

Servo system overview

Small-sized servo system

The small volume servo system has four subseries products of pulse type and bus type. In addition to all the functions of the general series, its outstanding advantage is that it is smaller and can save more installation space.

Applicable to 3C, textile, printing, packaging, food, medicine, electronics, environmental protection and other fields.

Adaptive motor: MS5, MS6 series.

Bus type	DS5C1	0.1kW~55kW	EtherCAT®
	DS5N1	0.1kW~3kW	CANopen
Pulse type	DS5L1	0.1kW~3kW	Modbus
	DS5L2	0.1kW~0.7kW	Modbus
	DS5K1	0.1kW~55kW	Modbus



General servo system

The general servo system has a complete product line, including five subseries of pulse type, bus type and full-function type. It has the characteristics of high-speed response, accurate synchronization, rapid adjustment, convenience and ease of use.

Suitable for a variety of applications.

Adaptive motor: MS5, MS6 series.

Bus type	DS5P	0.1kW~0.7kW	PROFI® NET
	DS5C	1.0kW~32kW	EtherCAT®
	DS5E	0.1kW~22kW	X-NET MOTION BUS
Pulse type	DSSL	0.1kW~2.6kW	Modbus
	DS5K	0.1kW~7.5kW	Modbus
Full-function type	DS5F	0.1kW~7.5kW	Modbus



Low voltage servo system

At present, the low-voltage servo system has a bus type subseries. It has compact design, light weight body, rich interfaces, supports communication protocols such as CANopen and Modbus, low-voltage DC power supply, with 24V brake power output, and only three steps for gain adjustment, which reduces the debugging time.

It is applicable to AGV, sorting, logistics, warehousing and medical fields.

Adaptive motor: MF3 series.

Bus type	DF3E	0.4kW~1.5kW	CANopen
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*Note: refer to the model list that have been put into production. Please look forward to the development of some models.



Two-in-one servo system

At present, the two-in-one series servo system has a pulse type subseries. It has outstanding advantages such as flat appearance, dual-axis integrated drive, convenient wiring and accurate positioning. It has built-in gantry synchronous control, which can meet the accuracy requirements under high-speed movement. Suitable for sewing, wire cutting, laser cutting, printing, turret punch and other equipment.

Adaptive motor: MS5, MS6 series.

Bus type	DM5C	0.7kW~5.5kW	EtherCAT®
Pulse type	DM5F	0.4kW~0.75kW	Modbus



General|small-sized servo system

Stable and easy to use Excellent Performance High-speed Response
Rich Product Lineup

Suitable for : wire cutting, packaging, textile, woodworking, labeling and other applications



Small-sized series



Bus type	DS5C1 DS5C1 EtherCAT, RS232, 3/5-channels SI, 3-channel/4-channel SO, position mode, speed mode, torque mode, bus mode
	DS5N1 DS5N1 CANopen, RS232, 3-channel SI, 3-channel SO, position mode, speed mode, torque mode, bus mode

Pulse type	DS5L1/L2 DS5L1/L2 pulse, RS232, RS485, 3-channel/5-channel SI, 3-channel SO, position mode, speed mode, torque mode
	DS5K1 DS5K1 pulse, analog input, RS485, RS232, 8/5-channels SI, 6/4-channels SO, position mode, speed mode, torque mode

General series



Bus type	DS5P PROFINET, RS232, 5-channel SI, 3-channel SO, Support message 1, 3 and Siemens message 102/105/111/750
	DS5C EtherCAT, pulse, RS232, 4 or 3 channels SI, 4 or 3 channels SO, position mode, speed mode, torque mode, bus mode
	DS5E XNET,pulse, RS232, RS485, 4 or 3 channels SI, 4 or 3 channels SO, position mode, speed mode, torque mode, bus mode

Pulse type	DS5L pulse, RS232, 4 or 3 channels SI, 4 or 3 channels SO, position mode, speed mode, torque mode
	DS5K pulse, RS232, RS485, 5 channels SI, 4 channels SO, position mode, speed mode, torque mode
Full-function type	Pulse pulse, line driver, analog input, external displacement sensor, RS232, RS485, 10 channels SI, 8 channels SO, position mode, speed mode, torque mode, analog control, full closed-loop control

MS6,MS5 series servo motor



High inertia	Occasions with large load and high stability requirements MS6H 0.1~7.5kW
Medium inertia	Occasions with general load and high stability requirements MS5G 0.85~22kW MS6G 0.85~2.3kW
Low inertia	Occasions with light load and high-speed positioning requirements MS6S 0.4~2.0kW

MS6, MS5 series servo motor

High protection grade | light weight design | high-precision positioning



■ New appearance and structure

MS6 series B3 motor

- The new black body with frosted texture can effectively reduce the tactile temperature of the motor.



■ Low noise, light temperature rise

- Effective noise reduction. Compared with the previous motor, the winding temperature rise of B3 motor can be reduced by 20°C (take 400W as an example).



■ Higher protection level

- The structure of MS6 series motor is optimized to further improve the protection grade. The protection grade of B1/B2 series can reach IP66 and B3 series can reach IP67.



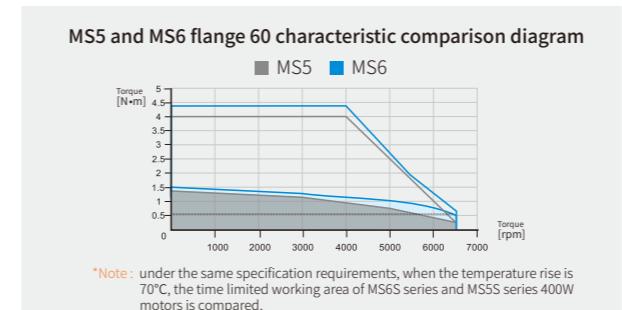
■ Motor is light and handy

- The body of MS6 series motor is further shortened, which can be shortened by 18% compared with MS5 series motor.



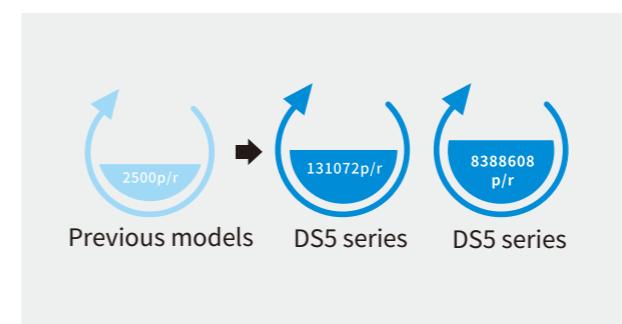
■ Higher torque output

- At present, the speed of MS6 series 400W motor can be overspeed to 6500rpm, and the maximum speed still maintains 80% of the rated output.



■ Encoder resolution

- The whole series is equipped with 17-bit encoder as standard, and 23-bit encoder is optional.
- Achieve higher precision position control and stable operation at low speed.
- The anti-oil and vibration ability of magnetic encoder is enhanced.



■ Flexible configuration to meet different needs

- Low inertia, medium inertia and high inertia motors are available.
- It can be equipped with power loss brake, oil seal, etc.
- B3 series front and rear outgoing cables are optional.
- B3 series can be configured with connector to amp adapter.
- B3 series can select oil-resistant cable.



DS5 series servo drive

Precise synchronization | high-speed response
rapid adjustment | easy to use



■ Smaller size, saving installation space

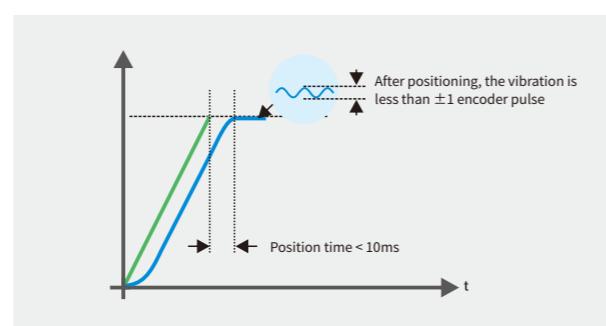
- The size is about 10% thinner than the previous generation.
- Save installation space.

*Note : the figure shows the comparison of DS5L 750W and DSS1L 750W.



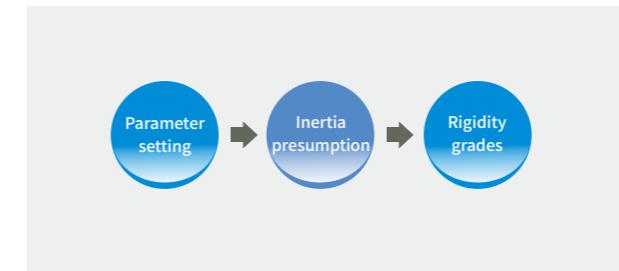
■ High speed response

- The rigid gain adjustment mode of servo system is self-tuning mode, which no need complicated adjustment process and greatly saves debugging time.
- By further gain adjustment, the positioning completion time can be reduced to 0 ~ 10ms.



■ Quick adjustment to shorten positioning time

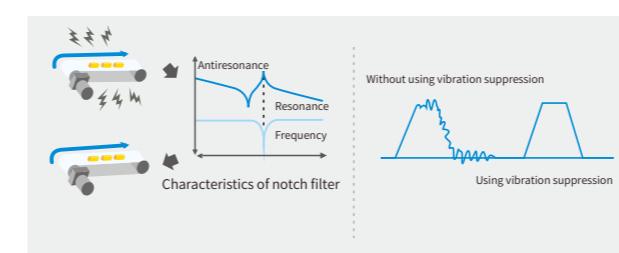
- Load inertia estimation, find the optimal gain, and the positioning completion time is within 20ms.
- The drive panel is adjusted offline.
- 63 rigidity grades.



*Note: DS5L2 covers 32 rigidity grades.

■ Active/manual vibration suppression

- Support 1-channel active vibration suppression.
- Equipped with 5 notch filters, combined with the vibration mechanical characteristic analysis function, the vibration suppression ability is improved.
- The filter setting frequency is 50 ~ 5000Hz, and the depth can be adjusted.
- Optimize friction compensation and disturbance observation algorithm.



■ Wide power range

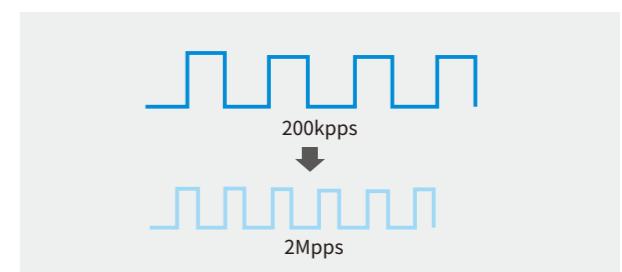
- New high-power models are added for small volume servo, and the power range is from 100W to 55kW.



*Note: please refer to the model list that have been put into operation, and some models are under development.

■ High speed pulse input

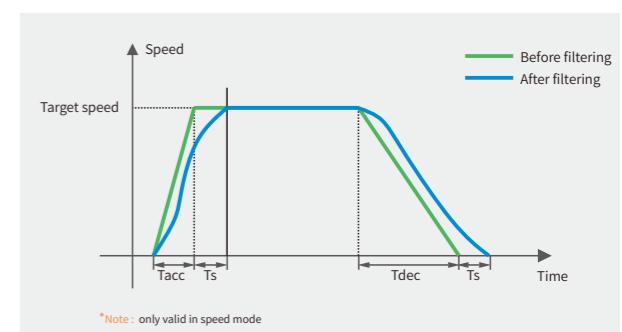
- DS5F supports 2Mpps long line reception.
- The full range of drives supports 200kpps (collector input) and DS5F/DS5K/DS5L1/DS5K1 series drives support 500kpps (differential input).



*Note: DS5N1/DS5C1/DS5P cannot support collector input.

■ S-type acceleration and deceleration curve

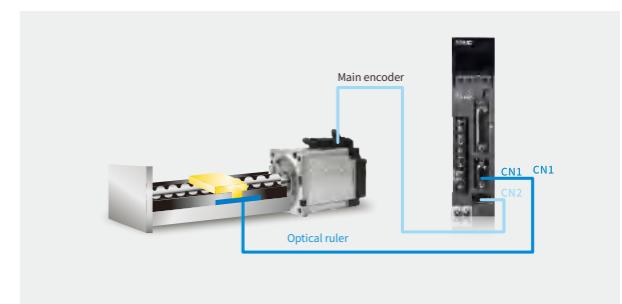
- S-type acceleration and deceleration curve can effectively overcome the mechanical vibration caused by sudden speed change, making the motion softer and more stable.



*Note: only valid in speed mode

■ Full closed-loop input DS5F series

- Reduce mechanical disturbance and determine the positioning of mechanical load terminal to ensure positioning accuracy.



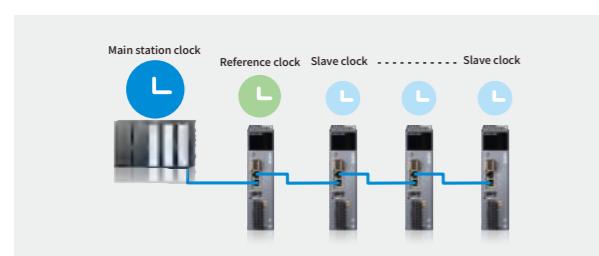
EtherCAT bus

100 megabytes full duplex Ethernet reduces the networking cost and makes the system structure more flexible



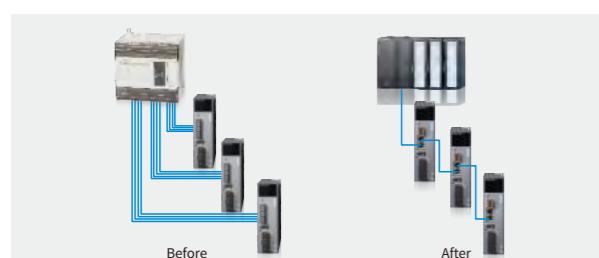
■ Synchronous clock

- Through the precise adjustment of EtherCAT distributed clock, the distance of 300 nodes 120m, 15ns synchronization error and ±20ns synchronization jitter are realized.
- Transmission rate: 2×100Mbps (full duplex)



■ Network topology to reduce cabling costs

- The standard RJ45 Industrial Ethernet fast interface is adopted to greatly reduce the labor cost and time consumption of wiring



■ High speed response

- Support 2-channel high speed touch probe function
- Response time can up to 1ms



■ EtherCAT networking debugging

- For EtherCAT networking equipment, the user can read or write all servo axes parameters at one time through the servo software, and can save the complete equipment recipe.



Typical application

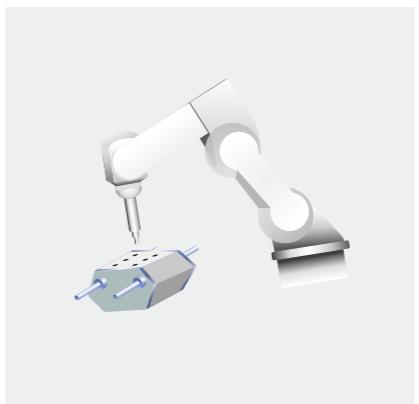
■ One to one high-speed plane mask machine

The mask machine is to manufacture various masks with certain filtering performance by hot pressing, folding and forming, ultrasonic welding, waste cutting, ear belt and nose beam welding and other processes of multi-layer non-woven fabrics. The mask equipment is not a single machine, but needs the cooperation of multiple machines to complete various different processes. The system of one to one mask machine is composed of constant tension feeding mechanism, sheet feeding mechanism and ear welding mechanism.



■ Mechanical arm

Manipulator is the most widely used automatic mechanical device in the field of robotics. It can be seen in industrial manufacturing, medical treatment, entertainment services, military, semiconductor manufacturing and space exploration. Although their shapes are different, they all have a common feature, that is, they can accept instructions and accurately locate a point in 3D (or 2D) space for operation.



■ High speed cutting machine

The high-speed cutting machine combines the ultrasonic welding technology with the traditional cutting. When the ultrasonic generator works, the ultrasonic energy is transmitted to the welding head through the ultrasonic transducer and generates violent vibration and friction with the cutter, so as to achieve the cutting effect, so that the cutting products have the advantages of more beauty, firmness, more efficient and fast production efficiency.



■ Circular die cutting machine

Circular die cutting machine is one of the most efficient cutting machines, which rotates continuously in the form of hob for cutting. Round knife cutting achieves the purpose of die cutting by extruding materials through the blade and backing roller. On the one hand, it improves the speed and accuracy of die cutting. On the other hand, it can form one-time products through multi-shaft sleeve position die cutting, which makes up for the disadvantage of traditional multiple die cutting.



■ 16 axes high speed winding machine

High speed winding machine is a device that winds linear objects to a specific workpiece. It is usually used for copper wire winding. In the past, it used to realize high-speed winding through variable-frequency motor combined with tension control system. With the increasing demand for benefits in modern industry, it can replace the original variable-frequency motor with servo to realize high-speed and high-efficiency production.



■ Three-servo packaging machine

Packaging machinery refers to the machinery that can complete the packaging process of all or part of products and commodities. The packaging process includes filling, wrapping, sealing and other main processes, as well as related before and after processes, such as cleaning, stacking and disassembly. In addition, packaging also includes measuring or stamping on the package. The use of mechanical packaging products can improve productivity, reduce labor intensity, meet the needs of large-scale production and meet the requirements of cleanliness and hygiene.



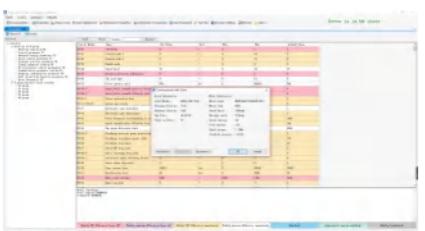
XINJE SERVO software

Help users better understand the operation of the equipment



Servo communication interface

Efficient and fast communication identification



Parameter setting interface

Intuitive and understandable parameter setting

Xinje servo software can do Modbus-RTU communication with servo driver through RS232, and can automatically read motor parameters without viewing motor code.



Curve acquisition interface

Convenient and practical curve acquisition

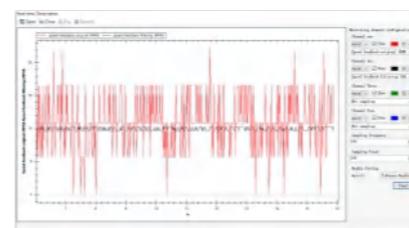
Xinje servo software has the functions of reading, modifying, saving and downloading, and is equipped with detailed parameter description. The parameter list directly indicates the effective time of parameters with different colors, which makes the distinction more eye-catching.



Real time observation interface

Real time dynamic curve observation

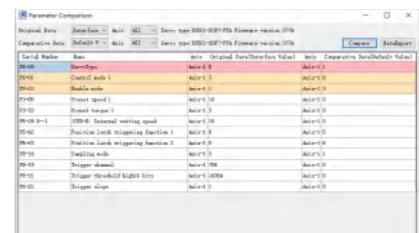
Xinje servo software can collect basic information such as speed, torque, position and bus voltage to help you understand the servo operation in real time and adjust the control scheme efficiently and timely.



Parameter comparison interface

Simple and clear parameter comparison

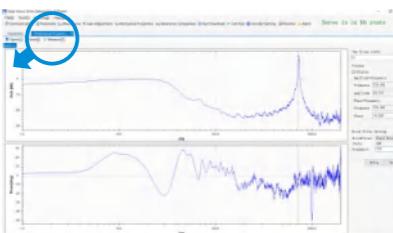
The parameter comparison function of Xinje servo software allows customers to easily compare preset values, current driver values, file values, and pairwise comparison of the current upper computer interface.



Mechanical property measurement interface

Precise resonance recognition

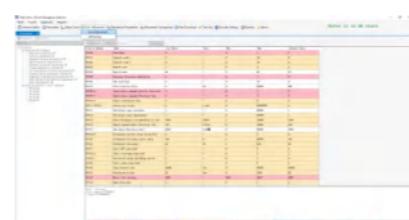
Xinje software has the function of mechanical characteristic measurement, which can automatically measure the resonance frequency according to the operation of mechanical load. It is equipped with five notch filters to ensure the stable and reliable operation of the equipment and sweep away the load vibration.



Gain adjustment interface

Fast adjustment

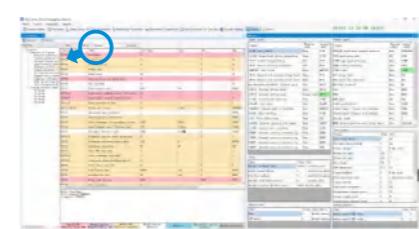
The fast adjustment / self-tuning mode can identify the inertia. The user can configure the appropriate mode, method, load type, foundation and other parameters according to the equipment operation status for the upper computer to set the best gain parameters, or adjust the rigidity level according to the equipment operation status.



Monitor interface

Rich and comprehensive real-time monitoring

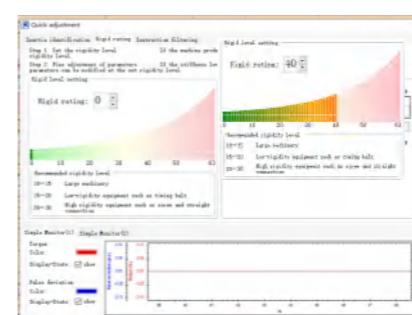
Xinje servo software has real-time status, alarm monitor and servo operation status, which are all under your control.



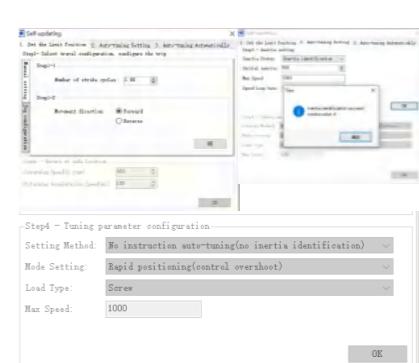
Tool interface

Motor selection tool

Xinje servo software has its own motor selection tool, which automatically matches the best motor model through the selection of equipment components and the establishment of motion model.



Self-turning interface



Electronic gear ratio conversion

Xinje servo software can accurately calculate the number of pulses per revolution and electronic gear ratio of screw, disc and pulley mechanical structures according to the mechanical specifications.



Naming rule

| MS6 motor naming rule

MS6S - 60 C S 30 B Z 1 - 2 0P4

① Inertia type	② Base number	③ Encoder construction	④ Encoder specification	⑤ Rated speed	⑩ Rated power
Sign	Inertia	Sign	Base number	Sign	Type
MS6S	Low inertia motor	40	Base 40	S	Single turn 17-bit
MS6G	Medium inertia motor	60	Base 60	M	Multi-turn 17-bit
MS6H	High inertia motor	80	Base 80	L	Multi-turn 23-bit
		100	Base 100	15	1500
		130	Base 130	20	2000
		180	Base 180	25	2500
				30	3000
⑥ Motor shaft specification					
Sign	Shaft specification	Sign	Power-off brake	Sign	Motor connector type
A	With key, no oil seal, with threaded hole	Z	With brake	1	AMP plug
B	With key, with oil seal, with threaded hole	vacant	Without brake	2	Aviation plug
C	No key, no oil seal, with threaded hole			3	Connector
D	No key, with oil seal, with threaded hole				
E	Special shaft specification (length, shaft diameter, etc.)				

*Note: the description provided is only an example. Refer to the detailed parameters of the motor for the specific model. Our company provides combined models of CS, CM and TL.

| MS5 motor naming rule

MS5G - 130 ST E - C S 11515 B Z - 2 1P8 - S01

① Inertia type	② Base number	③ Name	④ Motor structure	⑤ Encoder construction	⑥ Encoder specification
Sign	Inertia	Sign	Base number	Sign	Type
MS5S	Low inertia motor	110	Base 110	ST	Sine wave drive motor
MS5G	Medium inertia motor	130	Base 130	vacant	No oil seal
		220	Base 220	E	With oil seal
⑧ Motor construction					
Sign	Shaft key				
	B	With key			
⑦ Motor specification					
Sign	Rated torque(Nm)	Rated speed(rpm)	Sign	Power-off brake	Sign
04830	0.48	3000	Vacant	Without brake	2
11515	11.5	1500	Z	With brake	4
⑨ Power-off brake					
Sign	Connector type		Sign	Power supply voltage	Sign
			1P8	220V	1P8
			2P3	380V	1P5
⑩ Power supply voltage					
Sign	Rated power		Sign	Rated power	Sign
			22P0	22	1P0
⑪ Rated power					
Sign	Rated power(kW)				
⑫ Design number					
Sign	Meaning				
	S	Standard			
	01	Design number			

*Note: the description provided is only an example. Refer to the detailed parameters of the motor for the specific model. Our company provides combined models of CS, CM, TL and T.

| DS5 servo drive naming rule

DS 5□ - □ P□ - PTA-H

① Name	② Type	③ Voltage specification	④ Drive power	⑤ Encoder specification
DS	Servo drive	Sign	Product series	Sign
		DS	EtherCATbus type	2
			X-NETbus type	4
			Full function type	5F
			Standard type	5K
			Pulse type	5L
			Small size bus type	5C1
			Small size pulse type	5L1
			Small size standard type	5K1
			Small size CANopen type	5N1
			Small size pulse improved type	5L2
⑥ Product type				
			Sign	Product type
			T	Communication type encoder
④ Drive power				
			Sign	Rated output power(kW)
			OP1	0.1
			OP2	0.2
			OP4	0.4
			OP7	0.75
			1P0	1.0
			1P5	1.5
			2P3	2.3
			2P6	2.6
			3P0	3.0
			4P5	4.5
			5P5	5.5
			7P5	7.5
			32P0	32
			37P0	37
			11P0	11
			15P0	15
			45P0	45
			22P0	22
			55P0	55

| Motor and drive specifications

MS6/MS5 motor

Item	100W	200W	400W	750W	850W	1.0kW	1.3kW	1.5kW	1.8kW	2.3kW	2.4kW	2.6kW	3.0kW	4.4kW	5.5kW	7.5kW	22kW	30kW	37kW	45kW	55kW
Low inertia MS6S			60	80		80		100													
Medium inertia MS6G					130		130	130													
High inertia MS6H	40	60	60	80	130	80	130	130	130												
Low inertia MS6S						110		110	110												
Medium inertia MS6G							130		130	130	130										220

*Note: 40/60/80/110/130/220/265 indicates the motor flange. Provide models with voltage grade of 220V. Provide models with voltage grade of 380V. Provide models with voltage grade of 220V/380V. The motor marked with * is still under development. Please look forward to it.

DS5 drive specification

Function	Control mode				Control mode				RS232	RS485	Si input	So output
	Position control	Speed control	Torque control	Bus control	Pulse	Line driver	Analog input	External displacement sensor				
Pulse type DSSL series	●	●	●		●						●	●
EtherCAT type DSSC series	●	●	●	●	●	●					●	●
Xnet bus type DSSE series	●	●	●	●	●	●					●	●
Full function type DSSF series	●	●	●		●	●	●	●			●	●
Standard type DSSK series	●	●	●		●						●	●
Pulse type DSSL1 series	●	●	●	●	●						●	●
EtherCAT type DSSC1 series	●	●	●	●	●						●	●
Standard type DSSK1 series	●	●	●	●	●		●				●	●
CANopen type DSSN1 series	●	●	●	●	●						●	●
Profinet type DSSP series	●	●	●	●	●						●	●

Drive and motor model list

| MS6 series motor model list

Power [kW]	Motor model	Flange[mm]	Rated speed[RPM]	Rated torque [Nm]	Inertia type	Encoder bits[bit]
0.1	MS6H-40CS/CM/TL30B(Z)1/3-20P1	40	3000	0.32	High inertia	17/23
0.2	MS6H-60CS/CM/TL30B(Z)1/3-20P2	60	3000	0.64	High inertia	17/23
0.4	MS6S-60CS/CM/TL30B(Z)1/2/3-20P4	60	3000	1.27	Low inertia	17/23
	MS6H-60CS/CM/TL30B(Z)1/2/3-20P4		3000	1.27	High inertia	17/23
0.75	MS6S-80CS/CM/TL30B(Z)1/2/3-20P7	80	3000	2.39	Low inertia	17/23
	MS6H-80CS/CM/TL30B(Z)1/2/3-20P7		3000	2.39	High inertia	17/23
	MS6S-80CS/CM/20B(Z)1/2-20P7		2000	3.50	High inertia	17/23
	MS6H-80CS/CM/20B(Z)1/2-20P7		2000	3.50	High inertia	17/23
0.85	MS6H-130CS/CM/TL15B(Z)2-20P8	130	1500	5.41	High inertia	17/23
	MS6H-130CS/CM/TL15B(Z)2-40P8		1500	5.41	High inertia	17/23
1	MS6S-80CS/CM/TL30B(Z)3-21P0	80	3000	3.18	Low inertia	17/23
	MS6H-80CS/CM/TL30B(Z)3-21P0		3000	3.18	High inertia	17/23
	MS6G-130CS/CM/TL25B(Z)2-41P0*	130	2500	4.0	Medium inertia	17/23
1.3	MS6H-130CS/CM/TL15B(Z)2-41P3	130	1500	8.30	High inertia	17/23
1.5	MS6S-100CS/CM/TL30B(Z)2-21P5	100	3000	4.8	Low inertia	17/23
	MS6H-130CS/CM/TL20B(Z)2-21P5		2000	7.16	High inertia	17/23
	MS6G-130CS/CM/TL20B(Z)2-41P5*		2000	7.16	Medium inertia	17/23
	MS6G-130CS/CM/TL15B(Z)2-41P5*		1500	10.0	Medium inertia	17/23
1.8	MS6H-130CS/CM/TL15B(Z)2-21P8	130	1500	11.46	High inertia	17/23
	MS6H-130CS/CM/TL15B(Z)2-41P8		1500	11.46	High inertia	17/23
2.3	MS6H-130CS/CM/TL15B(Z)2-22P3	130	1500	14.64	High inertia	17/23
	MS6H-130CS/CM/TL15B(Z)2-42P3		1500	14.64	High inertia	17/23
3.0	MS6H-180CS/CM15B(Z)2-43P0		1500	19.0	High inertia	17/23
4.4	MS6H-180CS/CM/TL15B(Z)2-44P4		1500	28.0	High inertia	17/23
5.5	MS6H-180CS/CM/TL15B(E)Z2-45P5		1500	35.0	High inertia	17/23
7.5	MS6H-180CS/CM/TL15B(E)Z2-47P5		1500	47.8	High inertia	17/23
30	MS6H-265TL15B2-430P0*	265	1500	191.0	High inertia	23
37	MS6H-265TL15B2-437P0*	265	1500	236.0	High inertia	23
45	MS6H-265TL15B2-445P0*	265	1500	286.0	High inertia	23
55	MS6H-265TL15B2-455P0*	265	1500	350.0	High inertia	23

*Note: 1. B(Z) indicates brake model can be selected, non-brake model code is B, brake model code is BZ.
 2. Please select engineering aviation plug for motors below 60/80 flange.
 3. MS6 series below 80 flange models only S01 can support optical encoder.
 4. The servo driver marked with * is still under development. Please look forward to it.

| MS5 series motor model list

Power [kW]	Motor model	Flange[mm]	Rated speed[RPM]	Rated torque [Nm]	Inertia type	Encoder bits[bit]
0.85	MS5G-130STE-CS/CM05415B-20P8-S01		1500	5.4	Medium inertia	17
	MS5G-130STE-CS/CM05415BZ-20P8-S01		1500	5.4	Medium inertia	17
	MS5G-130STE-TL05415B-20P8-S01		1500	5.4	Medium inertia	23
	MS5G-130STE-TL05415BZ-20P8-S01		1500	5.4	Medium inertia	23
1.0	MS5S-110STE-CS/CM03230B□-21P0-S01		3000	3.18	Low inertia	17
	MS5S-110STE-TL03230B□-21P0-S01		3000	3.18	Low inertia	23
1.5	MS-110STE-T05030B□-21P5	110	3000	5	/	17
	MS5S-110STE-CS/CM04830B□-21P5-S01		3000	4.77	Low inertia	17
	MS5S-110STE-TL04830B□-21P5-S01		3000	4.77	Low inertia	23
	MS5G-130STE-CS/CM06025B□-21P5-S01		2500	6	Medium inertia	17
	MS5G-130STE-CS/CM/T07220B□-21P5-S01		2000	7.2	Medium inertia	17/23
	MS5G-130STE-CS/CM/T07220B□-41P5-S01		2000	7.2	Medium inertia	17/23
	MS5G-130STE-CS/CM/10015B□-21P5-S01		1500	10	Medium inertia	17
1.8	MS5G-130STE-CS/CM11515B□-21P8-S01	130	1500	11.5	Medium inertia	17
	MS5G-130STE-TL11515B□-21P8-S01		1500	11.5	Medium inertia	23
	MS5G-130STE-CS/CM11515B□-41P8-S01		1500	11.5	Medium inertia	17
	MS5G-130STE-TL11515B□-41P8-S01		1500	11.5	Medium inertia	23
	MS5S-110STE-TL06030B□-21P8-S01	110	3000	6	Low inertia	23
	MS5S-110STE-CS/CM06030B□-21P8-S01		3000	6	Low inertia	17
2.3	MS5G-130STE-CS/CM14615B□-22P3-S01		1500	14.6	Medium inertia	17
	MS5G-130STE-TL14615B□-22P3-S01		1500	14.6	Medium inertia	23
	MS5G-130STE-CS/CM14615B□-42P3-S01		1500	14.6	Medium inertia	17
2.4	MS5G-130STE-CS/CM/T07730B□-22P4-S01	130	3000	7.7	Medium inertia	17/23
2.6	MS5G-130STE-CS/CM/TL10025B□-22P6-S01		2500	10	Medium inertia	17/23
3.0	MS-130ST-TL10030B□-43P0		3000	10	/	23
11	MS-220STE-TL70015B-41P0-XJ	220	1500	70	/	23
15	MS-220STE-TL96015B-41P0-XJ		1500	96	/	23

*Note: 1. B□ indicates brake model can be selected, brake model code is BZ, non-brake model code is B.
 2. CS/CM indicates single turn magnetic encoder CS or multi-turn magnetic encoder CM can be selected.
 3. Flange 110 and up code S01 motors are aviation plug.
 4. For other detailed motor characteristic parameters, please refer to the electrical parameters

| DS5 series drive model list

Series Power[kW]	DS5E Series X-NETbus type	DS5C Series EtherCATbus type	DS5F Series function type	DS5K Series standard type	DS5L Series pulse type	DS5P Series PROFINET Profinet bus type
0.1	DS5E-20P1-PTA	/	DS5F-20P1-PTA	DS5K-20P1-PTA	/	DS5P-20P1-PTA
0.2	DS5E-20P2-PTA	/	DS5F-20P2-PTA	DS5K-20P2-PTA	/	DS5P-20P2-PTA
0.4	DS5E-20P4-PTA	/	DS5F-20P4-PTA	DS5K-20P4-PTA	/	DS5P-20P4-PTA
0.75	DS5E-20P7-PTA	/	DS5F-20P7-PTA	DS5K-20P7-PTA	/	DS5P-20P7-PTA
1.0	DS5E-21P0-PTA	DSSC-21P0-PTA	DS5F-21P0-PTA	DS5K-21P0-PTA	DSSL-21P0-PTA	/
1.5	DS5E-21P5-PTA	DSSC-21P5-PTA	DS5F-21P5-PTA	DS5K-21P5-PTA	DSSL-21P5-PTA	/
2.3	DS5E-22P3-PTA	DSSC-22P3-PTA	DS5F-22P3-PTA	DS5K-22P3-PTA	DSSL-22P3-PTA	/
2.6	DS5E-22P6-PTA	/	DS5F-22P6-PTA	DS5K-22P6-PTA	/	/
1	DSSE-41P0-PTA	DSSC-41P0-PTA	DS5F-41P0-PTA	DS5K-41P0-PTA	/	/
1.5	DSSE-41P5-PTA	/	DS5F-41P5-PTA	DS5K-41P5-PTA	/	/
3	DSSE-43P0-PTA-H	DSSC-43P0-PTA-H	DS5F-43P0-PTA-H	DS5K-43P0-PTA	/	/
5.5	DSSE-45P5-PTA-H	DSSC-45P5-PTA-H	DS5F-45P5-PTA-H	/	/	/
7.5	DSSE-47P5-PTA-H	DSSC-47P5-PTA-H	DS5F-47P5-PTA-H	/	/	/
11	DSSE-411P0-PTA	DSSC-411P0-PTA	/	/	/	/
15	DSSE-415P0-PTA	DSSC-415P0-PTA	/	/	/	/
22	DSSE-422P0-PTA	DSSC-422P0-PTA	/	/	/	/
32	/	DSSC-432P0-PTA	/	/	/	/
37	/	/	/	/	/	/
45	/	/	/	/	/	/
55	/	/	/	/	/	/

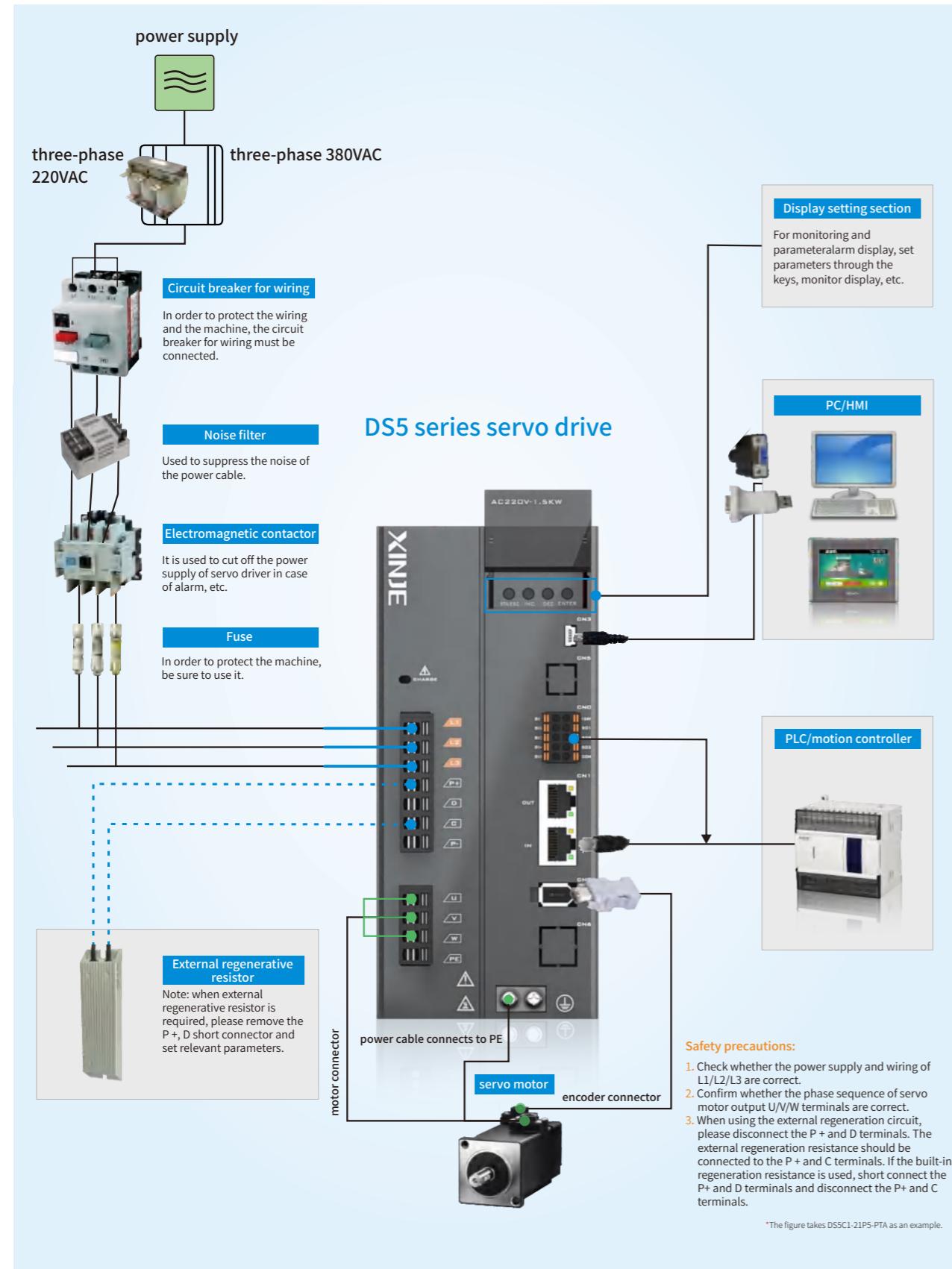
*Note : the servo driver marked with * is still under development. Please look forward to it.

Series Power[kW]	DS5C1 Series small size bus type	DS5N1 Series small size bus type	DS5K1 Series small size standard type	DS5L1 Series small size bus type	DS5L2 Series small size pulse improved type

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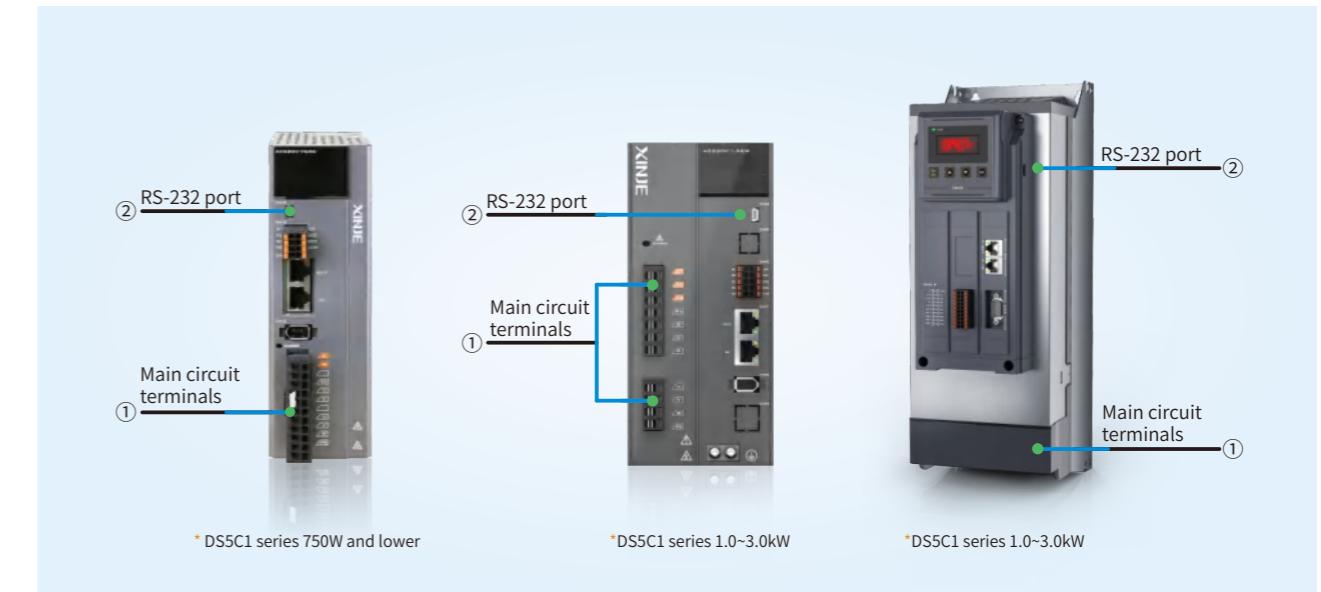
Peripheral connection

| DS5 series



Terminal definition

| DS5C1 series



PLC	HMI	Integrated controller	Industrial informatization	Servo system
Frequency inverter	Stepping system			

Terminal definition

| DS5C1 series



③ CN0 port

DS5C1 series 750W and lower

Pin	Name
SI1	High speed input terminal 1
SI2	High speed input terminal 2
SI3	High speed input terminal 3
+24V	Input terminal +24V
SO1	Output terminal 1
SO2	Output terminal 2
SO3	Output terminal 3
COM	Output terminal ground

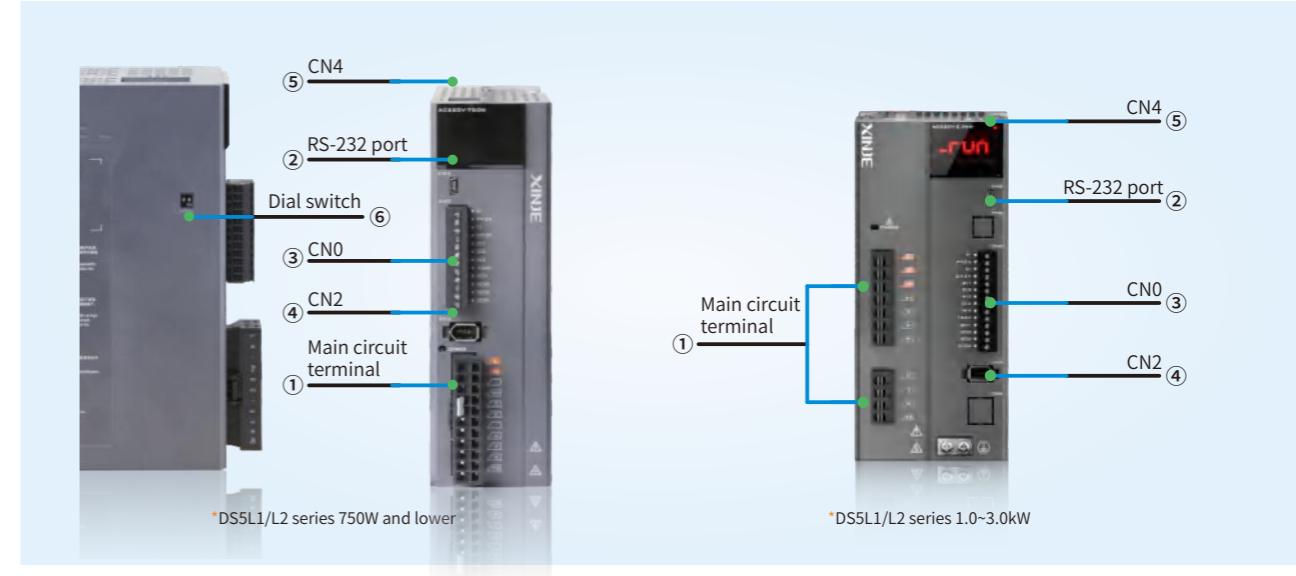
DS5C1 series 1~3kW

Pin	Explanation	Name	Explanation
SI1	Input terminal 1	D+24V	Open collector input
SI2	Input terminal 2	SO1	Output terminal 1
SI3	Input terminal 3	SO2	Output terminal 2
SI4	Input terminal 4 (high speed)	SO3	Output terminal 3
SI5	Input terminal 5 (high speed)	COM	Output terminal ground

DS5C1 series 11kW and up

Name	Explanation	Name	Explanation
P-	Pulse -	+24V	Input common terminal
P+5	Pulse +5V	SI1	Input terminal
P+24	Pulse +24V	SI2	Input terminal
D-	Direction -	SI3	Input terminal
D+5	Direction +5V	SI4	Input terminal (high speed)
D+24	Direction +24V	SI5	Input terminal (high speed)
SO1+	Output terminal +	SO1-	Output terminal -
SO2+	Output terminal +	SO2-	Output terminal -
SO3+	Output terminal +	SO3-	Output terminal -
SO4+	Output terminal +	SO4-	Output terminal -

| DS5L1/L2 series



① Main circuit terminal definition

DS5L1/L2-20P1/20P2/20P4-PTA

Terminal	Function	Explanation
L/N	Main circuit power supply input terminal	Single phase AC200~240V, 50/60Hz
●	Vacant terminal	/
P+, C	Use external regenerative resistor	Connect the regeneration resistor to P+ and C terminal, P0-25=power value, P0-26=resistor value
U, V, W, PE	Motor connection terminal	Connect to the motor

DS5L1/L2-20P7-PTA

Terminal	Function	Explanation
L/N	Main circuit power supply input terminal	Single phase AC200~240V, 50/60Hz
●	Vacant terminal	/
P+, D, C	Use built-in regenerative resistor	Short connect P+ and D terminal, disconnect P+ and C terminal
Use external regenerative resistor	Connect the regeneration resistor to P+ and C terminal, disconnect P+ and D, set P0-25 = power value, P0-26 = resistor value	Connect the regeneration resistor to P+ and C terminal, disconnect P+ and D, P0-25 = power value, P0-26 = resistor value
U, V, W	Motor connection terminal	Connect to the motor
⊕	Grounding terminal	Connect with the motor grounding terminal for grounding treatment

② RS-232 port

Pin	Name	Explanation
1	TXD	RS232 send
2	RXD	RS232 receive
3	GND	RS232 signal ground

④ CN2 port

Pin	Name	Pin	Name
1	5V	4	/
2	GND	5	485-A
3	/	6	485-B

⑤ CN4 - RS485 port

Pin	Name	Switch1	Switch2	State
4	485-A	ON	ON	Pulse input differential 5V
5	485-B	OFF	OFF	Pulse input collector 24V
6	485-GND			
Others	Reserved			

⑥ Dial switch

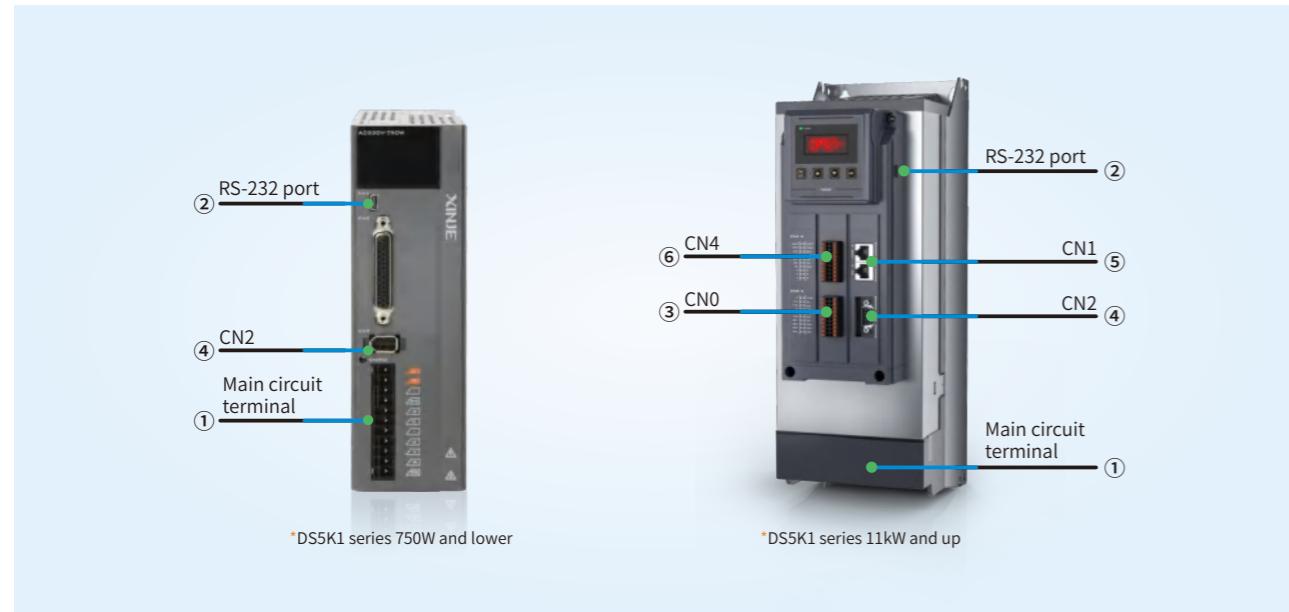
*Note: The directions of the two dial switches must be consistent. If they are not consistent, the pulse terminal of the driver will be burned once the power is supplied.

DS5L1 above 750W

Pin	Name
P-	Pulse input PUL-
P+24	Open Collector input
D-	Direction input DIR-
D+24	Open collector input
D+24	Direction input external power supply
SI1	Input terminal 1
SI2	Input terminal 2
SI3	Input terminal 3
SI4	Input terminal 4
SI5	Input terminal 5
+24V	Input terminal +24V
SO1	Output terminal 1
SO2	Output terminal 2
SO3	Output terminal 3
COM	Output terminal ground

Terminal definition

| DS5K1 series



① series 11kW and up

DS5K1-20P1/20P2/20P4-PTA

Terminal	Function	Explanation
L/N	Main circuit power supply input terminal	Single phase AC200~240V, 50/60Hz
●	Vacant terminal	/
P+, C	Use external regenerative resistor	Connect the regeneration resistor to P+ and C terminal, P0-25=power value, P0-26=resistor value
U,V,W,PE	Motor connection terminal	Connect to the motor

DS5K1-20P7-PTA

Terminal	Function	Explanation
L/N	Main circuit power supply input terminal	Single phase AC200~240V, 50/60Hz
●	Vacant terminal	/
P+, D, C	Use built-in regenerative resistor	Short connect P+ and D terminal, disconnect P+ and C terminal
P+, D, C	Use external regenerative resistor	Connect the regenerative resistor to P+ and C terminal, and disconnect P+ and D, set P0-25 = power value, P0-26 = resistance value
●	Vacant terminal	/
U,V,W,PE	Motor connection terminal	Connect with the motor

② RS-232 port

⑤ CN1-RS485 port

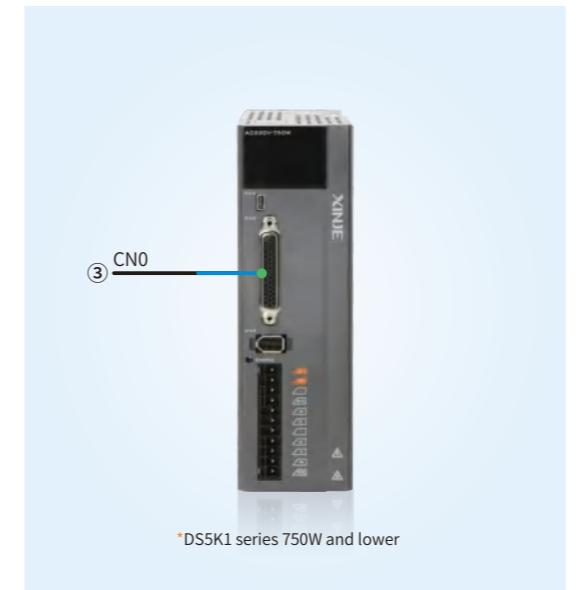
Pin	Name	Explanation
1	TxD	Rs232 send
2	RxD	Rs232 receive
3	GND	RS232 signal ground

④ CN2 port

DS5K1 series 750W and lower

Pin	Name	Number	Definition
1	5V	1	PE
2	GND	2	485-A
3	/	3	485-B
4	/	4	Temperature
5	485-A	5	Temperature ground
6	485-B	6	5V
7	/	7	GND
8	/	8	GND
9	/	9	GND

| DS5K1 series

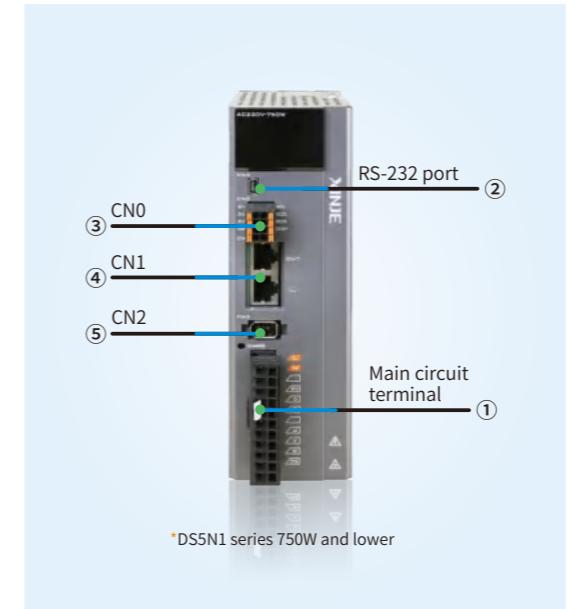


③ CN0 port

DS5K1 series 750W and lower

Number	Name	Explanation	Number	Name	Explanation
1	P-	Pulse -	23	SI4	Input terminal
2	P+5	Pulse +5V	24	SI6	Vacant
3	P+24	Pulse +24V	25	SI7	High speed SI +
4	D-	Direction -	26	NC	High speed SI -
5	D+5	Direction +5V	27	SI8+	High speed input terminal
6	D+24	Direction +24V	28	SI8-	Input common terminal
7	SO1+		29	SI5	External torque analog differential input +
8	SO2+		30	+24V	External torque analog differential input -
9	SO3+		31	T-REF+	External speed analog differential input +
10	SO4+		32	T-REF-	External speed analog differential input -
11	S05+		33	V-REF+	Encoder frequency division output OA +
12	S05-		34	V-REF-	Encoder frequency division output OA -
13	SO6+		35	OA+	Encoder frequency division output OB +
14	SO6-		36	OA-	Encoder frequency division output OB -
15	COM	Output common terminal	37	OB+	Encoder frequency division output OZ +
16	485+	Communication terminal +	38	OB-	Encoder frequency division output OZ -
17	485-	Communication terminal -	39	OZ+	Encoder frequency division output OZ +
18	GND	Analog input ground	40	OZ-	Encoder frequency division output OZ -
19	GND	Communication terminal ground	41	OZ	Encoder frequency division output OZ
20	SI1		42	GND	Frequency division output ground
21	SI2		43	NC	Input terminal
22	SI3		44	NC	Input terminal

| DS5N1 series



① Main circuit terminal definition

DS5N1 series 400W and lower

Terminal	Function	Explanation
L/N	Main circuit power supply input terminal	Single phase AC200~240V, 50/60Hz
●	Vacant terminal	/
P+, C	Use external regenerative resistor	Connect the regeneration resistor to P+ and C terminal, P0-25=power value, P0-26=resistor value
U, V, W, PE	Motor connection terminal	Connect to the motor

DS5N1 series 750W

Terminal	Function	Explanation
L/N	Main circuit power supply input terminal	Single phase AC200~240V, 50/60Hz
●	Vacant terminal	/
P+, D, C	Use built-in regenerative resistor	Short connect P+ and D terminal, disconnect P+ and C terminal
P+, D, C	Use external regenerative resistor	Connect the regenerative resistor to P+ and C terminal, and disconnect P+ and D, set P0-25 = power value, P0-26 = resistance value
●	Vacant terminal	/
U, V, W, PE	Motor connection terminal	Connect to the motor

② RS-232 port

Pin	Name	Explanation
1	TxD	RS232 send
2	RxD	RS232 receive
3	GND	RS232 signal ground

③ CN0 port

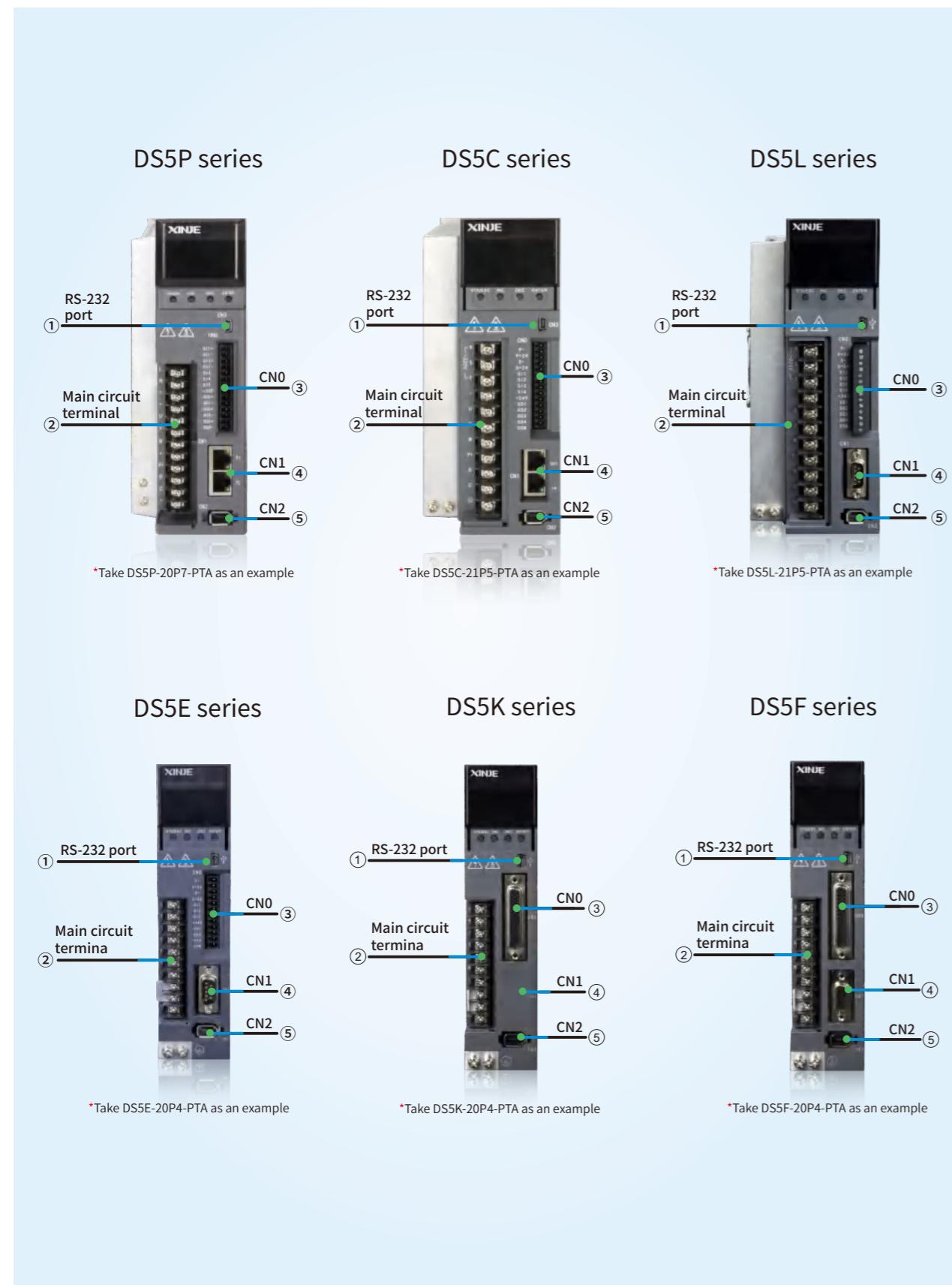
④ CN1 port

Pin	Name	Number	Name	Number
SI1	High speed input terminal 1	1	CAN_H	9
SI2	High speed input terminal 2	2	CAN_L	10
SI3	High speed input terminal 3	3	CAN_GND	11
+24V	Input terminal +24V	4	/	12
SO1	Output terminal 1	5	/	13
SO2	Output terminal 2	6	/	14
SO3	Output terminal 3	7	/	15
COM	Output terminal ground	8	/	16

⑤ CN2 port

Pin	Number
1	5V
2	GND
3	/
4	/
5	485-A
6	485-B

Terminal definition



① RS-232 port
Apply to DS5C/DS5E/DS5L/DS5K/DS5F/DS5P series

Pin	Name	Explanation
1	TXD	RS232 send
2	RXD	RS232 receive
3	GND	RS232 signal ground

② Main circuit terminal definition
Apply to DS5C/DS5E/DS5L/DS5K/DS5F/DS5P series

Terminal	Function	Explanation
L/N R/S/T	Main circuit power supply input terminal	Single/three phase AC200~240V, 50/60Hz Three phase AC380~440V, 50/60Hz
●	Vacant terminal	/
U/N W/PE	Motor connection terminal	Note: the ground wire is on the radiator, please check before powering on
P+, D, C	Use built-in regenerative resistor	Short connect P+ and D terminal, disconnect P+ and C
	Use external regenerative resistor	Connect the regenerative resistor to P+ and C terminal, disconnect P+ and D, P0-25=power value, P0-26=resistor value

DS5P series

③ CN0 port

Name	Explanation	Name	Explanation
SI1+	High speed SI+	24V	Input common terminal
SI1-	High speed SI-	SO1+	Output terminal
SI2+	High speed SI+	SO1-	Output terminal
SI2-	High speed SI-	SO2+	Output terminal
SI3	Input terminal	SO2-	Output terminal
SI4	Input terminal	SO3+	Output terminal
SI5	Input terminal	SO3-	Output terminal

④ CN1 port

Pin	Definition	Explanation
1	TX+	Explanation
2	TX-	Data send +
3	RX+	Data send -
4	-	-
5	-	-
6	RX-	Data receive -
7	-	-
8	-	-
outer covering	PE	Shield

⑤ CN2 port

Pin	Name
1	5V
2	GND
3	/
4	/
5	485-A
6	485-B

DS5C series

③ CN0 port 1.5kW and up

Name	Explanation	Name	Explanation
P-	Pulse input PUL-	SI4	Input terminal 4
P+24V	Pulse input external power supply	+24V	Input terminal +24V
D-	Direction input DIR-	SO1	Output terminal 1
D+24V	Direction input external power supply	SO2	Output terminal 2
SI1	Input terminal 1	SO3	Output terminal 3
SI2	Input terminal 2	SO4	Output terminal 4
SI3	Input terminal 3	COM	Output terminal ground

④ CN1 port

Pin	Name	Explanation	Pin	Name	Explanation
1	TX A+	TRANSMIT A+	9	TX B+	TRANSMIT B+
2	TX A-	TRANSMIT A-	10	TX B-	TRANSMIT B-
3	RX A+	RECEIVE A+	11	RX B+	RECEIVE B+
4	/	/	12	/	/
5	/	/	13	/	/
6	RX A-	RECEIVE A-	14	RX B-	RECEIVE B-
7	/	/	15	/	/
8	/	/	16	/	/

⑤ CN2 port

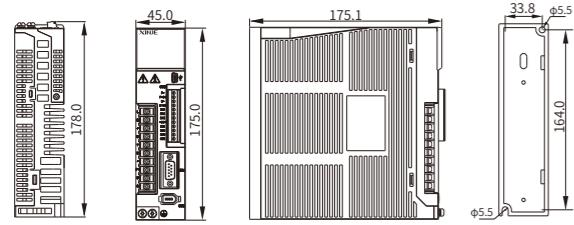
Pin	Name
1	5V
2	GND
3	/
4	/
5	485-A
6	485-B

Drive specification

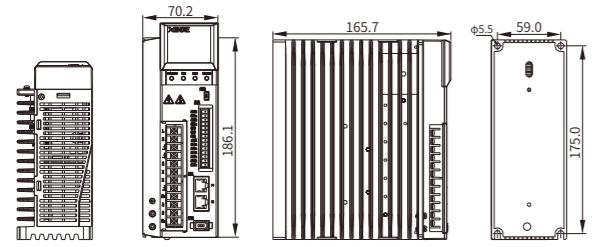
Specification	Model	Pulse type		EtherCAT bus type		CANopen bus type		X-NET bus type		Full function type		Standard type		PROFINET bus type										
		DS5L1 series	DS5L series	DS5C1 series	DS5C series	DS5N1 series	DS5E series	DSSF series	DS5K1 series	DS5K series	DS5P series													
Basic specification	Power range (kW)	0.1~3.0	0.1~2.6	0.1~32	0.1~32	0.1~0.75	0.1~22	0.1~7.5	0.75~15	0.1~3.0	0.1~0.75													
	Input power supply	Single/three phase AC200~240V, 50/60Hz. Three-phase AC380V~440V, 50/60Hz																						
	Encoder feedback	17-bit/23-bit communication encoder																						
	Control mode	Three-phase full wave rectifier IIPM, PWM control, sine wave current drive mode																						
	Ambient temperature	Operation: -10°C~40°C (no condensation)/storage: -20°C~60°C (no condensation)																						
	Ambient humidity	Operation/storage: 90%RH and below (no condensation)																						
	Vibration/shock resistance	4.9m/s ² / 19.6m/s ²																						
	Electronic CAM	None																						
	Protection function	Overvoltage, undervoltage, overheating, overcurrent, overload, overspeed, analog input abnormality, excessive position deviation, output short circuit, encoder abnormality, regeneration abnormality protection, overtravel protection, oscillation protection, phase loss protection, etc																						
	Dynamic brake	Apply to above 750W	None	Apply to 1~3kW		None		None	Apply to 750W	None														
I/O signal	Function	RS232: standard ModbusRTU protocol	RS232: standard ModbusRTU protocol	RS232: standard ModbusRTU protocol EtherCAT: support EtherCAT bus communication (max 32 axes)	Rs232: standard ModbusRTU protocol CANopen: support CANopen bus communication (max 64 axes)	RS232: standard ModbusRTU protocol RS485: standard ModbusRTU protocol Support X-NET bus communication (max 20 axes)	RS232: standard ModbusRTU protocol RS485: standard ModbusRTU protocol	RS232: standard ModbusRTU protocol PROFINET: support PROFINET bus communication (max 64 axes)																
	Communication function																							
	Brake resistor	Built-in brake resistor, external brake resistor can be connected																						
	Display and operate	5-bit LED indicator light, power indicator light, 4 buttons																						
	Output form	No					ABZ differential feedback output			No														
	Frequency division function	No					Yes			No														
	Collector Z phase output	Yes																						
	Analog input	No					2 channels input			No														
	Digital input (SI)	3 channels (750W and below)	3 channels (750W and below)	3 channels (750W and below)	3 channels (750W and below)	3 channels (750W and below)	3 channels (750W and below)	3 channels (750W and below)	10 channels	8 channels (below 11kW)	5 channels (above 11kW)													
		5 channels (above 750W)	4 channels (above 750W)	4 channels (above 750W)	5 channels (above 750W)	4 channels (above 750W)	4 channels (above 750W)	4 channels (above 750W)																
Position control mode	Servo enable, alarm clear, no forward rotation, no reverse rotation, torque limit selection, internal speed selection, gear ratio switching, mode switching, pulse input prohibition, zero speed locking, position deviation clear, internal position step change signal, internal control mode direction switching																							
	Digital output (SO)	3 channels	3 channels (750W and below)	3 channels	3 channels (below 11kW)	3 channels	3 channels (750W and below)	8 channels (below 11kW)	6 channels (below 11kW)	4 channels (above 11kW)	3 channels													
		4 channels (above 750W)	4 channels (above 750W)		4 channels (above 11kW)		4 channels (above 750W)		4 channels (above 11kW)															
		Positioning completion, servo ready, alarm output, torque limit output, same speed detection, rotation detection, speed arrival, brake release output and warning output																						
	Max input pulse frequency	Collector open: 200kpps (Optocoupler)					Differential input: 500kpps [Optocoupler]			Not support														
	Pulse command mode	3.3V~5V/18~24V pulse+direction, AB phase pulse, CW/CCW signal (5C cannot support CW/CCW, 5C1/5N1 not support external pulse)	Long line reception: 2Mpps [only DS5F series support]					3.3V~5V/18~24V pulse+direction, AB phase pulse, CW/CCW signal			Not support													
	Control mode	External pulse/built-in position	Built-in position/EtherCAT motion bus	External pulse/built-in position/EtherCAT motion bus	Built-in position/CANopen motion bus	External pulse/built-in position/X-NET motion bus	External pulse/built-in position			PROFINET motion bus														
	Feedforward compensation	0~100% (set the resolution to 1%)																						
	Positioning complete width	1~65535 command unit (set the resolution to 1 command unit)																						
Speed control mode	Electronic gear ratio	1/10000≤B/A≤10000																						
	Control mode	Analog speed control (only DS5F support), internal three segments of speed, external speed mode																						
	Command smoothing mode	Low pass filter, smooth filter																						
	Analog input	No	-10V~+10V (resolution 12-bit)					No																
	Input impedance	No	72KΩ					No																
	Torque limit	Internal parameter					Internal parameter/external analog			Internal parameter														
	Speed change rate	External load rated change 0~100%: below ±0.01% (at rated speed)																						
		Rated voltage ±10%: 0.01% (at rated speed)																						
		Ambient temperature 20±25°C: below ±0.01% (at rated speed)																						
		Analog speed control (only DS5F support), internal torque																						
Torque control mode	Control mode	Analog speed control (only DS5F support), internal torque																						
	Analog input	No	-10V~+10V (resolution 12-bit)					No																
	Voltage range	No	72KΩ					No																
Bus control mode	Speed limit	Internal parameter																						

Drive dimension diagram (Unit: mm)

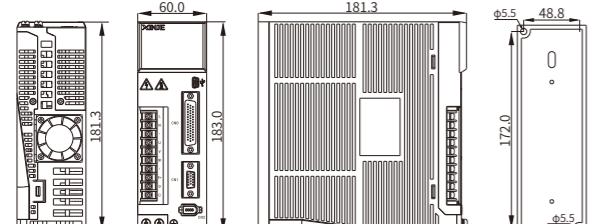
DS5E-20P1/20P2/20P4-PTA DS5F-20P1/20P2/20P4-PTA
DS5K-20P1/20P2/20P4-PTA



DS5P-20P4/20P7-PTA



DS5E-20P7-PTA DS5F-20P7-PTA DS5K-20P7-PTA



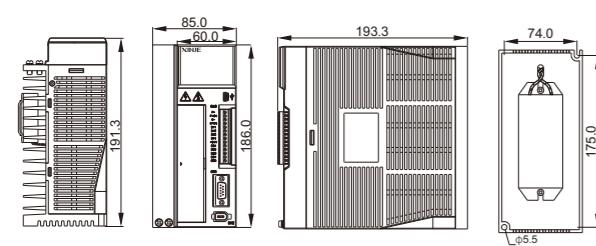
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DS5L-21P0/21P5/22P3-PTA

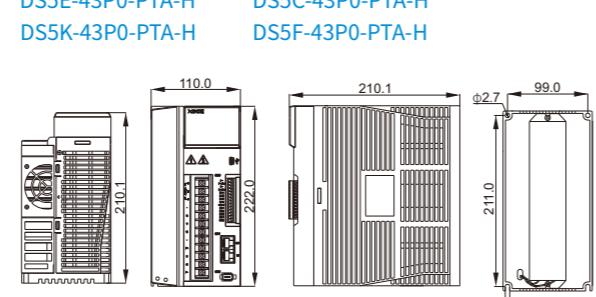
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DS5F-21P0/21P5/22P3/22P6-PTA

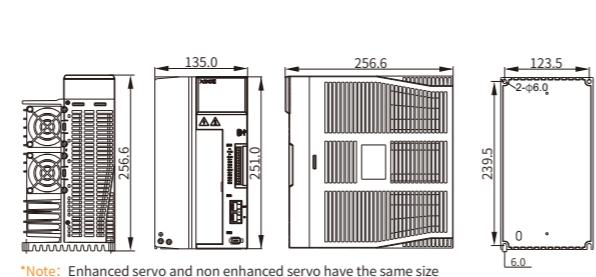
DS5K-21P0/21P5/22P3/22P6/41P5-PTA



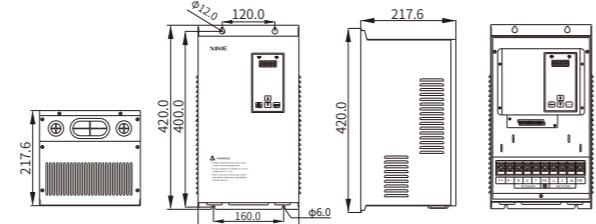
DS5E-43P0-PTA-H DS5C-43P0-PTA-H
DS5K-43P0-PTA-H DS5F-43P0-PTA-H



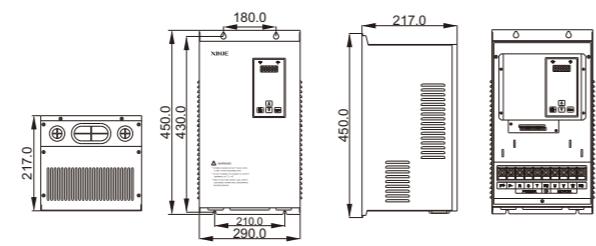
DS5E-45P5/47P5-PTA-H DS5C-45P5/47P5-PTA-H
DS5F-45P5/47P5-PTA-H



DS5E-411P0/415P0-PTA DS5C-411P0/415P0-PTA



DS5C-422P0/432P0-PTA



Ms series motor parameters

I MS6 series

Motor model	Voltage level		MS6H-40		MS6H-60		MS6S-60		MS6H-60		AC 220V		MS6S-80		MS6H-80		MS6S-80		MS6H-80		
	CS/CM30BZ/1L2	CS/CM/TL30B/Z13	CS/CM30B/Z1L2	CS/CM/TL30B/Z13	CS/CM30B/Z1L2	CS/CM/TL30B/Z13	CS/CM30B/Z1L2	CS/CM/TL30B/Z13													
20P1			20P2		20P4		20P4		20P4		20P7		20P7		20P7		20P7		21P0		
Rated power (kW)	0.1		0.2		0.4		0.4		0.4		0.75		0.75		0.75		0.75		1		
Rated speed (rpm)	3000		3000		3000		3000		3000		3000		3000		3000		3000		3000		
Max speed (rpm)	6500		6500		6500		6000		6000		5200		5200		5200		5200		4000		
Rated torque (N·m)	0.32		0.64		1.27		1.27		1.27		2.39		2.39		3.5		3.5		9.54		
Max torque (N·m)	0.96		2.24		4.45		4.45		4.45		7.17		7.17		10.5		10.5		31.8		
Rated current (mA)	850	950	1800	1900	2700	2600	2800	4000	4100	4100	1670(1691)	1550	1208(1261)	2445(2553)	1182(1196)	2391(2410)	2391(2410)	2391(2410)	2391(2410)	2391(2410)	2391(2410)
Rotor inertia ($10^{-7}\text{kg}\cdot\text{m}^2$)	86(93)	64.38(67.18)	277(295)	271(275)	273(262)	285(280)	520(590)	520	980(1030)	980	1670(1691)	1550	1208(1261)	2445(2553)	1182(1196)	2391(2410)	2391(2410)	2391(2410)	2391(2410)	2391(2410)	2391(2410)
Inertia type	High inertia		High inertia		Low inertia		High inertia		High inertia		High inertia		High inertia		High inertia		Low inertia		Low inertia		
Recommended rotor inertia ratio																	30				
Electrical constant $\tau_e(\text{ms})$	0.702		1.04		1.91		1.64		2.95		2.96		1.63		5.184		5.53		4.567		
Mechanical constant $\tau_m(\text{ms})$	1.635(1.768)		1.16(1.21)		1.74(1.86)		1.26(1.29)		0.603(0.623)		0.57(0.61)		0.929(1.054)		0.93		0.705(0.741)		0.69(0.71)		
EMF constant $K_e(\text{mV}/\text{rpm})$	38		33		24.03		31.25		44		44.25		49		43.98		56		54		
Torque constant $K_t(\text{Nm}/\text{A})$	0.376		0.34		0.36		0.34		0.47		0.47		0.45		0.598		0.58		0.598		
Pole of pairs															5						
Encoder bit	17	17/23	17	17/23	17	17/23	17	17/23	17	17/23	17	17/23	17	17/23	17	17/23	17	17/23	17	17/23	
Encoder type	magnetism	photoelectricity	magnetism	photoelectricity	magnetism	photoelectricity	magnetism	photoelectricity	magnetism	photoelectricity	magnetism	photoelectricity	magnetism	photoelectricity	magnetism	photoelectricity	magnetism	photoelectricity	magnetism	photoelectricity	
Motor insulation grade															ClassF(155°C)						
Protection level	IP65		IP67		IP66		IP67		IP66		IP67		IP66		IP66		IP67		IP66		IP67
Use environment	Ambient temperature														-15°C~+40°C (no freezing)						
	Ambient humidity														Relative humidity <90% (no condensation)						

Motor model	Voltage level		AC 220V		AC 380V		AC 220V	
	MS6S-100	MS6H-130						
21P5	20P8	20P8	40P8	40P8	41P3	41P3	21P5	21P5
Rated power (kW)	1.5	0.85	0.85	0.85	1.3	1.3	1.5	1.5
Rated speed (rpm)	3000	1500	1500	1500	1500	1500	2000	2000
Max speed (rpm)	4500	3000	3000	3000	3000	3000	3000	3000
Rated torque (N·m)	4.8	5.41	5.41	5.41	5.41	5.41	8.3	8.3
Max torque (N·m)	12	16.23	16.23	16.23	16.23	16.23	24.9	24.9
Rated current (mA)	8000	6000	6000	3500	3500	6000	6000	8000
Rotor inertia ($10^{-7}\text{kg}\cdot\text{m}^2$)	2812	13860	15340	13860	15340	13860	15340	20000
Inertia type	Low inertia	High inertia	High inertia	High inertia	High inertia	High inertia	High inertia	High inertia
Recommended rotor inertia ratio	15	10	10	10	10	10	10	10
Electrical constant $\tau_e(\text{$								

MS series motor parameters

MS6 series

Voltage level		AC 380V												
Motor model	MS6H-130 TL15BZ 42P3	MS6H-180			MS6H-180			MS6H-180			MS6H-180			
		TL15BZ 43P0	CS/CM15BZ 43P0	CS/CM15BZ 43P0	TL15BZ 44P4	CS/CM15BZ 44P4	TL15BZ 45P5	CS/CM15BZ 45P5	TL15BZ 47P5	CS/CM15BZ 47P5	TL15BZ 47P5	CS/CM15BZ 47P5	TL15BZ 47P5	
Rated power (kW)	2.3	3	3	4.4	4.4	5.5	5.5	7.5	7.5	7.5	7.5	7.5	7.5	
Rated speed (rpm)	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	
Max speed (rpm)	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	
Rated torque (N·m)	14.6	19	19	28	28	35	35	48	48	48	48	48	48	
Max torque (N·m)	36.5	51.3	51.3	84	84	87.5	87.5	120	120	120	120	120	120	
Rated current (mA)	8500	11000	11000	29700	16500	19700	19700	25000	25000	25000	25000	25000	25000	
Rotor inertia ($10^{-7}\text{kg}\cdot\text{m}^2$)	36260	51000	55490	51000	55490	73280	78040	90250	95200	132000	134690	132000	134690	
Inertia type	High inertia	High inertia	High inertia	High inertia	High inertia	High inertia	High inertia	High inertia	High inertia	High inertia	High inertia	High inertia	High inertia	
Recommended rotor inertia ratio	10	10	10	10	10	10	10	10	10	10	10	10	10	
Electrical constant $\tau_e(\text{ms})$	9.887	22.539	22.539	25.547	25.547	26.195	26.195	25.176	25.176	25.176	25.176	25.176	25.176	
Mechanical constant $\tau_m(\text{ms})$	1.285	1.251	1.361	1.251	1.361	1.023	1.09	0.957	1.01	0.957	1.01	0.907	0.925	
EMF constant K_e (mV/rpm)	155	160	160	160	160	160	160	172	172	172	172	172	172	
Torque constant K_t (Nm/A)	1.718	1.727	1.727	1.636	1.636	1.777	1.777	1.92	1.92	1.92	1.92	1.718	1.718	
Pole of pairs	5													
Encoder bit	23	17	23	17/23	17/23	17/23	17/23	17/23	17/23	17/23	17/23	17/23	17/23	
Encoder type	photoelectricity	magnetism	photoelectricity	magnetism (photoelectricity)										
Motor insulation grade	Class F (155°C)													
Protection level	IP65													
Use environment	Ambient temperature	-15°C~+40°C (no freezing)												
Ambient humidity	Ambient humidity	Relative humidity <90% (no condensation)												

MS5 series

Voltage level		AC 220V												
Motor model	MS5S-110STE CS/CM03230B 21P0-S01	MS5S-110STE			MS5G-130STE			MS5G-130STE			MS5G-130STE			
		TL03230B 21P0-S01	CS/CM04830B 21P5-S01	TL04830B 21P5-S01	CS/CM06030B 21P8-S01	TL06030B 21P8-S01	CS/CM05415B 20P8-S01	TL05415B 20P8-S01	CS/CM05415B 20P8-S01	TL05415B 20P8-S01	CS/CM06025B 21P5-S01	TL06025B 21P5-S01	CS/CM06025B 21P5-S01	
Rated power (kW)	1	1	1.5	1.5	1.8	1.8	0.85	0.85	0.85	0.85	1.5	1.5	1.5	
Rated speed (rpm)	3000	3000	2000	2000	3000	3000	1500	1500	1500	1500	2500	2500	2500	
Max speed (rpm)	6000	6000	4500	4500	4500	4500	2000	2000	2000	2000	3000	3000	3000	
Rated torque (N·m)	3.18	3.18	4.77	4.77	6	6	5.41	5.41	5.41	5.41	6	6	6	
Max torque (N·m)	7.95	7.95	9.54	9.54	12	12	15.15	15.15	15.15	15.15	15	15	15	
Rated current (mA)	7500	7500	7500	9500	7500	4200	4200	4200	4200	7500	7500	7500	7500	
Rotor inertia ($10^{-7}\text{kg}\cdot\text{m}^2$)	2869	2869	3360	3360	4170	4170	8480	9717	8480	9717	9440	9440	9440	
Inertia type	Low inertia	Low inertia	Low inertia	Low inertia	Low inertia	Medium inertia	Medium inertia	Medium inertia	Medium inertia	Medium inertia	Medium inertia	Medium inertia	Medium inertia	
Recommended rotor inertia ratio	15	15	15	15	10	10	10	10	10	10	10	10	10	
Electrical constant $\tau_e(\text{ms})$	18.363	18.363	20.606	20.606	20.863	20.863	7.79	7.79	7.79	7.79	9.368	9.368	9.368	
Mechanical constant $\tau_m(\text{ms})$	0.984	0.984	0.727	0.727	0.583	0.583	1.293	1.482	1.293	1.482	1.113	1.113	1.32	
EMF constant K_e (mV/rpm)	51	51	64	64	62	62	123	123	123	123	76	76	76	
Torque constant K_t (Nm/A)	0.424	0.424	0.636	0.636	0.632	1.286	1.286	1.286	1.286	0.8	0.8	0.8	0.8	
Pole of pairs	17	23	17	23	17	23	17	23	23	17	17	23	23	
Encoder bit	17	23	17	23	23	17	17	23	23	17	17	23	23	
Encoder type	magnetism	photoelectricity	magnetism	photoelectricity	magnetism	photoelectricity	magnetism	photoelectricity	magnetism	photoelectricity	magnetism	photoelectricity	magnetism	
Motor insulation grade	Class F (155°C)													
Protection level	IP65													
Use environment	Ambient temperature	-15°C~+40°C (no freezing)												
Ambient humidity	Ambient humidity													

Brake specification

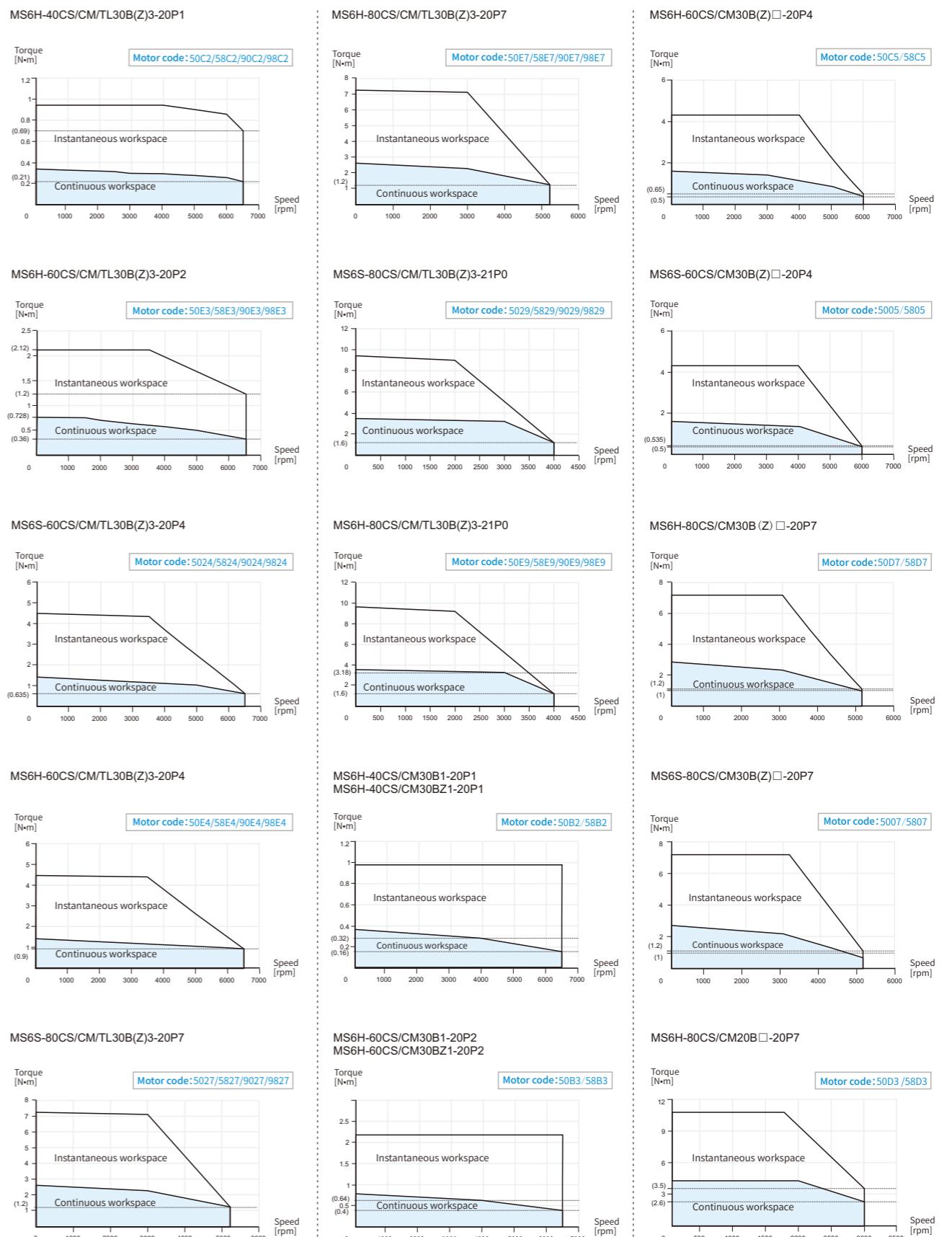
Motor	Ms series		MS5 series				MS6 series							
	220 flange	110 flange	130 flange	180 flange 19/27'	180 flange 35/48	B1/B2	B3	B1/B2	B3	B1/B2	B3	100 flange	130 flange	180 flange
Static friction torque[N·m]	≥115	≥8	≥15	≥30	≥50	≥0.32	≥0.32	≥1.3	≥1.3	≥2.5	≥3.2	≥8	≥15	≥58
Rated power[W]	55	14.4	25	31	51	6.1	6.1	7.2	7.4	8	11.5	17.6	25	30
Attraction time[ms]	<200	<80	<100	<110	<110	<35	≤50	<50	<80	≤60	<100	<100	<180	
Release time[ms]	<80	<40	<60	<80	<80	<20	≤40	<20	≤30	<40	≤30	<50	<60	<80
Excitation currentDC[A]	2.3	0.6	1	1.3	2.1	0.25	0.32	0.3	0.308	0.233	0.48	0.73	1	1.25
Attraction voltageDC[V]	<19.2	<16.8	<16.8	<18	<19	<16.8	≤16.8	<18	<16.8	<16.8	<16.8	<16.8	<16.8	<16.8
Release voltageDC[V]	>1.5	>1.5	>1.5	>4	>5	>1.5	≥1	>1.5	>1	>1	>1	>1	>1.5	>1.5
Excitation voltageDC[V]						DC24±10%								

*Note: 04/05 below flange indicates the motor torque.

MS motor axial and radial force specification

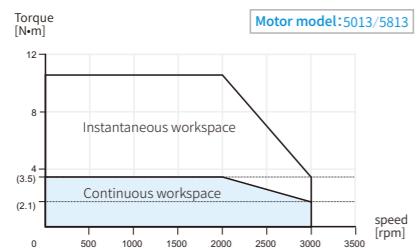
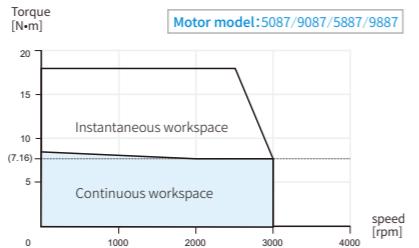
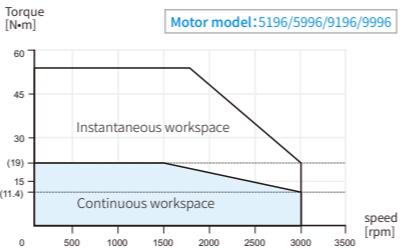
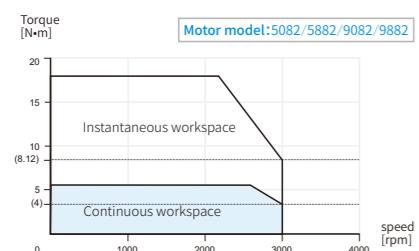
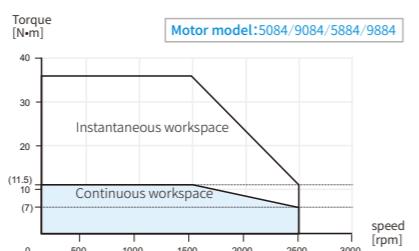
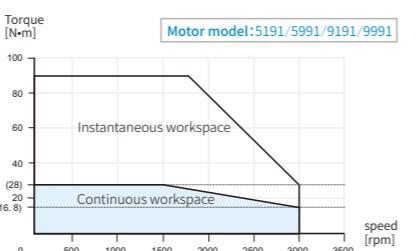
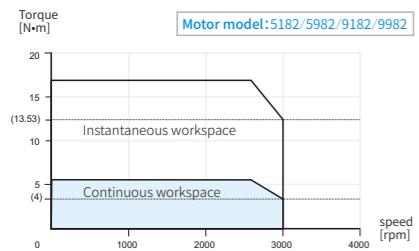
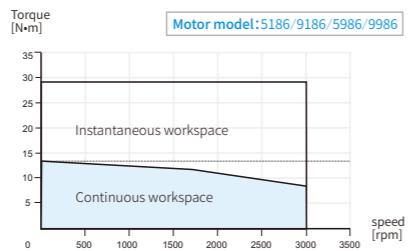
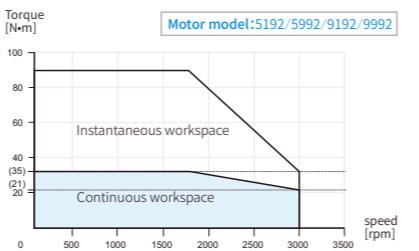
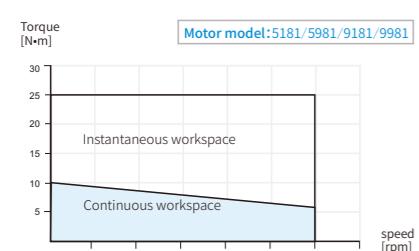
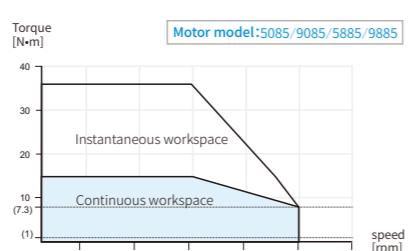
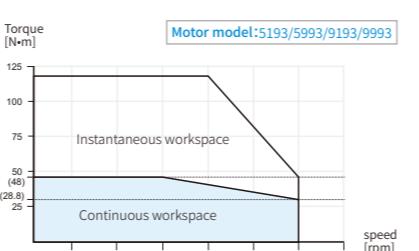
Base number (mm)	40 flange	60 flange	80 flange	100 flange	110 flange	130 flange	180 flange	220 flange
Axial force (N)	57	74	147	≤200	250	300	400	≤500
Radial force (N)	78	245	392	500	500	600	800	1000

MS6 series T/N curve

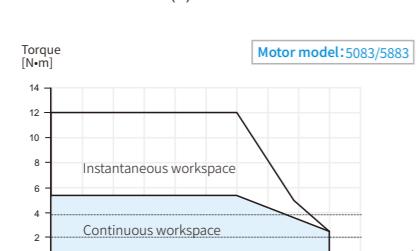
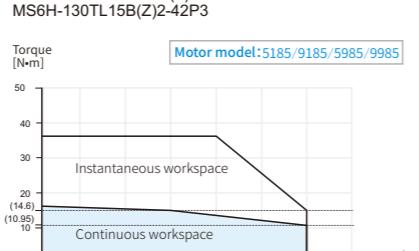


MS5 series T/N curve

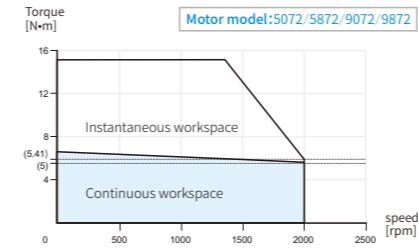
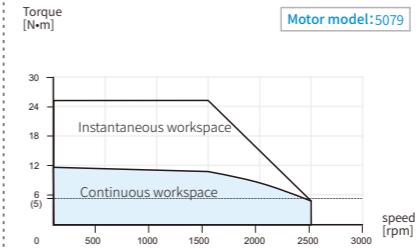
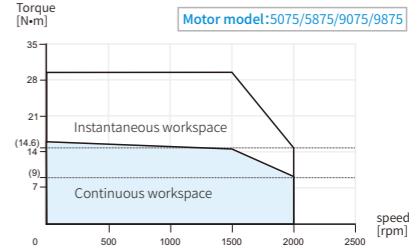
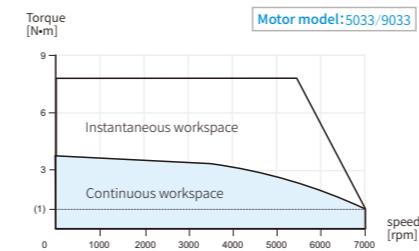
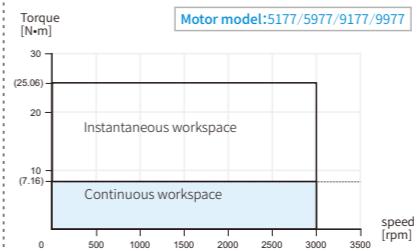
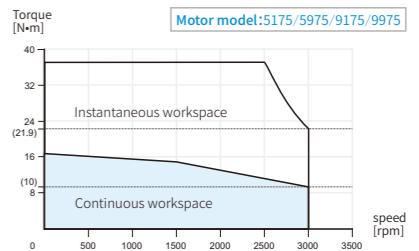
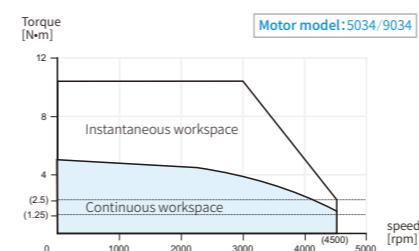
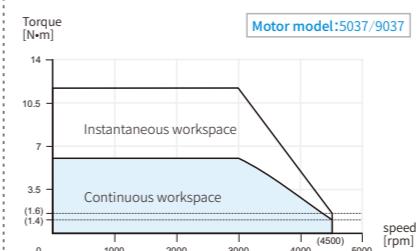
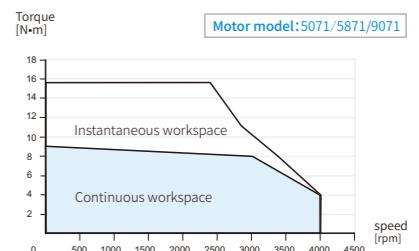
MS6S-80CS/CM20B(Z)□-20P7

MS6H-130CS/CM20B(Z)2-21P5
MS6H-130TL20B(Z)2-21P5MS6H-180CS/CM15B(Z)2-43P0
MS6H-180TL15B(Z)2-43P0MS6H-130CS/CM15B(Z)2-20P8
MS6H-130TL15B(Z)2-20P8MS6H-130CS/CM15B(Z)2-21P8
MS6H-130TL15B(Z)2-21P8MS6H-180CS/CM15B2-44P4
MS6H-180TL15B2-44P4MS6H-130CS/CM15B(Z)2-40P8
MS6H-130TL15B(Z)2-40P8MS6H-130CS/CM15B(Z)2-41P8
MS6H-130TL15B(Z)2-41P8MS6H-180CS/CM15B(Z)2-45P5
MS6H-180TL15B(Z)2-45P5MS6H-130CS/CM15B(Z)2-41P3
MS6H-130TL15B(Z)2-41P3MS6H-130CS/CM15B(Z)2-22P3
MS6H-130TL15B(Z)2-22P3MS6H-180CS/CM15B(Z)2-47P5
MS6H-180TL15B(Z)2-47P5

MS6S-100CS/CM30B(Z)2-21P5

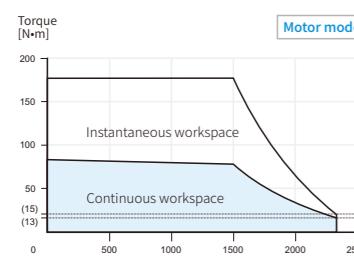
MS6H-130CS/CM15B(Z)2-42P3
MS6H-130TL15B(Z)2-42P3

MS series T/N curve

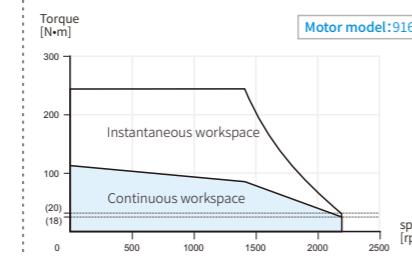
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MS5S-110STE-TL06030B/BZ-21P8MS5G-130STE-CS/CM07730B(Z)-22P4-S01
MS5G-130STE-TL07730B(Z)-22P4-S01

MS series T/N curve

MS-220STE-TL70015B/BZ-411P0-XJ



MS-220STE-TL96015B/BZ-415P0-XJ

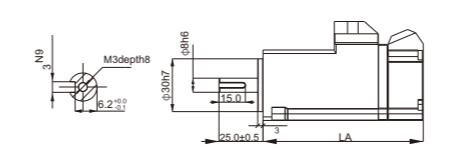


Motor dimension (Unit: mm)

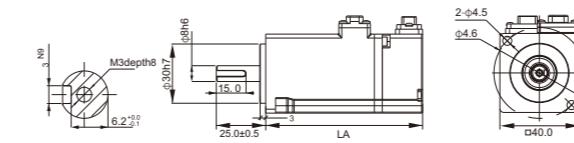
| MS6 series

40 flange

Motor model	LA±1		Inertia level
	Normal	With brake	
MS6H-40C□30B□1-20P1	91	122.9	High inertia

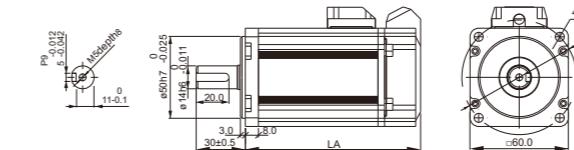


Motor model	LA±1		Inertia level
	Normal	With brake	
MS6H-40□□30B□3-20P1	79.4	112	High inertia

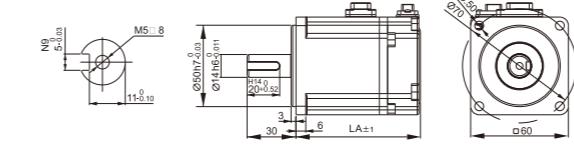


60 flange

Motor model	LA±1		Inertia level
	Normal	With brake	
MS6H-60C□30B□1-20P2	90	121	High inertia
MS6S-60C□30B□1/2-20P4	107	139	Low inertia
MS6H-60C□30B□1/2-20P4	119	151	High inertia

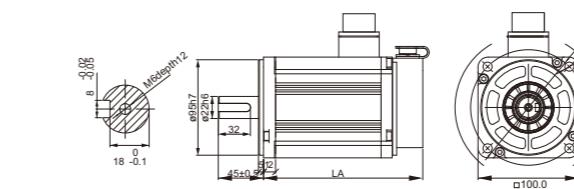


Motor model	LA±1		Inertia level
	Normal	With brake	
MS6H-60□□30B□3-20P2	76.4	99.15	High inertia
MS6S-60□□30B□3-20P4	98.4	121.15	Low inertia
MS6H-60□□30B□3-20P4	98.4	121.15	High inertia



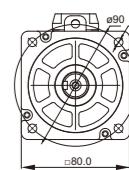
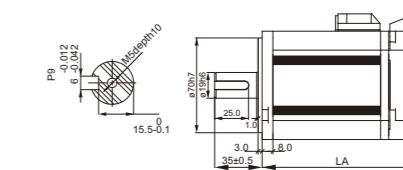
100 flange

Motor model	LA±1		Inertia level
	Normal	With brake	
MS6S-100□30B2-21P5	154.5	183	Low inertia

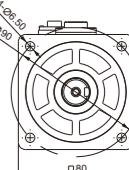
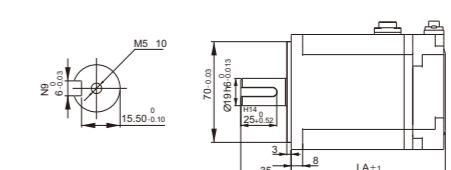


80 flange

Motor model	LA±1		Inertia level
	Normal	With brake	
MS6S-80C□30B□1/2-20P7	117	150	Low inertia
MS6H-80C□30B□1/2-20P7	124	157	High inertia
MS6S-80C□20B□1/2-20P7	127	160	Low inertia
MS6H-80C□20B□1/2-20P7	149	182	High inertia



Motor model	LA±1		Inertia level
	Normal	With brake	
MS6S-80□□30B□3-20P7	107.1	132.1	Low inertia
MS6H-80□□30B□3-20P7	107.1	132.1	High inertia
MS6S-80□□30B□3-21P0	117.6	142.6	Low inertia
MS6H-80□□30B□3-21P0	134	159	High inertia



130 flange

Motor model	LA±1		Inertia level
	Normal	With brake	
MS6H-130C□15B□2-20P8	126	156	
MS6H-130TL15B□2-20P8	142	172	
MS6H-130C□15B□2-40P8	126	156	
MS6H-130TL15B□2-40P8	142	172	
MS6H-130C□15B□2-41P3	148	178	
MS6H-130TL15B□2-41P3	164	194	
MS6H-130C□20B□2-21P5	148	178	
MS6H-130TL20B□2-21P5	164	194	
MS6H-130C□15B□2-21P8	175	205	
MS6H-130TL15B□2-21P8	191	221	
MS6H-130C□15B□2-41P8	175	205	
MS6H-130TL15B□2-41P8	191	221	
MS6H-130C□15B□2-22P3	195.6	225.6	
MS6H-130TL15B□2-22P3	211.6	241.6	
MS6H-130C□15B□2-42P3	195.6	225.6	
MS6H-130TL15B□2-42P3	211.6	241.6	

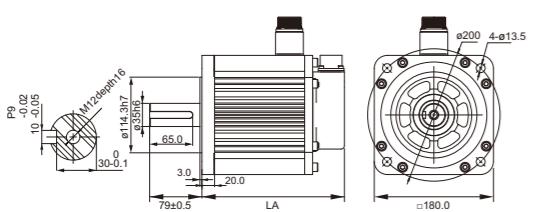


Motor dimension (Unit: mm)

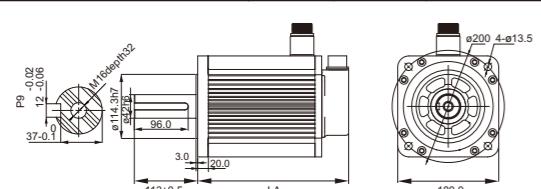
| MS6 series

180 flange

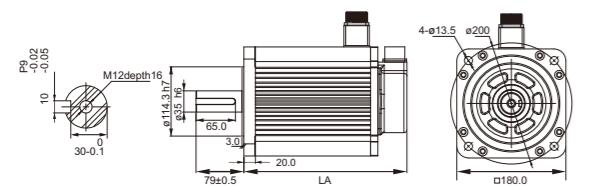
Motor model	LA±1		Inertia level
	Normal	With brake	
MS6H-180C□15B2-43P0	215	255	High inertia
MS6H-180TL15B2-43P0	215	255	
MS6H-180C□15B2-44P4	247	287	
MS6H-180TL15B2-44P4	247	287	



Motor model	LA±1		Inertia level
	Normal	With brake	
MS6H-180C□15B2-45P5	269	309	High inertia
MS6H-180TL15B2-45P5	269	309	
MS6H-180C□15B2-47P5	325	365	
MS6H-180TL15B2-47P5	325	365	



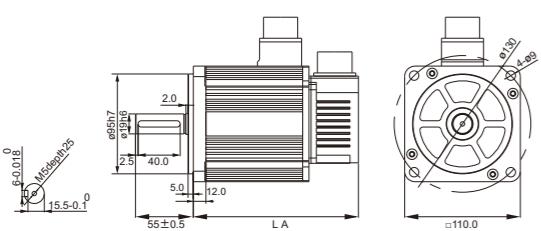
Motor model	LA±1		Inertia level
	Normal	With brake	
MS6H-180C□15E2-45P5	269	309	High inertia
MS6H-180C□15E2-47P5	325	365	



| MS5/MS series

110 flange

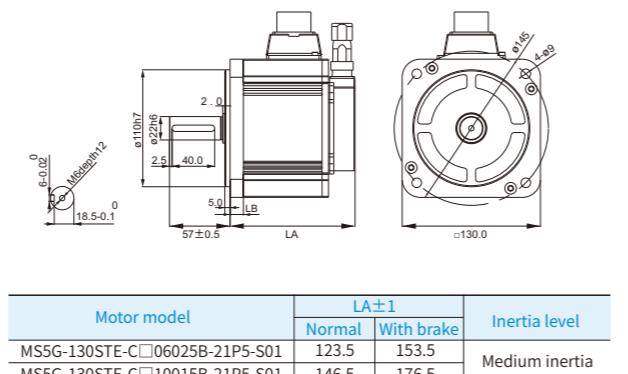
Motor model	LA±1		Inertia level
	Normal	With brake	
MS5S-110STE-C□03230B□-21P0-S01	157	205	Low inertia
MS5S-110STE-C□04830B□-21P5-S01	166	214	
MS5S-110STE-C□06030B□-21P8-S01	181	229	
MS5S-110STE-TL03230B□-21P0-S01	157	205	
MS5S-110STE-TL04830B□-21P5-S01	166	214	



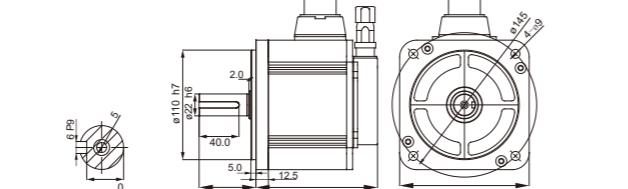
| MS5/MS series

130 flange

Motor model	LA±1		LB	Inertia level
	Normal	With brake		
MS5G-130STE-C□05415B□-20P8-S01	117.5	147.5	High inertia	Medium inertia
MS5G-130STE-C□07220B□-21P5-S01	133.5	163.5		
MS5G-130STE-C□07220B□-41P5-S01	133.5	163.5		
MS5G-130STE-C□11515B□-21P8-S01	159.5	189.5		
MS5G-130STE-C□11515B□-41P8-S01	159.5	189.5		
MS5G-130STE-C□14615B□-22P3-S01	133.5	210.5		
MS5G-130STE-C□14615B□-42P3-S01	133.5	210.5		
MS5G-130STE-C□07730B□-22P4-S01	132.5	163.5		
MS5G-130STE-C□10025B□-22P6-S01	159.5	189.5		
MS5G-130STE-TL05415B□-20P8-S01	134.5	164.5		
MS5G-130STE-TL07220B□-21P5-S01	149.5	179.5		
MS5G-130STE-TL07730B□-21P8-S01	149.5	179.5		
MS5G-130STE-TL11515B□-21P8-S01	176.5	206.5		
MS5G-130STE-TL11515B□-41P8-S01	176.5	206.5		
MS5G-130STE-TL14615B□-22P3-S01	197.5	227.5		
MS5G-130STE-TL14615B□-42P3-S01	197.5	227.5		
MS5G-130STE-TL07730B□-22P4-S01	149.5	179.5		



Motor model	LA±1		Inertia level
	Normal	With brake	
MS5G-130STE-C□06025B-21P5-S01	123.5	153.5	Medium inertia
MS5G-130STE-C□10015B-21P5-S01	146.5	176.5	



Model selection list

| MS6 series

DS5 series match MS6-B3 series motor

80 flange and below connector type motors				
Power [kW]	Inertia level	Motor model	Matched driver	Voltage level
0.1	High inertia	MS6H-40CS30B3-20P1	DS5L1/C1/N1/K1 -20P1-PTA DS5E/F/K/P-20P1-PTA	Front outgoing cable
		MS6H-40CM30B3-20P1		Rear outgoing cable
		MS6H-40CS30BZ3-20P1		Transfer cable
		MS6H-40CM30BZ3-20P1		Only support front outgoing cable
0.2	High inertia	CP(T)-SE-Length	CP(T)-SF-M-Length	CPT-PE
		CP(T)-SE-BM-Length	CP(T)-SF-BM-Length	CMT-PE03
		CP(T)-SE-Length	CM(B)-E03A-Length	CPT-PE
		CP(T)-SE-BM-Length	CM(B)-F03A-Length	CMBT-PE03
0.4	Low inertia	CP(T)-SE-M-Length	CP(T)-SF-M-Length	CPT-PE
		CP(T)-E05A-Length	CP(T)-F05A-Length	CPT-PE
		CP(T)-SE-BM-Length	CP(T)-SF-BM-Length	CPT-PE
		CP(T)-E05A-Length	CP(T)-F05A-Length	CPT-PE
0.75	High inertia	DS5L1/C1/N1/K1 -20P4-PTA DS5E/F/K/P-20P4-PTA	AC 220V	Front outgoing cable
		MS6S-60CS30B3-20P4		Rear outgoing cable
		MS6S-60CM30B3-20P4		Transfer cable
		MS6S-60CS30BZ3-20P4		Only support front outgoing cable
1	Low inertia	CP(T)-SE-Length	CP(T)-SF-M-Length	CPT-PE
		CP(T)-SE-BM-Length	CP(T)-SF-BM-Length	CPT-PE
		CP(T)-E05A-Length	CP(T)-F05A-Length	CPT-PE
		CP(T)-SE-BM-Length	CP(T)-SF-BM-Length	CPT-PE
1	High inertia	DS5L1/C1/N1/K1 -20P7-PTA DS5E/F/K/P-20P7-PTA	AC 220V	Front outgoing cable
		MS6S-80CS30B3-21P0		Rear outgoing cable
		MS6S-80CM30B3-21P0		Transfer cable
		MS6S-80CS30BZ3-21P0		Only support front outgoing cable
1	Low inertia	CP(T)-SE-Length	CP(T)-SF-M-Length	CPT-PE
		CP(T)-SE-BM-Length	CP(T)-SF-BM-Length	CPT-PE

Model selection list

| MS6 series

DS5L,5C,5E,5K,5F,5P matched MS6-B1/B2 motor

Power(kW)	Inertia level	Motor model	Matched driver	Voltage level	Encoder cable	Power cable	Brake cable	Cable accessories package
0.1	High inertia	MS6H-40CS30B1-20P1	DS5E/F/K/P-20P1-PTA	AC 220V	CP(T)-SP-Length	CM(T)-P07-M-Length	/	JAM-P9-P4
		MS6H-40CM30B1-20P1			CP(T)-SP-BM-Length	CM(T)-P07-M-Length	/	JAM-P9-P4
		MS6H-40CS30BZ1-20P1			CP(T)-SP-M-Length	CB(T)-P03-Length	JAM-P9-P4-P2	
		MS6H-40CM30BZ1-20P1			CP(T)-SP-BM-Length	CB(T)-P03-Length	JAM-P9-P4-P2	
0.2	High inertia	MS6H-60CS30B1-20P2	DS5E/F/K/P-20P2-PTA	AC 220V	CP(T)-SP-M-Length	CM(T)-P07-M-Length	/	JAM-P9-P4
		MS6H-60CM30B1-20P2			CP(T)-SP-BM-Length	CM(T)-P07-M-Length	/	JAM-P9-P4
		MS6H-60CS30BZ1-20P2			CP(T)-SP-M-Length	CB(T)-P03-Length	JAM-P9-P4-P2	
		MS6H-60CM30BZ1-20P2			CP(T)-SP-BM-Length	CB(T)-P03-Length	JAM-P9-P4-P2	
0.4	Low inertia	MS6S-60CS30B1-20P4	DS5E/F/K/P-20P4-PTA	AC 220V	CP(T)-SP-M-Length	CM(T)-P07-M-Length	/	JAM-P9-P4
		MS6S-60CM30B1-20P4			CP(T)-SP-BM-Length	CM(T)-P07-M-Length	/	JAM-P9-P4
		MS6S-60CS30BZ1-20P4			CP(T)-SP-M-Length	CB(T)-P03-Length	JAM-P9-P4-P2	
		MS6S-60CM30BZ1-20P4			CP(T)-SP-BM-Length	CB(T)-P03-Length	JAM-P9-P4-P2	
	High inertia	MS6H-60CS30B1-20P4			CP(T)-SP-M-Length	CM(T)-P07-M-Length	/	JAM-P9-P4
		MS6H-60CM30B1-20P4			CP(T)-SP-BM-Length	CM(T)-P07-M-Length	/	JAM-P9-P4
		MS6H-60CS30BZ1-20P4			CP(T)-SP-M-Length	CB(T)-P03-Length	JAM-P9-P4-P2	
		MS6H-60CM30BZ1-20P4			CP(T)-SP-BM-Length	CB(T)-P03-Length	JAM-P9-P4-P2	
0.75	Low inertia	MS6S-80CS20B1-20P7	DS5E/F/K/P-20P7-PTA	AC 220V	CP(T)-SP-M-Length	CM(T)-P07-M-Length	/	JAM-P9-P4
		MS6S-80CM20B1-20P7			CP(T)-SP-BM-Length	CM(T)-P07-M-Length	/	JAM-P9-P4
		MS6S-80CS20BZ1-20P7			CP(T)-SP-M-Length	CB(T)-P03-Length	JAM-P9-P4-P2	
		MS6S-80CM20BZ1-20P7			CP(T)-SP-BM-Length	CB(T)-P03-Length	JAM-P9-P4-P2	
	High inertia	MS6H-80CS20B1-20P7			CP(T)-SP-M-Length	CM(T)-P07-M-Length	/	JAM-P9-P4
		MS6H-80CM20B1-20P7			CP(T)-SP-BM-Length	CM(T)-P07-M-Length	/	JAM-P9-P4
		MS6H-80CS20BZ1-20P7			CP(T)-SP-M-Length	CB(T)-P03-Length	JAM-P9-P4-P2	
		MS6H-80CM20BZ1-20P7			CP(T)-SP-BM-Length	CB(T)-P03-Length	JAM-P9-P4-P2	
	Low inertia	MS6S-80CS30B1-20P7			CP(T)-SP-M-Length	CM(T)-P07-M-Length	/	JAM-P9-P4
		MS6S-80CM30B1-20P7			CP(T)-SP-BM-Length	CM(T)-P07-M-Length	/	JAM-P9-P4
		MS6S-80CS30BZ1-20P7			CP(T)-SP-M-Length	CB(T)-P03-Length	JAM-P9-P4-P2	
		MS6S-80CM30BZ1-20P7			CP(T)-SP-BM-Length	CB(T)-P03-Length	JAM-P9-P4-P2	
	High inertia	MS6H-80CS30B1-20P7			CP(T)-SP-M-Length	CM(T)-P07-M-Length	/	JAM-P9-P4
		MS6H-80CM30B1-20P7			CP(T)-SP-BM-Length	CM(T)-P07-M-Length	/	JAM-P9-P4
		MS6H-80CS30BZ1-20P7			CP(T)-SP-M-Length	CB(T)-P03-Length	JAM-P9-P4-P2	
		MS6H-80CM30BZ1-20P7			CP(T)-SP-BM-Length	CB(T)-P03-Length	JAM-P9-P4-P2	
0.85	High inertia	MS6H-130CS15B2-20P8	DS5L/E/C/K/F-21P0-PTA	AC 380V	CP(T)-SC(T)-M-Length	CM(T)-L15-Length	/	JAM-C10-L4
		MS6H-130CM15B2-20P8			CP(T)-SC(T)-B-Length	CM(T)-L15-Length	/	JAM-C10-L4
		MS6H-130CS15BZ2-20P8			CP(T)-SC(T)-M-Length	CB(T)-L15-Length	/	JAM-C10-L7
		MS6H-130CM15BZ2-20P8			CP(T)-SC(T)-B-Length	CB(T)-L15-Length	/	JAM-C10-L7
	High inertia	MS6H-130TL15B2-20P8			CP(T)-SC(T)-M-Length	CM(T)-L15-Length	/	JAM-C10-L4
		MS6H-130TL15BZ2-20P8			CP(T)-SC(T)-B-Length	CM(T)-L15-Length	/	JAM-C10-L7
		MS6H-130CS15B2-40P8			CP(T)-SC(T)-M-Length	CB(T)-L15-Length	/	JAM-C10-L7
		MS6H-130CM15B2-40P8			CP(T)-SC(T)-B-Length	CM(T)-L15-Length	/	JAM-C10-L7
	High inertia	MS6H-130CS15BZ2-40P8			CP(T)-SC(T)-M-Length	CB(T)-L15-Length	/	JAM-C10-L7
		MS6H-130CM15BZ2-40P8			CP(T)-SC(T)-B-Length	CM(T)-L15-Length	/	JAM-C10-L7
		MS6H-130TL15B2-40P8			CP(T)-SC(T)-M-Length	CB(T)-L15-Length	/	JAM-C10-L7
		MS6H-130TL15BZ2-40P8			CP(T)-SC(T)-B-Length	CM(T)-L15-Length	/	JAM-C10-L7
1.3	High inertia	MS6H-130CS15B2-41P3	DS5E/K/F-41P5-PTA	AC 380V	CP(T)-SC(T)-M-Length	CM(T)-L15-Length	/	JAM-C10-L4
		MS6H-130CM15B2-41P3			CP(T)-SC(T)-B-Length	CM(T)-L15-Length	/	JAM-C10-L4
		MS6H-130CS15BZ2-41P3			CP(T)-SC(T)-M-Length	CB(T)-L15-Length	/	JAM-C10-L7
		MS6H-130CM15BZ2-41P3			CP(T)-SC(T)-B-Length	CB(T)-L15-Length	/	JAM-C10-L7
	High inertia	MS6H-130TL15B2-41P3			CP(T)-SC(T)-M-Length	CM(T)-L15-Length	/	JAM-C10-L4
		MS6H-130TL15BZ2-41P3			CP(T)-SC(T)-B-Length	CM(T)-L15-Length	/	JAM-C10-L7
		MS6S-100CS30B2-21P5			CP(T)-SC(T)-M-Length	CM(T)-L15-Length	/	JAM-C10-L4
		MS6S-100CM30B2-21P5			CP(T)-SC(T)-B-Length	CM(T)-L15-Length	/	JAM-C10-L4
1.5	Low inertia	MS6S-100CS30BZ2-21P5	DS5E/L/C/F/K-21P5-PTA	AC 220V	CP(T)-SC(T)-M-Length	CB(T)-L15-Length	/	JAM-C10-L7
		MS6S-100CM30BZ2-21P5			CP(T)-SC(T)-B-Length	CB(T)-L15-Length	/	JAM-C10-L7
		MS6H-130CS20B2-21P5			CP(T)-SC(T)-M-Length	CM(T)-L15-Length	/	JAM-C10-L4
		MS6H-130CM20B2-21P5			CP(T)-SC(T)-B-Length	CM(T)-L15-Length	/	JAM-C10-L4
	High inertia	MS6H-130CM20BZ2-21P5			CP(T)-SC(T)-M-Length	CB(T)-L15-Length	/	JAM-C10-L7
		MS6H-130TL20B2-21P5			CP(T)-SC(T)-B-Length	CB(T)-L15-Length	/	JAM-C10-L7
		MS6H-130TL20BZ2-21P5			CP(T)-SC(T)-M-Length	CM(T)-L15-Length	/	JAM-C10-L4
		MS6H-130TL20BZ2-21P5			CP(T)-SC(T)-B-Length	CM(T)-L15-Length	/	JAM-C10-L7
1.8	High inertia	MS6H-130CS15B2-21P8	DS5E/F/K-22P6-PTA	AC 380V	CP(T)-SC(T)-M-Length	CM(T)-L15-Length	/	JAM-C10-L4
		MS6H-130CM15B2-21P8			CP(T)-SC(T)-B-Length	CM(T)-L15-Length	/	JAM-C10-L4
		MS6H-130CS15BZ2-21P8			CP(T)-SC(T)-M-Length	CB(T)-L15-Length	/	JAM-C10-L7
		MS6H-130CM15BZ2-21P8			CP(T)-SC(T)-B-Length	CB(T)-L15-Length	/	JAM-C10-L7
	High inertia	MS6H-130TL15B2-21P8			CP(T)-SC(T)-M-Length	CM(T)-L15-Length	/	JAM-C10-L4
		MS6H-130TL15BZ2-21P8			CP(T)-SC(T)-B-Length	CM(T)-L15-Length	/	JAM-C10-L7
		MS6H-130CS15B2-41P8			CP(T)-SC(T)-M-Length	CB(T)-L15-Length	/	JAM-C10-L4
		MS6H-130CM15B2-41P8			CP(T)-SC(T)-B-Length			

Model selection list

| MS6 series

DS5L,5C,5E,5K,5F,5P matched MS6-B1/B2 motor								
Power[kW]	Inertia level	Motor model	Matched driver	Voltage level	Encoder cable	Power cable	Brake cable	Cable accessories package
0.1	High inertia	MS6H-40CS30B1-20P1	DS5L1/C1/N1/K1-20P1-PTA	AC 220V	CP(T)-SP-M-Length	CM(T)-P07A-M-Length	/	JAM-P9-P4
		MS6H-40CM30B1-20P1			CP(T)-SP-BM-Length	CM(T)-P07A-M-Length	/	JAM-P9-P4
		MS6H-40CS30B1-20P1			CP(T)-SP-M-Length	CM(T)-P07A-M-Length	CB(T)-P03-Length	JAM-P9-P4-P2
		MS6H-40CM30B1-20P1			CP(T)-SP-BM-Length	CM(T)-P07A-M-Length	CB(T)-P03-Length	JAM-P9-P4-P2
0.2	High inertia	MS6H-60CS30B1-20P2	DS5L1/C1/N1/K1-20P2-PTA	AC 220V	CP(T)-SP-M-Length	CM(T)-P07A-M-Length	/	JAM-P9-P4
		MS6H-60CM30B1-20P2			CP(T)-SP-BM-Length	CM(T)-P07A-M-Length	/	JAM-P9-P4
		MS6H-60CS30B1-20P2			CP(T)-SP-M-Length	CM(T)-P07A-M-Length	CB(T)-P03-Length	JAM-P9-P4-P2
		MS6H-60CM30B1-20P2			CP(T)-SP-BM-Length	CM(T)-P07A-M-Length	CB(T)-P03-Length	JAM-P9-P4-P2
0.4	Low inertia	MS6S-60CS30B1-20P4	DS5L1/C1/N1/K1-20P4-PTA	AC 220V	CP(T)-SP-M-Length	CM(T)-P07A-M-Length	/	JAM-P9-P4
		MS6S-60CM30B1-20P4			CP(T)-SP-BM-Length	CM(T)-P07A-M-Length	/	JAM-P9-P4
		MS6S-60CS30B1-20P4			CP(T)-SP-M-Length	CM(T)-P07A-M-Length	CB(T)-P03-Length	JAM-P9-P4-P2
		MS6S-60CM30B1-20P4			CP(T)-SP-BM-Length	CM(T)-P07A-M-Length	CB(T)-P03-Length	JAM-P9-P4-P2
0.75	High inertia	MS6H-60CS30B1-20P4	DS5L1/C1/N1/K1-20P7-PTA	AC 220V	CP(T)-SP-M-Length	CM(T)-P07A-M-Length	/	JAM-P9-P4
		MS6S-80CS20B1-20P7			CP(T)-SP-BM-Length	CM(T)-P07A-M-Length	/	JAM-P9-P4
		MS6S-80CM20B1-20P7			CP(T)-SP-M-Length	CM(T)-P07A-M-Length	CB(T)-P03-Length	JAM-P9-P4-P2
		MS6H-80CS20B1-20P7			CP(T)-SP-BM-Length	CM(T)-P07A-M-Length	CB(T)-P03-Length	JAM-P9-P4-P2
0.85	High inertia	MS6H-80CM20B1-20P7	DS5L1/C1-21P0-PTA	AC 380V	CP(T)-SP-M-Length	CM(T)-P07A-M-Length	/	JAM-P9-P4
		MS6H-80CM30B1-20P7			CP(T)-SP-BM-Length	CM(T)-P07A-M-Length	/	JAM-P9-P4
		MS6H-80CS30B1-20P7			CP(T)-SP-M-Length	CM(T)-P07A-M-Length	CB(T)-P03-Length	JAM-P9-P4-P2
		MS6H-80CM30B1-20P7			CP(T)-SP-BM-Length	CM(T)-P07A-M-Length	CB(T)-P03-Length	JAM-P9-P4-P2
1.3	High inertia	MS6H-130CS15B2-41P3	DS5L1/C1-41P5-PTA	AC 380V	CP(T)-SC(T)-M-Length	CM(T)-L15B-Length	/	JAM-C10-L4
		MS6H-130CM15B2-41P3			CP(T)-SC(T)-B-Length	CM(T)-L15B-Length	/	JAM-C10-L4
		MS6H-130CS15B2-41P3			CP(T)-SC(T)-M-Length	CB(T)-L15B-Length	/	JAM-C10-L7
		MS6H-130CM15B2-41P3			CP(T)-SC(T)-B-Length	CB(T)-L15B-Length	/	JAM-C10-L7
1.5	Low inertia	MS6S-100CS30B2-21P5	DS5L1/C1-21P5-PTA	AC 220V	CP(T)-SC(T)-M-Length	CM(T)-L15B-Length	/	JAM-C10-L4
		MS6S-100CM30B2-21P5			CP(T)-SC(T)-B-Length	CM(T)-L15B-Length	/	JAM-C10-L4
		MS6S-100CS30B2-21P5			CP(T)-SC(T)-M-Length	CB(T)-L15B-Length	/	JAM-C10-L7
		MS6S-100CM30B2-21P5			CP(T)-SC(T)-B-Length	CB(T)-L15B-Length	/	JAM-C10-L7
1.8	High inertia	MS6H-130CS20B2-21P5	DS5L1/C1-22P6-PTA	AC 380V	CP(T)-SC(T)-M-Length	CM(T)-L15B-Length	/	JAM-C10-L4
		MS6H-130CM20B2-21P5			CP(T)-SC(T)-B-Length	CM(T)-L15B-Length	/	JAM-C10-L4
		MS6H-130CS20B2-21P5			CP(T)-SC(T)-M-Length	CB(T)-L15B-Length	/	JAM-C10-L7
		MS6H-130CM20B2-21P5			CP(T)-SC(T)-B-Length	CB(T)-L15B-Length	/	JAM-C10-L7

DS5L,5C,5E,5K,5F,5P matched MS6-B1/B2 motor								
Power[kW]	Inertia level	Motor model	Matched driver	Voltage level	Encoder cable	Power cable	Brake cable	Cable accessories package
2.3	High inertia	MS6H-130CS15B2-22P3	DS5L1/C1-22P6-PTA	AC 220V	CP(T)-SC(T)-M-Length	CM(T)-L15B-Length	/	JAM-C10-L4
		MS6H-130CM15B2-22P3			CP(T)-SC(T)-B-Length	CM(T)-L15B-Length	/	JAM-C10-L4
		MS6H-130CS15B2Z-22P3			CP(T)-SC(T)-M-Length	CMB(T)-L15B-Length	/	JAM-C10-L7
		MS6H-130CM15B2Z-22P3			CP(T)-SC(T)-B-Length	CMB(T)-L15B-Length	/	JAM-C10-L4
3.0	High inertia	MS6H-130TL15B2-22P3	DS5L1/C1-43P0-PTA	AC 380V	CP(T)-SC(T)-B-Length	CMB(T)-L15B-Length	/	JAM-C10-L7
		MS6H-130CS15B2-42P3			CP(T)-SC(T)-M-Length	CM(T)-L15B-Length	/	JAM-C10-L4
		MS6H-130CM15B2-42P3			CP(T)-SC(T)-B-Length	CM(T)-L15B-Length	/	JAM-C10-L4
		MS6H-130CS15B2Z-42P3			CP(T)-SC(T)-M-Length	CMB(T)-L15B-Length	/	JAM-C10-L7
80 flange and lower small aviation plug matching list								
0.4	Low inertia	MS6S-60CS30B2-20P4	DS5L1/C1/N1/K1-20P4-PTA	AC 220V	CP(T)-SV-M-Length	CMT-V07A-M-Length	/	JAM-V7-V4
		MS6S-60CM30B2-20P4			CP(T)-SV-BM-Length	CMT-V07A-M-Length	/	JAM-V7-V4
		MS6S-60CS30B2Z-20P4			CP(T)-SV-M-Length	CMBT-V07A-M-Length	/	JAM-V7-V6
		MS6S-60CM30B2Z-20P4			CP(T)-SV-BM-Length	CMBT-V07A-M-Length	/	JAM-V7-V6
0.75	High inertia	MS6H-60CS30B2-20P4	DS5L1/C1/N1/K1-20P7-PTA	AC 220V	CP(T)-SV-M-Length	CMT-V07A-M-Length	/	JAM-V7-V4
		MS6H-60CM30B2-20P4			CP(T)-SV-BM-Length	CMT-V07A-M-Length	/	JAM-V7-V4
		MS6H-60CS30B2Z-20P4			CP(T)-SV-M-Length	CMBT-V07A-M-Length	/	JAM-V7-V6
		MS6H-60CM30B2Z-20P4			CP(T)-SV-BM-Length	CMBT-V07A-M-Length	/	JAM-V7-V6
0.75	Low inertia	MS6S-80CS20B2-20P7	DS5L1/C1/N1/K1-20P7-PTA	AC 220V	CP(T)-SV-M-Length	CMT-V07A-M-Length	/	JAM-V7-V4
		MS6S-80CM20B2-20P7			CP(T)-SV-BM-Length	CMT-V07A-M-Length	/	JAM-V7-V4
		MS6S-80CS20B2Z-20P7			CP(T)-SV-M-Length	CMBT-V07A-M-Length	/	JAM-V7-V6
		MS6S-80CM20B2Z-20P7			CP(T)-SV-BM-Length	CMBT-V07A-M-Length	/	JAM-V7-V6
0.75	High inertia	MS6H-80CS20B2-20P7	DS5L1/C1/N1/K1-20P7-PTA	AC 220V	CP(T)-SV-M-Length	CMT-V07A-M-Length	/	JAM-V7-V4
		MS6H-80CM20B2-20P7			CP(T)-SV-BM-Length	CMT-V07A-M-Length	/	JAM-V7-V4
		MS6H-60CS30B2-20P4			CP(T)-SV-M-Length	CMBT-V07A-M-Length	/	JAM-V7-V6
		MS6H-60CM30B2-20P4			CP(T)-SV-BM-Length	CMBT-V07A-M-Length	/	JAM-V7-V6
0.75	Low inertia	MS6S-80CS20B2-20P7	DS5L1/C1/N1/K1-20P7-PTA	AC 220V	CP(T)-SV-M-Length			

Model selection list

| MS5/MS series

DS5E,5L,5C,5F,5K,5P								
Power[kW]	Inertia level	Motor model	Matched driver	Voltage level	Encoder cable	Power cable	Brake cable	Cable accessories package
0.85	Medium inertia	MS5G-130STE-CS05415B-20P8-S01	DS5E/F/K/P-20P7-PTA	Single phase 220V	CP(T)-SC(T)-M-Length	CM(T)-L15A-Length	/	JAM-C10-L4
		MS5G-130STE-CM05415B-20P8-S01			CP(T)-SC(T)-B-Length	CM(T)-L15A-Length	/	JAM-C10-L4
		MS5G-130STE-CS05415BZ-20P8-S01			CP(T)-SC(T)-M-Length	CMB(T)-L15A-Length	/	JAM-C10-L7
		MS5G-130STE-CM05415BZ-20P8-S01			CP(T)-SC(T)-B-Length	CMB(T)-L15A-Length	/	JAM-C10-L7
		MS5G-130STE-TL05415B-20P8-S01			CP(T)-SC(T)-B-Length	CM(T)-L15A-Length	/	JAM-C10-L4
		MS5G-130STE-TL05415BZ-20P8-S01			CP(T)-SC(T)-B-Length	CM(T)-L15A-Length	/	JAM-C10-L7
		MS5S-110STE-CS03230B□-21P0-S01			CP(T)-SL-M-Length	CM(T)-L15-Length	/	JAM-L15-L4
1.0	Low inertia	MS5S-110STE-CS03230B□-21P0-S01	DS5E/L/C/F/K-21P0-PTA	Single phase 220V	CP(T)-SL-B-Length	CM(T)-L15-Length	/	JAM-L15-L4
		MS5S-110STE-CM03230B□-21P0-S01			CP(T)-SL-B-Length	CM(T)-L15-Length	/	JAM-L15-L4
		MS5S-110STE-TL03230B□-21P0			CP(T)-SL-B-Length	CM(T)-L15-Length	/	JAM-L15-L4
		MS5S-110STE-CS04830B□-21P5			CP(T)-SL-M-Length	CM(T)-L15-Length	/	JAM-L15-L4
1.5	Medium inertia	MS5S-110STE-CS04830B□-21P5	DS5E/L/C/F/K-21P5-PTA	Single phase 220V	CP(T)-SL-B-Length	CM(T)-L15-Length	/	JAM-L15-L4
		MS5G-130STE-CS06025B-21P5-S01			CP(T)-SC(T)-M-Length	CM(T)-L15-Length	/	JAM-C10-L4
		MS5G-130STE-CM06025B-21P5-S01			CP(T)-SC(T)-B-Length	CM(T)-L15-Length	/	JAM-C10-L4
		MS5G-130STE-CS06025BZ-21P5-S01			CP(T)-SC(T)-M-Length	CMB(T)-L15-Length	/	JAM-C10-L7
		MS5G-130STE-CM06025BZ-21P5-S01			CP(T)-SC(T)-B-Length	CMB(T)-L15-Length	/	JAM-C10-L7
		MS5G-130STE-CS10015B-21P5-S01			CP(T)-SC(T)-M-Length	CM(T)-L15-Length	/	JAM-C10-L4
		MS5G-130STE-CM10015B-21P5-S01			CP(T)-SC(T)-B-Length	CM(T)-L15-Length	/	JAM-C10-L4
		MS5G-130STE-CS10015BZ-21P5-S01			CP(T)-SC(T)-M-Length	CM(B)-L15-Length	/	JAM-C10-L7
		MS5G-130STE-CS10015BZ-21P5-S01			CP(T)-SC(T)-B-Length	CM(B)-L15-Length	/	JAM-C10-L7
		MS5G-130STE-CS07220B-21P5-S01			CP(T)-SC(T)-M-Length	CM(T)-L15-Length	/	JAM-C10-L4
		MS5G-130STE-CM07220B-21P5-S01			CP(T)-SC(T)-B-Length	CM(T)-L15-Length	/	JAM-C10-L4
		MS5G-130STE-CS07220BZ-21P5-S01			CP(T)-SC(T)-M-Length	CMB(T)-L15-Length	/	JAM-C10-L7
		MS5G-130STE-CM07220BZ-21P5-S01			CP(T)-SC(T)-B-Length	CMB(T)-L15-Length	/	JAM-C10-L7
1.8	Medium inertia	MS5G-130STE-CS07220BZ-21P5-S01	DS5E/L/C/F/K-21P5-PTA	Single/three phase 220V	CP(T)-SC(T)-B-Length	CM(T)-L15-Length	/	JAM-C10-L4
		MS5G-130STE-CS11515B-21P8-S01			CP(T)-SC(T)-M-Length	CM(T)-L15-Length	/	JAM-C10-L4
		MS5G-130STE-CM11515B-21P8-S01			CP(T)-SC(T)-B-Length	CM(T)-L15-Length	/	JAM-C10-L4
		MS5G-130STE-CS11515BZ-21P8-S01			CP(T)-SC(T)-M-Length	CMB(T)-L15-Length	/	JAM-C10-L7
		MS5G-130STE-CM11515BZ-21P8-S01			CP(T)-SC(T)-B-Length	CMB(T)-L15-Length	/	JAM-C10-L7
		MS5G-130STE-TL11515B-21P8-S01			CP(T)-SC(T)-M-Length	CM(T)-L15-Length	/	JAM-C10-L4
		MS5G-130STE-TL11515BZ-21P8-S01			CP(T)-SC(T)-B-Length	CM(T)-L15-Length	/	JAM-C10-L4
		MS5G-130STE-TL07220B-21P5-S01			CP(T)-SC(T)-M-Length	CM(T)-L15-Length	/	JAM-C10-L4
		MS5G-130STE-TL07220B-21P5-S01			CP(T)-SC(T)-B-Length	CM(T)-L15-Length	/	JAM-C10-L4
		MS5G-130STE-CS06030B□-21P8			CP(T)-SL-B-Length	CM(T)-L15-Length	/	JAM-L15-L4
		MS5S-110STE-CS06030B□-21P8			CP(T)-SL-M-Length	CM(T)-L15-Length	/	JAM-L15-L4
		MS5S-110STE-CM06030B□-21P8			CP(T)-SL-B-Length	CM(T)-L15-Length	/	JAM-L15-L4
		MS5G-130STE-TL06030B□-21P8			CP(T)-SL-B-Length	CM(T)-L15-Length	/	JAM-L15-L4
2.3	Medium inertia	MS5G-130STE-CS14615B-22P3-S01	DS5E/L/C/F/K-22P3-PTA	Single phase 220V	CP(T)-SC(T)-M-Length	CM(T)-L15-Length	/	JAM-C10-L4
		MS5G-130STE-CM14615B-22P3-S01			CP(T)-SC(T)-B-Length	CM(T)-L15-Length	/	JAM-C10-L4
		MS5G-130STE-CS14615BZ-22P3-S01			CP(T)-SC(T)-M-Length	CMB(T)-L15-Length	/	JAM-C10-L7
		MS5G-130STE-CM14615BZ-22P3-S01			CP(T)-SC(T)-B-Length	CMB(T)-L15-Length	/	JAM-C10-L7
		MS5G-130STE-TL14615B-22P3-S01			CP(T)-SC(T)-M-Length	CM(T)-L15-Length	/	JAM-C10-L4
		MS5G-130STE-TL14615BZ-22P3-S01			CP(T)-SC(T)-B-Length	CMB(T)-L15-Length	/	JAM-C10-L7
		MS5G-130STE-CS07730B-22P4-S01			CP(T)-SC(T)-M-Length	CM(T)-L15-Length	/	JAM-C10-L4
2.4	Medium inertia	MS5G-130STE-CS07730B-22P4-S01	DS5E/F/K-22P6-PTA	Single phase 220V	CP(T)-SC(T)-B-Length	CM(T)-L15-Length	/	JAM-C10-L4
		MS5G-130STE-CM07730B-22P4-S01			CP(T)-SC(T)-M-Length	CM(T)-L15-Length	/	JAM-C10-L4
		MS5G-130STE-CS07730BZ-22P4-S01			CP(T)-SC(T)-B-Length	CMB(T)-L15-Length	/	JAM-C10-L7
		MS5G-130STE-CM07730BZ-22P4-S01			CP(T)-SC(T)-B-Length	CMB(T)-L15-Length	/	JAM-C10-L7
		MS5G-130STE-TL07730B-22P4-S01			CP(T)-SC(T)-B-Length	CM(T)-L15-Length	/	JAM-C10-L4
2.6	Medium inertia	MS5G-130STE-CS10025B-22P6-S01	DS5E/F/K-22P6-PTA	Single phase 220V	CP(T)-SC(T)-M-Length	CM(T)-L15-Length	/	JAM-C10-L4
		MS5G-130STE-CM10025B-22P6-S01			CP(T)-SC(T)-B-Length	CM(T)-L15-Length	/	JAM-C10-L4
		MS5G-130STE-CS10025BZ-22P6-S01			CP(T)-SC(T)-M-Length	CMB(T)-L15-Length	/	JAM-C10-L7
		MS5G-130STE-CM10025BZ-22P6-S01			CP(T)-SC(T)-B-Length	CMB(T)-L15-Length	/	JAM-C10-L7
		MS5G-130STE-TL10025B-22P6-S01			CP(T)-SC(T)-B-Length	CM(T)-L15-Length	/	JAM-C10-L4
1.5	Medium inertia	MS5G-130STE-CS07220B-41P5-S01	DS5E/K/F-41P5-PTA	Three phase 380V	CP(T)-SC(T)-M-Length	CM(T)-L15-Length	/	JAM-C10-L4
		MS5G-130STE-CM07220B-41P5-S01			CP(T)-SC(T)-B-Length	CM(T)-L15-Length	/	JAM-C10-L4
		MS5G-130STE-CS07220BZ-41P5-S01			CP(T)-SC(T)-M-Length	CMB(T)-L15-Length	/	JAM-C10-L7
		MS5G-130STE-CM07220BZ-41P5-S01			CP(T)-SC(T)-B-Length	CMB(T)-L15-Length	/	JAM-C10-L7
		MS5G-130STE-TL07220B-41P5-S01			CP(T)-SC(T)-M-Length	CM(T)-L15-Length	/	JAM-C10-L4
		MS5G-130STE-TL07220B-41P5-S01			CP(T)-SC(T)-B-Length	CMB(T)-L15-Length	/	JAM-C10-L7
		MS5G-130STE-CS11515B-41P8-S01			CP(T)-SC(T)-M-Length	CM(T)-L15-Length	/	JAM-C10-L4
1.8	Medium inertia	MS5G-130STE-CS11515B-41P8-S01	DS5E/K/F-41P5-PTA	Three phase 380V	CP(T)-SC(T)-B-Length	CM(T)-L15-Length	/	JAM-C10-L4
		MS5G-130STE-CS11515BZ-41P8-S01			CP(T)-SC			

Model selection list

| MS5/MS series

DS5L1,5C1,5N1,5K1								
Power[kW]	Inertia level	Motor model	Matched driver	Voltage level	Encoder cable	Power cable	Cable accessories package	
1.5	Medium inertia	MS5G-130STE-CS07220B-41P5-S01	DS5L1/C1-41P5-PTA	Single/three phase 380V	CP(T)-SC(T)-M-Length	CM(T)-L15B-Length	JAM-C10-L4	
		MS5G-130STE-CM07220B-41P5-S01			CP(T)-SC(T)-B-Length	CM(T)-L15B-Length	JAM-C10-L4	
		MS5G-130STE-CS07220BZ-41P5-S01			CP(T)-SC(T)-M-Length	CMB(T)-L15B-Length	JAM-C10-L7	
		MS5G-130STE-CM07220BZ-41P5-S01			CP(T)-SC(T)-B-Length	CMB(T)-L15B-Length	JAM-C10-L7	
		MS5G-130STE-TL07220B-41P5-S01			CP(T)-SC(T)-B-Length	CMB(T)-L15B-Length	JAM-C10-L7	
		MS5G-130STE-TL07220BZ-41P5-S01			CP(T)-SC(T)-M-Length	CMB(T)-L15B-Length	JAM-C10-L7	
		MS5G-130STE-CS11515B-41P8-S01			CP(T)-SC(T)-B-Length	CM(T)-L15B-Length	JAM-C10-L4	
		MS5G-130STE-CM11515B-41P8-S01			CP(T)-SC(T)-M-Length	CMB(T)-L15B-Length	JAM-C10-L7	
		MS5G-130STE-CS11515BZ-41P8-S01			CP(T)-SC(T)-B-Length	CMB(T)-L15B-Length	JAM-C10-L7	
		MS5G-130STE-CM11515BZ-41P8-S01			CP(T)-SC(T)-B-Length	CM(T)-L15B-Length	JAM-C10-L4	
1.8	Medium inertia	MS5G-130STE-TL11515B-41P8-S01	DS5L1/C1-42P3-PTA		CP(T)-SC(T)-B-Length	CMB(T)-L15B-Length	JAM-C10-L7	
		MS5G-130STE-CS11515B-41P8-S01			CP(T)-SC(T)-B-Length	CM(T)-L15B-Length	JAM-C10-L4	
		MS5G-130STE-CM11515BZ-41P8-S01			CP(T)-SC(T)-M-Length	CMB(T)-L15B-Length	JAM-C10-L7	
		MS5G-130STE-CM11515BZ-41P8-S01			CP(T)-SC(T)-B-Length	CMB(T)-L15B-Length	JAM-C10-L7	
		MS5G-130STE-TL11515B-41P8-S01			CP(T)-SC(T)-B-Length	CM(T)-L15B-Length	JAM-C10-L4	
		MS5G-130STE-TL11515BZ-41P8-S01			CP(T)-SC(T)-B-Length	CMB(T)-L15B-Length	JAM-C10-L7	
		MS5G-130ST-CS14615B-42P3-S01			CP(T)-SC(T)-M-Length	CM(T)-L15B-Length	JAM-C10-L4	
		MS5G-130ST-CM14615B-42P3-S01			CP(T)-SC(T)-B-Length	CM(T)-L15B-Length	JAM-C10-L4	
		MS5G-130ST-CS14615BZ-42P3-S01			CP(T)-SC(T)-M-Length	CMB(T)-L15B-Length	JAM-C10-L7	
		MS5G-130ST-CM14615BZ-42P3-S01			CP(T)-SC(T)-B-Length	CMB(T)-L15B-Length	JAM-C10-L7	
2.3	Medium inertia	MS5G-130ST-TL14615B-42P3-S01	DS5L1/C1-42P3-PTA		CP(T)-SC(T)-B-Length	CM(T)-L15B-Length	JAM-C10-L4	
		MS5G-130ST-TL14615BZ-42P3-S01			CP(T)-SC(T)-B-Length	CMB(T)-L15B-Length	JAM-C10-L7	
		MS5G-130ST-TL14615B-42P3-S01			CP(T)-SC(T)-B-Length	CM(T)-L15B-Length	JAM-C10-L4	
		MS5G-130ST-TL14615BZ-42P3-S01			CP(T)-SC(T)-B-Length	CMB(T)-L15B-Length	JAM-C10-L7	
		MS5G-130ST-TL14615B-42P3-S01			CP(T)-SC(T)-B-Length	CM(T)-L15B-Length	JAM-C10-L4	
3	/	MS-130ST-TL10030B(Z)-43P0	DS5L1/C1-43P0-PTA	/	CP(T)-SL-B-Length	CM(T)-L15B-Length	JAM-L15-L4	
11	/	MS-220STE-TL70015B□-41P0-XJ	DS5C1/K1-41P0-PTA		CPT-ZDL-B-Length	CM(T)-D60-Length		
15	/	MS-220STE-TL96015B□-41P0-XJ	DS5C1/K1-41P0-PTA		CPT-ZDL-B-Length	CM(T)-D60-Length		
22	Medium inertia	MS5G-220STE-TL140015B-422P0-S01	DS5C1-422P0-PTA		CPT-ZDL-B-Length	CM-D100-Length		

Product accessories

| Quick connector

- Provide convenient wiring terminals
- Used by 100W ~ 15kW drivers
- Suitable for DS5F, DS5K series 44 bits terminal: DTHDB44M-BK10



| X-NET module

- Bus module: JA-NE-L
- Twisted pair shielded cable for bus module: JC-EA-Length



| Battery box

- Battery box model: CP-B-BATT
- The battery cannot be charged



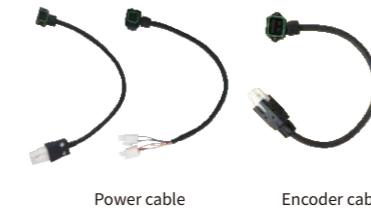
| JC-CB bus wiring cable

- Special communication cable for EtherCAT motion bus
- Encoder cable
- CAT5e 4-core Ethernet cable



| B3 to AMP conversion cable

- Power cable
- Encoder cable



| DB9 side cable

- Cable specification is 1.5m
- Connect to the PC to control the servo



| Power cable

- Cable specification: 2/3/5/8/10/12/16/20/25/30m
- The length can be customized
- Cable connectors can be purchased optionally (excluding cables)



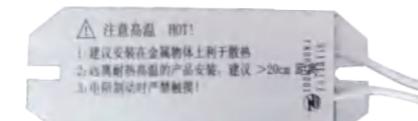
| Encoder cable

- Cable specification: 2/3/5/8/10/12/16/20/25/30m
- The length can be customized
- Cable connectors can be purchased optionally (excluding cables)



| Regenerative resistor

- Release bus capacitor regeneration voltage
- Refer to the selection table of regenerative resistance in the user manual for specific selection



| Differential module

- Realize the conversion of collector signal and differential signal
- Differential to differential isolation circuit board: JS-ID-AB
- Differential to collector circuit board: JS-IDC-AB(AB phase), JS-IDC-ABZ(ABZ phase)



Low voltage servo system

Light and compact | Easy to install and debug

Xinje's low-voltage servo system, which can be used for AGV/RGV trolley, adopts low-voltage servo motor for its motion axis, which can provide different motor power options of 0.1kW~1.5kW according to the load size, so as to realize rapid response, high stability and high-precision control in the whole motion control process. Through the cooperative movement between motors, it can realize accurate walking and reversing, and provide a solid and reliable solution for the realization of intelligent logistics.



DF3E driver

Interface: pulse, RS232, RJ45

Input output: 4 inputs 3 outputs (non-brake model), 3 inputs 3 outputs (brake model)

Control mode: position control, speed control, torque control, bus control



MF3S series motor

Power: 0.2~1.5kW

Using occasion: light load high speed positioning



Note: *the product with is under development, please look forward to it!

Appearance innovation

The new appearance design, rich interfaces, small volume and light body meet the equipment installation requirements of AGV industry

Powerful function

Support a variety of control modes, with 24V brake output, alarm synchronous braking and other functions to meet customer requirements

Diverse communication

Support EtherCAT*, CANopen, MODBUS and other communication protocols to meet different communication function requirements of users

Convenient debugging

The gain adjustment only needs three steps, which greatly reduces the equipment debugging time and greatly improves the on-site debugging efficiency

Overload capacity

The whole series is equipped with 3 times overload as standard, and the start and stop in heavy load situations are faster and more stable

Accuracy assurance

The motor is equipped with self-developed 17-bit magnetic encoder, and the positioning accuracy is greatly improved

Excellent performance

The insulation level reaches the highest level F in the industry, which fully ensures the stability of field application

Protective ability

he protection grade reaches IP66, which can easily deal with the occasions with harsh environment such as oil, water vapor and dust, so as to ensure the reliability of the motor

Naming rule

| Low voltage servo driver

DF 3 E - 04 10 Z - A

① Name

Display	Product name
DF	Low voltage servo driver

② Series no.

Display	Specification
3	Series no.

③ Control function

Display	Function
E	Pulse, RS485, CANopen
C	EtherCAT <small>Under development</small>

④ Driver power

Display	Rated output power
01	100W
02	200W
04	400W
07	750W
15	1.5kW

⑤ Rated current

Display	Rated output current
03	3A
06	6A
10	10A
20	20A
40	40A

⑥ Driver function

Display	Driver function
Z	Servo can drive the brake directly
Vacant	Cannot drive the brake directly

⑦ Driver appearance

Display	Appearance type
A	Small size

| Low voltage servo motor

MF3S - 60 C S 30 B Z □ - 5 04

① Type

Display	Inertia
MF3S	Low inertia
MF3G	Medium inertia
MF3H	High inertia

② Base no.

Display	Base no.
40	40flange
60	60flange
80	80flange
130	130flange

③ Encoder type

Display	Type
C	Magnetic encoder
T	Photoelectric encoder
L	Multi-turn 23-bit

④ Encoder precision

Display	Specification
S	Single turn 17-bit
M	Multi-turn 17-bit
L	Multi-turn 23-bit

⑤ Rated speed

Display	Rated speed
15	1500rpm
20	2000rpm
30	3000rpm

⑥ Motor shaft specification

Display	Shaft key, oil seal
A	With key, no oil seal
B	With key, with oil seal
C	No key, no oil seal
D	No key, with oil seal

⑦ Power loss brake

Display	Specification
Z	With brake
Vacant	Without brake

⑧ Motor connector type

Display	Plug type
1	AMP plug
2	Aviation plug

⑨ Voltage level

Display	Voltage
2	24V
5	48V
6	60V

⑩ Rated power

Display	Power
01	100W
02	200W
04	400W
07	750W
15	1.5kW

| Low voltage servo cable

CP - SP - M - Length

① Cable type

Symbol	Cable specification
CP	Normal encoder cable
CPT	High flexibility encoder cable

② Plug type

Symbol	Plug specification
SP	9-core AMP plug
SV	7-core waterproof small aviation plug
SC	10-core small aviation plug

③ Battery box type

Symbol	Battery box type
M	Without battery box
BM	With battery box
B	With battery box

④ Cable length

Symbol	Length (m)
02	2
03	3
05	5

Naming rule

| Low voltage servo driver

CM - P 15 A- Length

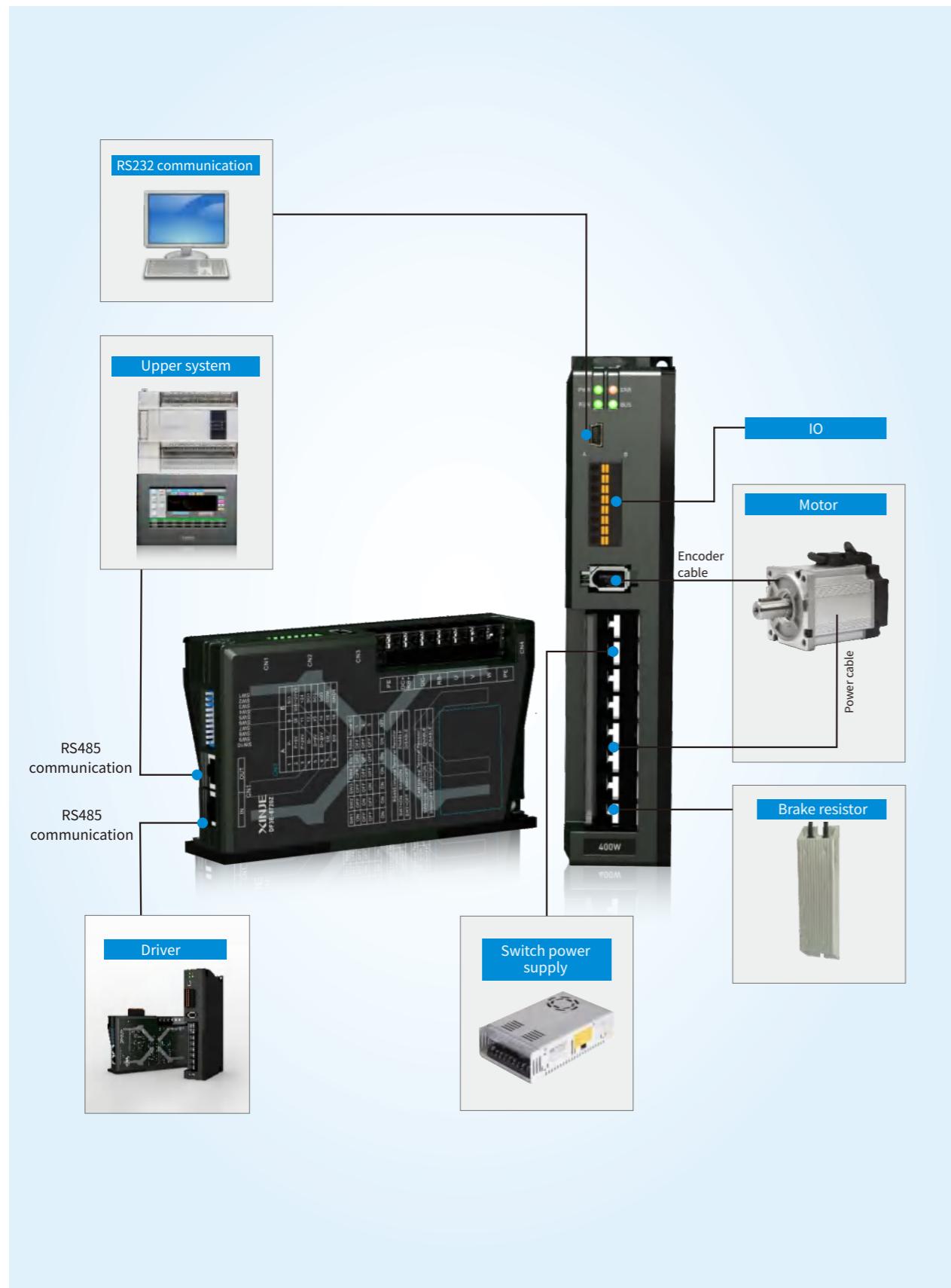
① Cable type

Symbol	Cable specification
CM	Normal power cable
CMT	High flexibility power cable
CMB	Normal brake power cable
CMBT	High flexibility brake power cable

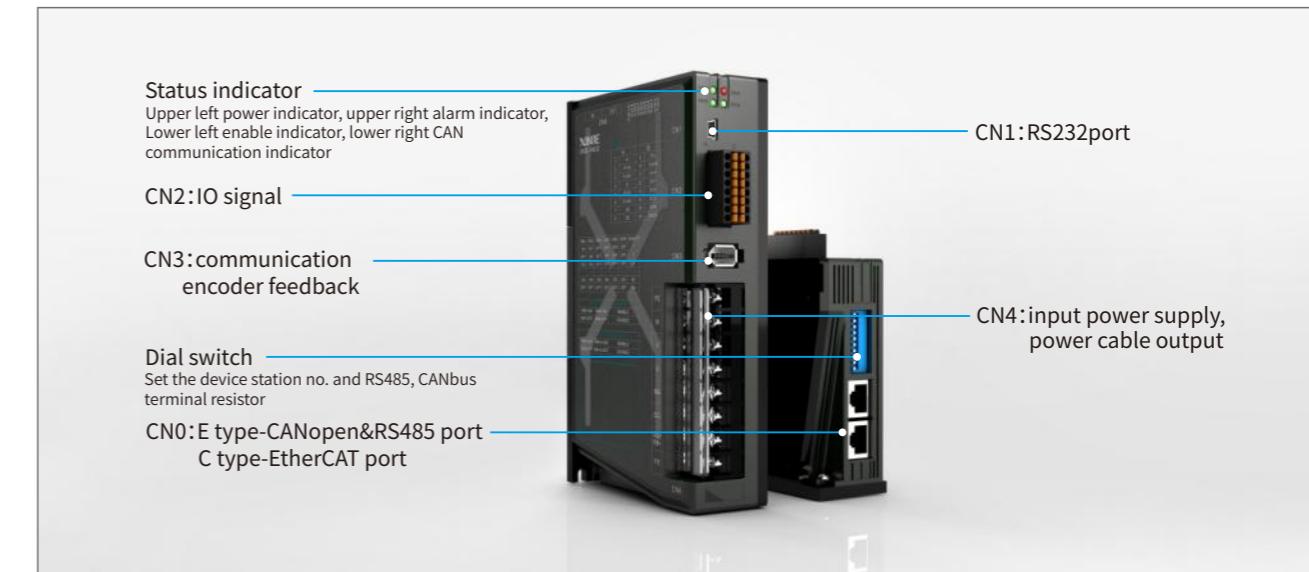
② Plug type

Symbol	Plug specification
P	4-core AMP plug
V	4-core waterproof small aviation plug
20	2
XL</	

Peripheral wiring diagram



Terminal definition



CN0 port (E type)

Pin	Definition
1	CAN_H
2	CAN_L
3	CGND
4	485+
5	485-
6	GND

CN1 port

Pin	Definition	Explanation
1	TXD	RS232 send
2	RXD	RS232 receive
3	GND	RS232 signal ground

CN2 port

Pin	Definition
1	P-
2	P+5V
3	P+24V
4	D-
5	D+5V
6	D+24V
7	SI1
8	SI2
9	SI3
10	SI4/+24VS
11	+24V
12	SO1
13	SO2
14	SO3
15	COM
16	-/GNDS

* Note: the terminal functions of CN2 are divided into two types. One is non-brake model. The function of terminal 10 is SI4 and terminal 16 is empty. The other is the brake model. The function of terminal 10 is +24VS and terminal 16 is GNDS, which can be used in braking control.

CN3 port (communication encoder feedback)

Pin	Definition
1	PE
2	W
3	V
4	U
5	RB-
6	DC-
7	DC+/RB+
8	PE

CN4 port (Main circuit terminal)

Pin	Definition
1	5V
2	GND
3	/
4	/
5	485+
6	485-
7	DC+/RB+
8	PE

* Note: 1.RB+, RB- connect to external resistor.
2.DF3E-1540, DF3E-0206, DF3E-0410-A have no PE terminal.

Set the communication station number of low-voltage servo through the dial switch SW1~SW6

Station no.	SW1	SW2	SW3	SW4	SW5	SW6
1	ON	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF	OFF
...
63	ON	ON	ON	ON	ON	ON
64	OFF	OFF	OFF	OFF	OFF	OFF

SW7,SW8 are used to control whether the internal terminal resistance of RS485 is turned on

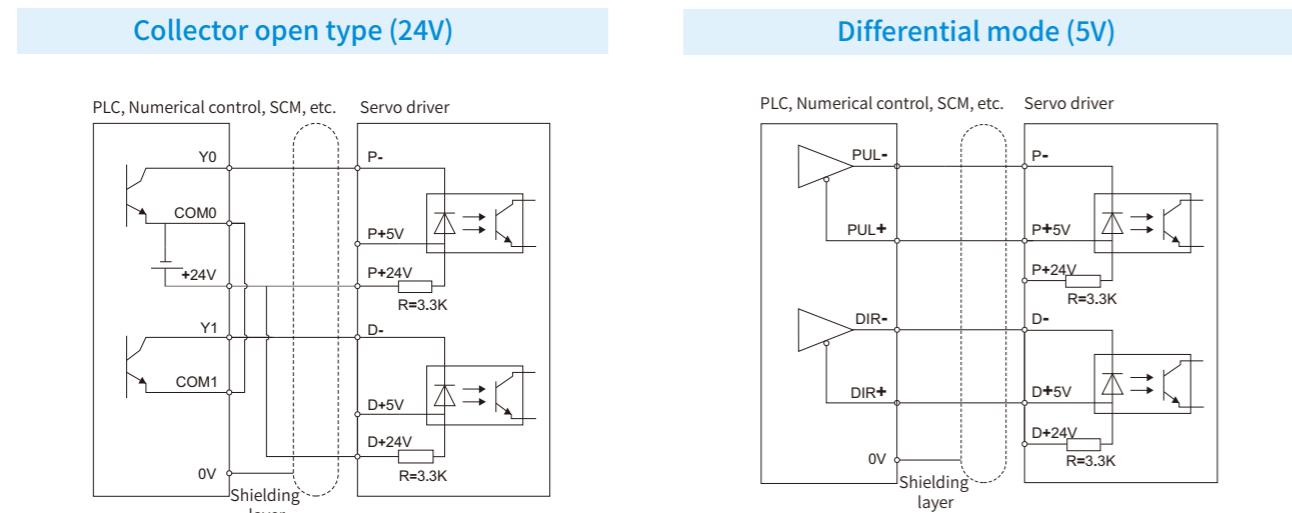
RS485 internal terminal resistance	
SW7=ON	SW8=ON
SW7=OFF	SW8=OFF

SW9,SW10 are used to control whether the internal terminal resistance of CANbus is turned on

CAN internal terminal resistance	
SW9=ON	SW10=ON
SW9=OFF	SW10=OFF

Typical connection diagram

P+ D, CW, CCW, AB phase interface circuit wiring diagram:



When the upper device adopts open collector output, this connection method is adopted. Please note that P+ 5V and D+ 5V are suspended.

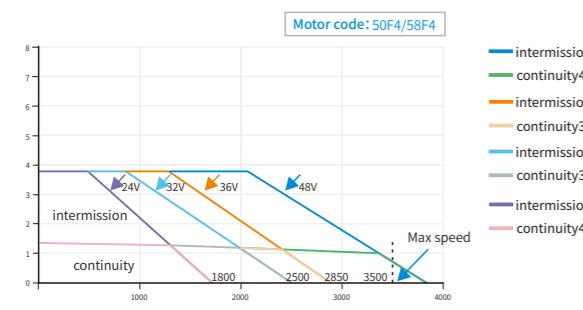
* Note: ① The power supply range of P-/P+24V, D-/D+24V is 18V~25V. If it is lower than 18V, the pulse and direction maybe abnormal.
② For anti-interference, be sure to use twisted pair shielded cable.

When the upper device adopts 5V differential output, this connection method is adopted. Please note that P+ 24V and D+ 24V are suspended.

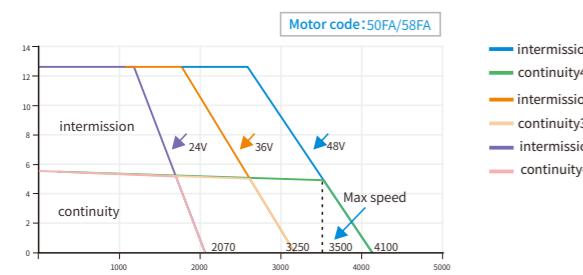
* Note: ① The power supply range of P-/P+5V, D-/D+5V is 3.3V~5V. If it is lower than 3.3V, the pulse and direction maybe abnormal.
② For anti-interference, be sure to use twisted pair shielded cable.
③ The servo pulse input port is turned on at 10mA.

Torque frequency characteristic curve

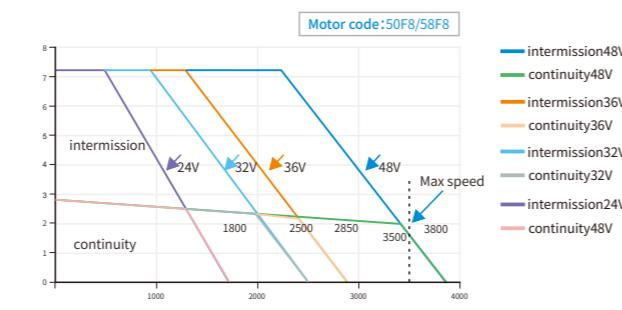
MF3S-60CS/CM30B1-504
MF3S-60CS/CM30BZ1-504



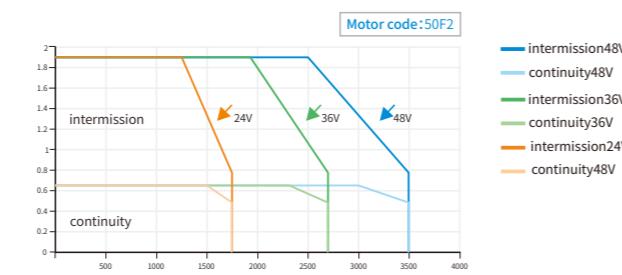
MF3S-130CS/CM30B2-515
MF3S-130CS/CM30BZ2-515



MF3S-80CS/CMB2-507
MF3S-80CS/CMBZ2-507



MF3H-60CS(CM)30B1-502



Typical connection diagram (Unit: mm)

MF3H-60CS(CM)30B1-504



Specification table

Driver specification

Item	DF3E-0103 Under development	DF3E-0206 Under development	DF3E-0410-(A)	DF3E-0720	DF3E-1540
Power	100W	200W	400W	750W	1500W
Input power supply			DC24V-70V		
Rated output current	Max continuous output current(Arms)	3	6	10	20
	Peak current(Peak)	10	15	30	60
Encoder feedback			17bit communication encoder		
Communication mode			RS232, RS485, CANopen		
Using environment	Using environment	Operation: -10°C~40°C (no condensation); storage: -20°C~60°C (no condensation)			
Ambient temperature	Ambient temperature	Operation/storage: below 90%RH (no condensation)			
Vibration and impact resistance	Vibration and impact resistance	4.9m/s ² / 19.6m/s ²			
Installation location	Installation location	Places without dust, dry, vibration and corrosive substances			
Installation method	Installation method	Vertical or horizontal installation			
Energy consumption braking	Energy consumption braking	Can connect external brake resistor			
Protection function	Protection function	Overspeed, undervoltage, overheating, overcurrent, overload, overspeed, excessive position deviation, output short circuit, encoder abnormality, regeneration abnormality protection, overtravel protection, oscillation protection, operation disconnection protection, etc			
Load change rate	Load change rate	0~100% load: below ±0.1% (at rated speed)			
Voltage change rate	Voltage change rate	Rated voltage ±10%: 0.01% (at rated speed)			
Temperature change rate	Temperature change rate	1008. 20±25°C: below ±0.1% (at rated speed)			
IO signal	Digital input specification	4 channels digital input (3 channels digital input for brake models) Servo enable, alarm clear, no forward rotation, no reverse rotation, torque limit selection, internal speed selection, gear ratio switching, mode switching, pulse input prohibition, position deviation clear, internal position step change signal	3 channels digital output		
	Digital output specification	Positioning completed, servo ready, alarm output, speed arrival, rotation detection, torque limit output, same speed detection, brake release output			
	Pulse direction	Support P+D, AB phase, CW/CCW			

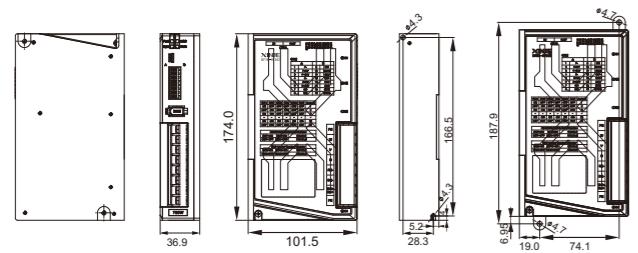
Motor specification

Motor model MF	Voltage level		DC48V				
	3H-60		3S-60		3S-80		3S-130
	CS/CM30B1	504	CS/CM30B(Z)1	504	CS/CM30B(Z)2	507	130CS/CM30B(Z)2
Rated power (W)	200	400	400	400	750	1500	
Rated current (A)	5	10	10	10	19.2	40	
Rated speed (rpm)	3000	3000	3000	3000	3000	3000	
Max speed (rpm)	3500	3500	3500	3500	3500	3500	
Rated torque (N.m)	0.64	1.27	1.27	1.27	2.39	4.8	
Max torque (N.m)	1.92	3.81	3.81	3.81	7.17	14.4	
Rotor inertia (10 ⁻⁷ kg.m ²)	274	536	358.4 (374.9)	358.4 (374.9)	980 (1030)	15018 (15275)	
Static friction torque (N.m)	≥1.3	≥1.3	≥1.3	≥1.3	≥2.5	≥15	
Bearing axial force (N)	74	74	74	74	147	300	
Bearing radial force (N)	245	245	245	245	392	600	
Inertia type	High inertia		Low inertia				
Pole-pair number					5		
Encoder bit					17		
Encoder type					Magnetism		
Cooling method					Natural cooling		
Motor insulation level					CLASSF (155°C)		
Protection level					IP66		
Using environment	Ambient temperature				-15°C~+40°C (no freezing)		
	Ambient humidity				Relative humidity < 90% (no condensation)		

Installation dimension diagram (unit: mm)

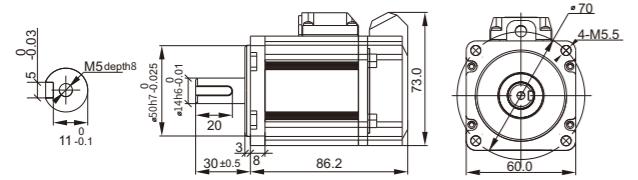
| Low voltage servo driver

DF3E-0720(Z)/ DF3E-0410(Z)

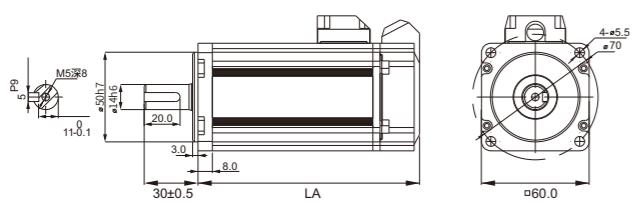


| Low voltage servo motor

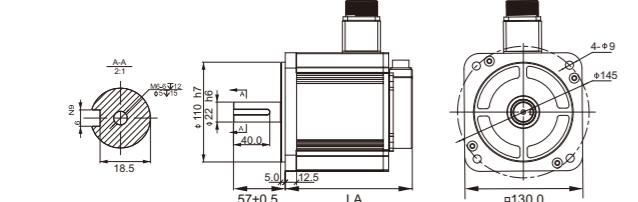
Motor model	Inertia type
MF3H-60CS/CM30B1-502	High inertia



Motor model	LA		Inertia type
	Normal	With brake	
MF3S-60CS/CM30B(Z)-1-504	123.5	155.5	Low inertia



Motor model	LA		Inertia type
	Normal	With brake	
MF3S-130CS/CM30B(Z)2-515	140.0	168.0	Low inertia



*Note : after the revision of 750W low-voltage servo motor, the body length is reduced.

Two in one servo system

More accurate positioning Faster response
Support gantry synchronization

| DM5F series

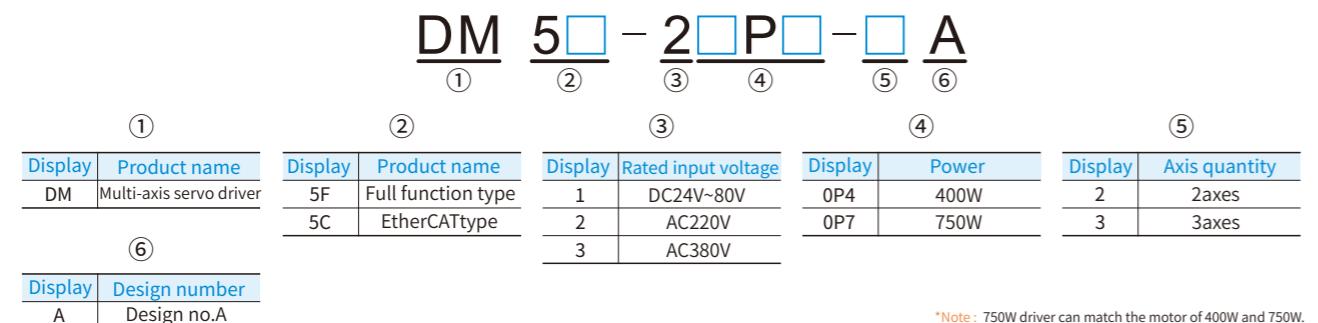
Flat appearance structure design,
convenient wiring and saving installation space
Support gantry synchronization and realize double-axis accurate
synchronization
Support Modbus RTU, EtherCAT please look forward tool and CANopen
please look forward tool
communication protocols
More accurate positioning and faster response
Support position, speed, torque mode, multi-mode seamless
switching

Power::0.1kW~1.0kW
Interface:pulse,RS232,RS485
Control mode: position control, speed control,
torque control



* Note: Refer to the subsequent list for the models that have been put into operation. Some models have not been put into operation. Please look forward to it.

Naming rule



***Note:** 750W driver can match the motor of 400W and 750W.

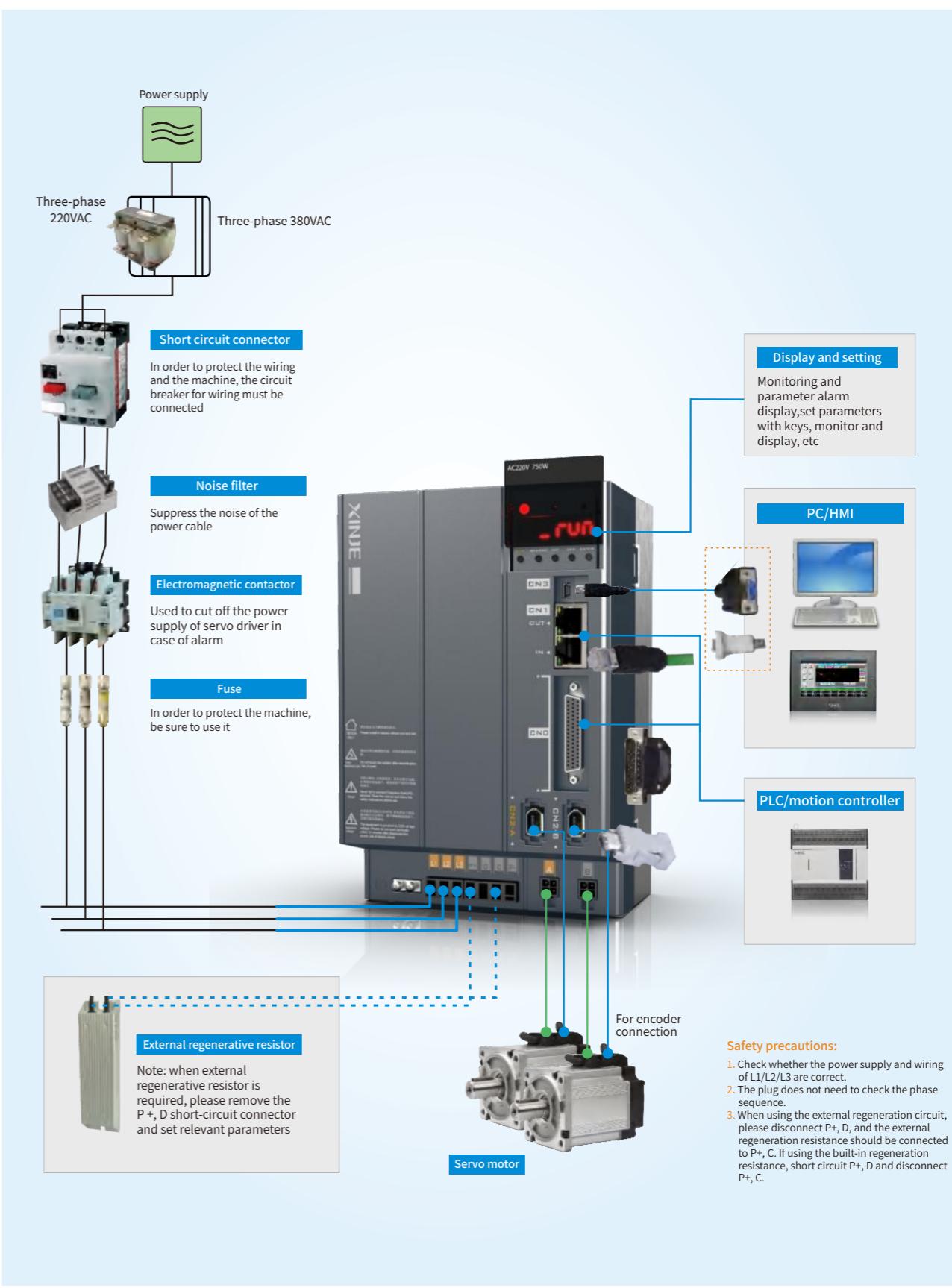
Driver model list

Series	series AC220V	Rated power(W)	Diquantity	Doquantity
DM5 Series AC220V	DM5F-20P4-2A	400	6	6
	DM5F-20P7-2A	750	6	6

Driver specification

Item		DM5F series general model
Basic specification Using environment	Power range	0.1kW~1kW
	Input power supply	Single phase/three-phase 200~240V, 50~60Hz
	Encoder feedback	17bit/23bit communication encoder
	Control mode	Three-phase full wave rectifier IPM, PWM control, sine wave current drive mode
	Ambient temperature	Operation: -10°C~40°C (no condensation)/storage: -20°C~60°C (no condensation)
	Ambient humidity	Operation/storage: below 90% (no condensation)
	Vibration and impact resistance	4.9m/s ² / 19.6m/s ²
	Installation place	Places without dust, dry, vibration and corrosive substances
	Installation mode	Vertical or horizontal installation
	Protection function	Oversupply, undervoltage, overheating, overcurrent, overload, overspeed, analog input abnormality, excessive position deviation, output short circuit, encoder abnormality, regeneration abnormality protection, overtravel protection, oscillation protection, phase loss protection, etc
Function	Dynamic brake	None
	Communication	RS232: standardModbusRTUprotocol RS485: standardModbusRTUprotocol
	Brake resistor	Built-in brake resistor, can connect external brake resistor
	Display and operate	5 digits LED indicator light, power indicator, 2 operation indicators and 5 keys
	Output state	ABZ differential feedback output
Position output	Frequency division function	Yes
	Collector Z phase output	Yes
	Digital input	6 channels digital input Servo enable, alarm clear, no forward rotation, no reverse rotation, torque limit selection, internal speed selection, gear ratio switching, mode switching, pulse input prohibition, position deviation clear, internal position step change signal
IO signal	Digital output	6 channels digital input Positioning completed, servo ready, alarm output, speed arrival, rotation detection, torque limit output, same speed detection, brake release output and frequency division output
	Pulse direction control	Support P+D, AB phase, CW/CCW
Position control	Max pulse frequency	Collector open: 200kpps, differential input 500kpps
	Pulse command mode	3.3~5V/18~24V pulse+direction, AB phase pulse, CW/CCW signal
	Control mode	External pulse, internal position
	Feedforward compensation	0~100% (set the resolution to 1%)
	Positioning completion width	0~65535 command unit (set the resolution to 1 command unit)
Speed control mode	Electronic gear ratio	1/10000≤B/A≤10000
	Control mode	Internal 3-segment speed, external speed mode
	Command smooth mode	Low pass filter, smoothing filter
	Analog input	None
	Torque limit	Internal parameter
Speed control mode	Speed change rate	When the external load rated change is 0~100% of load: below ±0.01% (at rated speed)
		Rated voltage ±10%; ±0.01% (at rated speed)
		Ambient temperature 20±25°C: below ±0.01% (at rated speed)
	Control mode	Internal torque
Speed control mode	Analog input	None
	Speed limit	Internal parameter

Peripheral wiring diagram



Peripheral wiring diagram

| Terminal definition

① CN3 port (RS232)

Pin	Name	Explanation
1	TXD	RS232 send
2	RXD	RS232 receive
3	GND	RS232 signal ground

② Main circuit terminals

Terminal	Function	Explanation
L1, L2, L3	Main circuit power supply input terminal	Single/three phase AC 200~240V, 50/60Hz
P+, D, C	Use built-in regenerative resistor	Short circuit P+ and D, disconnect P+ and C
P+, D, C	Use external regenerative resistor	Connect the regeneration resistance to P+ and C, remove the short connectors of P+ and D, and set P0-25=power value, P0-26=resistor value
P+, P-	Bus terminal	The real-time voltage of the bus can be measured, please pay attention

③ CN0 port

Pin	Name	Explanation	Pin	Name	Explanation
1	P1-	Axis 1 pulse -	23	SI5	Input terminal
2	P1+5	Axis 1 pulse +5V	24	SI6	High speed input terminal
3	P1+24	Axis 1 pulse +24V	25	+24V	Common terminal of input
4	D1-	Axis 1 direction -	26	SO1-2	Axis 2 output terminal (500mA)
5	D1+5	Axis 1 direction +5V	27	SO2-2	Axis 2 output terminal (50mA)
6	D1+24	Axis 1 direction +24V	28	SO3-2	Axis 2 output terminal (50mA)
7	SI1	Input terminal	29	COM	Common terminal of output
8	SI2	Input terminal	30	NC	Vacant terminal
9	SI3	High speed input terminal	31	OA1+	Axis 1 encoder frequency division output OA+
10	+24V	Common terminal of input	32	OA1-	Axis 1 encoder frequency division output OA-
11	SO1-1	Axis 1 output terminal (500mA)	33	OB1+	Axis 1 encoder frequency division output OB+
12	SO2-1	Axis 1 output terminal (50mA)	34	OB1-	Axis 1 encoder frequency division output OB-
13	SO3-1	Axis 1 output terminal (50mA)	35	OZ1+	Axis 1 encoder frequency division output OZ1+
14	COM	Common terminal of output	36	OZ1-	Axis 1 encoder frequency division output OZ1-
15	NC	Vacant terminal	37	GND	Frequency division output ground
16	P2-	Axis 2 pulse -	38	OA2+	Axis 2 encoder frequency division output OA+
17	P2+5	Axis 2 pulse +5V	39	OA2-	Axis 2 encoder frequency division output OA-
18	P2+24	Axis 2 pulse +24V	40	OB2+	Axis 2 encoder frequency division output OB+
19	D2-	Axis 2 direction -	41	OB2-	Axis 2 encoder frequency division output OB-
20	D2+5	Axis 2 direction +5V	42	OZ2+	Axis 2 encoder frequency division output OZ+
21	D2+24	Axis 2 direction +24V	43	OZ2-	Axis 2 encoder frequency division output OZ-
22	SI4	Input terminal	44	GND	Frequency division output ground

④ CN2 port

Pin	Name
1	5V
2	GND
3	/
4	/
5	485-A
6	485-B

⑤ CN1 port (from down to up)

Pin	Name	Pin	Name
1	/	7	/
2	/	8	/
3	/		
4	485-A		
5	485-B		
6	485-GND		

⑥ Motor power terminals

Pin	Name
1	V
2	U
3	W
4	PE

Driver motor matching list

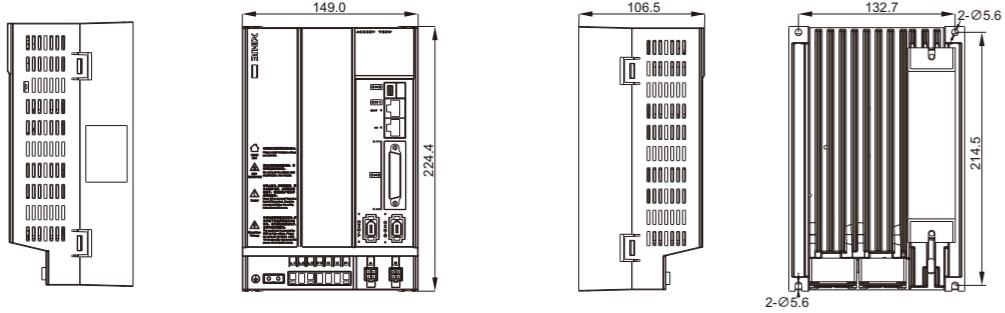
| DM5F matched MS6 motor

Power(kW)	Inertia level	Motor model	Matched driver	Voltage level	Encoder cable	Power cable	Brake cable	Cable accessories package
0.2	High inertia	MS6H-60CS30B1-20P2	DM5F-20P4-2A	AC 220V	CP(T)-SP-Length	CM(T)-PP07-M-Length	/	JAM-P9-P4-P4
		MS6H-60CM30B1-20P2			CP(T)-SP-BM-Length	CM(T)-PP07-M-Length	/	JAM-P9-P4-P4
		MS6H-60CS30B2-20P2			CP(T)-SP-M-Length	CM(T)-PP07-M-Length	CB(T)-P03-Length	JAM-P9-P4-P4-P2
		MS6H-60CM30B2-20P2			CP(T)-SP-BM-Length	CM(T)-PP07-M-Length	CB(T)-P03-Length	JAM-P9-P4-P4-P2
0.4	Low inertia	MS6S-60CS30B1-20P4	DM5F-20P4/20P7-2A	AC 220V	CP(T)-SP-M-Length	CM(T)-PP07-M-Length	/	JAM-P9-P4-P4
		MS6S-60CM30B1-20P4			CP(T)-SP-BM-Length	CM(T)-PP07-M-Length	/	JAM-P9-P4-P4
		MS6S-60CS30B2-20P4			CP(T)-SP-M-Length	CM(T)-PP07-M-Length	CB(T)-P03-Length	JAM-P9-P4-P4-P2
		MS6S-60CM30B2-20P4			CP(T)-SP-BM-Length	CM(T)-PP07-M-Length	CB(T)-P03-Length	JAM-P9-P4-P4-P2
0.75	High inertia	MS6S-80CS20B1-20P7	DM5F-20P7-2A	AC 220V	CP(T)-SP-M-Length	CM(T)-PP07-M-Length	/	JAM-P9-P4-P4
		MS6S-80CM20B1-20P7			CP(T)-SP-BM-Length	CM(T)-PP07-M-Length	CB(T)-P03-Length	JAM-P9-P4-P4-P2
		MS6S-80CS20B2-20P7			CP(T)-SP-M-Length	CM(T)-PP07-M-Length	CB(T)-P03-Length	JAM-P9-P4-P4-P2
		MS6S-80CM20B2-20P7			CP(T)-SP-BM-Length	CM(T)-PP07-M-Length	CB(T)-P03-Length	JAM-P9-P4-P4-P2
0.4	Low inertia	MS6S-80CS20B1-20P7	DM5F-20P4/20P7-2A	AC 220V	CP(T)-SP-M-Length	CM(T)-PP07-M-Length	/	JAM-V7-V4-P4
		MS6S-80CM20B1-20P7			CP(T)-SP-BM-Length	CM(T)-PP07-M-Length	/	JAM-V7-V4-P4
		MS6S-80CS20B2-20P4			/	/	/	JAM-V7-V6-P4
		MS6S-80CM20B2-20P4			CP(T)-SP-M-Length	CM(T)-PV07-M-Length	/	JAM-V7-V4-P4
0.75	High inertia	MS6H-60CS30B2-20P4	DM5F-20P7-2A	AC 220V	CP(T)-SP-BM-Length	CM(T)-PV07-M-Length	/	JAM-V7-V4-P4
		MS6H-60CM30B2-20P4			CP(T)-SV-M-Length	CM(T)-PV07-M-Length	/	JAM-V7-V4-P4
		MS6H-60CS30B2-20P4			CP(T)-SV-BM-Length	CM(T)-PV07-M-Length	/	JAM-V7-V4-P4
		MS6H-60CM30B2-20P4			/	/	/	JAM-V7-V6-P4
0.4	Low inertia	MS6S-80CS20B2-20P7	DM5F-20P7-2A	AC 220V	CP(T)-SV-M-Length	CM(T)-PV07-M-Length	/	JAM-V7-V4-P4
		MS6S-80CM20B2-20P7			CP(T)-SV-BM-Length	CM(T)-PV07-M-Length	/	JAM-V7-V4-P4
		MS6S-80CS20B2-20P7			/	/	/	JAM-V7-V6-P4
		MS6S-80CM20B2-20P7			CP(T)-SV-M-Length	CM(T)-PV07-M-Length	/	JAM-V7-V4-P4
0.75	High inertia	MS6H-80CS20B2-20P7	DM5F-20P7-2A	AC 220V	CP(T)-SV-M-Length	CM(T)-PV07-M-Length	/	JAM-V7-V4-P4
		MS6H-80CM20B2-20P7			CP(T)-SV-BM-Length	CM(T)-PV07-M-Length	/	JAM-V7-V4-P4
		MS6H-80CS20B2-20P7			/	/	/	JAM-V7-V6-P4
		MS6H-80CM20B2-20P7			CP(T)-SV-M-Length	CM(T)-PV07-M-Length	/	JAM-V7-V4-P4
0.4	Low inertia	MS6H-80CS30B2-20P7	DM5F-20P7-2A	AC 220V	CP(T)-SV-M-Length	CM(T)-PV07-M-Length	/	JAM-V7-V4-P4
		MS6H-80CM30B2-20P7			CP(T)-SV-BM-Length	CM(T)-PV07-M-Length	/	JAM-V7-V4-P4
		MS6H-80CS30B2-20P7			/	/	/	JAM-V7-V6-P4

Two in one servo system

Installation dimension (Unit: mm)

DM5F-20P4-2A、DM5F-20P7-2A



Frequency conversion system

VH6 · VHL · VH5 · VH1