

Shanghai Sigriner STEP Electric Co. Ltd

Shanghai Sigriner STEP Electric Co. Ltd
No. 1560 Siyi Road, Jiading District, Shanghai
Tel: 021 – 69926000
Fax: 021 – 69926010
Zip: 201801
Website: www.stepelectric.com/sigriner

Shanghai STEP Electric Co. Ltd
No. 289 Xinqin Road, Jiading District, Shanghai
Tel: 021 – 39126902
Fax: 021 – 39126607
Zip: 201802
Website: www.stepelectric.com

STEP Sigriner Elektronik GmbH
Martin-Moser-str. 15, 84503 Altoetting, Germany
Tel: 0049 – 8671 – 3096
Fax: 0049 – 8671 – 72476
Website: step-sigriner.com

HONG KONG International STEP Holdings Co., Ltd.
Unit AD, 9/F., Nathan Commercial Building, 430-436
Nathan Road, Kowloon, Hong Kong
Tel: 00852 – 27592938, 23327719, 27819038
Fax: 00852 – 27590662

Shanghai STEP Software Technology Co., Ltd.
No. 289 Xinqin Road, Jiading District, Shanghai
Tel: 021 – 39126902
Fax: 021 – 39126607
Zip: 201802

Shanghai STEP Elevator Components Co., Ltd.
No. 289 Xinqin Road, Jiading District, Shanghai
Tel: 021 – 39126902
Fax: 021 – 39126607
Zip: 201802

Shanghai STEP Electrical Wire & Cable Co. Ltd
No. 289 Xinqin Road, Jiading District, Shanghai
Tel: 021 – 39126902
Fax: 021 – 39126607
Zip: 201802

Beijing Office
Room 2303, Full Tower, No.9 East Third Ring
Road, Chaoyang District, Beijing
Tel: 010-85911326
Fax: 010-85911338
Zip: 100020

Shanghai Office
No.1560 Siyi Road, Jiading district, Shanghai
Tel: 021-69926013
Fax: 021-69926011
Zip: 201801

Guangzhou Office
Rm.1506, Xinde Building, No. 246, Zhongshan No.4
Road, Guangzhou
Tel: 020 – 83635232, 83635425
Fax: 020 – 83635858
Zip: 510030

Chengdu Office
Rm.701, Wanxingyuan Building A, No.8 Lingshiguan
Road, Wuhou District, Chengdu
Tel: 028 – 85232751, 85232752
Fax: 028 – 85237034
Zip: 610041

STEP[®]

Service hotline: 400-821-0325

AS500 Low-voltage Drive with high Performance Vector Control V1.1



With Creative Science and Technology
You Will Find Such is The World

COMPANY CULTURE

STEP Spirit: Face the world; pursue the best, stay always ahead of the line.
 STEP Value: Faith, innovation, excellence.
 STEP Tenet: Customer satisfaction, employee pride, community benefit.
 STEP Mission: Provide the best controller, drive and energy-saving products for our customers.
 STEP vision: To be an international high-tech enterprise in electric industry.

COMPANY INTRODUCTION

Shanghai Sigriner STEP Electric Co., Ltd is a subsidiary of Shanghai STEP Electric Corporation. Shanghai STEP Electric Corporation is an enterprise group and was founded in 1995, and the registered trademark is "STEP". STEP Group mainly specializes in R&D, manufacture and sales of industrial control systems and drive products, owning 4 domestic companies and 2 overseas companies.
 STEP came into the A-share market publicly on December 24, 2010 while the opening bell of Shenzhen Stock Exchange was sounded.
 Stock: STEP; stock code: 002527
 In 2006, Shanghai STEP Electric Corporation invested in and established the Shanghai Sigriner STEP Electric Co., Ltd, having a modern R&D and manufacture facility of drive product, with area of 30000 square meters, equipped with the first class test instruments and production equipments in the world. And advanced management systems and strict quality controls are implemented to make sure of providing clients with drive products and services of high quality. The company owns various series of products, including high/low voltage fan/pump drive, high/low voltage vector drive, four-quadrant drive, drive for elevator, common DC bus drive, integrated driving controller, energy regeneration device, door drive, AC servo system, etc.
 As utilization of the STEP global strategy, the products have been exported to over 30 countries and regions in Europe, North America, and Asia. In China, STEP has set up 18 agencies and liaison offices, with sales of service covering the entire country.
 STEP insists in the enterprise spirit: Face the world; pursue the best, stay always ahead of the line. It strives to provide the best control, drive and energy-saving products for our customers and desires to be an international high-tech enterprise in electric industry step by step.

AS500
 Low-voltage Drive
 with high
 Performance
 Vector Control



AS500
 Low-voltage Drive
 with high
 Performance
 Vector Control

CONTENTS

Product Introduction	03
Features	03
Operation Method	04
Applications	05
Standard Wiring Diagram	07
Technical Specification	09
Model-selection and Ordering	12
Annex	15
Service Commitment	17
After-sales Service Network	18



➤ PRODUCT INTRODUCTION

AS500 low-voltage drive with high performance vector control is the up-to-date drive designed by Shanghai Sigriner STEP Electric Co., Ltd for China market. With most experiential R&T team in China, constant technical innovation and wide international communication, Shanghai Sigriner STEP has controlled different core technology such as vector control and torque control. The corporation, which has met international criteria and aims the demands in different conditions and industries in china , further enhances the design of product's reliability and environmental adaptability to meet different level's requirement.



AS500
Low-voltage Drive
with high
Performance
Vector Control

FEATURES

➤ Advanced Drive Technology

Controllable motor

- ◆ Induction asynchronous motor
- ◆ Permanent magnet synchronous traction machine
- ◆ Permanent magnet synchronous motor
- ◆ PMSM servo motor

➤ Newly Control Features

V/F control

Offering excellent vector control performance and insensitive to motor parameters.Startup torque: 0.50Hz 150% rated torque

Speed adjustment range: 1:100

Speed stabilization precision : ± 0.5%

0.5Hz controllable motor stable operation with 150% rated torque

Sensorless vector control

Precise speed sensorless vector control technology realizes AC motor decoupling,enabling the DC motorization of operation control.Startup torque: 0.2 Hz 180% rated torque

Speed adjustment range: 1:200

Speed stabilization precision: ± 0.2%

0.2Hz controllable motor stable operation with 150% rated torque

Closed-loop vector control

Startup torque: 0.00 Hz 180% rated torque

Speed adjustment range: 1:1000

Speed stabilization precision: ± 0.02%

Torque control

Support online conversion of torque and speed control, torque precision: ±5%, response time < 10 m/s

➤ Rich Application Experiences

Macro for elevator, macro for lifting

Macro for water pump, process PID control

Constant tension control, spinning swing frequency control

Energy-saving control for injection molding machine

AS500
Low-voltage Drive
with high
Performance
Vector Control

OPERATION METHOD

➤ Mutual switching between two sets of operation command

Operation command 1/2:

Control panel digital given

Analog/digital given

- ◆ Analog A0/A1 terminal: -10 V~+10V or 0~20 mA
- ◆ Digital Xi terminals: multi-step frequency, voltage given
- ◆ Pulse DI0/DI1 terminal : 0 ~ 50 kHz

Modbus communication mode given (Profibus DP optional)

Performance function given

➤ Multiple input/ouput modes integrated

2-way analog inputs analog outputs

- ◆ Analog input filtering time may be set, strengthening anti-interference ability
- ◆ Analog input curve has an independent multi-step correction function

8 -way digital inputs / 2-way digital outputs, 4-way relay outputs

- ◆ Standard 16-speed setting, 23-speed operation may be set at the utmost

Provide independent high-speed pulse input and output ports for high-speed pulse cascade connection

➤ Two sets of frequency commands

Speed command 1/2:

- ◆ Panel given speed
- ◆ A0 given speed
- ◆ A1 given speed
- ◆ A0+A1 given speed
- ◆ A0-A1 given speed
- ◆ UPDN given speed
- ◆ Communication given speed
- ◆ PID given speed

APPLICATIONS

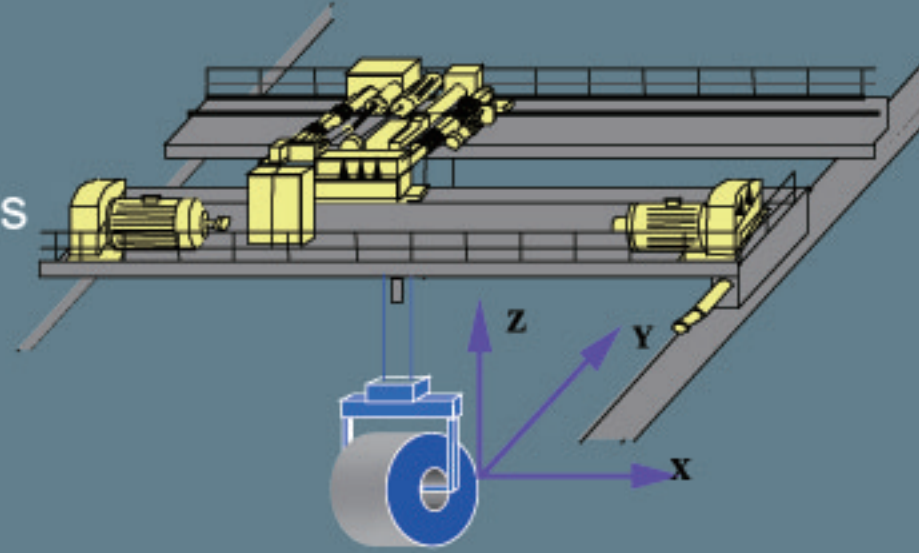
Braking Function

High performance

- ◆ Brake release current is adjustable, to protect the mechanical brake device and guarantee the evenness of motion simultaneously.
- ◆ High torque starting, prevent load slipping down due to insufficient torque.

Safe and reliable

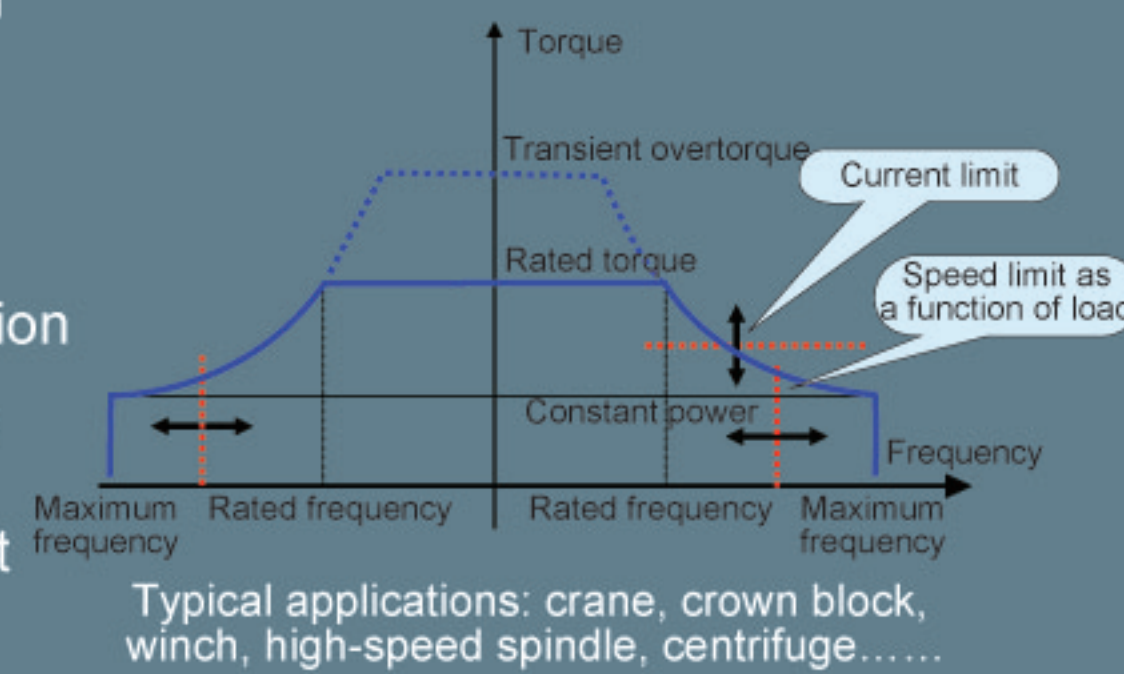
- ◆ Moment conditions detected before the brake being released
- ◆ Consider the state of brake contact
- ◆ Creepage and overspeed control detection



Main applications: lifter, crane, travelling crane, elevator, hoist.....

High-speed lifting

- ◆ When the load is light or empty, the cycle of operation may be optimized by this function
- ◆ Drive operates in the constant power mode and makes the speed exceed the rated value on the premise that the output current does not exceed rated current of motor



AS500
Low-voltage Drive
with high
Performance
Vector Control

PID regulator

High performance

- ◆ Independent regulator without external options
- ◆ Massive auxiliary functions
- ◆ Given and feedback diverse sources
- ◆ Filtering and correction of given value

Application type

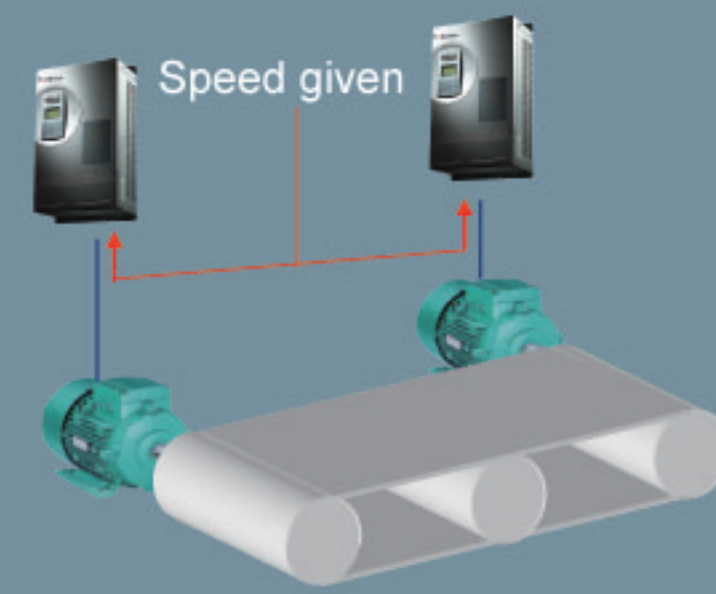
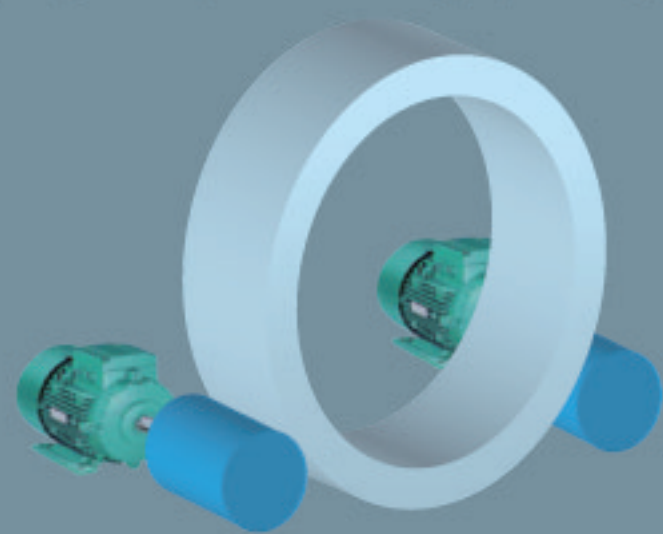
- ◆ Tension control: draw bench, printer, coiling machine, paper machine, etc.

Load balance

- ◆ Apply to mechanically coaxial coupling of several motors
- ◆ Realize the load balance by correcting the speed of one or more motors positioned mechanically
- ◆ This correction is a function of load
- ◆ This function applies to any motor driven or four-quadrant regenerative electric power status

Application type

- ◆ Conveying belt, centrifuge, lifting motion of cranes



Simple realization

- ◆ Special menu
- ◆ Factory setting meets the requirements under most circumstances
- ◆ Show all variables of PID regulator for convenience of commissioning

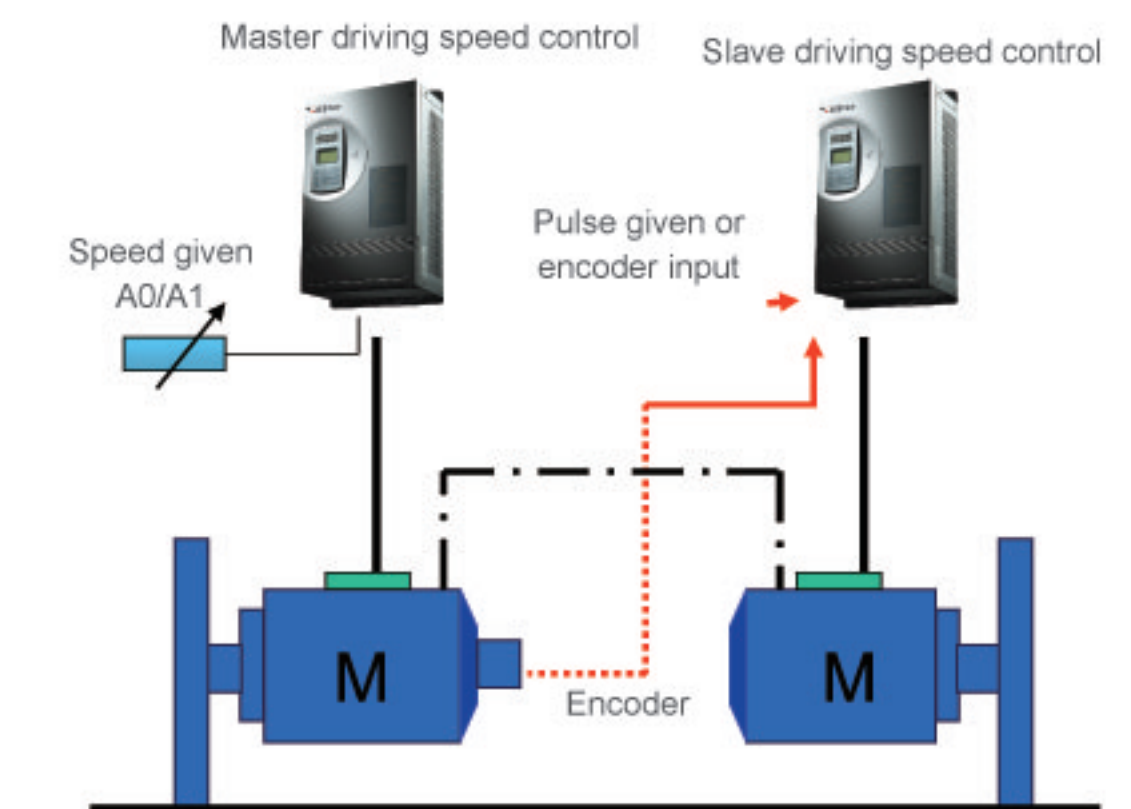
AS500
Low-voltage Drive
with high
Performance
Vector Control

APPLICATIONS

Master and slave control

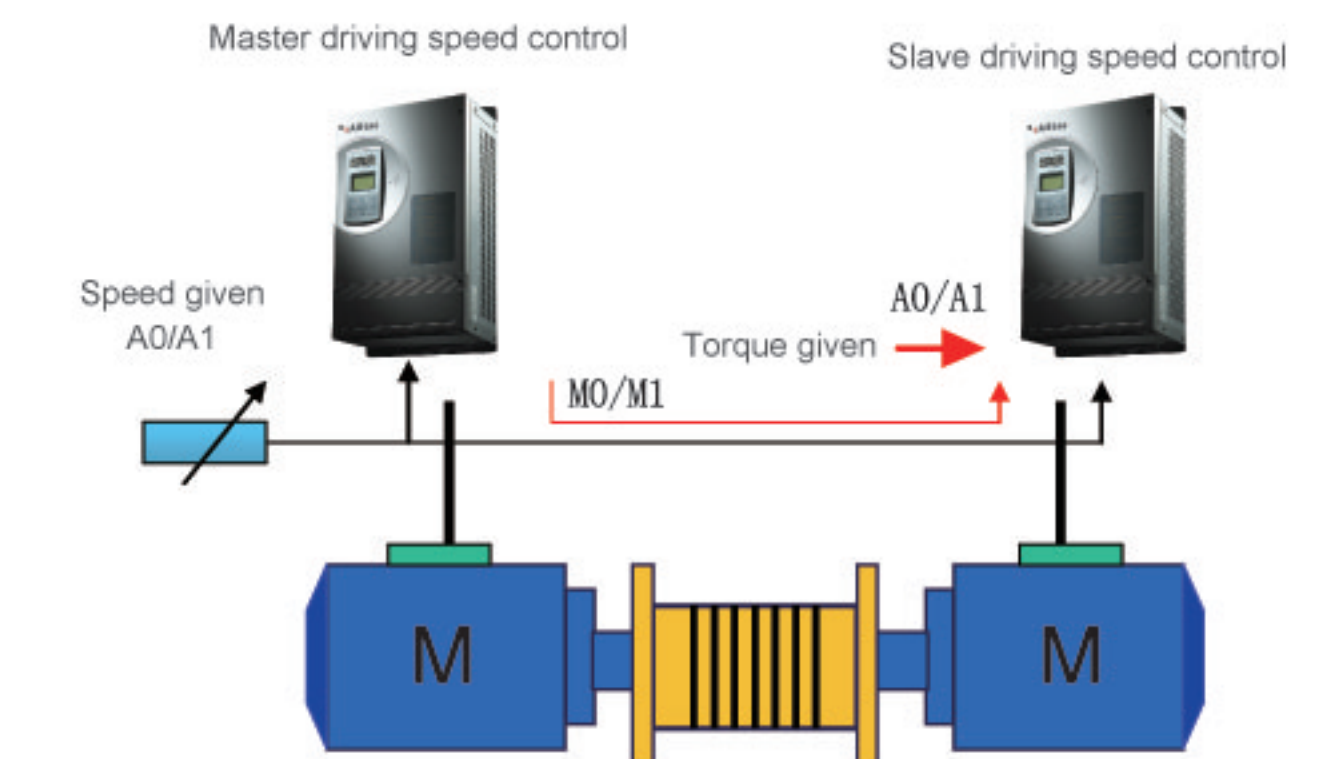
Flexible coupling

- ◆ Master driving unit adopts speed control
- ◆ Torque of slave driving unit is given depending on master driving unit
- ◆ For closed-loop control, the encoder of master motor feeds back to slave driving unit
- ◆ Pulse input may be used as any given mode (Speed given, PI, sum...)



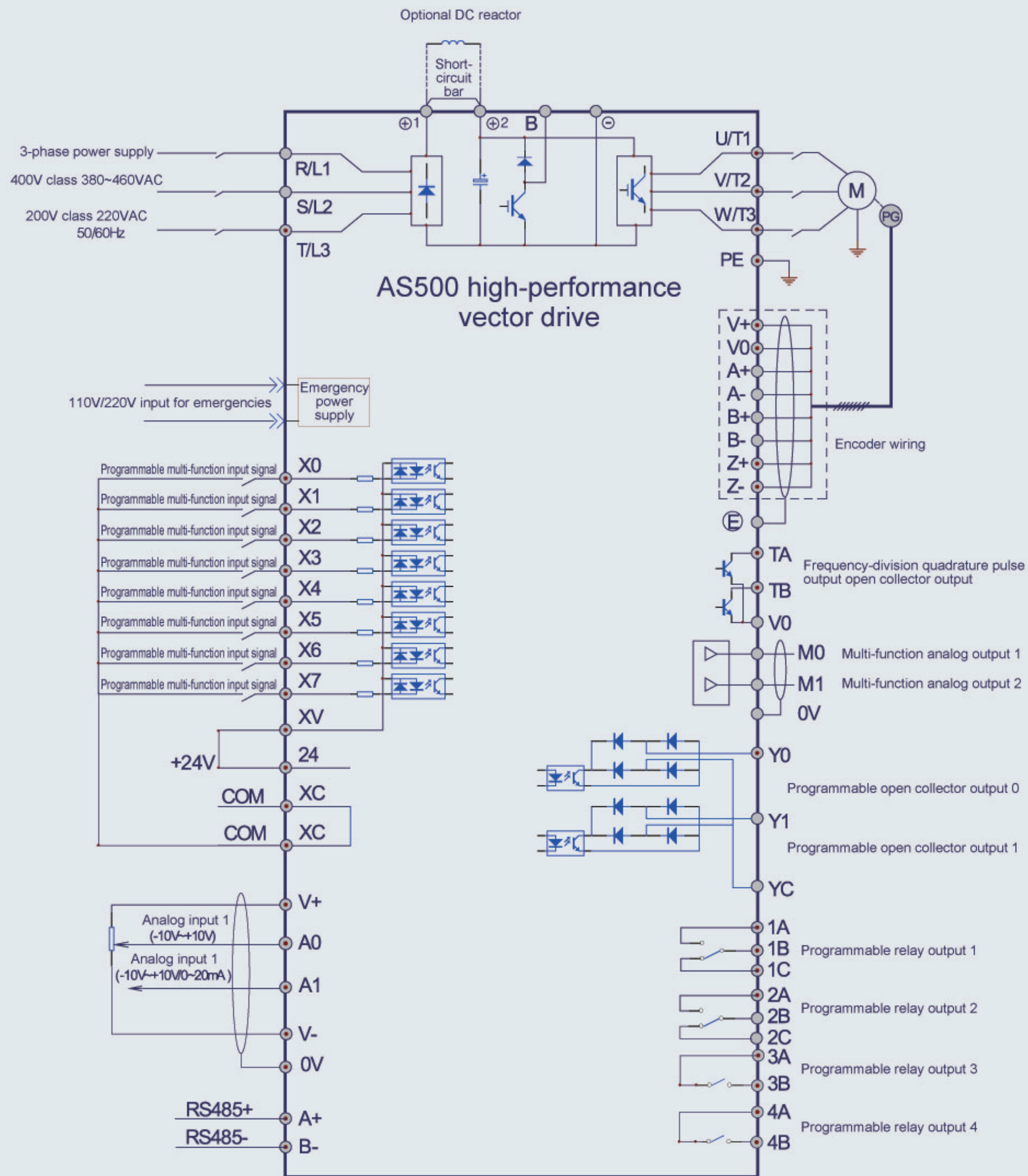
Rigid coupling

- ◆ Master driving unit adopts speed control
- ◆ Speed of slave driving unit is given depending on the master driving unit
- ◆ Torque analog of master driving unit is outputted to slave driving unit, and this analog input is set as given limit or torque command
- ◆ Response time depends on the response time of analog output and input



STANDARD WIRING DIAGRAM

Terminal Wiring Diagram



AS500
 Low-voltage Drive
 with high
 Performance
 Vector Control

STANDARD WIRING DIAGRAM

Control circuit terminal functions

1A	1B	1C	3A	3B	Y1	YC	24	XV	X1	X3	X5	X7	XC	0V	0V	A0	A1
2A	2B	2C	4A	4B	Y0	XC	XC	X0	X2	X4	X6	A+	B-	M0	M1	V+	V-

Type	Terminal symbols	Function description	Specifications
Terminal 485	A+	Positive end of 485 differential signal	Baud rate: 4800/9600/19200/38400/57600 bps Up to 32 sets of equipment can be paralleled, if the number exceeds 32 relay shall be used. Maximum distance:500m(adopt standard twisted shielding cable)
	B-	Negative end of 485 differential signal	
Digital input	24	+24V	24 V ± 10%; maximum load: 200 mA, with overload and short circuit protection
	X0 - X7	Multi-functional input terminals	Input specification: 24VDC, 5mA Frequency range: 0 ~ 200Hz Voltage range:24±20%
	XV	+24V ground	Interior isolated from GND
Digital output	Y0-Y1	Open collector output terminals	Voltage range: 24V±20%, maximum input current: 50mA
	YC	Open collector output common terminal	Interior isolated from GND
Analog input	V+	Analog input reference voltage	+15V, Interior isolated from COM Maximum output current: 20mA, with short circuit and overload protection
	V-	Analog input reference voltage	-15 V, interior isolated from COM Maximum output current: 20mA, with short circuit and overload protection
	A0	Analog voltage input	-10V~10V: input impedance 20kΩ, maximum input voltage: 15V, resolution: 12 bits (0.025%)
	A1	Analog voltage input	0~20mA: input impedance 500Ω, maximum input current: 30mA, resolution: 12 bits (0.025%)
	0V	Analog input ground	Interior isolated from COM
Analog output	M0	Analog output 1	0~20 mA: permissible output impedance 200~ 500Ω 0~10V: permissible output impedance ≥10kΩ Output accuracy: 2%, resolution: 10bits (0.1%), with short-circuit protection 0~20mA or 0~10 V analog input is selected through jumpers
	M1	Analog output 2	
	0V	Analog output ground	Interior isolated from COM
Relay output	1A/1B/1C	Relay output	1A/1B, 2A/2B, 3A/3B, 4A/4B normally open Contact capacity: 250 VAC/5 A, 30 VDC/5 A Minimum action current: 10 mA Actuation time: 10 ms below
	2A/2B/2C	Relay output	
	3A/3B	Relay output	
	4A/4B	Relay output	

Main circuit terminal functions

⊕1	⊕2	B	⊖	R/L1	S/L2	T/L3	U/T1	V/T2	W/T3
OPTION				POWER			MOTOR		

Terminal symbols



Terminal symbols	Name and function
R/L1, S/L2, T/L3	3-phase AC input terminal
⊕1, ⊕2/B1 or ⊕1, ⊕2	DC reactor terminal, copper bar short connection when delivery
⊕2/B1, B2 or B1, B2	Braking resistor connection terminal
⊕2/B1, ⊖ or ⊕2, ⊖	DC power input terminal: external braking unit DC input terminal
U/T1, V/T2, W/T3	3-phase AC output terminal
⊕	Grounding terminal PE



TECHNICAL SPECIFICATION

Input	Rated voltage	Three-phase 380V ~ 460V(-15%~+10%); 220~240V(-15%~+10%)
	Rated frequency	50/60Hz
	Allowable voltage range	Voltage unbalancedness ≤3%; allowable frequency fluctuation: ±5%
	Voltage dips	For 3-phase AC 380V~460V power supply, when the input voltage < AC 300V, under-voltage protection after 15ms
Output	Voltage (V)	Three-phase 0 to rated input voltage
	Frequency range	V/F control: 0.00 ~ 300.00 Hz Vector control: 0.00 ~ 120.00 Hz
	Overload capacity	150%, 1 min, 180% 3s, 200%, 0.5s
	Efficiency (full load)	7.5 kW and below ≥93%; 45kW and below ≥95%; 55kW and above ≥97%
Digital input/output	Precision of output frequency	± 0.01% (digital instruction -10~+45°C) ± 0.01% (analog instruction 25~10°C)
	Digital input	8-way, 24VDC high/low level set effectively. Input function may be defined
	Pulse frequency input	2-way, maximum input frequency: 0~50kHz
	Open collector output	2-way, output function may be defined
Analog input/output	Relay output	4-way, Normally open and close, contact capacity: resistive, 5A 250VAC or 5A 30VDC; output function may be defined
	Pulse frequency output	1-way, 0~50kHz open collector pulse square signal output, programmable
	Analog voltage input	2-way, -10 ~ +10VDC or 0 ~ +10VDC, precision 0.1%
	Analog current input	1-way, 0 ~ 20mA, precision 0.1%
Encoder input	Analog voltage output	2-way, -10 ~ +10VDC, precision 0.1%
	Potentiometer voltage	Provide +10VDC power supply for setting speed of potentiometer (maximum 25mA)
Encoder input	PG power supply	5V, 12V, 300mA
	PG signal	Open collector, push-pull, differential, SIN/COS, Resolver, Endat absolute type
	PG dividing frequency output	OA and OB orthogonal, dividing frequency coefficient 1 ~ 128



AS500
Low-voltage Drive
with high
Performance
Vector Control

TECHNICAL SPECIFICATION

Control characteristics	Carrier frequency	2 ~ 16k(Hz); carrier frequency may be adjusted automatically according to the load characteristic
	Frequency setting resolution	0.01Hz (digital instruction) ±0.06Hz/120Hz (analog instruction 11bit + unsigned)
	Operation command channel	Operation panel given, control terminal given, communication given
	Multiple Frequency Reference Modes	Operation panel reference, digital/analog terminals, communication mode reference, performance function reference.
	Torque boost	Automatic torque boost; manual torque boost
	V/F curve	User-defined V/F curve, linear V/F curve and 5 kinds of drop torque characteristic curves
	Automatic voltage regulation (AVR)	Regulate the duty ratio of output PWM signal automatically according to fluctuation of bus voltage so as to relieve the effect on the output voltage fluctuation by fluctuation of grid voltage
	Instantaneous power-down disposal	At the time of instantaneous power-down, control by bus voltage to realize uninterrupted operation
	Dynamic braking capacity	Built-in braking unit for 110kW and below class, use external braking resistor
	DC braking capacity	Braking current: 0.0 ~ 150.0% rated current DC braking time: 0.0 ~ 30.0s, there is no waiting time for DC braking to realize quick
Unique functions	Parameter copy function	The standard operation panel can realize the parameter upload, download and display the copy progress. The user can select the uploaded forbidden function to avoid parameters be overwritten.
	Process PID	For closed-loop control of process
	Torque control	Torque/speed control may be switched by terminal, diverse torque given manners
	Zero servo and position control	Practicable null speed position locking, precise positioning, position control
	Common DC bus	Common DC bus power supply for all series multiple drives The full series can realize common DC bus supply for several drives.
Power on self test	Realizing the power-up auto-detection of internal and peripheral circuits, including motor grounding, abnormal +10V power supply output, abnormal analog input, and disconnection.	



TECHNICAL SPECIFICATION

Motor protection	Rotor locking	
	Motor overload	
	Motor overtemperature(PTC)	
	Speed limit	
	Torque limit	
Drive protection	Output current limit	
	Torque limit	
	Drive overload	
	IGBT's overload	
	Input power undervoltage/overvoltage	
	DC bus undervoltage/overvoltage	
	IGBT overheat	
	Radiator overheat	
	+10 V power output abnormality	
	Analog input signal loss (loss of speed reference value)	
	Abnormal communication	
	Encoder connection fault	
	Self-tuning fault	
Environmental	Operating site	The product shall be mounted vertically in the electric control cabinet with good ventilation. Horizontal or other installation modes are not allowed. The cooling media is the air. The product shall be installed in the environment free from direct sunlight, dust, corrosive gas, combustible gas, oil mist, steam and drip.
	Ambient temperature	-10 ~ +40℃
	Temperature derating	>40℃, for each 1℃ rise, rated output current reduces 1%, 50℃ at utmost
	Altitude	1000m
	Height derating	>1000 m, for each 100m lift, rated output current reduces 1% (3000 m at utmost)
	Humidity	5 ~ 95%, no condensing
	Vibration	3.5m/s ² , 2 ~ 9Hz; 10m/s ² , 9 ~ 120Hz;
	Storage temperature	-40 ~ +70℃
	Degree of protection	IP20
Others	Cooling type	Forced air cooling
	Installation method	In cabinet
	Certification	CE



Product series model

AS500 4 T 0200

		Code	Applicable motor power	Code	Applicable motor power
General drive series		02P2	2.2 kW	0045	45 kW
		0003	3 kW	0055	55 kW
		0004	4 kW	0075	75 kW
	Code Voltage class	05P5	5.5 kW	0090	90 kW
	2 200V class	07P5	7.5 kW	0110	110 kW
	4 400V class	0011	11 kW	0132	132 kW
		0015	15 kW	0160	160 kW
	Code Phase number	18P5	18.5 kW	0185	185 kW
	T 3 phase	0022	22 kW	0200	200 kW
		0037	37 kW		

MODEL-SELECTION AND ORDERING

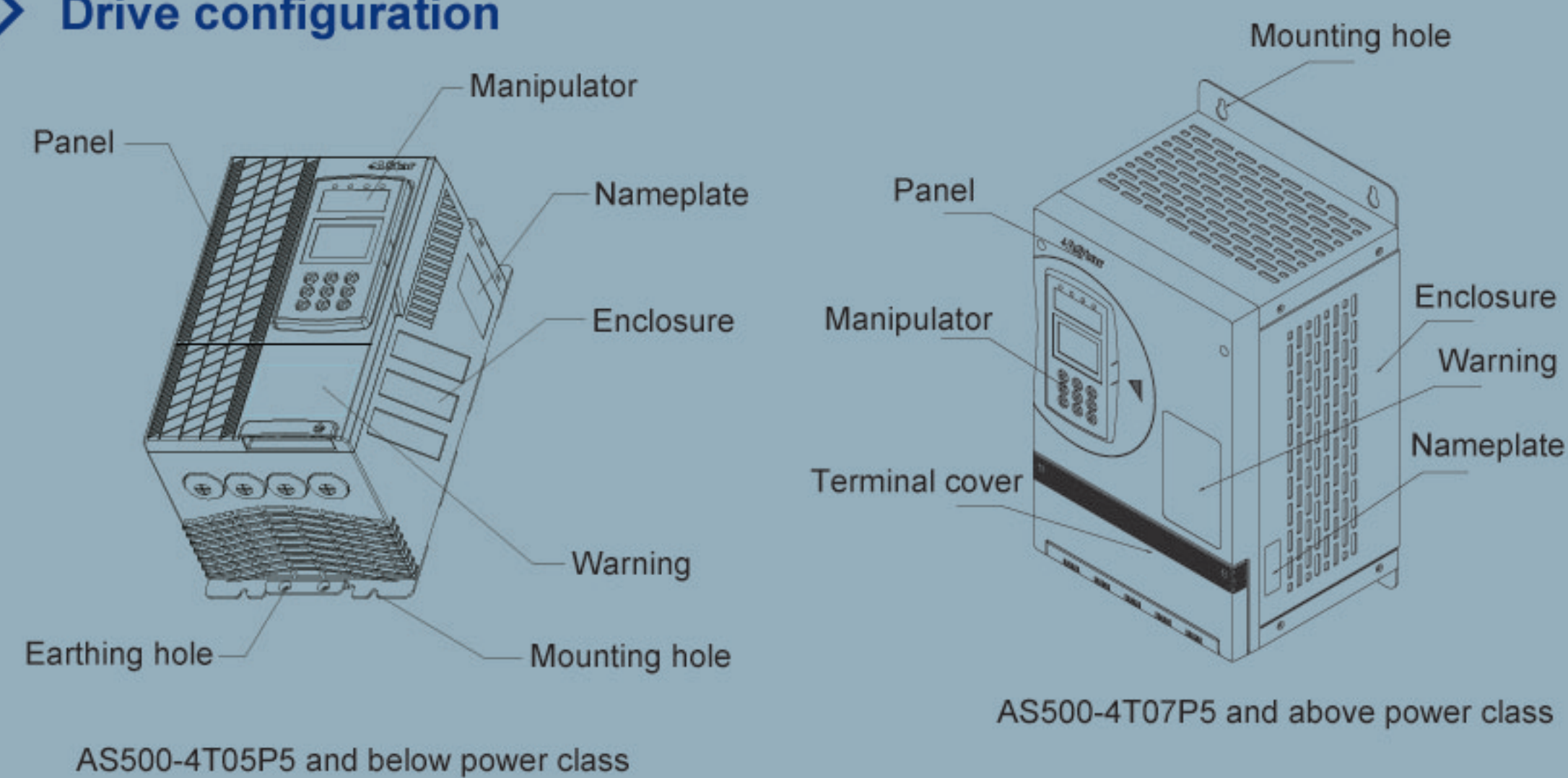
Product series model

Rated input	Drive model	Rated output current (A)	Applicable motor (kW)	Overload 150% 1min(A)
200~240V	AS500 2T01P5	6	1.5	9
	AS500 2T02P2	9	2.2	14
	AS500 2T03P7	14	3.7	22
380~460V	AS500 4T02P2	6	2.2	9
	AS500 4T0003	7	3	11
	AS500 4T0004	9	4	14
	AS500 4T05P5	13	5.5	20
	AS500 4T07P5	18	7.5	27
	AS500 4T0011	27	11	40
	AS500 4T0015	34	15	51
	AS500 4T18P5	41	18.5	62
	AS500 4T0022	48	22	72
	AS500 4T0030	65	30	98
	AS500 4T0037	80	37	120
	AS500 4T0045	97	45	146
	AS500 4T0055	128	55	192
	AS500 4T0075	165	75	248
	AS500 4T0090	195	90	292
	AS500 4T0110	240	110	360
	AS500 4T0132	270	132	405
	AS500 4T0160	302	160	453
	AS500 4T0185	352	185	528
	AS500 4T0200	390	200	585
	AS500 4T0220	426	220	639
	AS500 4T0280	520	280	780
	AS500 4T0315	585	315	877
	AS500 4T0355	650	355	975
AS500 4T0400	740	400	1110	

Note: as to the rated power, higher power and voltage class of 4-pole AC motor (1500 r/min), please contact STEP Corporation. Be sure to check the motor nameplate to ensure selected drive compatible with the motor.

AS500
Low-voltage Drive
with high
Performance
Vector Control

Drive configuration



AS500-4T05P5 and below power class

AS500-4T07P5 and above power class

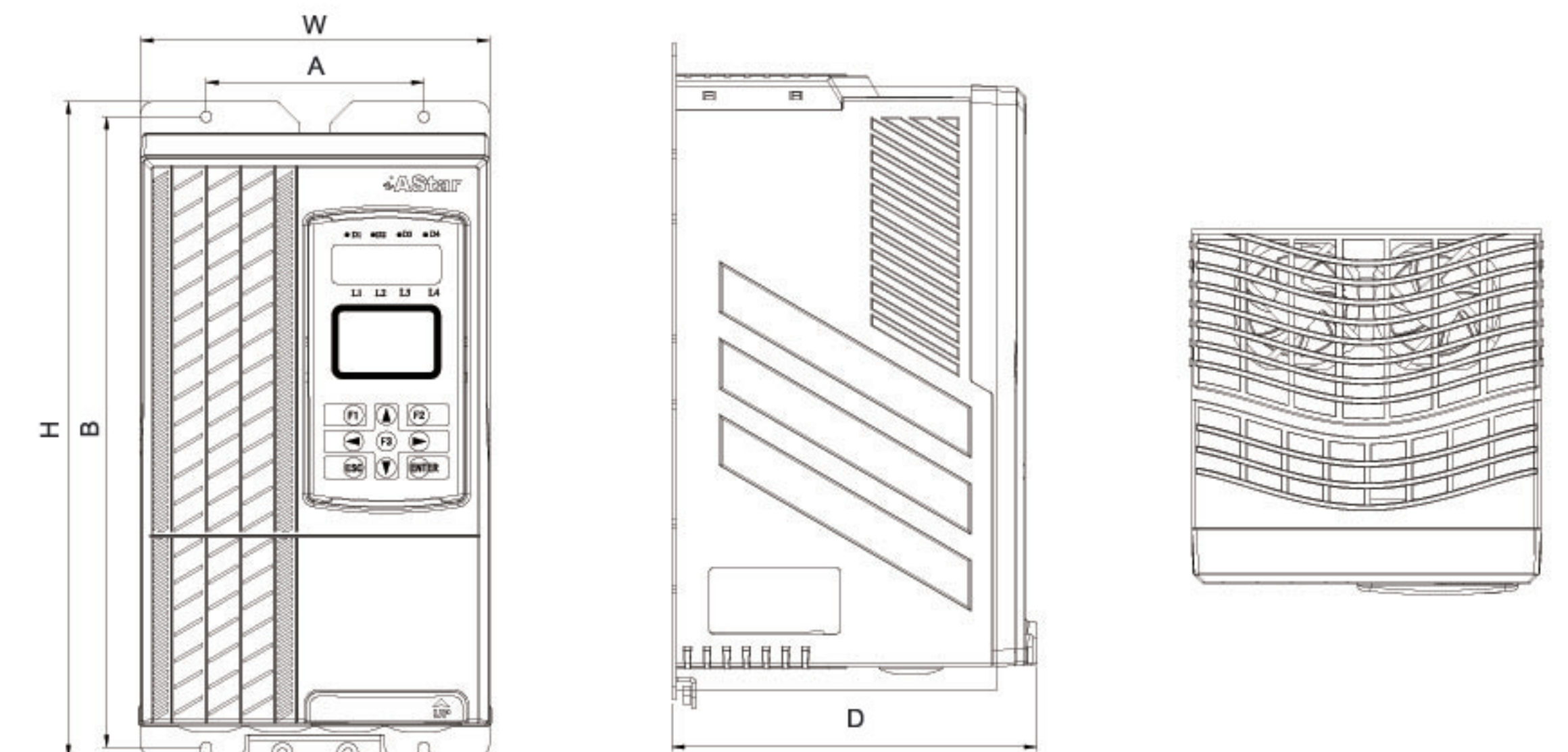
AS500
Low-voltage Drive
with high
Performance
Vector Control

MODEL-SELECTION AND ORDERING

Installation dimension

Drive model	A (mm)	B (mm)	H (mm)	W (mm)	D (mm)	Installation aperture Φ (mm)	Installation			Fastening torque (Nm)	Weight (kg)
							Bolt	Nut	washer		
AS500 2T01P5	100	243	265	158	151	7.0	4M4	4M4	4 Φ 4	3	4
AS500 2T02P2											
AS500 2T03P7											
AS500 4T02P2											
AS500 4T0003											
AS500 4T0004											
AS500 4T05P5											
AS500 4T07P5	165.5	357	379	232	182	7.0	4M6	4M6	4 Φ 6	3	8
AS500 4T0011											
AS500 4T0015											
AS500 4T18P5											
AS500 4T0022											
AS500 4T0030	165.5	511	533	305	240	10	4M8	4M8	4 Φ 8	4	23
AS500 4T0037											
AS500 4T0045											
AS500 4T0055	200	587	610	330	310	10	4M10	4M10	4 Φ 10	4	31
AS500 4T0075											
AS500 4T0090											
AS500 4T0110											
AS500 4T0132	370	855	890	540	370	12	4M13	4M12	4 Φ 12	4	42
AS500 4T0160											

Take AS500-4T05P5 and below power class for example



Hand held operator

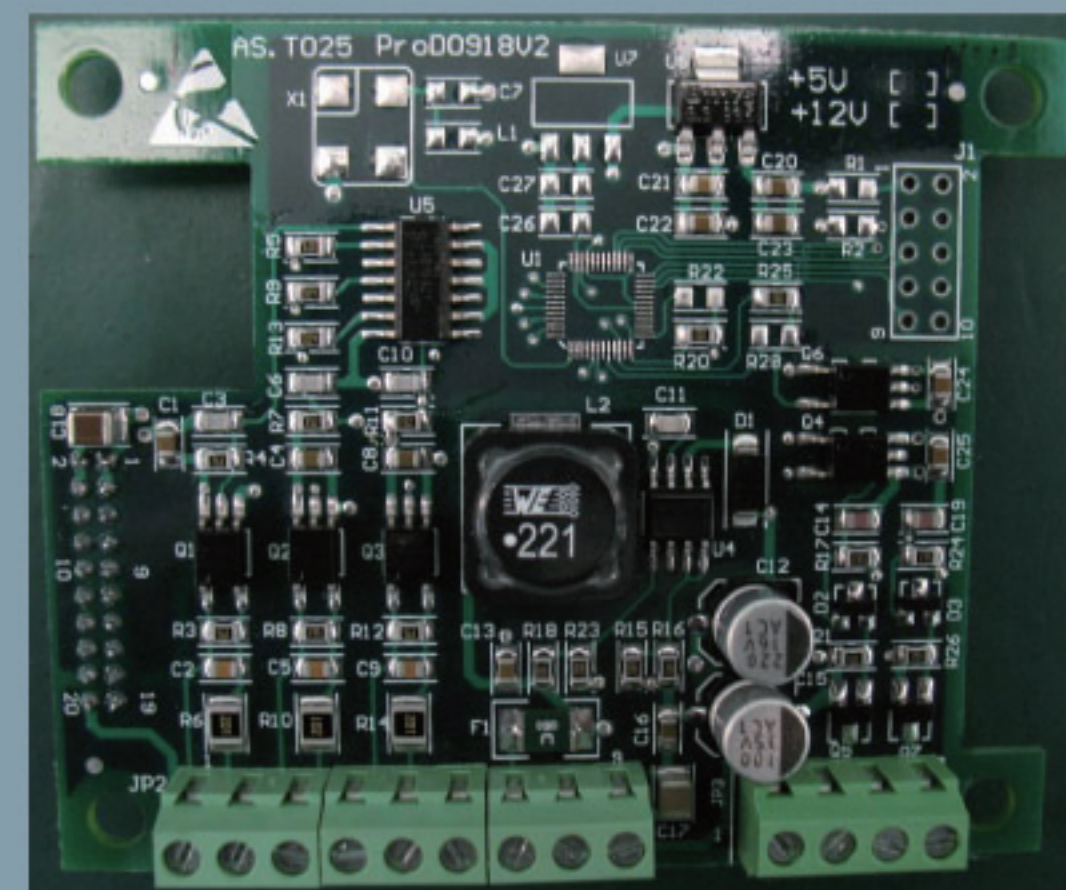


AS500
Low-voltage Drive
with high
Performance
Vector Control

PG card

ABZ increment PG card

ABZ increment PG card (model: AS.T025) may receive the output signals from two kinds of encoders, namely, being provided with encoder with open collector signal or push-pull signal.



JP2 input terminals:

A+	A-	B+
B-	Z+	Z-
V+	V-	PE

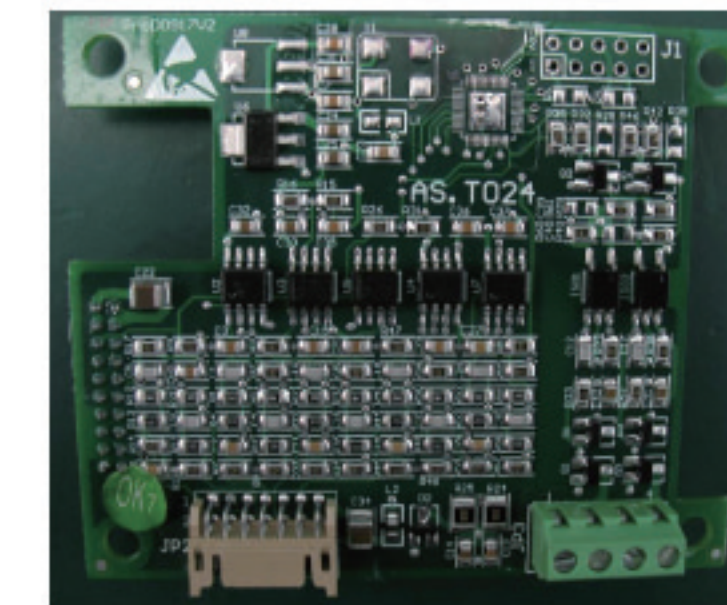
JP3 dividing frequency output terminals:

FA	V0	FB	V0
----	----	----	----

AS500
Low-voltage Drive
with high
Performance
Vector Control

SIN/COS PG card

SIN/COS PG card (model: AS.T024) can receive differential output signals from encoders, and thus may be equipped with an encoder with differential output signals.



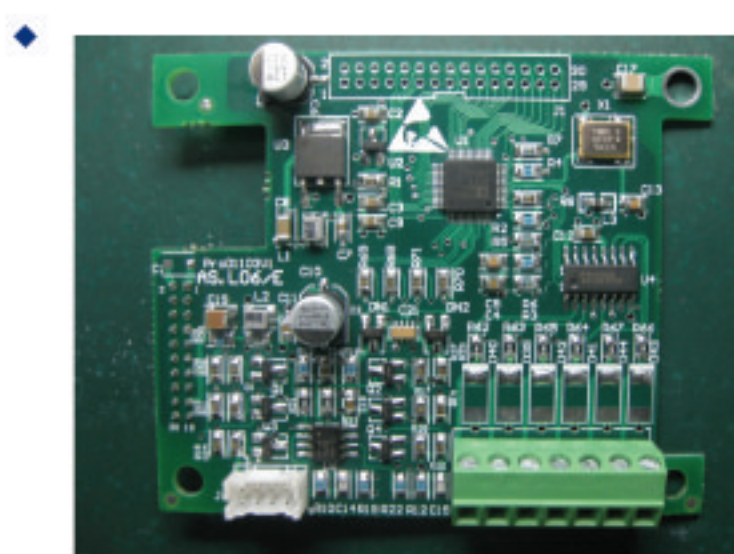
Symbols of JP3 terminal

FA	V0	FB	V0
----	----	----	----

Symbols of JP2 terminal (14-pin socket)

1	2	3	4	5	6	7
NC	NC	R-	R+	B-	B+	A-
8	9	10	11	12	13	14
A+	NC	NC	NC	NC	0V	V+

SIN/COS PG card can receive SIN/COS differential output signals from encoder



J6 J5

1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8

J6	signal	J5	signal
PIN1	E+	PIN1	A+
PIN2	E-	PIN2	A-
PIN3	sin+	PIN3	B+
PIN4	sin-	PIN4	B-
PIN5	cos+	PIN5	Z+
PIN6	cos-	PIN6	Z-
PIN7	0V	PIN7	0V
PIN8	0V	PIN7	0V

Braking resistor configurations

Drive model	Applicable motor (kW)	Minimum (Ω)	Maximum (Ω)	Recommended (Ω)	Recommended total power	
					Synchronous	Asynchronous
AS500 4T02P2	2.2	56	210	100	1000	1000
AS500 4T03P7	3.7	56	144	80	1600	1200
AS500 4T05P5	5.5	56	100	70	2000	1600
AS500 4T07P5	7.5	56	72	64	3200	2000
AS500 4T0011	11	34	48	40	4000	3200
AS500 4T0015	15	34	41	36	5000	4000
AS500 4T18P5	18.5	17	31	24	6400	5000
AS500 4T0022	22	17	27	20	8000	6400
AS500 4T0030	30	11	20	15	10000	8000
AS500 4T0037	37	8	16	12	12000	10000
AS500 4T0045	45	5	10	9	18000	15000
AS500 4T0055	55	5	8	8	22000	18000
AS500 4T0075	75	5	6	6	30000	25000
AS500 2T02P2	2.2	13	58	50	1000	600
AS500 2T03P7	3.7	13	39	30	1600	1000
AS500 2T05P5	5.5	8	26	20	2000	2000
AS500 2T07P5	7.5	8	21	15	3200	2000



> SERVICE COMMITMENT

When you contact products of Sigriner STEP for the first time, you will find their differences. Our experts own rich experiences and may help you select drives applicable to your process. From the initial technical specifications to production, delivery and installation, we will comply with all your requirements.

Sigriner STEP's services and supports are not only limited to telephone assistance. At different stages of installation, startup, maintenance and troubleshooting, our representatives will provide technical services and supports for you for 24 hours per day, 7 days per week.

> Range of our services

- Round-the-clock service 24 / 7 / 365
- Preventive maintenance
- Training
- Spares sales
- Product renewal
- Upgrading
- Repair and replacement
- Professional services (harmonic analysis, power supply quality research, electrical system application, remote diagnosis, etc.)

> Our commitment

Sigriner STEP is honorable to its reputation in long-term product services (including high-voltage drive). We commit to provide supports in the whole service life. However long the service life of product is, we shall never give up our responsibilities in product services and will ensure your full satisfaction. To prolong the service life of drivers and strengthen their functions, Sigriner STEP upgrades their programs ceaselessly to make you have opportunity for enjoying the newly upgraded technologies.

> Convenient local services

Because of our long-term field service for all customers, we own numerous professional service personnel. Each one of our service representatives receives all-around special training.

AS500
Low-voltage Drive
with high
Performance
Vector Control



AS500
Low-voltage Drive
with high
Performance
Vector Control

AFTER-SALES SERVICE NETWORK

> Domestic service network

Domestic market

5 agencies

14 liaison offices

Agencies

Beijing, Shanghai, Guangzhou, Wuhan, Jinan

Liaison offices

Dalian, Shenyang, Tianjin, Shijiazhuang, Zhengzhou, Chongqing, Xi'an, Hangzhou, Wuxi, Nanxun, Wujiang, Changsha, Shenzhen, Fuzhou, etc.



> Oversea network

Oversea companies

Germany, Hong Kong

Overseas sales

Germany, England, Denmark, Scotland, Canada, Japan, Brazil, Chile, Singapore, Australia, India, Pakistan, Turkey, Saudi Arabia, Korea, Hong Kong, Macao, Taiwan, etc.

