and 5 status LED indicators. It can perform forward rotation, reverse rotation, reset, stop, jogging, as well as parameter setting and display.

• Protection Characteristics

Protection Function : Short-circuit detection of the motor during power-on, input and output phase-loss protection, overcurrent protection, overvoltage protection, undervoltage protection, overheat protection, overload protection, short-circuit protection, etc.

Technical Specifications:

• Operating Characteristics

Operating command channel	Three channels: given by the operation panel, given by the control terminal, given by the serial communication port. It can be switched through various methods.
Frequency source	Ten frequency sources: given by the panel knob, given by the operation panel, given by the analog voltage, given by the analog current, given by RS485 communication, multi-segment speed, simple PLC of PID. It can be switched through various methods.
Auxiliary frequency source	Ten auxiliary frequency sources. It can flexibly achieve the fine-tuning of the auxiliary frequency and frequency synthesis.
Input terminal	Five digital input terminals, one of which can be used as a high-speed pulse input. There are two analog input terminals. AI1: input 0 ~ +10V, AI2: input 0 ~ +10V/0-20mA.
Output terminal	One high-speed pulse output terminal, which can output a square wave signal of 0kHz ~ 50kHz, and can achieve the output of physical quantities such as the set frequency and output frequency. It can be selected as an open-collector type. One digital output terminal. One relay output terminal. Two analog output terminals of 0V ~ 10V/0-20mA can indicate the output frequency/current/voltage/frequency command/rotation speed/power factor signal output.

• Other Characteristics

Optional card	IO expansion card, communication card (isolated type), PG card
Multi-encoder support	Supports differential mode, open collector, UVW, resolver

• Environment

Place of use	Indoors, free from direct sunlight, and without dust, corrosive gases, flammable gases, oil mist, water vapor, dripping water or salt content, etc.
Altitude	Below 1000m
Ambient temperature	-10°C ~ +40°C (When the ambient temperature is between 40°C and 50°C, it should be used with a derated load.)
Humidity	Less than 95%RH, without water condensation
Vibration	Less than 5.9m/s ² (0.6g)
Storage temperature	-20°C ~ +60°C

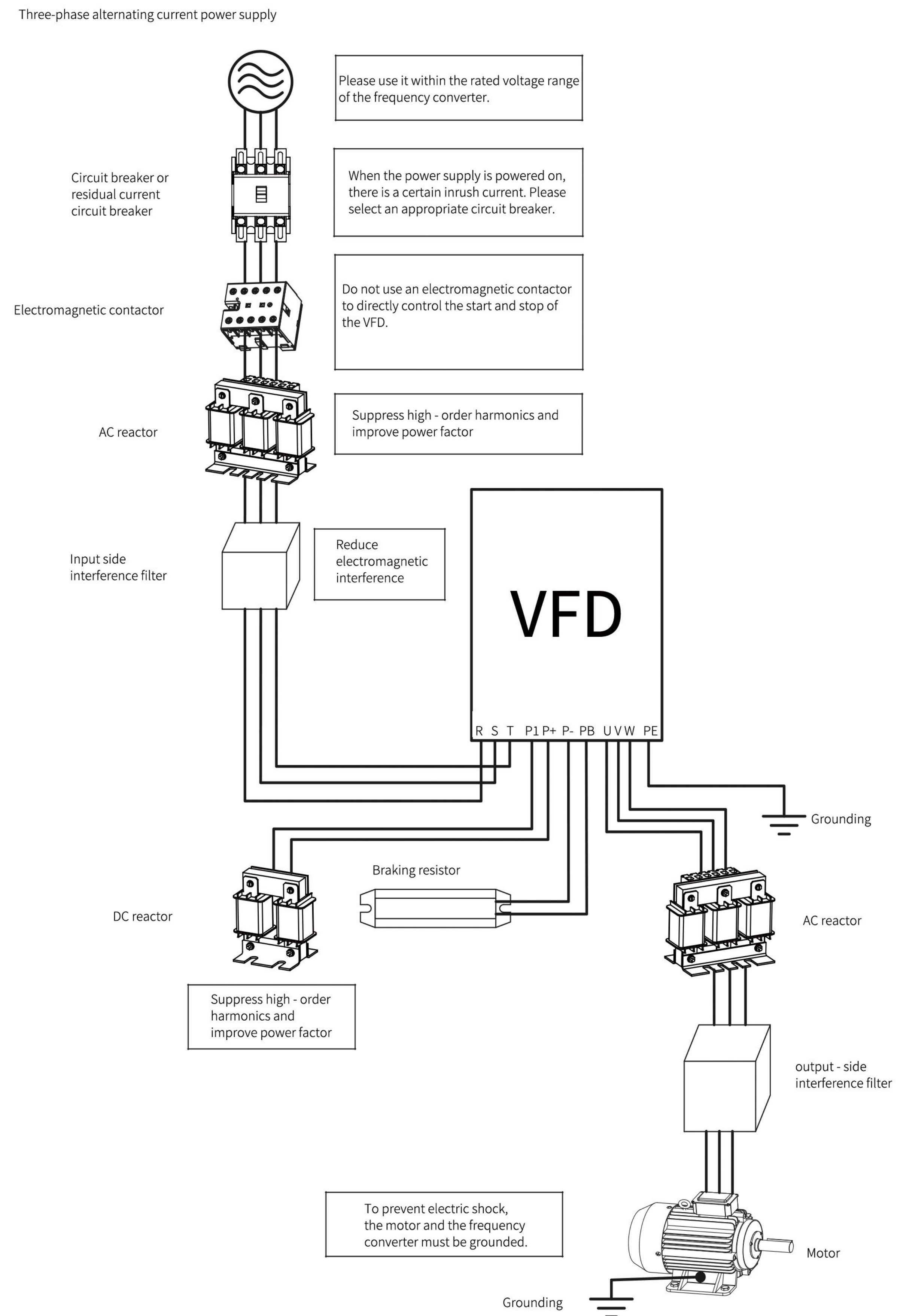
Application scenarios:



With advanced vector control technology, vector frequency inverters achieve precise regulation of motor speed and torque, featuring three core functions: high-precision speed regulation, high energy efficiency, and high dynamic response. In terms of speed regulation performance, its speed regulation ratio can reach 1:200 or even higher, and the speed accuracy error is controlled within $\pm 0.5\%$. It can adjust the motor operation status in real-time according to load changes to ensure the stable operation of equipment. In terms of energy conservation, by intelligently matching load requirements, it can reduce energy consumption by more than 30% compared with traditional driving methods. When facing sudden load changes, it can respond rapidly within milliseconds to maintain system stability.

Based on these outstanding functions, vector frequency inverters precisely control the operating speeds of robotic arms and conveyor belts in industrial automation production lines, ensuring the accuracy of product assembly. In the construction field, they are used in elevator control systems to achieve smooth start and stop, while reducing energy consumption. By optimizing energy utilization efficiency, they are widely applied in multiple fields such as energy, manufacturing, and construction, becoming an indispensable power core for the intelligent development of modern industries.

Device connection diagram:



Wiring diagram:

