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XINJE

SERVO SYSTEM

DS5 Servo Driver/MS Servo Motor

Product lineup

From pulse type to bus type, from single driver to integrated driver and control machine, it can meet the requirements of all kinds of systems

Driver layer

Pulse type

DS5L

Interface

Pulse | RS232 | SI input 4 channels above 750W | SO output 4 channels above 750W | SI input 3 channels below 750W | SO output 3 channels below 750W

Control mode

Position control | Speed control | Torque control

DS5K

Interface

Pulse | RS232 | RS485 | SO output 4 channels | SI input 5 channels

Control mode

Position control | Speed control | Torque control

Full function type

DS5F

Interface

Pulse | Line driver | Analog input | External displacement sensor | RS232 | SI input 10 channels | SO output 8 channels | RS485

Control mode

Position control | Speed control | Torque control | Full closed loop control | Analog control

Bus type

DS5C EtherCAT

Interface

Pulse | RS232 | SI input 4 channels above 750W | SO output 4 channels above 750W | SI input 3 channels below 750W | SO output 3 channels below 750W

Control mode

Position control | Speed control | Torque control | Bus control

DS5E X-NET

Interface

Pulse | RS232 | RS485 | SI input 4 channels above 750W | SO output 4 channels above 750W | SI input 3 channels below 750W | SO output 3 channels below 750W

Control mode

Position control | Speed control | Torque control | Bus control

Integrated driver and control type

W5E3

Interface

Pulse | RS232 | RS485 | SI input 4 channels | SO output 4 channels | DI input 7 channels | DO output 7 channels

Control mode

Position control | Speed control | Torque control | Bus control

Execution layer

MS6S Low inertia

0.2~2.0KW

Application
Light load, high speed positioning

*

MS6H High Inertia

0.1~7.5KW

Application:
large load, high requirement for stability

*

MS5S Low Inertia

0.1~2.0KW

Application:
light load, high speed positioning

MS5G Middle Inertia

0.85~7.5KW

Application:
general load, high requirement for stability

MS5H High Inertia

0.2~1.0KW

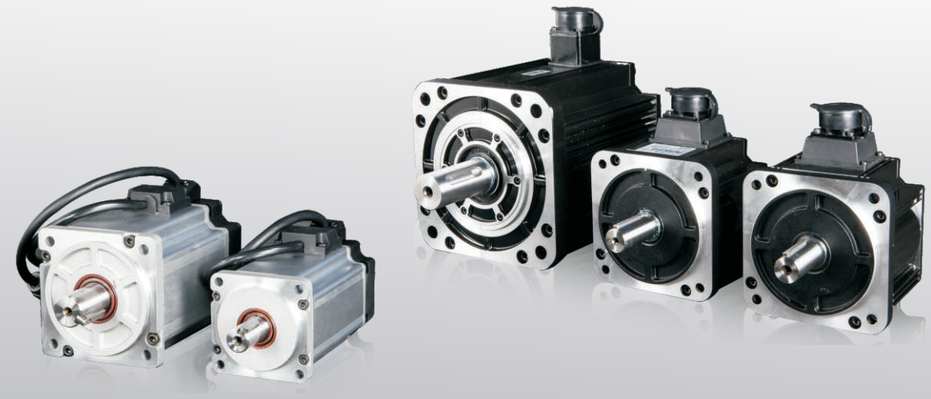
Application:
large load, high requirement for stability

Excellent product performance

NEW

Servo Motor MS5 / MS6

- Smaller size
- More accurate positioning
- Faster speed and greater torque

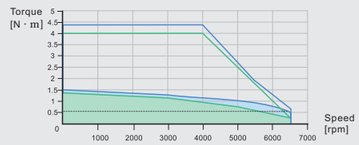


Higher torque output MS6 series

At present, the speed of MS6 series 400W motor can exceed to 6500rpm, and the maximum speed still keeps 60% of the rated output.

60 flange MS5 and MS6 characteristic comparison diagram

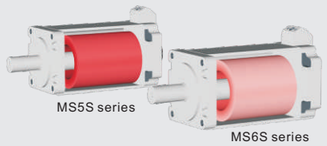
*Note: MS5 is green, MS6 is blue



*Note: under the same specification, when the temperature rise is 70 ℃, the instantaneous working area of MS6 series and MS5 series 400W motors is compared.

Lower temperature rise MS6 series

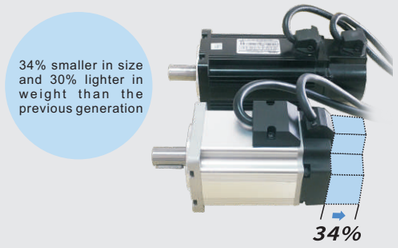
Ms6 series motors can reduce the reactive power loss and the winding temperature rise by 15 ~ 20 ℃ through more reasonable electromagnetic optimization design (compared with MS5 series motors).



Lighter motor

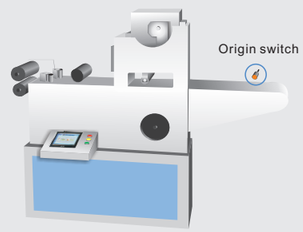
- The motor is 34% shorter than the previous generation.
- With mobile mechanism, the quality is lighter.

*Take MS5S-60STE-CS01330B-S01 as an example



No origin switch

Absolute value encoder, cancel hardware switch signal, reduce the occurrence of fault.



Higher protection level MS6 series

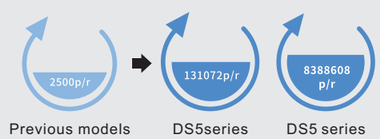
Compared with MS5 series, MS6 series motor further improves the protection level, up to IP66.

Optional for special occasions

- Small power can be equipped with S02 small aviation plug interface.
- Wet, greasy environment is more durable.

Encoder resolution

- 17/23 bits communication type encoder.
- Achieve higher precision position control and stable operation at low speed.
- The magnetic encoder is oil resistant and vibration resistant.



Flexible configuration to meet different needs

- Low inertia, medium inertia and high inertia motors for choice.
- Power loss brake, oil seal are optional.

Excellent product performance

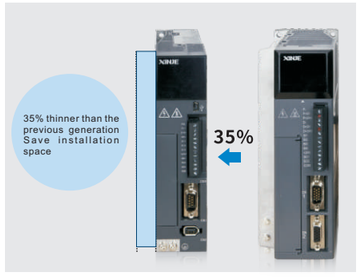
DS5 Series Driver

- Precise synchronization
- High-speed response
- Fast adjustment, Easy to use

Smaller size, saving installation space

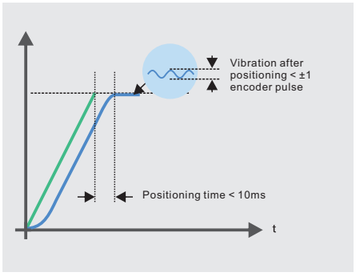
- 35%thinner than the previous generation
- Save installation space

*Note: take DS5E-20P4-PTA as an example.



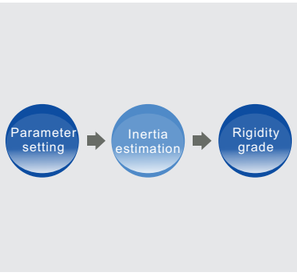
High speed response

- The rigid gain adjustment mode of servo system is self-tuning mode, without complicated adjustment process, which greatly saves debugging time.
- By further gain adjustment, the positioning completion time can be reduced to 0~10ms.



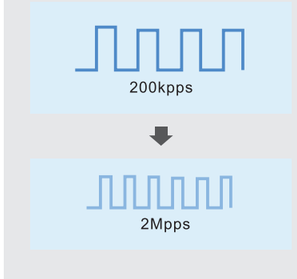
Quick adjustment, shorter positioning time

- Load inertia estimation, search for the optimal gain, positioning time within 20ms.
- Further gain tuning can shorten the positioning completion time to 0~10ms.
- Driver panel offline adjustment.
- 63 rigidity grade covers.



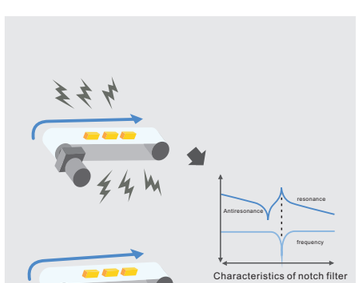
High speed pulse input

- DS5F supports 2Mpps long-line receiving.
- All series of driver supports 200kpps (collector input), DS5F/DS5K series driver supports 500kpps (differential input).



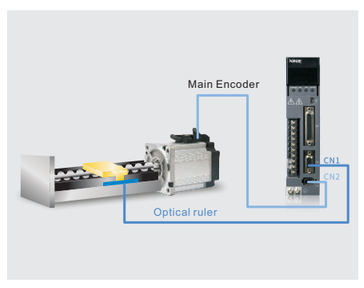
Active/manual vibration suppression

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



Full closed loop input

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



Integrated driving and control

- Built in electronic cam.
- The pulse and RS485 communication wiring are omitted, and the wiring is simple.
- Save installation space of electrical cabinet.

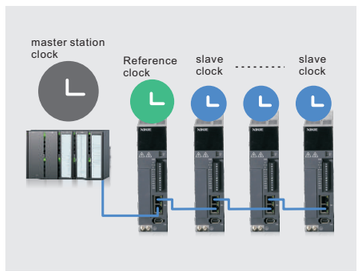
EtherCAT®

EtherCAT bus

Reduce networking cost and
make system construction more flexible

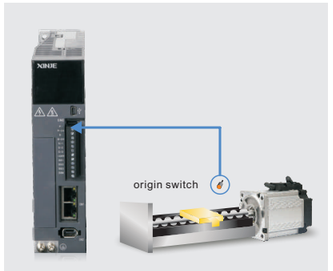
Synchronous clock

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



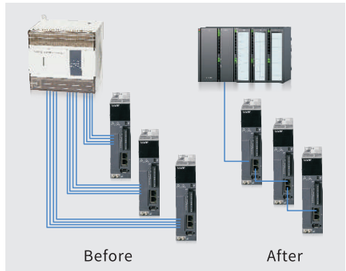
High speed grasping

- Support 2 channels of touch probefunction.
- Response time can up to 1ms.



Network topology to reduce wiring costs

- The standard RJ45 IndustrialEthernet fast interface is adopted to greatly reduce the labor cost and time loss of wiring.



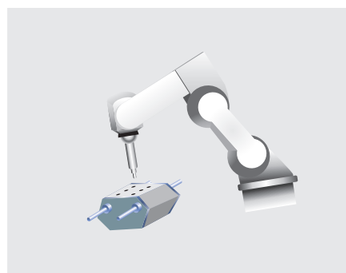
Typical application

CNC machine tool

CNC machine tool is the abbreviation of digital control machine tool. It is a kind of automatic machine tool equipped with program control system. The control system can logically process the program with control code or other symbol instructions, decode it, express it with coded numbers, and input it into the numerical control device through the information carrier. After calculation and processing, the CNC device sends out various control signals to control the action of the machine tool, and automatically processes the parts according to the shape and size required by the drawings. CNC machine tool is a kind of flexible and efficient automatic machine tool, which can solve the problem of complex, precision, small batch and multi variety of parts processing. It represents the development direction of modern machine tool control technology and is a typical mechatronic product.

Mechanical arm

Robot arm is the most widely used automatic mechanical device in the field of robotics. It can be seen in industrial manufacturing, medical treatment, entertainment service, military, semiconductor manufacturing, space exploration and other fields. Although their shapes are different, they all have a common feature, that is, they can receive instructions and accurately locate a point in three-dimensional or two-dimensional space for operation.

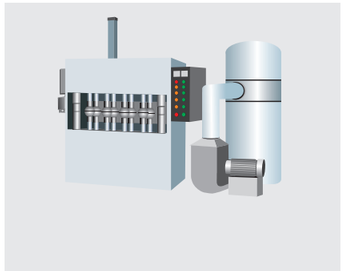


High speed cutting machine

High speed cutting machine is a combination of ultrasonic fusing technology and traditional shearing. When the ultrasonic generator is working, the ultrasonic energy is transmitted to the welding head through the ultrasonic transducer, and violent vibration and friction are generated between the ultrasonic energy and the cutting die, so as to achieve the shearing effect, making the shearing products more beautiful, more firm and more efficient.

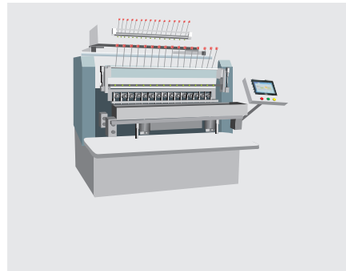
Ball grinding machine

The ball grinder uses multi axis grinding wheel to polish and process artificial or natural crystal. At most, it can realize simultaneous operation of more than 20 shafts at the same time, so as to process crystal products of different shapes. The movement of more than 20 shafts can be realized by bus control, so as to realize simple and economic multi-axis control.



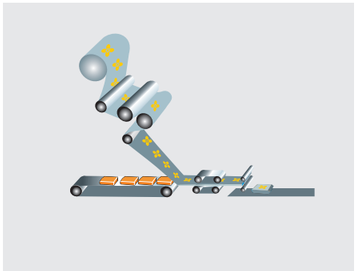
16-axis high speed winder

The high-speed winding machine is a kind of equipment that twines the linear objects to the specific workpiece, usually used for copper wire winding. In the past, it used to realize high-speed winding by the combination of frequency conversion motor and tension control system. With the increasing demand of modern industry for benefits, it can replace the original frequency conversion motor by servo to achieve efficient production.



Three servo packaging machine

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



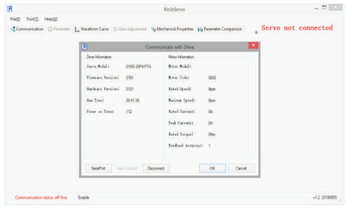
XINJE SERVO

Help users understand the operation of the device better

Servo communication interface

Efficient communication identification

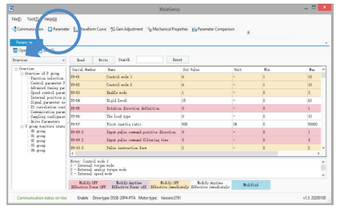
The communication interface of Xinje Servo Tuner can realize RS232 communication with Xinje servo driver through Modbus RTU. Without checking the motor code, the motor parameters can be read automatically.



Parameter setting interface

Easy to set parameters

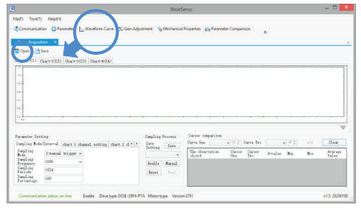
Xinje servo tuner has the functions of reading, modifying, saving and downloading, and is equipped with detailed parameter description without manual assistance; the parameter list directly uses color to indicate the effective time of parameters, which makes the distinction more striking.



Curve acquisition interface

Convenient and practical curve acquisition

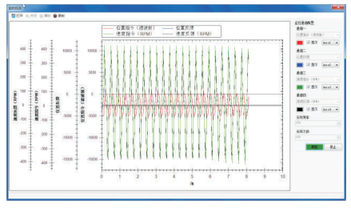
Xinje servo tuner has a detailed data acquisition interface and powerful servo data acquisition function, including basic information acquisition of speed, position, current, bus voltage, etc. Help you to have a deeper and comprehensive understanding of the servo operation and improve the control scheme.



Real time observation interface

Real time dynamic curve observation

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



Mechanical property test interface

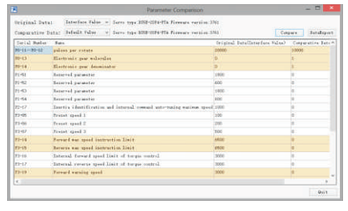
Accurate resonance recognition

Xinje servo tuner mechanical characteristics measurement function determines the resonance frequency according to the mechanical load operation automatically. It is equipped with five notch filters to ensure the stable and reliable operation of the equipment and eliminate the load vibration.

Parameter comparison interface

Simple parameter comparison

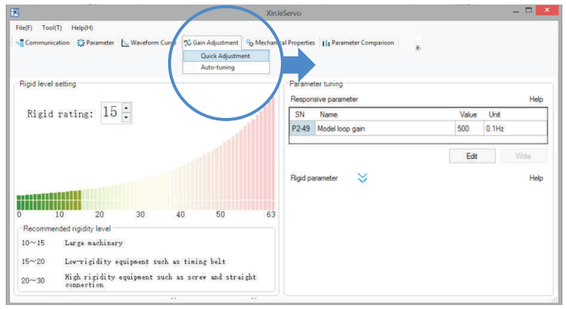
Xinje servo tuner parameter comparison function can be used for customers to compare preset values, current driver values, file values and current upper computer interface values.



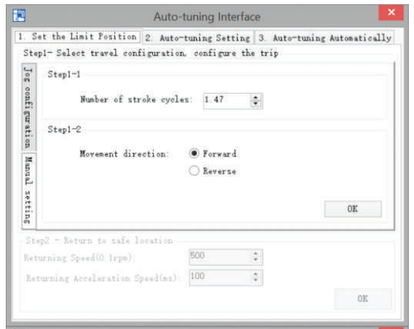
Gain adjustment interface

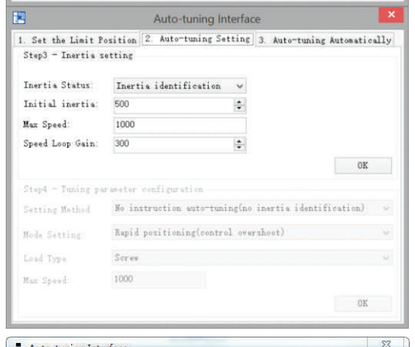
·Fast adjustment

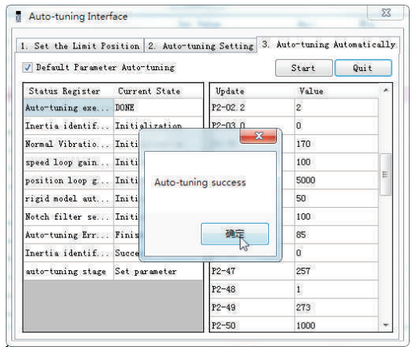
Fast adjustment, auto-tuning mode can perform inertia identification, and users can configure appropriate mode, load type and other parameters for upper computer to set the best gain parameters, or adjust the rigidity level according to the operation status of the equipment.



·Auto-tuning interface



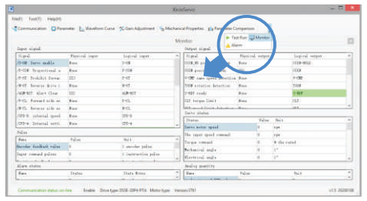




Monitor interface

Rich and overall real-time monitoring

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



Naming rule

MS6 servo motor naming rule

MS6S-60 C S 30 B Z 1 -2 0P4
① ② ③④ ⑤ ⑥⑦⑧ ⑨ ⑩

① Inertia type

Symbol	Inertia
MS6S	Low inertia motor
MS6G	Medium inertia motor
MS6H	High inertia motor

② Base numbe

Symbol	Base numbe
40	40 base
60	60 base
80	80 base
100	100 base
130	130 base
180	180 base

③ Encoder model

Symbol	Product name
C	Magnetic Encoder
T	Optical encoder

④ Encoder specification

Symbol	Encoder structure
S	single turn 17-bit
M	Multi-turn 17-bit
L	Multi-turn 23-bit

⑤ Rated speed

Symbol	Rated speed（rpm）
15	1500
20	2000
25	2500
30	3000

⑩ Rated power

Symbol	Rated power(kw)
0P1	100W
0P2	200W
0P4	400W
0P7	750W
0P8	850W
1P0	1.0W
1P5	1.5W
1P8	1.8W
2P0	2.0W
2P3	2.3W
3P0	3.0W
4P4	4.4W
5P5	5.5W
7P5	7.5W

⑥ Motor shaft specification

Symbol	Shaft specification
A	With key, no oil seal, with threaded hole
B	With key, with oil seal, with threaded hole
C	No key, no oil seal, with threaded hole
D	No key, with oil seal, with threaded hole

⑦ Power-off brake

Symbol	Power-off brake
Z	With brake
Empty	Without brake

⑧ Motor connector type

Symbol	Connector type
1	Amp plug
2	Aviation plug

⑨ Power supply voltage

Symbol	Power supply voltage
2	220V
4	380V

*Note: the above is only an example. See the motor parameters for all the models. We provide CS, CM, TL combination models.

MS5 servo motor naming rule

MS5S – 80 ST E – C S 02430 B Z – 2 0P7 – S01
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫

① Type

Symbol	Inertia
MS5S	Low inertia motor
MS5G	Medium inertia motor
MS5H	High inertia motor

② Base number

Symbol	Base number
40	40 base
60	60 base
80	80 base
110	110 base
130	130 base
180	180 base

③ Name

Symbol	Product name
ST	Sine wave driving motor

④ Motor structure

Symbol	Oil seal
Empty	No oil seal
E	With oil seal

⑤ Encoder structure

Symbol	Type
C	Magnetic Encoder
T	Optical encoder

⑥ Encoder specification

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

⑦ Motor specification

Symbol	Rated torque (N · m)	Rated speed (rpm)
00630	0.637	3000
01330	1.3	3000
02430	2.39	3000

⑧ Motor structure

Symbol	Shaft key
B	With key

⑨ Power-off brake

Symbol	Power-off brake
Empty	Without brake
Z	With brake

⑩ Voltage specification

Symbol	Voltage specification
2	220V
4	380V

⑪ Motor power

Symbol	Rated power (kw)
0P1	0.1
0P2	0.2
0P4	0.4
0P7	0.75
0P8	0.85
1P0	1.0
1P5	1.5
1P8	1.8
2P0	2.0
2P3	2.3
2P9	2.9
4P4	4.4
5P5	5.5
7P5	7.5

⑫ Design number

Symbol	Meaning
S	Standard
01	Design number

*Note: the above is only an example. See the motor parameters for all the models. We provide CS, CM, TL, T combination models.

Servo driver naming rule

DS 5□- □ □P□ - PTA
① ② ③ ④ ⑤

① Name

Symbol	Product name
DS	Servo driver

② Type

Symbol	Product series
5E	XNET bus type
5L	Pulse type
5C	EtherCAT bus type
5F	Full function type
5K	Standard type

③ Voltage specification

Symbol	Rated input voltage
2	AC220V
4	AC380V

④ Driver power

Symbol	Rated output power (KW)
0P1	0.1
0P2	0.2
0P4	0.4
0P7	0.75
1P5	1.5
2P3	2.3
2P6	2.6
3P0	3.0
4P5	4.5
5P5	5.5
7P5	7.5

⑤ Encoder specification

Symbol	Encoder specification
T	Communication encoder

MS6/MS5 motor

Item	100W	200W	400W	750W	850W	1.0W	1.5W	1.8W	2.0W	2.3W	2.9W	4.4W	5.5W	7.5W
Low inertia MS6S		60*	60	80		80 / 100*	100*		100					
High inertia MS6H	40*	60*	60	80	130	80*	130	130		130	180*	180*	180*	180*
Low inertia MS5S	40	60	60	80		80 / 110	110	110						
Medium inertia MS5G					130		130	130		130	180	180	180	180
High inertia MS5H		60	60	80										

* Note: 40/60/80 indicates motor flange. Provide voltage level 220V models. Provide voltage level 380V models. Provide voltage level 220V/380V models.

DS5 driver specification

Function	Control mode				Control method								
	Postion control	Speed control	Torque control	Bus control	Pulse	Line driver	Analog input	External displacement sensor	ABZ differential feedback	RS232	RS485	SI input	SO input
Pulse type DS5L series	●	●	●		●					●		4	4
EtherCAT type DS5C series	●	●	●	●	●					●		4	4
XNet bus type DS5E type	●	●	●	●	●					●	●	4	4
Full function type DS5F series	●	●	●		●	●	●	●	●	●	●	10	8
Standard type DS5K series	●	●	●		●				●	●	●	5	4

* Note: DS5E, DS5L, DS5C series 750W and below servo driver has 3 inputs and 3 outputs.

Driver/motor model list

DS5 series driver model list

Power[kw] \ Series	DS5E series X-NET bus type	DS5C series EtherCAT bus type	DS5F series Full function type
0.1	DS5E-20P1-PTA	DS5C-20P1-PTA	DS5F-20P1-PTA
0.2	DS5E-20P2-PTA	DS5C-20P2-PTA	DS5F-20P2-PTA
0.4	DS5E-20P4-PTA	DS5C-20P4-PTA	DS5F-20P4-PTA
0.75	DS5E-20P7-PTA	DS5C-20P7-PTA	DS5F-20P7-PTA
1.5	DS5E-21P5-PTA	DS5C-21P5-PTA	DS5F-21P5-PTA
2.3	DS5E-22P3-PTA	DS5C-22P3-PTA	DS5F-22P3-PTA
2.6	DS5E-22P6-PTA	DS5C-22P6-PTA	DS5F-22P6-PTA
1	DS5E-41P0-PTA	DS5C-41P0-PTA	/
1.5	DS5E-41P5-PTA	DS5C-41P5-PTA	/
3	DS5E-43P0-PTA	DS5C-43P0-PTA	DS5F-43P0-PTA
5.5	DS5E-45P5-PTA	DS5C-45P5-PTA	DS5F-45P5-PTA
7.5	DS5E-47P5-PTA	DS5C-47P5-PTA	DS5F-47P5-PTA
11	DS5E-411P0-PTA	DS5C-411P0-PTA	DS5F-411P0-PTA
15	DS5E-415P0-PTA	DS5C-415P0-PTA	DS5F-415P0-PTA

Power[kw] \ Series	DS5K series Standard type	DS5L series Pulse type	W5E3 series Integrated driving and control type
0.1	DS5K-20P1-PTA	DS5L-20P1-PTA	/
0.2	DS5K-20P2-PTA	DS5L-20P2-PTA	/
0.4	DS5K-20P4-PTA	DS5L-20P4-PTA	/
0.75	DS5K-20P7-PTA	DS5L-20P7-PTA	W5E3-20P7-PTA
1.5	DS5K-21P5-PTA	DS5L-21P5-PTA	W5E3-21P5-PTA
2.3	DS5K-22P3-PTA	DS5L-22P3-PTA	/
2.6	DS5K-22P6-PTA	DS5L-22P6-PTA	/
1	DS5K-41P0-PTA	/	/
1.5	DS5K-41P5-PTA	/	/
3	DS5K-43P0-PTA	/	/
5.5	DS5K-45P5-PTA	/	/
7.5	DS5K-47P5-PTA	/	/

MS6S series motor model list

Power[kw]	Motor model	Flange	Rated speed [RPM]	Rated torque [Nm]	Inertia type	Encoder bit [bit]
0.1	MS6H-40CS/CM30B(Z)1-20P1	40	3000	0.32	high inertia	17
0.2	MS6S-60CS/CM30B(Z)1-20P2	60	3000	0.64	low inertia	17
	MS6H-60CS/CM30B(Z)1-20P1		3000	0.64	high inertia	17
0.4	MS6S-60CS/CM30B(Z)1-20P4	60	3000	1.27	low inertia	17
	MS6H-60CS/CM30B(Z)1-20P4		3000	1.27	high inertia	17
0.75	MS6S-80CS/CM30B(Z)1-20P7	80	3000	2.39	low inertia	17
	MS6H-80CS/CM30B(Z)1-20P7		3000	2.39	high inertia	17
	MS6H-80CS/CM/TL20B(Z)1-20P7		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/CM30B(Z)1-21P0	80	3000	3.18	low inertia	17
	MS6H-80CS/CM30B(Z)1-21P0		3000	3.18	high inertia	17
	MS6S-100CS/CM30B(Z)2-21P0	100	3000	3.18	low inertia	17
1.5	MS6S-100CS/CM30B(Z)2-21P5		3000	4.78	low inertia	17
	MS6H-130CS/CM/TL20B(Z)2-21P5	130	2000	7.16	high inertia	17/23
1.8	MS6H-130CS/CM/TL15B(Z)2-21P8		1500	11.5	high inertia	17/23
2	MS6S-100CS/CM/TL30B(Z)2-22P0	100	3000	6.37	low inertia	17/23
2.3	MS6H-130CS/CM/TL15B(Z)2-22P3	130	1500	14.6	high inertia	17/23
3.0	MS6H-180CS/CM/TL15B(Z)2-43P0	180	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(Z)2-45P5		1500	35.0	high inertia	17/23
7.5	MS6H-180CS/CM/TL15B(Z)2-47P5		1500	47.8	high inertia	17/23

*Note: 1. B(Z) indicates the brake is optional, B indicates no brake model, BZ indicates brake model.
2. The product status marked with gray font is under development and will be launched one after another. Please look forward to it.

MS5S series motor model list

Power[kw]	Motor model	Flange	Rated speed [RPM]	Rated torque [Nm]	Inertia type	Encoder bit [bit]
0.1	MS5S-40STE-CS/CM00330B□-20P1-S01/S02	40	3000	0.32	low inertia	17
0.2	MS5S-60STE-CS/CM00630B□-20P2-S01/S02	60	3000	0.64	low inertia	17
	MS5H-60STE-CS/CM0O630B□-20P2-S01/S02		3000	0.64	high inertia	17
0.4	MS5S-60STE-CS/CM01330B□-20P4-S01/S02	60	3000	1.27	low inertia	17
	MS5H-60STE-CS/CM01330B□-20P4-S01/S02		3000	1.27	high inertia	17
	MS-60STE-T01330B□-20P4-D01		3000	1.27	/	17
0.75	MS5S-80STE-CS/CM02430B-20P7-S01/S02	80	3000	2.39	low inertia	17
	MS5S-80STE-CS/CM02430BZ-20P7-S01/S02		3000	2.39	low inertia	17
	MS5H-80STE-CS/CM02430B-20P7-S01/S02		3000	2.39	high inertia	17
	MS5H-80STE-CS/CM02430BZ-20P7-S01/S02		3000	2.39	high inertia	17
	MS-80STE-T02430B□-20P7		3000	2.39	/	17
	MS-80STE-T03520B□-20P7		2000	3.5	/	17
0.85	MS5G-130STE-CS/CM05415B-20P8-S01	130	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-80STE-CS/CM03230B□-21P0-S01/S02	80	3000	3.18	low inertia	17
	MS5H-80STE-CS/CM03230B□-21P0-S01/S02		3000	3.18	high inertia	17
	MS5S-110STE-CS/CM03230B□-21P0-S01	110	3000	3.18	low inertia	17
	MS5S-110STE-TL03230B□-21P0		3000	3.18	low inertia	23
1.5	MS-110STE-T05030B□-21P5		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
	MS-130ST-T06025B□-21P5	130	2500	6	/	17
	MS-130ST-T10015B□-21P5		1500	10	/	17
	MS5G-130STE-CS/CM06025B-21P5-S01		2500	6	medium inertia	17
	MS5G-130STE-CS/CM07220B□-21P5-S01		2000	7.2	medium inertia	17
	MS5G-130STE-TL07220B□-21P5-S01		2000	7.2	medium inertia	23
	MS5G-130STE-CS/CM10015B-21P5-S01		1500	10	medium inertia	17
1.8	MS5G-130STE-CS/CM11515B□-21P8-S01		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	130	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
	MS5G-130STE-TL14615B□-42P3-S01		1500	14.6	medium inertia	23
	MS-130ST-T15015GB□-22P3		1500	15	/	17
2.4	MS-130ST-T07730B□-22P4		3000	7.7	/	17
2.6	MS-130ST-TL10025B□-22P6		2500	10	/	23
2.9	MS5G-180STE-TL19015B□-42P9-S01	180	1500	19	medium inertia	23
3.0	MS-130ST-TL10030B□-43P0	130	3000	10	/	23
4.4	MS5G-180STE-TL28015B□-44P4-S01	180	1500	28	medium inertia	23
5.5	MS5G-180STE-TL35015B□-45P5-S01		1500	35		23
7.5	MS5G-180STE-TL48015B□-47P5-S01		1500	48		23
11	MS-220STE-TL70015B-411P0-XJ	220	1500	70	/	23
15	MS-220STE-TL96015B-415P0-XJ		1500	96	/	23

*Note: 1. B□ indicates the brake is optional, B indicates no brake model, BZ indicates brake model.
2. CS/CM indicates single turn magnetic encoder CS or multi-turn magnetic encoder CM are optional.
3. 80 flange and below can choose S01 amp or S02 small aviation plug. 110 flange and above with S01 code are all aviation plug.
4. Please refer to electrical parameters and dimensions in the following page for other detailed motor characteristic parameters.

MS6 series 400W

Motor parameter

Voltage level		AC 220V			
Motor model		MS6S-60		MS6H-60	
		CS/CM30B1	CS/CM30BZ1	CS/CM30B1	CS/CM30BZ1
		20P4			
Motor code		5005	5805	50C5	58C5
Rated power [kw]		0.4			
Rated speed [rpm]		3000			
Max speed [rpm]		6500			
Rated torque [rpm]		1.27			
Max torque [rpm]		4.445			
Rated current [mA]		2600			
Rotor inertia[10^{-7}kg·m^2]		267	273	520	590
Inertia type		Low inertia		High inertia	
Recommended rotor inertia ratio		Within 30 times			
Polar logarithm		5			
Encoder bit		17			
Encoder type		Magnetic			
Motor insulation class		ClassF(155℃)			
Protection level		IP65			
Using environment	Ambient temperature	-15℃~+40℃			
	Ambient humidity	Relative humidity < 90% (no condensation)			

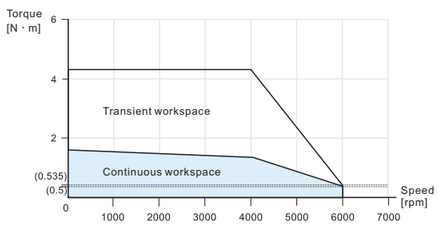
Brake specification

It is a maintain brake, the excitation will release it.
It cannot be used for braking when the motor is rotating.

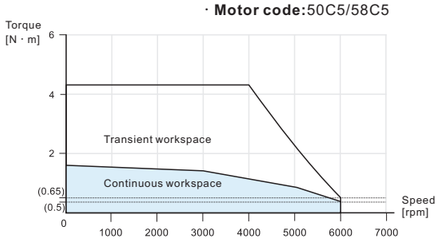
Static friction torque [N · m]	⩾1.3
Rated power [W]	7.2
Suction time [ms]	＜50
Release time [ms]	＜20
Excitation current [A]	0.3
Suction voltage [V]	＜18
Release voltage [V]	＞1.5
Excitation voltage [V]	DC24±10%

Torque feature (T – N curve)

· **Motor code:**5005/5805



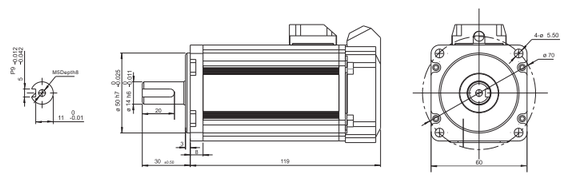
· **Motor code:**50C5/58C5



Dimension diagram

(Unit: mm)

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



MS6 series 750W

Motor parameter

Voltage level		AC 220V			
Motor model		MS6S-80		MS6H-80	
		CS/CM30B1	CS/CM30BZ1	CS/CM30B1	CS/CM30BZ1
		20P7			
Motor code		5007	5807	50D7	58D7
Rated power [kw]		0.75			
Rated speed [rpm]		3000			
Max speed [rpm]		5200			
Rated torque [rpm]		2.39			
Max torque [rpm]		7.17			
Rated current [mA]		4000		4100	
Rotor inertia[10^{-7}kg·m^2]		980	1030	1670	1693
Inertia type		Low inertia		High inertia	
Recommended rotor inertia ratio		Within 30 times			
Polar logarithm		5			
Encoder bit		17			
Encoder type		Magnetic			
Motor insulation class		ClassF(155℃)			
Protection level		IP65			
Using environment	Ambient temperature	-15℃~+40℃			
	Ambient humidity	Relative humidity < 90% (no condensation)			

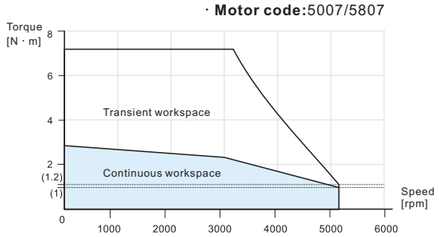
Brake specification

It is a maintain brake, the excitation will release it.
It cannot be used for braking when the motor is rotating.

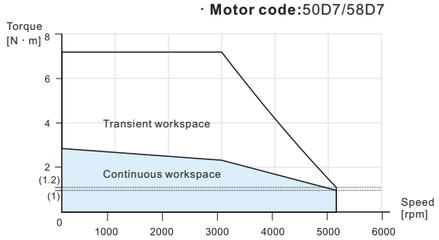
Static friction torque [N · m]	⩾2.5
Rated power [W]	8
Suction time [ms]	＜80
Release time [ms]	＜40
Excitation current [A]	0.233
Suction voltage [V]	＜16.8
Release voltage [V]	⩾1
Excitation voltage [V]	DC24±10%

Torque feature (T – N curve)

· **Motor code:**5007/5807



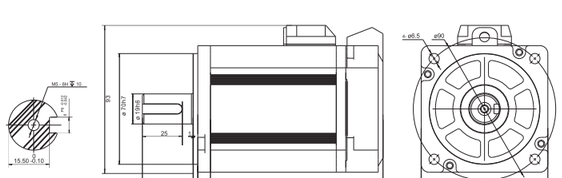
· **Motor code:**50D7/58D7



Dimension diagram

(Unit: mm)

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



MS5 series 100W

Motor parameter

Voltage level		AC 220V	
Motor model		MS5S-40STE	
		CS/CM00330B	CS/CM00330BZ
		20P1-S01	
Motor code		5022	5822
Rated power [kw]		0.1	
Rated speed [rpm]		3000	
Max speed [rpm]		6000	
Rated torque [rpm]		0.32	
Max torque [rpm]		0.96	
Rated current [mA]		950	
Rotor inertia[10^{-7}kg·m^2]		44	53
Inertia type		Low inertia	
Recommended rotor inertia ratio		Within 30 times	
Polar logarithm		5	
Encoder bit		17	
Encoder type		Magnetic	
Motor insulation class		ClassF(155℃)	
Protection level		IP65	
Using environment	Ambient temperature	-15℃~+40℃	
	Ambient humidity	Relative humidity < 90% (no condensation)	

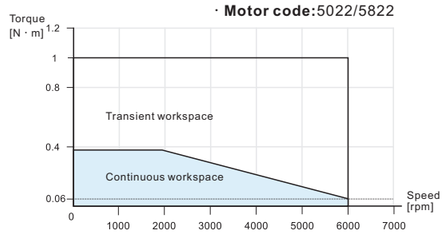
Brake specification

It is a maintain brake, the excitation will release it.
It cannot be used for braking when the motor is rotating.

Static friction torque [N · m]	⩾0.3
Rated power [W]	6
Suction time [ms]	＜50
Release time [ms]	＜20
Excitation current [A]	0.25
Suction voltage [V]	＜16.8
Release voltage [V]	＞0.5
Excitation voltage [V]	DC24±10%

Torque feature (T – N curve)

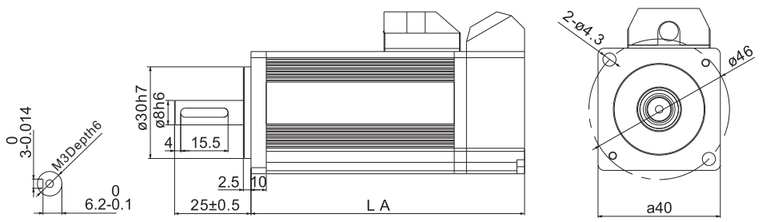
· **Motor code:**5022/5822



Dimension diagram

(Unit: mm)

Motor model	LA±1		Inertia level
	Normal	With brake	
MS5S-40STE-C□00330B□-20P1-S01	89.5	119	Low inertia



Ms5 series 200W

Motor parameter

Voltage level		AC 220V			
Motor model		MS5S-60STE		MS5H-60STE	
		CS/CM00630B	CS/CM00630BZ	CS/CM00630B	CS/CM00630BZ
		20P2-S01/S02			
Motor code		5003	5803	50C3	58C3
Rated power [kw]		0.2			
Rated speed [rpm]		3000			
Max speed [rpm]		6500			
Rated torque [rpm]		0.64			
Max torque [rpm]		1.92			
Rated current [mA]		1900			
Rotor inertia[10^{-7}kg·m^2]		137	159	537	557
Inertia type		Low inertia		High inertia	
Recommended rotor inertia ratio		Within 30 times			
Polar logarithm		5			
Encoder bit		17			
Encoder type		Magnetic			
Motor insulation class		ClassF(155℃)			
Protection level		IP65			
Using environment	Ambient temperature	-15℃~+40℃			
	Ambient humidity	Relative humidity < 90% (no condensation)			

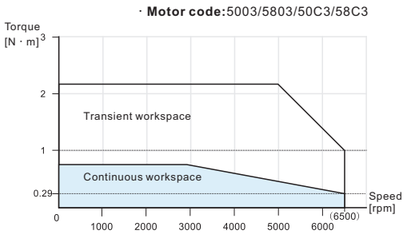
Brake specification

It is a maintain brake, the excitation will release it.
It cannot be used for braking when the motor is rotating.

Static friction torque [N · m]	⩾1.3
Rated power [W]	7.2
Suction time [ms]	＜50
Release time [ms]	＜20
Excitation current [A]	0.3
Suction voltage [V]	＜16.8
Release voltage [V]	＞1.5
Excitation voltage [V]	DC24±10%

Torque feature (T – N curve)

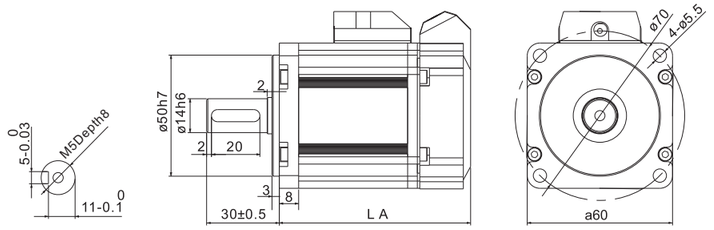
· **Motor code:**5003/5803/50C3/58C3



Dimension diagram

(Unit: mm)

Motor model	LA±1		Inertia level
	Normal	With brake	
MS5S-60STE-C□00630B□-20P2-S01/S02	79	114	Low inertia
MS5H-60STE-C□00630B□-20P2-S01/S02	91	126	High inertia



MS5 series 400W

Motor parameter

Voltage level		AC 220V			
Motor model		MS5S-60STE		MS5H-60STE	
		CS/CM01330B	CS/CM01330BZ	CS/CM01330B	CS/CM01330BZ
		20P4-S01/S02			
Motor code		5004	5804	50C4	58C4
Rated power [kw]		0.4			
Rated speed [rpm]		3000			
Max speed [rpm]		6500			
Rated torque [rpm]		1.27			
Max torque [rpm]		4.45			
Rated current [mA]		2800			
Rotor inertia[10^-7kg·m²]		258	272	648	661
Inertia type		Low inertia		High inertia	
Recommended rotor inertia ratio		Within 30 times			
Polar logarithm		5			
Encoder bit		17			
Encoder type		Magnetic			
Motor insulation class		ClassF(155℃)			
Protection level		IP65			
Using environment	Ambient temperature	-15℃~+40℃			
	Ambient humidity	Relative humidity < 90% (no condensation)			

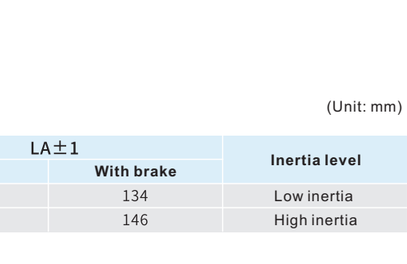
Brake specification

It is a maintain brake, the excitation will release it.
It cannot be used for braking when the motor is rotating.

Static friction torque [N · m]	⩾1.3
Rated power [W]	7.2
Suction time [ms]	＜50
Release time [ms]	＜20
Excitation current [A]	0.3
Suction voltage [V]	＜16.8
Release voltage [V]	＞1.5
Excitation voltage [V]	DC24±10%

Torque feature (T – N curve)

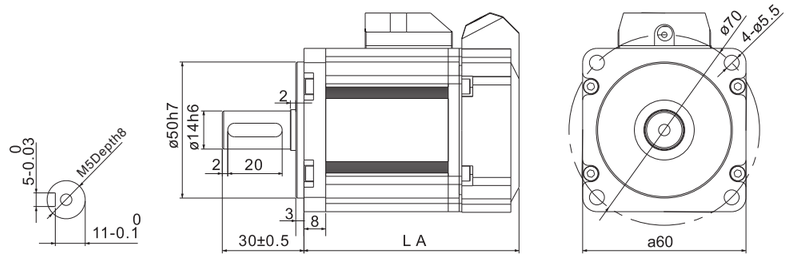
· **Motor code:**5004/5804/50C4/58C4



Dimension diagram

(Unit: mm)

Motor model	LA±1		Inertia level
	Normal	With brake	
MS5S-60STE-C□01330B□-20P4-S01/S02	99	134	Low inertia
MS5H-60STE-C□01330B□-20P4-S01/S02	111	146	High inertia



Motor parameter and dimension

MS series 400W

Motor parameter

Voltage level		AC 220V
Motor model		MS-60STE
		T01330B□
		20P4-D01
Motor code		4004
Rated power [kw]		0.4
Rated speed [rpm]		3000
Max speed [rpm]		5000
Rated torque [rpm]		1.27
Max torque [rpm]		4.45
Rated current [mA]		2200
Rotor inertia[10^-7kg·m²]		343
Inertia type		-
Recommended rotor inertia ratio		Within 30 times
Polar logarithm		5
Encoder bit		17
Encoder type		Optical
Motor insulation class		ClassF(155℃)
Protection level		IP65
Using environment	Ambient temperature	-15℃~+40℃
	Ambient humidity	Relative humidity < 90% (no condensation)

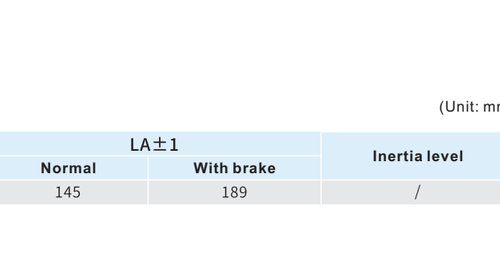
Brake specification

It is a maintain brake, the excitation will release it.
It cannot be used for braking when the motor is rotating.

Static friction torque [N · m]	⩾1.3
Rated power [W]	7.2
Suction time [ms]	＜50
Release time [ms]	＜20
Excitation current [A]	0.3
Suction voltage [V]	＜16.8
Release voltage [V]	＞1.5
Excitation voltage [V]	DC24±10%

Torque feature (T – N curve)

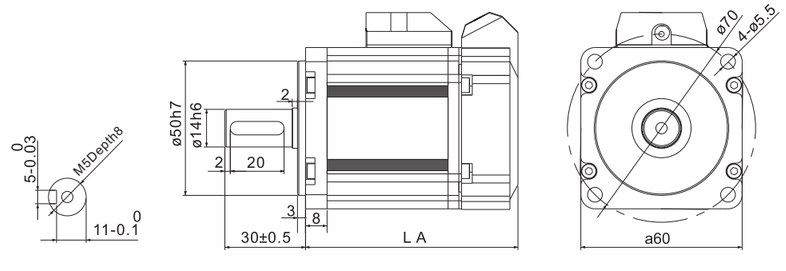
· **Motor code:**4004



Dimension diagram

(Unit: mm)

Motor model	LA±1		Inertia level
	Normal	With brake	
MS-60STE-T01330B-20P4-D01	145	189	/



MS5 series 750W

Motor parameter

Voltage level		AC 220V			
Motor model		MS5S-80STE		MS5H-80STE	
		CS/CM02430B	CS/CM02430BZ	CS/CM02430B	CS/CM02430BZ
		20P7-S01/S02			
Motor code		5011	5811	50D1	58D1
Rated power [kw]		0.75			
Rated speed [rpm]		3000			
Max speed [rpm]		5200			
Rated torque [rpm]		2.39			
Max torque [rpm]		7.17			
Rated current [mA]		4000			
Rotor inertia[10^-7kg·m²]		902	1000	1655	1659
Inertia type		Low inertia		High inertia	
Recommended rotor inertia ratio		Within 30 times			
Polar logarithm		5			
Encoder bit		17			
Encoder type		Magnetic			
Motor insulation class		ClassF(155℃)			
Protection level		IP65			
Using environment	Ambient temperature	-15℃~+40℃			
	Ambient humidity	Relative humidity < 90% (no condensation)			

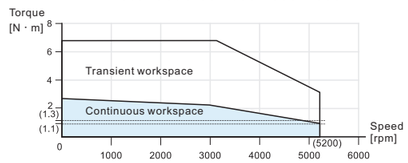
Brake specification

It is a maintain brake, the excitation will release it.
It cannot be used for braking when the motor is rotating.

Static friction torque [N · m]	⩾3.2
Rated power [W]	11.5
Suction time [ms]	＜60
Release time [ms]	＜40
Excitation current [A]	0.47
Suction voltage [V]	＜16.8
Release voltage [V]	＞1.5
Excitation voltage [V]	DC24±10%

Torque feature (T – N curve)

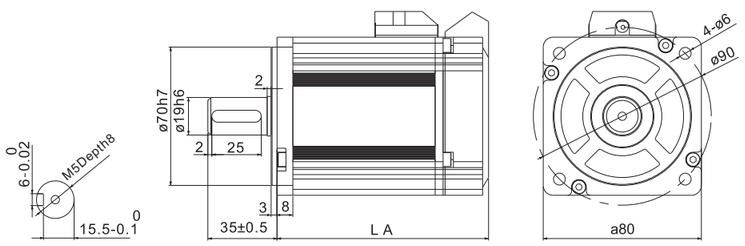
· **Motor code:**5011/5811/50D1/58D1



Dimension diagram

(Unit: mm)

Motor model	LA±1		Inertia level
	Normal	With brake	
MS5S-80STE-C□02430B□-20P7-S01/S02	107	144	Low inertia
MS5H-80STE-C□02430B□-20P7-S01/S02	119	156	High inertia



MS series 750W

Motor parameter

Voltage level		AC 220V	
Motor model		MS-80STE	
		T02430B□	T03520B□
		20P7	
Motor code		4011	4012
Rated power [kw]		0.75	
Rated speed [rpm]		3000	2000
Max speed [rpm]		4000	2500
Rated torque [rpm]		2.39	3.5
Max torque [rpm]		7.17	10.5
Rated current [mA]		3200	3000
Rotor inertia[10^-7kg·m²]		1023	2630
Inertia type		/	
Recommended rotor inertia ratio		Within 20 times	
Polar logarithm		4	
Encoder bit		17	
Encoder type		optical	
Motor insulation class		ClassF(155℃)	
Protection level		IP65	
Using environment	Ambient temperature	-15℃~+40℃	
	Ambient humidity	Relative humidity < 90% (no condensation)	

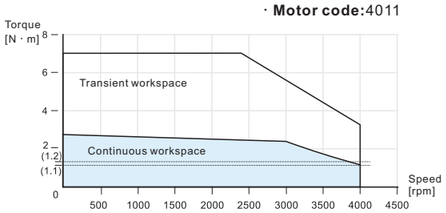
Brake specification

It is a maintain brake, the excitation will release it.
It cannot be used for braking when the motor is rotating.

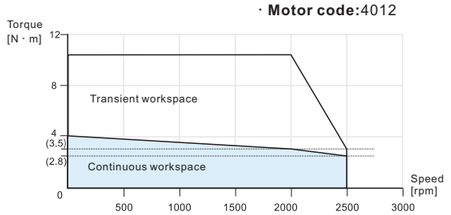
Static friction torque [N · m]	⩾3.2
Rated power [W]	11.5
Suction time [ms]	＜60
Release time [ms]	＜40
Excitation current [A]	0.47
Suction voltage [V]	＜16.8
Release voltage [V]	＞1.5
Excitation voltage [V]	DC24±10%

Torque feature (T – N curve)

· **Motor code:**4011



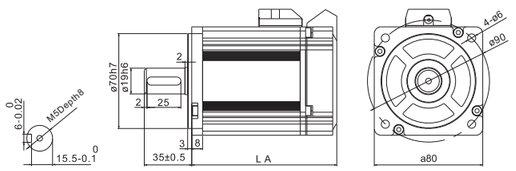
· **Motor code:**4012



Dimension diagram

(Unit: mm)

Motor model	LA±1		Inertia level
	Normal	With brake	
MS-80STE-T02430B□-20P7	150	199	/
MS-80STE-T03520B□-20P7	179	219	



MS5G series 850W

Motor parameter

Voltage level		AC 220V			
Motor model		MS5G-130STE			
		CS/CM05415B	CS/CM05415BZ	TL05415B	TL05415BZ
		20P8-S01			
Motor code		5072	5872	9072	9872
Rated power [kw]		0.85			
Rated speed [rpm]		1500			
Max speed [rpm]		2000			
Rated torque [rpm]		5.41			
Max torque [rpm]		15.15			
Rated current [mA]		4200			
Rotor inertia[10^-7kg·m²]		8480	9717	8480	9717
Inertia type		Medium inertia			
Recommended rotor inertia ratio		Within 10 times			
Polar logarithm		5			
Encoder bit		17		23	
Encoder type		Magnetic		optical	
Motor insulation class		ClassF(155℃)			
Protection level		IP65			
Using environment	Ambient temperature	-15℃~+40℃			
	Ambient humidity	Relative humidity < 90% (no condensation)			

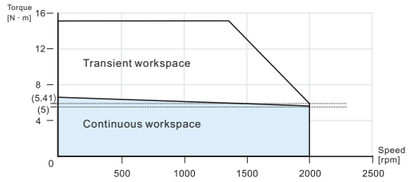
Brake specification

It is a maintain brake, the excitation will release it.
It cannot be used for braking when the motor is rotating.

Static friction torque [N · m]	⩾15
Rated power [W]	25
Suction time [ms]	＜100
Release time [ms]	＜60
Excitation current [A]	1
Suction voltage [V]	＜16.8
Release voltage [V]	＞1.5
Excitation voltage [V]	DC24±10%

Torque feature (T – N curve)

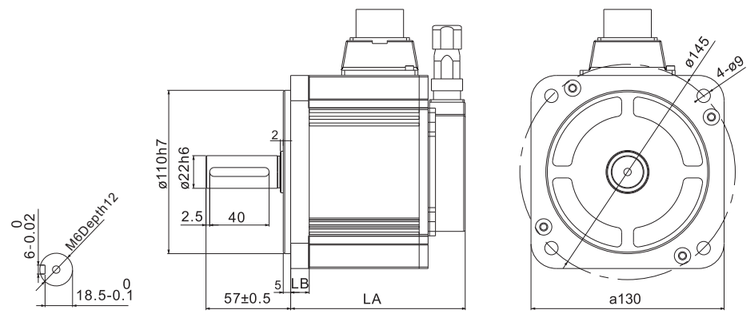
· **Motor code:**5072/5872/9072/9872



Dimension diagram

(Unit: mm)

Motor model	LA±1		LB	Inertia level
	Normal	With brake		
MS5G-130STE-C□05415B□-20P8-S01	117.5	147.5	12.5	Medium inertia
MS5G-130STE-TL05415B□-20P8-S01	134.5	164.5		



MS5 series 1.0kW

Motor parameter

Voltage level		AC 220V	
Motor model		MS5S-80STE	MS5H-80STE
		CS/CM03230B□	
		21P0-S01	
Motor code		5012	50D2
Rated power [kw]		1	
Rated speed [rpm]		3000	
Max speed [rpm]		4000	
Rated torque [rpm]		3.18	
Max torque [rpm]		8	
Rated current [mA]		4000	
Rotor inertia[10^-7kg·m²]		1286	2021
Inertia type		/	
Recommended rotor inertia ratio		Within 20 times	
Polar logarithm		5	
Encoder bit		17	
Encoder type		Magnetic	
Motor insulation class		ClassF(155℃)	
Protection level		IP65	
Using environment	Ambient temperature	-15℃~+40℃	
	Ambient humidity	Relative humidity < 90% (no condensation)	

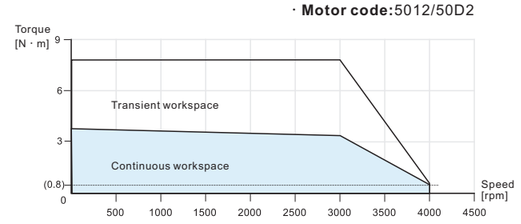
Brake specification

It is a maintain brake, the excitation will release it.
It cannot be used for braking when the motor is rotating.

Static friction torque [N · m]	⩾3.2
Rated power [W]	11.5
Suction time [ms]	＜60
Release time [ms]	＜40
Excitation current [A]	0.47
Suction voltage [V]	＜16.8
Release voltage [V]	＞1.5
Excitation voltage [V]	DC24±10%

Torque feature (T – N curve)

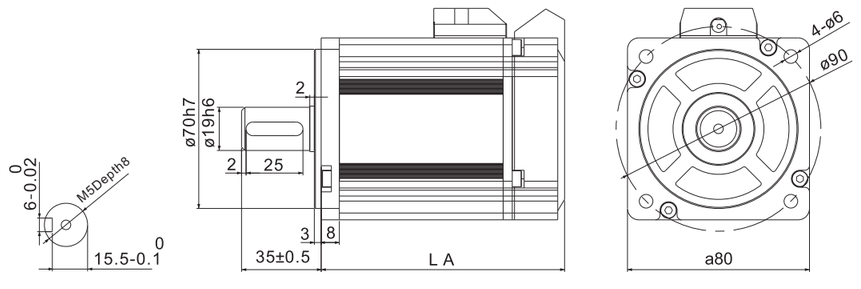
· **Motor code:**5012/50D2



Dimension diagram

(Unit: mm)

Motor model	LA±1		Inertia level
	Normal	With brake	
MS5S-80STE-C□03230B□-21P0-S01	128	165	Low inertia
MS5H-80STE-C□03230B□-21P0-S01	140	177	High inertia



MS5 series 1.0kW

Motor parameter

Voltage level		AC 220V	
Motor model		MS5S-110STE	
		CS/CM03230B□	TL03230B□
		21P0-S01	
Motor code		5033	9033
Rated power [kw]		1	
Rated speed [rpm]		3000	
Max speed [rpm]		6000	
Rated torque [rpm]		3.18	
Max torque [rpm]		7.95	
Rated current [mA]		7500	
Rotor inertia[10^{-7}kg·m^2]		2869	
Inertia type		Low inertia	
Recommended rotor inertia ratio		Within 15 times	
Polar logarithm		5	
Encoder bit		17	23
Encoder type		Magnetic	optical
Motor insulation class		ClassF(155℃)	
Protection level		IP65	
Using environment	Ambient temperature	-15℃~+40℃	
	Ambient humidity	Relative humidity < 90% (no condensation)	

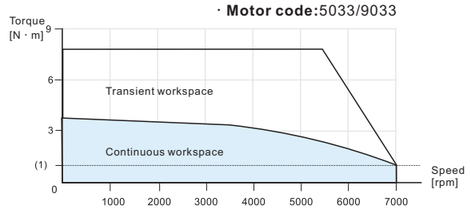
Brake specification

It is a maintain brake, the excitation will release it.
It cannot be used for braking when the motor is rotating.

Static friction torque [N · m]	⩾8
Rated power [W]	14.4
Suction time [ms]	＜80
Release time [ms]	＜40
Excitation current [A]	0.6
Suction voltage [V]	＜16.8
Release voltage [V]	＞1.5
Excitation voltage [V]	DC24±10%

Torque feature (T – N curve)

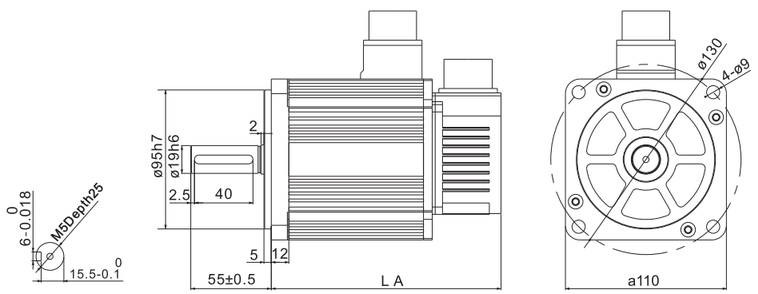
· **Motor code:**5033/9033



Dimension diagram

(Unit: mm)

Motor model	LA±1		Inertia level
	Normal	With brake	
MS5S-110STE-C□03230B□-21P0-S01	157	205	Low inertia
MS5S-110STE-TL03230B□-21P0-S01			



MS series 1.2kW

Motor parameter

Voltage level		AC 220V
Motor model		MS-110STE
		T04030B□
		21P2
Motor code		4031
Rated power [kw]		1.2
Rated speed [rpm]		3000
Max speed [rpm]		3500
Rated torque [rpm]		4
Max torque [rpm]		12
Rated current [mA]		5000
Rotor inertia[10^{-7}kg·m^2]		5400
Inertia type		/
Recommended rotor inertia ratio		Within 10 times
Polar logarithm		4
Encoder bit		17
Encoder type		optical
Motor insulation class		ClassF(155℃)
Protection level		IP65
Using environment	Ambient temperature	-15℃~+40℃
	Ambient humidity	Relative humidity < 90% (no condensation)

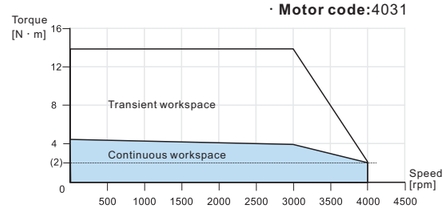
Brake specification

It is a maintain brake, the excitation will release it.
It cannot be used for braking when the motor is rotating.

Static friction torque [N · m]	⩾8
Rated power [W]	14.4
Suction time [ms]	＜80
Release time [ms]	＜40
Excitation current [A]	0.6
Suction voltage [V]	＜16.8
Release voltage [V]	＞1.5
Excitation voltage [V]	DC24±10%

Torque feature (T – N curve)

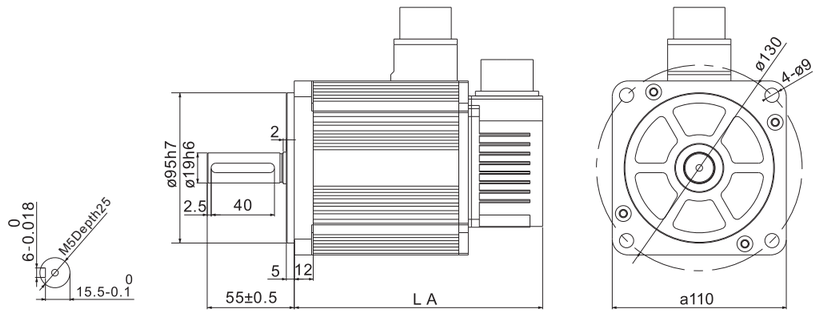
· **Motor code:**4031



Dimension diagram

(Unit: mm)

Motor model	LA±1		Inertia level
	Normal	With brake	
MS-110STE-T04030B-21P2	157	205	/



MS5 series 1.5kW

Motor parameter

Voltage level		AC 220V	
Motor model		MS5S-110STE	
		CS/CM04830B□	TL04830B□
		21P5-S01	
Motor code		5034	9034
Rated power [kw]		1.5	
Rated speed [rpm]		3000	
Max speed [rpm]		4500	
Rated torque [rpm]		4.77	
Max torque [rpm]		9.54	
Rated current [mA]		7500	
Rotor inertia[10^-7kg·m²]		3360	
Inertia type		Low inertia	
Recommended rotor inertia ratio		Within 15 times	
Polar logarithm		5	
Encoder bit		17	23
Encoder type		Magnetic	optical
Motor insulation class		ClassF(155℃)	
Protection level		IP65	
Using environment	Ambient temperature	-15℃~+40℃	
	Ambient humidity	Relative humidity < 90% (no condensation)	

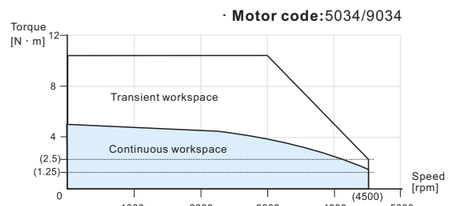
Brake specification

It is a maintain brake, the excitation will release it.
It cannot be used for braking when the motor is rotating.

Static friction torque [N · m]	⩾8
Rated power [W]	14.4
Suction time [ms]	＜80
Release time [ms]	＜40
Excitation current [A]	0.6
Suction voltage [V]	＜16.8
Release voltage [V]	＞1.5
Excitation voltage [V]	DC24±10%

Torque feature (T – N curve)

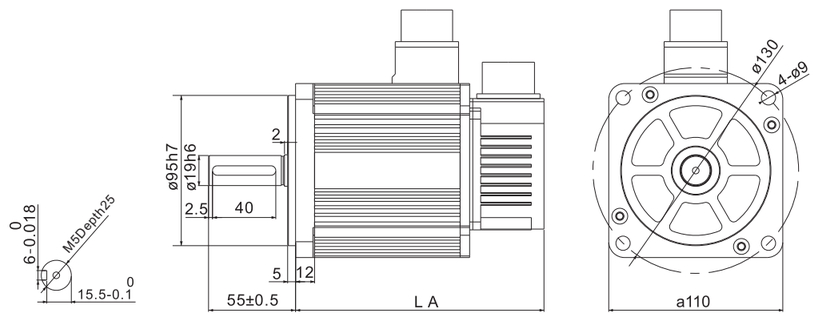
· **Motor code:**5034/9034



Dimension diagram

(Unit: mm)

Motor model	LA±1		Inertia level
	Normal	With brake	
MS5S-110STE-C□04830B□-21P5-S01	166	214	Low inertia
MS5S-110STE-TL04830B□-21P5-S01			



Motor parameter and dimension

MS5 series 1.5kW

Motor parameter

Voltage level		AC 220V					
Motor model		MS5G-130STE					
		CS07220B	CS07220BZ	TL07220B	TL07220BZ	CS/CM06025B	CS/CM10015B
		21P5-S01					
Motor code		5077	5877	9077	9877	5078	5079
Rated power [kw]		1.5				1.5	
Rated speed [rpm]		2000				2500	1500
Max speed [rpm]		3000				3000	2500
Rated torque [rpm]		7.16				6	10
Max torque [rpm]		17.9				15	25
Rated current [mA]		7500				7500	
Rotor inertia[10^-7kg·m²]		11780	13130	11780	13130	9440	14400
Inertia type		Medium inertia					
Recommended rotor inertia ratio		Within 10 times					
Polar logarithm		5					
Encoder bit		17		23		17	
Encoder type		Magnetic		optical		Magnetic	
Motor insulation class		ClassF(155℃)					
Protection level		IP65					
Using environment	Ambient temperature	-15℃~+40℃					
	Ambient humidity	Relative humidity < 90% (no condensation)					

Brake specification

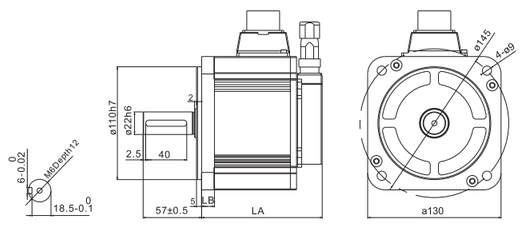
It is a maintain brake, the excitation will release it.
It cannot be used for braking when the motor is rotating.

Static friction torque [N · m]	⩾8
Rated power [W]	14.4
Suction time [ms]	＜80
Release time [ms]	＜40
Excitation current [A]	0.6
Suction voltage [V]	＜16.8
Release voltage [V]	＞1.5
Excitation voltage [V]	DC24±10%

Dimension diagram

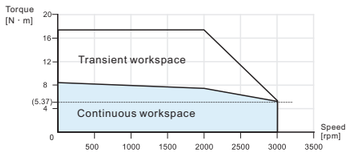
(Unit: mm)

Motor model	LA±1		LB	Inertia level
	Normal	With brake		
MS5G-130STE-C□07220B□-21P5-S01	132.5	162.5	12.5	Medium inertia
MS5G-130STE-TL07220B□-21P5-S01	149.5	179.5		
MS5G-130STE-CS/CM06025B-21P5-S01	122	/		
MS5G-130STE-CS/CM10015B-21P5-S01	145	/		

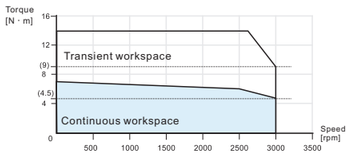


Torque feature (T – N curve)

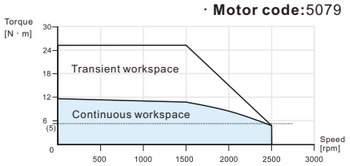
· **Motor code:**5077/5877/9077/9877



· **Motor code:**5078



· **Motor code:**5079



MS5 series 1.8kW

Motor parameter

Voltage level		AC 220V	
Motor model		MS5S-110STE	
		CS/CM06030B□	TL06030B□
		21P8-S01	
Motor code		5037	9037
Rated power [kw]		1.8	
Rated speed [rpm]		3000	
Max speed [rpm]		4500	
Rated torque [rpm]		6	
Max torque [rpm]		12	
Rated current [mA]		9500	7500
Rotor inertia[10^-7kg·m²]		4170	
Inertia type		Low inertia	
Recommended rotor inertia ratio		Within 10 times	
Polar logarithm		5	
Encoder bit		17	23
Encoder type		Magnetic	optical
Motor insulation class		ClassF(155℃)	
Protection level		IP65	
Using environment	Ambient temperature	-15℃~+40℃	
	Ambient humidity	Relative humidity < 90% (no condensation)	

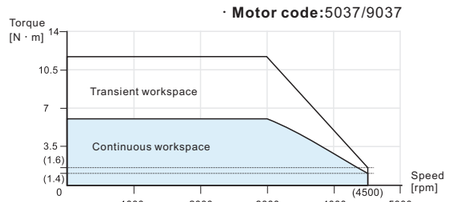
Brake specification

It is a maintain brake, the excitation will release it.
It cannot be used for braking when the motor is rotating.

Static friction torque [N · m]	⩾8
Rated power [W]	14.4
Suction time [ms]	＜80
Release time [ms]	＜40
Excitation current [A]	0.6
Suction voltage [V]	＜16.8
Release voltage [V]	＞1.5
Excitation voltage [V]	DC24±10%

Torque feature (T – N curve)

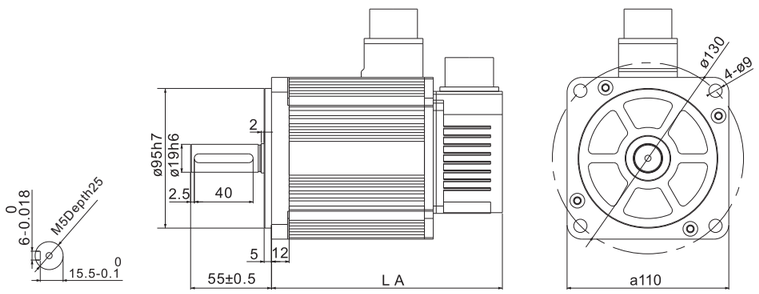
· **Motor code:**5037/9037



Dimension diagram

(Unit: mm)

Motor model	LA±1		Inertia level
	Normal	With brake	
MS5S-110STE-C□06030B□-21P8-S01	181	229	Low inertia
MS5S-110STE-TL06030B□-21P8-S01			



Motor parameter and dimension

MS5 series 1.8kW

Motor parameter

Voltage level		AC 220V			
Motor model		MS5G-130STE			
		CS/CM11515B	CS/CM11515BZ	TL11515B	TL11515BZ
		21P8-S01			
Motor code		5074	5874	9074	9874
Rated power [kw]		1.8			
Rated speed [rpm]		1500			
Max speed [rpm]		2000			
Rated torque [rpm]		11.5			
Max torque [rpm]		23			
Rated current [mA]		9000			
Rotor inertia[10^-7kg·m²]		17710	19060	17710	19060
Inertia type		Medium inertia			
Recommended rotor inertia ratio		Within 10 times			
Polar logarithm		5			
Encoder bit		17		23	
Encoder type		Magnetic		optical	
Motor insulation class		ClassF(155℃)			
Protection level		IP65			
Using environment	Ambient temperature	-15℃~+40℃			
	Ambient humidity	Relative humidity < 90% (no condensation)			

Brake specification

It is a maintain brake, the excitation will release it.
It cannot be used for braking when the motor is rotating.

Static friction torque [N · m]	⩾15
Rated power [W]	25
Suction time [ms]	＜100
Release time [ms]	＜60
Excitation current [A]	1
Suction voltage [V]	＜16.8
Release voltage [V]	＞1.5
Excitation voltage [V]	DC24±10%

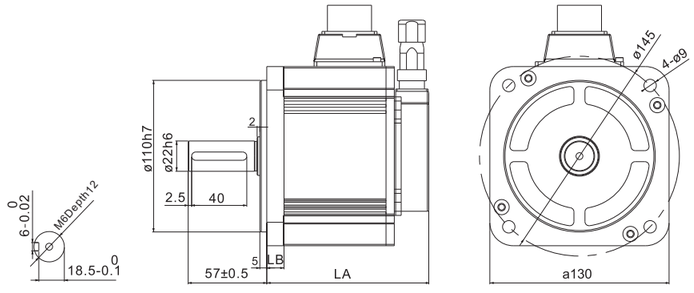
Torque feature (T – N curve)

· **Motor code:**5074/5874/9074/9874

Dimension diagram

(Unit: mm)

Motor model	LA±1		LB	Inertia level
	Normal	With brake		
MS5G-130STE-C□11515B□-21P8-S01	159.5	189.5	12.5	Low inertia
MS5G-130STE-TL11515B□-21P8-S01	176.5	206.5		



MS5 series 1.8kW

Motor parameter

Voltage level		AC 380V			
Motor model		MS5G-130STE			
		CS/CM11515B	CS/CM11515BZ	TL11515B	TL11515BZ
		41P8-S01			
Motor code		5174	5974	9174	9974
Rated power [kw]		1.8			
Rated speed [rpm]		1500			
Max speed [rpm]		3000			
Rated torque [rpm]		11.5			
Max torque [rpm]		28.75			
Rated current [mA]		6800			
Rotor inertia[10^-7kg·m²]		17710	18974	17710	18974
Inertia type		Medium inertia			
Recommended rotor inertia ratio		Within 10 times			
Polar logarithm		5			
Encoder bit		17		23	
Encoder type		Magnetic		optical	
Motor insulation class		ClassF(155℃)			
Protection level		IP65			
Using environment	Ambient temperature	-15℃~+40℃			
	Ambient humidity	Relative humidity < 90% (no condensation)			

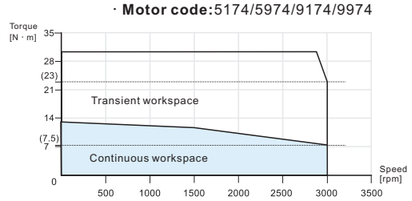
Brake specification

It is a maintain brake, the excitation will release it.
It cannot be used for braking when the motor is rotating.

Static friction torque [N · m]	⩾15
Rated power [W]	25
Suction time [ms]	＜100
Release time [ms]	＜60
Excitation current [A]	1
Suction voltage [V]	＜16.8
Release voltage [V]	＞1.5
Excitation voltage [V]	DC24±10%

Torque feature (T – N curve)

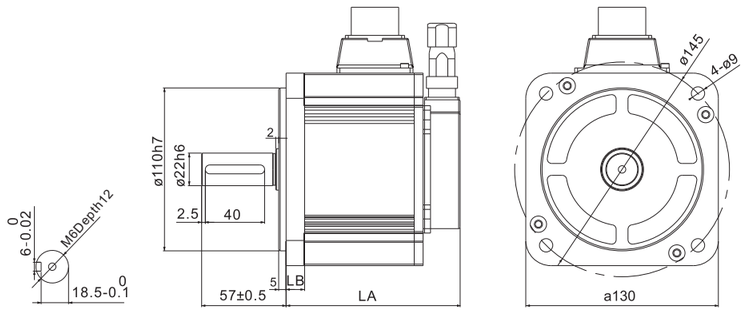
· **Motor code:**5174/5974/9174/9974



Dimension diagram

(Unit: mm)

Motor model	LA±1		LB	Inertia level
	Normal	With brake		
MS5G-130STE-C□11515B□-41P8-S01	159.5	189.5	12.5	Medium inertia
MS5G-130STE-TL11515B□-41P8-S01	176.5	206.5		



MS5 series 2.3kW

Motor parameter

Voltage level		AC 220V			
Motor model		MS5G-130STE			
		CS/CM14615B	CS/CM14615BZ	TL14615B	TL14615BZ
		22P3-S01			
Motor code		5075	5875	9075	9875
Rated power [kw]		2.3			
Rated speed [rpm]		1500			
Max speed [rpm]		2000			
Rated torque [rpm]		14.6			
Max torque [rpm]		29.2			
Rated current [mA]		9000			
Rotor inertia[10^-7kg·m²]		22324	23560	22324	23560
Inertia type		Medium inertia			
Recommended rotor inertia ratio		Within 10 times			
Polar logarithm		5			
Encoder bit		17		23	
Encoder type		Magnetic		optical	
Motor insulation class		ClassF(155℃)			
Protection level		IP65			
Using environment	Ambient temperature	-15℃~+40℃			
	Ambient humidity	Relative humidity < 90% (no condensation)			

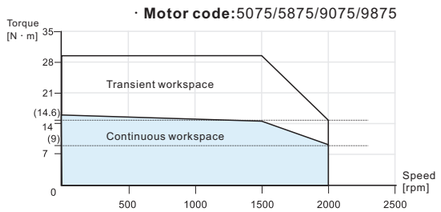
Brake specification

It is a maintain brake, the excitation will release it.
It cannot be used for braking when the motor is rotating.

Static friction torque [N · m]	⩾15
Rated power [W]	25
Suction time [ms]	＜100
Release time [ms]	＜60
Excitation current [A]	1
Suction voltage [V]	＜16.8
Release voltage [V]	＞1.5
Excitation voltage [V]	DC24±10%

Torque feature (T – N curve)

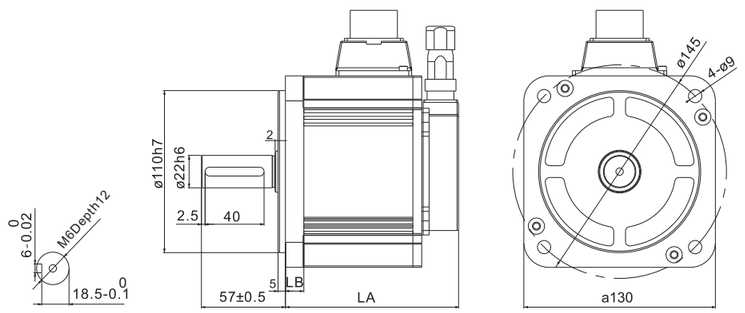
· **Motor code:**5075/5875/9075/9875



Dimension diagram

(Unit: mm)

Motor model	LA±1		LB	Inertia level
	Normal	With brake		
MS5G-130STE-C□14615B□-22P3-S01	180.5	210.5	12.5	Medium inertia
MS5G-130STE-TL14615B□-22P3-S01	197.5	227.5		



MS5 series 2.3kW

Motor parameter

Voltage level		AC 380V			
Motor model		MS5G-130STE			
		CS/CM14615B	CS/CM14615BZ	TL14615B	TL14615BZ
		42P3-S01			
Motor code		5175	5975	9175	9975
Rated power [kw]		2.3			
Rated speed [rpm]		1500			
Max speed [rpm]		3000			
Rated torque [rpm]		14.6			
Max torque [rpm]		36.5			
Rated current [mA]		8500			
Rotor inertia[10^{-7}kg·m^2]		22320	23560	22320	23560
Inertia type		Medium inertia			
Recommended rotor inertia ratio		Within 10 times			
Polar logarithm		5			
Encoder bit		17		23	
Encoder type		Magnetic		optical	
Motor insulation class		ClassF(155℃)			
Protection level		IP65			
Using environment	Ambient temperature	-15℃~+40℃			
	Ambient humidity	Relative humidity < 90% (no condensation)			

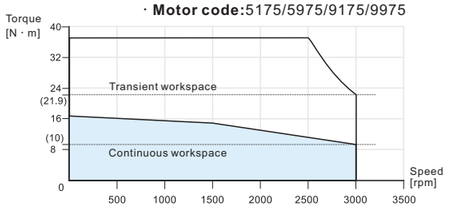
Brake specification

It is a maintain brake, the excitation will release it.
It cannot be used for braking when the motor is rotating.

Static friction torque [N · m]	⩾15
Rated power [W]	25
Suction time [ms]	＜100
Release time [ms]	＜60
Excitation current [A]	1
Suction voltage [V]	＜16.8
Release voltage [V]	＞1.5
Excitation voltage [V]	DC24±10%

Torque feature (T – N curve)

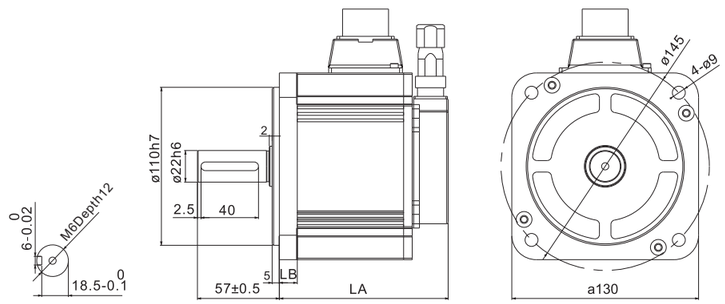
· **Motor code:**5175/5975/9175/9975



Dimension diagram

(Unit: mm)

Motor model	LA±1		LB	Inertia level
	Normal	With brake		
MS5G-130STE-C□14615B□-42P3-S01	180.5	210.5	12.5	Medium inertia
MS5G-130STE-TL14615B□-42P3-S01	197.5	227.5		



MS series 2.6kW

Motor parameter

Voltage level		AC 220V
Motor model		MS-130STE
		TL10025B□
		22P6
Motor code		9045
Rated power [kw]		2.6
Rated speed [rpm]		2500
Max speed [rpm]		3000
Rated torque [rpm]		10
Max torque [rpm]		25
Rated current [mA]		10000
Rotor inertia[10^{-7}kg·m^2]		19400
Inertia type		/
Recommended rotor inertia ratio		Within 15 times
Polar logarithm		4
Encoder bit		23
Encoder type		optical
Motor insulation class		ClassF(155℃)
Protection level		IP65
Using environment	Ambient temperature	-15℃~+40℃
	Ambient humidity	Relative humidity < 90% (no condensation)

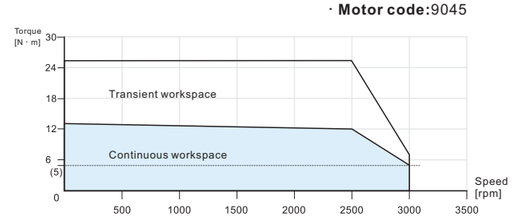
Brake specification

It is a maintain brake, the excitation will release it.
It cannot be used for braking when the motor is rotating.

Static friction torque [N · m]	⩾15
Rated power [W]	25
Suction time [ms]	＜100
Release time [ms]	＜60
Excitation current [A]	1
Suction voltage [V]	＜16.8
Release voltage [V]	＞1.5
Excitation voltage [V]	DC24±10%

Torque feature (T – N curve)

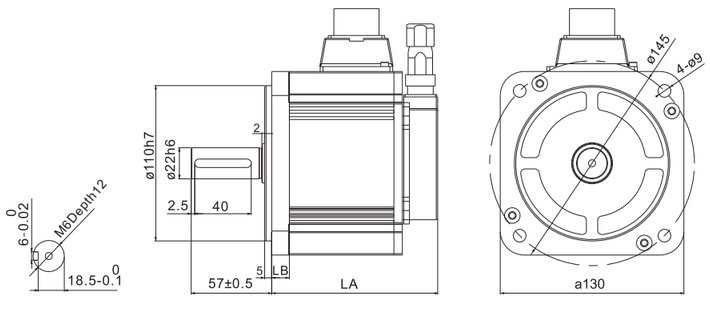
· **Motor code:**9045



Dimension diagram

(Unit: mm)

Motor model	LA±1		LB	Inertia level
	Normal	With brake		
MS-130STE-TL10025B□-22P6	209	290	14	/



MS5 series 2.9kW

Motor parameter

Voltage level		AC 380V
Motor model		MS5G-180STE
		TL19015B□
		42P9-S01
Motor code		9166
Rated power [kw]		2.9
Rated speed [rpm]		1500
Max speed [rpm]		2500
Rated torque [rpm]		19
Max torque [rpm]		51.3
Rated current [mA]		9000
Rotor inertia[10^-7kg·m²]		40443
Inertia type		Medium inertia
Recommended rotor inertia ratio		Within 10 times
Polar logarithm		5
Encoder bit		23
Encoder type		Optical
Motor insulation class		ClassF(155℃)
Protection level		IP65
Using environment	Ambient temperature	-15℃~+40℃
	Ambient humidity	Relative humidity < 90% (no condensation)

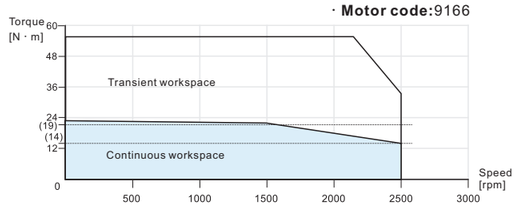
Brake specification

It is a maintain brake, the excitation will release it.
It cannot be used for braking when the motor is rotating.

Static friction torque [N · m]	⩾30
Rated power [W]	31
Suction time [ms]	＜110
Release time [ms]	＜80
Excitation current [A]	1.3
Suction voltage [V]	＜18
Release voltage [V]	＞4
Excitation voltage [V]	DC24±10%

Torque feature (T – N curve)

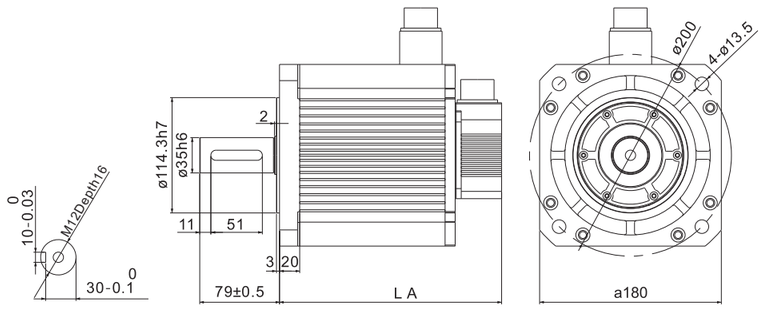
· **Motor code:**9166



Dimension diagram

(Unit: mm)

Motor model	LA±1		Inertia level
	Normal	With brake	
MS5G-180STE-TL19015B□-42P9-S01	221	303	Medium inertia



Motor parameter and dimension

MS series 3.0kW

Motor parameter

Voltage level		AC 380V
Motor model		MS-130STE
		TL10030B□
		43P0
Motor code		9148
Rated power [kw]		3
Rated speed [rpm]		3000
Max speed [rpm]		3500
Rated torque [rpm]		10
Max torque [rpm]		30
Rated current [mA]		6400
Rotor inertia[10^-7kg·m²]		12723
Inertia type		/
Recommended rotor inertia ratio		Within 15 times
Polar logarithm		5
Encoder bit		23
Encoder type		Optical
Motor insulation class		ClassF(155℃)
Protection level		IP65
Using environment	Ambient temperature	-15℃~+40℃
	Ambient humidity	Relative humidity < 90% (no condensation)

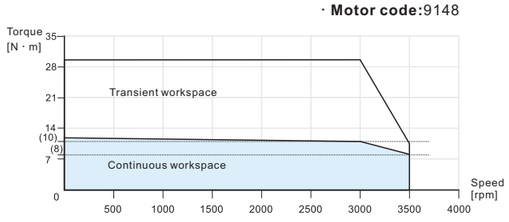
Brake specification

It is a maintain brake, the excitation will release it.
It cannot be used for braking when the motor is rotating.

Static friction torque [N · m]	⩾15
Rated power [W]	25
Suction time [ms]	＜100
Release time [ms]	＜60
Excitation current [A]	1
Suction voltage [V]	＜16.8
Release voltage [V]	＞1.5
Excitation voltage [V]	DC24±10%

Torque feature (T – N curve)

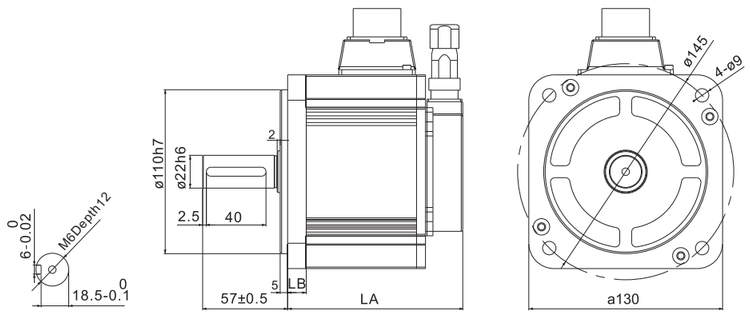
· **Motor code:**9148



Dimension diagram

(Unit: mm)

Motor model	LA±1		LB	Inertia level
	Normal	With brake		
MS-130STE-TL10030B□-43P0	225	284	14	/



MS5 series 4.4kW

Motor parameter

Voltage level		AC 380V
Motor model		MS5G-180STE
		TL28015B□
		44P4-S01
Motor code		9161
Rated power [kw]		4.4
Rated speed [rpm]		1500
Max speed [rpm]		2500
Rated torque [rpm]		28
Max torque [rpm]		56
Rated current [mA]		14000
Rotor inertia[10^-7kg·m²]		55139
Inertia type		Medium inertia
Recommended rotor inertia ratio		Within 10 times
Polar logarithm		5
Encoder bit		23
Encoder type		Optical
Motor insulation class		ClassF(155℃)
Protection level		IP65
Using environment	Ambient temperature	-15℃~+40℃
	Ambient humidity	Relative humidity < 90% (no condensation)

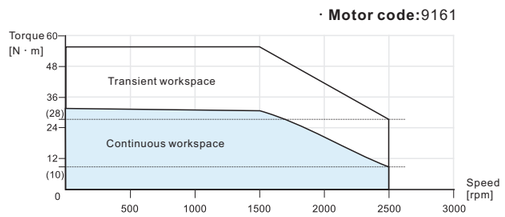
Brake specification

It is a maintain brake, the excitation will release it.
It cannot be used for braking when the motor is rotating.

Static friction torque [N · m]	⩾30
Rated power [W]	31
Suction time [ms]	＜110
Release time [ms]	＜80
Excitation current [A]	1.3
Suction voltage [V]	＜18
Release voltage [V]	＞4
Excitation voltage [V]	DC24±10%

Torque feature (T – N curve)

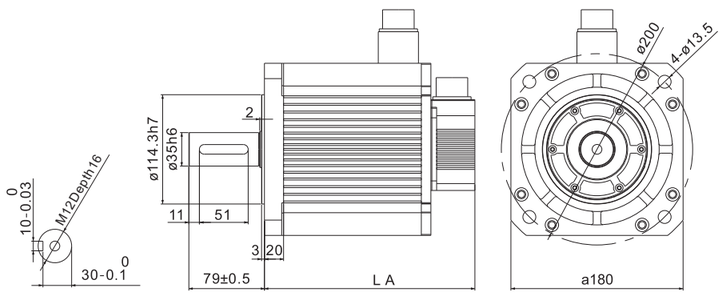
· **Motor code:**9161



Dimension diagram

(Unit: mm)

Motor model	LA±1		Inertia level
	Normal	With brake	
MS5G-180STE-TL28015B□-44P4-S01	247	329	Medium inertia



Motor parameter and dimension

MS5 series 5.5kW

Motor parameter

Voltage level		AC380V
Motor model		MS5G-180STE
		TL35015B□
		45P5-S01
Motor code		9162
Rated power [kw]		5.5
Rated speed [rpm]		1500
Max speed [rpm]		2500
Rated torque [rpm]		35
Max torque [rpm]		70
Rated current [mA]		16000
Rotor inertia[10^-7kg·m²]		68342
Inertia type		Medium inertia
Recommended rotor inertia ratio		Within 10 times
Polar logarithm		5
Encoder bit		23
Encoder type		Optical
Motor insulation class		ClassF(155℃)
Protection level		IP65
Using environment	Ambient temperature	-15℃~+40℃
	Ambient humidity	Relative humidity < 90% (no condensation)

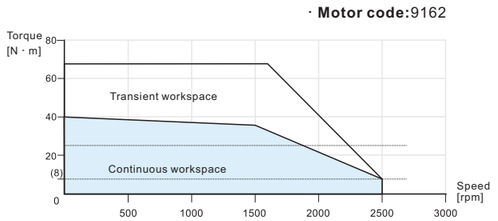
Brake specification

It is a maintain brake, the excitation will release it.
It cannot be used for braking when the motor is rotating.

Static friction torque [N · m]	⩾50
Rated power [W]	51
Suction time [ms]	＜110
Release time [ms]	＜80
Excitation current [A]	2.1
Suction voltage [V]	＜19
Release voltage [V]	＞5
Excitation voltage [V]	DC24±10%

Torque feature (T – N curve)

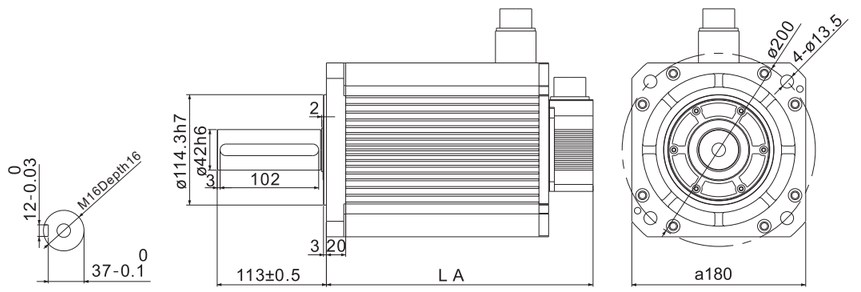
· **Motor code:**9162



Dimension diagram

(Unit: mm)

Motor model	LA±1		Inertia level
	Normal	With brake	
MS5G-180STE-TL35015B□-45P5-S01	277	359	Medium inertia



MS5 series 7.5kW

Motor parameter

Voltage level		AC 380V
Motor model		MS5G-180STE
		TL48015B□
		47P5-S01
Motor code		9163
Rated power [kw]		7.5
Rated speed [rpm]		1500
Max speed [rpm]		2000
Rated torque [rpm]		48
Max torque [rpm]		96
Rated current [mA]		16100
Rotor inertia[10^-7kg·m²]		95424
Inertia type		Medium inertia
Recommended rotor inertia ratio		Within 10 times
Polar logarithm		5
Encoder bit		23
Encoder type		Optical
Motor insulation class		ClassF(155℃)
Protection level		IP65
Using environment	Ambient temperature	-15℃~+40℃
	Ambient humidity	Relative humidity < 90% (no condensation)

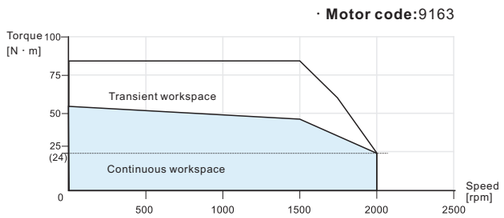
Brake specification

It is a maintain brake, the excitation will release it.
It cannot be used for braking when the motor is rotating.

Static friction torque [N · m]	⩾50
Rated power [W]	51
Suction time [ms]	＜110
Release time [ms]	＜80
Excitation current [A]	2.1
Suction voltage [V]	＜19
Release voltage [V]	＞5
Excitation voltage [V]	DC24±10%

Torque feature (T – N curve)

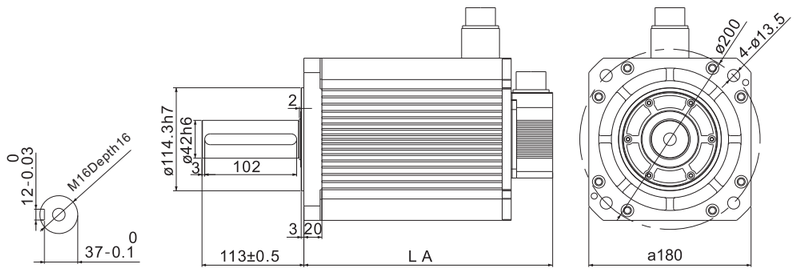
· **Motor code:**9163



Dimension diagram

(Unit: mm)

Motor model	LA±1		Inertia level
	Normal	With brake	
MS5G-180STE-TL48015B□-47P5-S01	318	400	Medium inertia



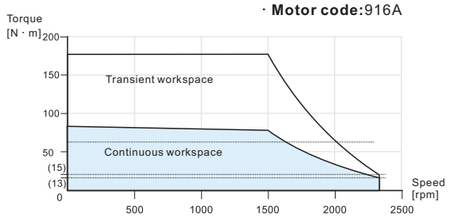
MS series 11kW

Motor parameter

Voltage level		AC380V
Motor model		MS-220STE
		TL70015B
		411P0-XJ
Motor code		916A
Rated power [kw]		11
Rated speed [rpm]		1500
Max speed [rpm]		2300
Rated torque [rpm]		70
Max torque [rpm]		175
Rated current [mA]		25500
Rotor inertia[10^-7kg·m²]		120270
Inertia type		/
Recommended rotor inertia ratio		Within 10 times
Polar logarithm		4
Encoder bit		23
Encoder type		Optical
Motor insulation class		ClassF(155℃)
Protection level		IP65
Using environment	Ambient temperature	-15℃~+40℃
	Ambient humidity	Relative humidity < 90% (no condensation)

Torque feature (T – N curve)

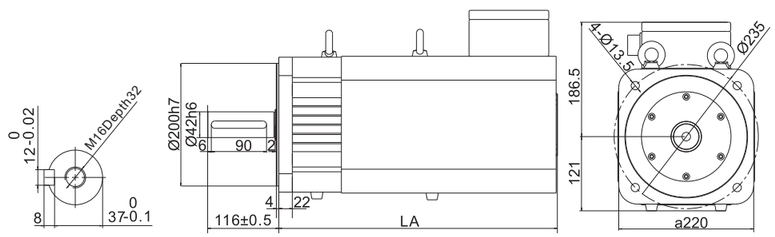
· **Motor code:**916A



Dimension diagram

(Unit: mm)

Motor model	LA±1	Inertia level
	Normal	
MS-220STE-TL70015B-411P0-XJ	454	/
MS-220STE-TL96015B-415P0-XJ	507	



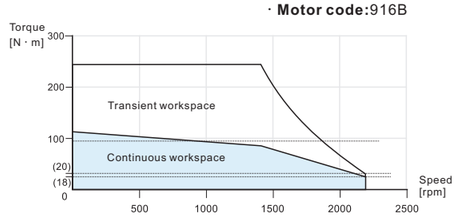
MS series 15kW

Motor parameter

Voltage level		AC380V
Motor model		MS-220STE
		TL96015B
		415P0-XJ
Motor code		916B
Rated power [kw]		15
Rated speed [rpm]		1500
Max speed [rpm]		2200
Rated torque [rpm]		96
Max torque [rpm]		240
Rated current [mA]		35000
Rotor inertia[10^-7kg·m²]		159500
Inertia type		/
Recommended rotor inertia ratio		Within 10 times
Polar logarithm		4
Encoder bit		23
Encoder type		Optical
Motor insulation class		ClassF(155℃)
Protection level		IP65
Using environment	Ambient temperature	-15℃~+40℃
	Ambient humidity	Relative humidity < 90% (no condensation)

Torque feature (T – N curve)

· **Motor code:**916B



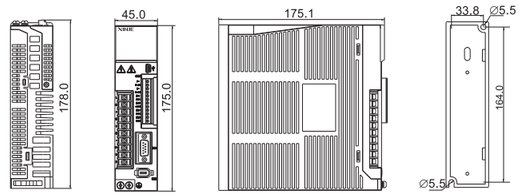
Driver specification

Specification \ Model			Pulse type	EtherCAT type	Xnet bus type	Full function type	Standard type	Integrated driving and control type
			DS5L series	**DS5C series**	**DS5E series**	**DS5Fseries**	**DS5K series**	**W5E3**
Basic specification	Power range		0.1KW~2.6KW	0.1KW~15KW	0.1KW~15KW	0.1~15KW	0.1~3.0KW	0.75-~1.5kW
	Input power supply		Single phase/three phase AC200~240V, 50Hz/60Hz; three phase 340~420V, 50Hz/60Hz					Single phase/three phase AC200~240V, 50Hz/60Hz
	Encoder feedback		17 bits/23 bits communication encoder					
	Control method		Three phase full wave rectifier IPM PWM control, sine wave current driving mode					
	Using environment	Ambient temperature	Operation: -10℃~40℃(no condensation)/storage: -20℃~60℃(no condensation)					
		Ambient humidity	Operation/storage: below 90% RH (no condensation)					
		Vibration and impact resistance	4.9m/s² / 19. 6m/s²					
	Function	Electronic CAM	Without					With
		Protection	Overvoltage, undervoltage, overheat, overcurrent, overload, overspeed, analog input error, excessive position deviation, output short circuit, encoder error, regenerative error, overrun protection, oscillation protection, lack of phase protection					
		Dynamic brake	Without					
		Communication function	**RS232**: standard Modbus Rtu protocol	**RS232**: standard Modbus Rtu protocol EtherCAT: support EtherCAT bus communication (max 32-axis)	**RS232**: standard Modbus Rtu protocol **RS485**: standard Modbus Rtu protocol Support Xnet bus communication (max 20-axis)	**RS232**: standard Modbus Rtu protocol **RS485**: standard Modbus Rtu protocol	**RS232**: standard Modbus Rtu protocol	**RS232**: standard ModbusRtu protocol **RS485**: standard ModbusRtu protocol
		Brake resistor	Built in brake resistor, external brake resistor					
		Display and operate	5 digits LED indicator, power indicator, 4 buttons					
I/O signal	Position output	Output status	Without			ABZ differential feedback output		Without
		Frequency division function	Without			with		Without
		Collector Z phase output	with					
	Analog input		Without			2 channels input	Without	Without
	Digital input		750W and below: 3 channels SI input. 750W and above: 4 channels SI input			10 channels SI input	5 channels SI input	750W and below: 3 channls SI input. 750W and above: 4 channels SI input
	Digital output		750W and below: 3 channels SO output. 750W and above: 4 channels SO output			8 channels SO output	4 channels SO output	750W and below: 3 channls SO output. 750W and above: 4 channels SO output
			Positioning completion, servo ready, alarm output, torque limit output, same speed detection, rotation detection, speed reached, brake release output, warning output					
Position control mode	Max input pulse frequency		Open collector: 200kpps			Open collector: 200kpps<optocoupler> Differential input: 500kpps <optocoupler> Line reception: 2Mpps		Open collector: 200kpps
	Pulse command mode		Can receive 18~24V pulse+direction, AB phase pulse, CW/CCW signal (5C not support CW/CCW)			3.3V~5V/18~24V pulse+direction, AB phase pulse, CW/CCW signal		Can receive 18~24V pulse+direction, AB phase pulse, CW/CCW signal
	Control mode		External pulse/ internal position	External pulse/ internal position/ EtherCAT motion bus	External pulse/ internal position/ XNet motion bus	External pulse/internal position		
	Feedforward compensation		0~100% (setting resolution is 1%)					
	Positioning completion width		0~65535 command unit (setting resolution is 1 command unit)					
	electronic gear ratio		1/10000≤B/A≤10000					
Speed control mode	Control mode		Analog speed control (only DS5F supports), internal 3-segment speed, external speed mode					
	Command smoothing mode		Low pass filter, smoothing filter					
	Analog input	Voltage range	Without			-10~+10V (resolution 12-bit)		Without
		Input impedance	Without			72KΩ		Without
	Torque limit		Internal parameter			External load rated changing 0~100% : below ±0.01% (rated speed)		Internal parameter
	Speed changing rate		External load rated changing 0~100% : below ±0.01% (rated speed)					
			Rated voltage ±10%: 0.01% (rated speed)					
			Ambient temperature 20±25℃: below ±0.01% (rated speed)					
Torque control mode	Control mode		Analog speed control (only DS5F supports), internal torque					
	Command smoothing mode		Low pass filter, smoothing filter					
	Analog input	Voltage range	Without			-10~+10V (resolution 12-bit)		Without
		Input impedance	Without			72KΩ		Without
	Speed limit		Internal parameter			Internal parameter/ external analog value		Internal parameter
Bus control mode	Control axis		Without	32 axes	20 axes	Without		
	Communication protocol		Without	EtherCAT protocol	XNET protocol	Without		

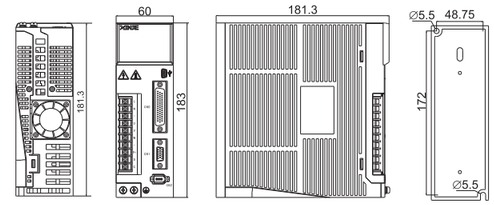
Servo driver dimension

(Unit: mm)

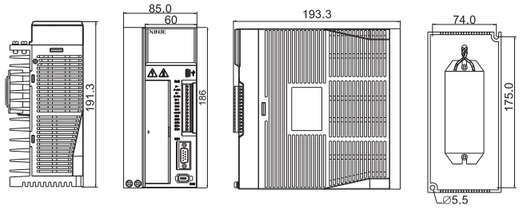
DS5E-20P1/20P2/20P4-PTA
DS5L-20P1/20P2/20P4-PTA
DS5C-20P1/20P2/20P4-PTA
DS5F-20P1/20P2/20P4-PTA
DS5K-20P1/20P2/20P4-PTA



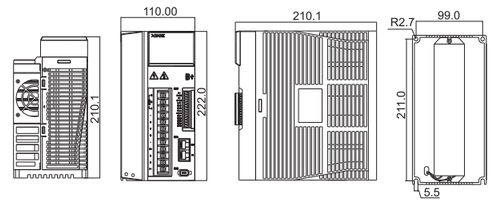
DS5E-20P7-PTA
DS5L-20P7-PTA
DS5C-20P7-PTA
DS5F-20P7-PTA
DS5K-20P7-PTA



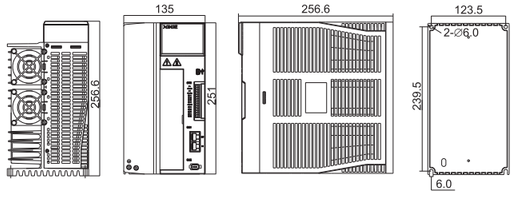
DS5E-21P5/22P3/22P6-PTA
DS5L-21P5/22P3/22P6-PTA
DS5C-21P5/22P3/22P6-PTA
W5E3-21P5-PTA
DS5F-21P5/22P3/22P6-PTA
DS5K-21P5/22P3/22P6-PTA
DS5C-41P5-PTA



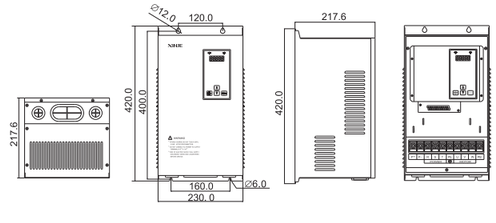
DS5E-43P0-PTA
DS5K-43P0-PTA
DS5C-43P0-PTA
DS5F-43P0-PTA



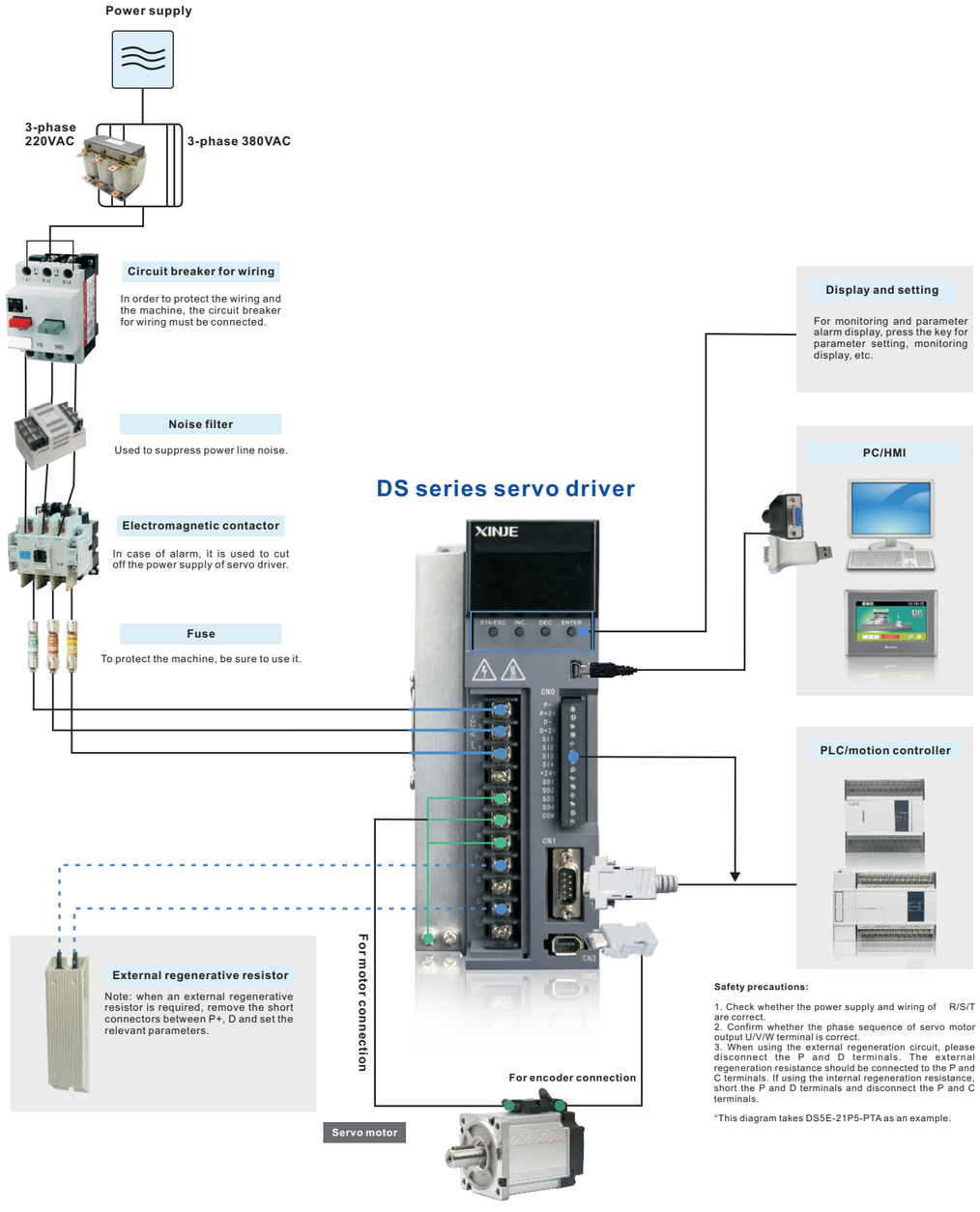
DS5E-45P5/47P5-PTA
DS5F-45P5/47P5-PTA
DS5C-45P5/47P5-PTA



DS5E-411P0/415P0-PTA



DS5E, DS5L series

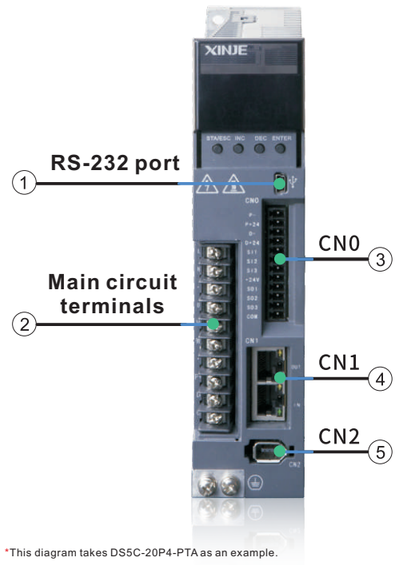


Safety precautions:

1. Check whether the power supply and wiring of R/S/T are correct.
2. Confirm whether the phase sequence of servo motor output U/V/W terminal is correct.
3. When using the external regeneration circuit, please disconnect the P and D terminals. The external regeneration resistance should be connected to the P and C terminals. If using the internal regeneration resistance, short the P and D terminals and disconnect the P and C terminals.

*This diagram takes DS5E-21P5-PTA as an example.

DS5C series



*This diagram takes DS5C-20P4-PTA as an example.

① RS-232 port

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

② Main circuit terminals

Terminal	Function	Explanation
L/N R/S/T	Main circuit power supply input terminal	single/three phase AC220~240V, 50/60Hz Three phase AC340~420V, 50/60Hz
●	Empty terminal	/
U、V、W	Motor connection terminal	Connect to the motor Note: the ground wire is on the radiator, please check before power on
P+、D、C	Use internal regenerative resistor	Short connect P+ and D terminals, disconnect P+ and C terminals
	Use external regenerative resistor	Connect the regeneration resistance to the P + and C terminals, and remove the P + and D short wires P0-25=power, P0-26=resistance

③ CN0 port

• 750W and below power

Name	Explanation	Name	Explanation
P-	Pulse input PUL-	SI3	Input terminal 3
P+24V	Open collector input	+24V	Input +24V
D-	Direction input DIR-	SO1	Output terminal 1
D+24V	Open collector input	SO2	Output terminal 2
SI1	Input terminal 1	SO3	Output terminal 3
SI2	Input terminal 2	COM	Output terminal ground

• 1.5KW and above power

Name	Explanation	Name	Explanation
P-	Pulse input PUL-	SI4	Input terminal 4
P+24V	Open collector input	+24V	Input +24V
D-	Direction input DIR-	SO1	Output terminal 1
D+24V	Open collector input	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

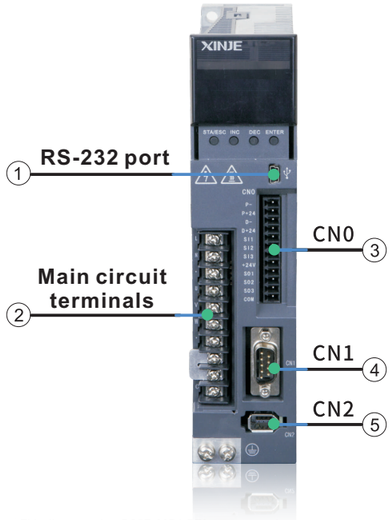
④ CN1 port

Pin number	Name	Explanation	Pin number	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 number	Name
1	5V
2	GND
3	/
4	/
5	485+
6	485-

DS5E series



* This diagram takes DS5E-20P4-PTA as an example.

① RS-232 port

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

② Main circuit terminals

Terminal	Function	Explanation
L/N R/S/T	Main circuit power supply input terminal	single/three phase AC220~240V, 50/60Hz Three phase AC340~420V, 50/60Hz
●	Empty terminal	/
U、V、W	Motor connection terminal	Connect to the motor Note: the ground wire is on the radiator, please check before power on
P+、D、C	Use internal regenerative resistor	Short connect P+ and D terminals, disconnect P+ and C terminals
	Use external regenerative resistor	Connect the regeneration resistance to the P + and C terminals, and remove the P + and D short wires P0-25=power, P0-26=resistance

③ CN0 port

- **750W and below power**

Name	Explanation	Name	Explanation
P-	Pulse input PUL-	SI3	Input terminal 3
P+24V	Open collector input	+24V	Input +24V
D-	Direction input DIR-	SO1	Output terminal 1
D+24V	Open collector input	SO2	Output terminal 2
SI1	Input terminal 1	SO3	Output terminal 3
SI2	Input terminal 2	COM	Output terminal ground

- **1.5KW and above power**

Name	Explanation	Name	Explanation
P-	Pulse input PUL-	SI4	Input terminal 4
P+24V	Open collector input	+24V	Input +24V
D-	Direction input DIR-	SO1	Output terminal 1
D+24V	Open collector input	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

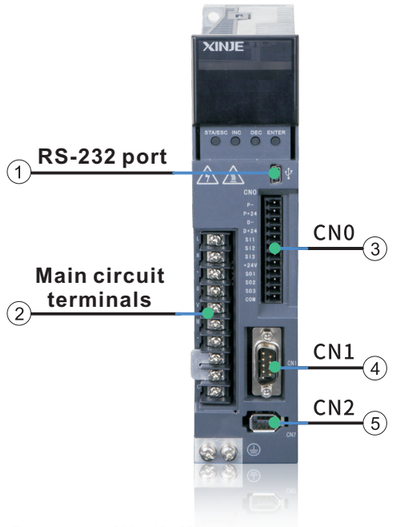
④ CN1 port

Pin number	Name	Explanation
1	GND	GND-485
2	A1	RS485 +
3	B1	RS485 –
4	A2	RS485 +
5	B2	RS485 –
6	GND	GND-485
7	NC	Reserved
8		
9		

⑤ CN2 port

Pin number	Name
1	5V
2	GND
3	/
4	/
5	485+
6	485-

DS5L series



* This diagram takes DS5L-20P4-PTA as an example.

① RS-232 port

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

② Main circuit terminals

Terminal	Function	Explanation
L/N R/S/T	Main circuit power supply input terminal	single/three phase AC220~240V, 50/60Hz Three phase AC340~420V, 50/60Hz
●	Empty terminal	/
U、V、W	Motor connection terminal	Connect to the motor Note: the ground wire is on the radiator, please check before power on
P+、D、C	Use internal regenerative resistor	Short connect P+ and D terminals, disconnect P+ and C terminals
	Use external regenerative resistor	Connect the regeneration resistance to the P + and C terminals, and remove the P + and D short wires P0-25=power, P0-26=resistance

③ CN0 port

- **750W and below power**

Name	Explanation	Name	Explanation
P-	Pulse input PUL-	SI3	Input terminal 3
P+24V	Open collector input	+24V	Input +24V
D-	Direction input DIR-	SO1	Output terminal 1
D+24V	Open collector input	SO2	Output terminal 2
SI1	Input terminal 1	SO3	Output terminal 3
SI2	Input terminal 2	COM	Output terminal ground

- **1.5KW and above power**

Name	Explanation	Name	Explanation
P-	Pulse input PUL-	SI4	Input terminal 4
P+24V	Open collector input	+24V	Input +24V
D-	Direction input DIR-	SO1	Output terminal 1
D+24V	Open collector input	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

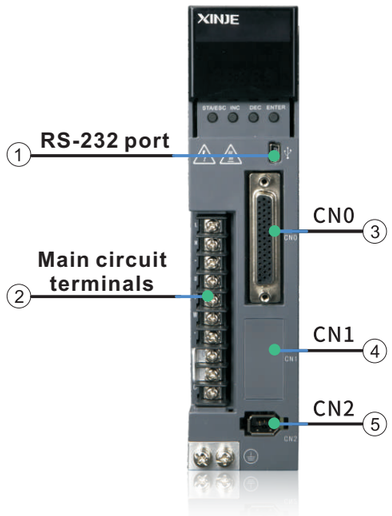
④ CN1 port

Pin number	Name	Explanation
1	NC	Reserved
2		
3		
4		
5		
6		
7		
8		
9		

⑤ CN2 port

Pin number	Name
1	5V
2	GND
3	/
4	/
5	485+
6	485-

DS5K series



* This diagram takes DS5K-20P4-PTA as an example.

① RS-232 port

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

② Main circuit terminals

Terminal	Function	Explanation
L/N R/S/T	Main circuit power supply input terminal	single/three phase AC220~240V, 50/60Hz Three phase AC340~420V, 50/60Hz
●	Empty terminal	/
U、V、W	Motor connection terminal	Connect to the motor Note: the ground wire is on the radiator, please check before power on
P+、D、C	Use internal regenerative resistor	Short connect P+ and D terminals, disconnect P+ and C terminals
	Use external regenerative resistor	Connect the regeneration resistance to the P + and C terminals, and remove the P + and D short wires P0-25=power, P0-26=resistance

③ CN0 port

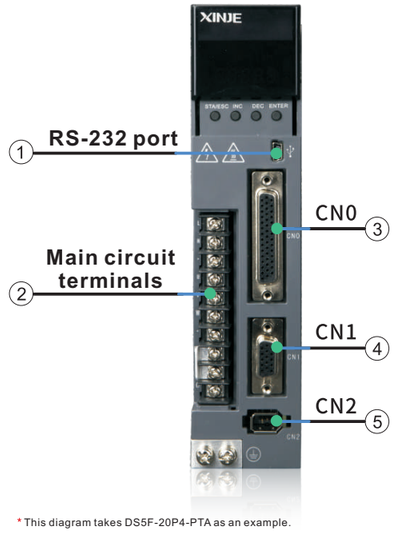
Pin number	Name	Explanation	Name	Pin number	Explanation
1	P-	Pulse –	23	SI4	Input terminal
2	P+5	Pulse +5V	24	SI5	
3	P+24	Pulse +24V	25	SI6	
4	D-	Direction –	26	SI7	
5	D+5	Direction +5	27	SI8	
6	D+24	Direction +24V	28	SI9	
7	SO1	Output terminal	29	SI10	High speed input terminal
8	SO2		30	+24V	Input common terminal
9	SO3		31	T-REF+	External torque analog differential input +
10	SO4		32	T-REF-	External torque analog differential input –
11	NC	Empty terminal	33	V-REF+	External speed analog differential input +
12			34	V-REF-	External speed analog differential input –
13			35	OA+	Encoder frequency division output OA+
14			36	OA-	Encoder frequency division output OA-
15	COM	Output common terminal	37	OB+	Encoder frequency division output OB+
16	485+	Communication +	38	OB-	Encoder frequency division output OB-
17	485-	Communication –	39	OZ+	Encoder frequency division output OC+
18	GND	Communication ground	40	OZ-	Encoder frequency division output OC-
19	NC	Empty terminal	41	HPUL+	Line driver high speed pulse +
20	SI1	Output terminal	42	HPUL-	Line driver high speed pulse –
21	SI2		43	HDIR+	Line driver high speed direction +
22	SI3		44	HDIR-	Line driver high speed direction –

④ CN1 port (no function)

⑤ CN2 port

Pin number	Name
1	5V
2	GND
3	/
4	/
5	485+
6	485-

DS5F series



* This diagram takes DS5F-20P4-PTA as an example.

① RS-232 port

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

② Main circuit terminals

Terminal	Function	Explanation
L/N R/S/T	Main circuit power supply input terminal	single/three phase AC220~240V, 50/60Hz Three phase AC340~420V, 50/60Hz
●	Empty terminal	/
U、V、W	Motor connection terminal	Connect to the motor Note: the ground wire is on the radiator, please check before power on
P+、D、C	Use internal regenerative resistor	Short connect P+ and D terminals, disconnect P+ and C terminals
	Use external regenerative resistor	Connect the regeneration resistance to the P + and C terminals, and remove the P + and D short wires P0-25=power, P0-26=resistance

③ CN0 port

Pin number	Name	Explanation	Name	Pin number	Explanation
1	P-	Pulse –	23	SI4	Input terminal
2	P+5	Pulse +5V	24	SI5	
3	P+24	Pulse +24V	25	SI6	
4	D-	Direction –	26	SI7	
5	D+5	Direction +5	27	SI8	
6	D+24	Direction +24V	28	SI9	
7	SO1	Output terminal	29	SI10	High speed input terminal
8	SO2		30	+24V	Input common terminal
9	SO3		31	T-REF+	External torque analog differential input +
10	SO4		32	T-REF-	External torque analog differential input –
11	SO5		33	V-REF+	External speed analog differential input +
12	SO6		34	V-REF-	External speed analog differential input –
13	SO7		35	OA+	Encoder frequency division output OA+
14	SO8		36	OA-	Encoder frequency division output OA-
15	COM	Output common terminal	37	OB+	Encoder frequency division output OB+
16	485+	Communication +	38	OB-	Encoder frequency division output OB-
17	485-	Communication –	39	OZ+	Encoder frequency division output OC+
18	GND	Communication ground	40	OZ-	Encoder frequency division output OC-
19	GND	Analog input ground	41	HPUL+	Line driver high speed pulse +
20	SI1	Output terminal	42	HPUL-	Line driver high speed pulse –
21	SI2		43	HDIR+	Line driver high speed direction +
22	SI3		44	HDIR-	Line driver high speed direction –

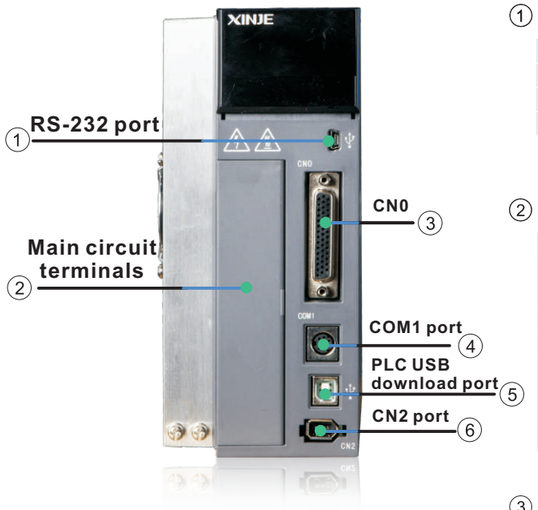
④ CN1 port (Hardware version v3.1.40 and later)

Pin number	Name	Explanation
1	Z-	Full closed loop input Z-
2	B-	Full closed loop input B-
3	B+	Full closed loop input B+
4	A+	Full closed loop input A+
5	A-	Full closed loop input A-
6	GND	Grating power supply GND
7	GND	Grating power supply GND
8	5V	Grating power supply 5V
9	Z+	Full closed loop input Z+
10	/	Empty terminal
11		
12		
13		
14		
15		

⑤ CN2 port

Pin number	Name
1	5V
2	GND
3	/
4	/
5	485+
6	485-

W5E3 series



*This diagram takes W5E3-21P5-PTA as an example.

① RS-232 port

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

② Main circuit terminals

Terminal	Function	Explanation
L/N R/S/T	Main circuit power supply input terminal	single/three phase AC220~240V, 50/60Hz
		Three phase AC340~420V, 50/60Hz
●	Empty terminal	/
U、V、W	Motor connection terminal	Connect to the motor Note: the ground wire is on the radiator, please check before power on
P+、D、C	Use internal regenerative resistor	Short connect P+ and D terminals, disconnect P+ and C terminals
	Use external regenerative resistor	Connect the regeneration resistance to the P + and C terminals, and remove the P + and D short wires P0-25=power, P0-26=resistance

③ CN0 port

Pin number	Name	Explanation	Name	Pin number	Explanation
1	SI1	Servo input terminal 1	23	X5	PLC input terminal X5
2	SI3	Servo input terminal 3	24	X7	PLC input terminal X7
3	+24V	Servo input +24V	25	/	Empty
4	SO1	Servo output terminal 1	26	Y4	PLC output terminal Y4
5	COM	SO1 common terminal COM	27	Y5	PLC output terminal Y5
6	SO3	Servo output terminal 3	28	Y6	PLC output terminal Y6
7	COM	SO3 common terminal COM	29	Y7	PLC output terminal Y7
8	X6	PLC input terminal X6	30	COM	Common terminal COM of PLC output Y4/Y5/Y6/Y7
9	+24V	PLC input common power supply			
10	Y1	PLC output terminal Y1	31	/	Empty
11	Y3	PLC output terminal Y3	32	/	Empty
12	A	PLC485+	33	/	Empty
13	B	PLC485-	34	X0	PLC high speed count X0
14	GND	PLC485GND	35	X1	PLC high speed count X1
15	COM	PLC output terminal Y1 COM terminal with Y3	36	X2	PLC input terminal X2
			37	X3	PLC input terminal X3
16	SI2	Servo input terminal 2	38	X4	PLC input terminal X4
17	SI4	Servo input terminal 4	39	A+	Frequency division output A+
18	/	Empty	40	A-	Frequency division output A-
19	SO2	Servo output terminal 2	41	B+	Frequency division output B+
20	COM	SO2 common terminal COM	42	B-	Frequency division output B-
21	SO4	Servo output terminal 4	43	Z+	Frequency division output Z+
22	COM	SO4 common terminal COM	44	Z-	Frequency division output Z-

④ COM1 port

Pin number	Name	Explanation
1	/	Empty
3	/	Empty
5	TXD	RS232 send
7	/	Empty
2	/	Empty
4	RXD	RS232 receive
6	/	Empty
8	GND	RS232 ground

⑤ PLC USB donwload port

⑥ CN2 port

Number	Definition
1	5V
2	GND
3	/
4	/
5	A
6	B

Product accessories

Quick connector

- Provide convenient wiring terminals
- For 100W~15KW driver
- Suitable for DS5F, DS5K, W5E3 series 44-bit terminals: DTHDB44M-BK10

DB9 cable

- The cable length is 1.5m
- Connect PC to perform servo upper computer control

JC-CA bus cable

- Special communication cable for EtherCAT motion bus
- Use CAT5e industrial level 4-core cable

Absolute value battery box

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

X-NET parts

- Bus module: JA-NE-L
- Suitable shielded twisted-pair cable: JC-EA-length

Power cable

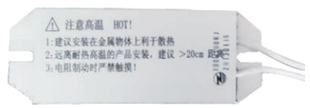
- Standard cable length: 2/3/5/8/10/12/16/20 meter
- The length can be customized
- The cable connector is optional (not include cable)

Encoder cable

- Standard cable length: 2/3/5/8/10/12/16/20 meter
- The length can be customized
- The cable connector is optional (not include cable)

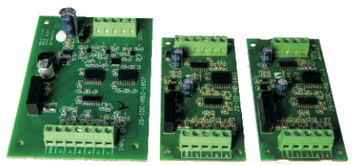
Regenerative resistor

- Release the regeneration voltage of bus capacitance
- Please refer to the regeneration resistance selection table in the user manual for specific model



Differential module

- Conversion between collector signal and differential signal
- Differential to differential isolation card: JS-ID-AB
- Differential to collector card: JS-IDC-AB(AB phase), JS-IDC-ABZ(ABZ phase)



Model configuration list

Motor model	Adapted driver	Encoder cable	Power cable	Brake cable	Cable parts
MS5S-40ST□-CS00330B-20P1-S01	DS5E/L/C/F/K-20P1-PTA	CP(T)-SP-M-length	CM(T)-P07-M-length	/	JAM-P9-P4
MS5S-40ST□-CM00330B-20P1-S01		CP(T)-SP-BM-length	CM(T)-P07-M-length	/	JAM-P9-P4
MS5S-40ST□-CS00330BZ-20P1-S01		CP(T)-SP-M-length	CM(T)-P07-M-length	CB(T)-P03-length	JAM-P9-P4-P2
MS5S-40ST□-CM00330BZ-20P1-S01		CP(T)-SP-BM-length	CM(T)-P07-M-length	CB(T)-P03-length	JAM-P9-P4-P2
MS5S-60ST□-CS00630B-20P2-S01	DS5E/L/C/F/K-20P2-PTA	CP(T)-SP-M-length	CM(T)-P07-M-length	/	JAM-P9-P4
MS5S-60ST□-CM00630B-20P2-S01		CP(T)-SP-BM-length	CM(T)-P07-M-length	/	JAM-P9-P4
MS5S-60ST□-CS00630BZ-20P2-S01		CP(T)-SP-M-length	CM(T)-P07-M-length	CB(T)-P03-length	JAM-P9-P4-P2
MS5S-60ST□-CM00630BZ-20P2-S01		CP(T)-SP-BM-length	CM(T)-P07-M-length	CB(T)-P03-length	JAM-P9-P4-P2
MS5H-60ST□-CS0O630B-20P2-S01		CP(T)-SP-M-length	CM(T)-P07-M-length	/	JAM-P9-P4
MS5H-60ST□-CM0O630B-20P2-S01		CP(T)-SP-BM-length	CM(T)-P07-M-length	/	JAM-P9-P4
MS5H-60ST□-CS00630BZ-20P2-S01		CP(T)-SP-M-length	CM(T)-P07-M-length	CB(T)-P03-length	JAM-P9-P4-P2
MS5H-60ST□-CM00630BZ-20P2-S01		CP(T)-SP-BM-length	CM(T)-P07-M-length	CB(T)-P03-length	JAM-P9-P4-P2
MS5S-60ST□-CS01330B-20P4-S01	DS5E/L/C/F/K-20P4-PTA	CP(T)-SP-M-length	CM(T)-P07-M-length	/	JAM-P9-P4
MS5S-60ST□-CM01330B-20P4-S01		CP(T)-SP-BM-length	CM(T)-P07-M-length	/	JAM-P9-P4
MS5S-60ST□-CS01330BZ-20P4-S01		CP(T)-SP-M-length	CM(T)-P07-M-length	CB(T)-P03-length	JAM-P9-P4-P2
MS5S-60ST□-CM01330BZ-20P4-S01		CP(T)-SP-BM-length	CM(T)-P07-M-length	CB(T)-P03-length	JAM-P9-P4-P2
MS5H-60ST□-CS01330B-20P4-S01		CP(T)-SP-M-length	CM(T)-P07-M-length	/	JAM-P9-P4
MS5H-60ST□-CM01330B-20P4-S01		CP(T)-SP-BM-length	CM(T)-P07-M-length	/	JAM-P9-P4
MS5H-60ST□-CS01330BZ-20P4-S01		CP(T)-SP-M-length	CM(T)-P07-M-length	CB(T)-P03-length	JAM-P9-P4-P2
MS5H-60ST□-CM01330BZ-20P4-S01		CP(T)-SP-BM-length	CM(T)-P07-M-length	CB(T)-P03-length	JAM-P9-P4-P2
MS-60ST□-T01330B□-20P4-D01		CP(T)-SP-B-length	CM(T)-P07-length	/	JAM-P9-P4
MS6S-60CS30B1-20P4 敬请期待		CP(T)-SP-M-length	CM(T)-P07-M-length	/	JAM-P9-P4
MS6S-60CM30B1-20P4 敬请期待		CP(T)-SP-BM-length	CM(T)-P07-M-length	/	JAM-P9-P4
MS6S-60CS30BZ1-20P4 敬请期待		CP(T)-SP-M-length	CM(T)-P07-M-length	CB(T)-P03-length	JAM-P9-P4-P2
MS6S-60CM30BZ1-20P4 敬请期待		CP(T)-SP-BM-length	CM(T)-P07-M-length	CB(T)-P03-length	JAM-P9-P4-P2
MS6H-60CS30B1-20P4 NEW		CP(T)-SP-M-length	CM(T)-P07-M-length	/	JAM-P9-P4
MS6H-60CM30B1-20P4 NEW		CP(T)-SP-BM-length	CM(T)-P07-M-length	/	JAM-P9-P4
MS6H-60CS30BZ1-20P4 NEW		CP(T)-SP-M-length	CM(T)-P07-M-length	CB(T)-P03-length	JAM-P9-P4-P2
MS6H-60CM30BZ1-20P4 NEW		CP(T)-SP-BM-length	CM(T)-P07-M-length	CB(T)-P03-length	JAM-P9-P4-P2
MS5S-80ST□-CS02430B-20P7-S01	DS5E/L/C/F/K-20P7-PTA W5E3-21P5-PTA	CP(T)-SP-M-length	CM(T)-P07-M-length	/	JAM-P9-P4
MS5S-80ST□-CM02430B-20P7-S01		CP(T)-SP-BM-length	CM(T)-P07-M-length	/	JAM-P9-P4
MS5S-80ST□-CS02430BZ-20P7-S01		CP(T)-SP-M-length	CM(T)-P07-M-length	CB(T)-P03-length	JAM-P9-P4-P2
MS5S-80ST□-CM02430BZ-20P7-S01		CP(T)-SP-BM-length	CM(T)-P07-M-length	CB(T)-P03-length	JAM-P9-P4-P2
MS5H-80ST□-CS02430B-20P7-S01		CP(T)-SP-M-length	CM(T)-P07-M-length	/	JAM-P9-P4
MS5H-80ST□-CM02430B-20P7-S01		CP(T)-SP-BM-length	CM(T)-P07-M-length	/	JAM-P9-P4
MS5H-80ST□-CS02430BZ-20P7-S01		CP(T)-SP-M-length	CM(T)-P07-M-length	CB(T)-P03-length	JAM-P9-P4-P2
MS5H-80ST□-CM02430BZ-20P7-S01		CP(T)-SP-BM-length	CM(T)-P07-M-length	CB(T)-P03-length	JAM-P9-P4-P2
MS-80ST□-T02430B□-20P7		CP(T)-SP-B-length	CM(T)-P07-length	/	JAM-P9-P4
MS-80ST□-T03520B□-20P7		CP(T)-SP-B-length	CM(T)-P07-length	/	JAM-P9-P4
MS5G-130STE-CS05415B-20P8-S01		CP(T)-SP-M-length	CM(T)-L15A-length	/	JAM-C10-L7
MS5G-130STE-CM05415B-20P8-S01		CP(T)-SP-B-length	CM(T)-L15A-length	/	JAM-C10-L7
MS5G-130STE-CS05415BZ-20P8-S01		CP(T)-SP-M-length	CMB(T)-L15A-length	/	JAM-C10-L7
MS5G-130STE-CM05415BZ-20P8-S01		CP(T)-SP-B-length	CMB(T)-L15A-length	/	JAM-C10-L7
MS5G-130STE-TL05415B-20P8-S01		CP(T)-SP-B-length	CM(T)-L15A-length	/	JAM-C10-L7
MS5G-130STE-TL05415BZ-20P8-S01		CP(T)-SP-B-length	CMB(T)-L15A-length	/	JAM-C10-L7
MS5S-80ST□-CS03230B□-21P0-S01		CP(T)-SP-M-length	CM(T)-P07-M-length	with brake needs to use CB(T)-P03-length	without brake model: JAM-P9-P4 with brake model: JAM-P9-P4-P2
MS5S-80ST□-CM03230B□-21P0-S01		CP(T)-SP-BM-length	CM(T)-P07-M-length		
MS5H-80ST□-CS03230B□-21P0-S01		CP(T)-SP-M-length	CM(T)-P07-M-length		
MS5H-80ST□-CM03230B□-21P0-S01		CP(T)-SP-BM-length	CM(T)-P07-M-length		
MS6S-80CS30B1-20P7 NEW		CP(T)-SP-M-length	CM(T)-P07-M-length	/	JAM-P9-P4
MS6S-80CM30B1-20P7 NEW		CP(T)-SP-BM-length	CM(T)-P07-M-length	/	JAM-P9-P4
MS6S-80CS30BZ1-20P7 敬请期待		CP(T)-SP-M-length	CM(T)-P07-M-length	CB(T)-P03-length	JAM-P9-P4-P2
MS6S-80CM30BZ1-20P7 敬请期待		CP(T)-SP-BM-length	CM(T)-P07-M-length	CB(T)-P03-length	JAM-P9-P4-P2
MS6H-80CS30B1-20P7 NEW		CP(T)-SP-M-length	CM(T)-P07-M-length	/	JAM-P9-P4
MS6H-80CM30B1-20P7 NEW		CP(T)-SP-BM-length	CM(T)-P07-M-length	/	JAM-P9-P4
MS6H-80CS30BZ1-20P7 敬请期待		CP(T)-SP-M-length	CM(T)-P07-M-length	CB(T)-P03-length	JAM-P9-P4-P2
MS6H-80CM30BZ1-20P7 敬请期待		CP(T)-SP-BM-length	CM(T)-P07-M-length	CB(T)-P03-length	JAM-P9-P4-P2
MS5S-110STE-CS03230B□-21P0-S01	DS5E/L/C/F/K-21P5-PTA W5E3-21P5-PTA	CP(T)-SP-M-length	CM(T)-L15-length	/	JAM-L15-L4
MS5S-110STE-CM03230B□-21P0-S01		CP(T)-SP-B-length	CM(T)-L15-length	/	JAM-L15-L4
MS5S-110STE-TL03230B□-21P0-S01		CP(T)-SP-B-length	CM(T)-L15-length	/	JAM-L15-L4
MS-110ST□-T04030B□-21P2		CP(T)-SP-B-length	CM(T)-L15-length	/	JAM-L15-L4
MS-110ST□-T05030B□-21P5		CP(T)-SP-B-length	CM(T)-L15-length	/	JAM-L15-L4
MS5S-110STE-CS04830B□-21P5-S01		CP(T)-SP-M-length	CM(T)-L15-length	/	JAM-L15-L4
MS5S-110STE-CM04830B□-21P5-S01		CP(T)-SP-B-length	CM(T)-L15-length	/	JAM-L15-L4

Motor model	Adapted driver	Encoder cable	Power cable	Brake cable	Cable parts
MS5S-110STE-TL04830B□-21P5-S01	DS5E/L/C/F/K-21P5-PTA W5E3-21P5-PTA	CP(T)-SL-B-length	CM(T)-L15-length	/	JAM-L15-L4
MS-130ST-T06025B□-21P5		CP(T)-SL-B-length	CM(T)-L15-length	/	JAM-L15-L4
MS-130ST-T10015B□-21P5		CP(T)-SL-B-length	CM(T)-L15-length	/	JAM-L15-L4
MS5G-130STE-CS07220B-21P5-S01		CP(T)-SC-M-length	CM(T)-L15-length	/	JAM-C10-L4
MS5G-130STE-CM07220B-21P5-S01		CP(T)-SC-B-length	CM(T)-L15-length	/	JAM-C10-L4
MS5G-130STE-CS07220BZ-21P5-S01		CP(T)-SC-M-length	CMB(T)-L15-length	/	JAM-C10-L7
MS5G-130STE-CM07220BZ-21P5-S01		CP(T)-SC-B-length	CMB(T)-L15-length	/	JAM-C10-L7
MS5G-130STE-TL07220B-21P5-S01		CP(T)-SC-B-length	CM(T)-L15-length	/	JAM-C10-L4
MS5G-130STE-TL07220BZ-21P5-S01		CP(T)-SC-B-length	CMB(T)-L15-length	/	JAM-C10-L7
MS5G-130STE-CS11515B-21P8-S01	DS5E/L/C/F/K-22P3-PTA	CP(T)-SC-M-length	CM(T)-L15-length	/	JAM-C10-L4
MS5G-130STE-CM11515B-21P8-S01		CP(T)-SC-B-length	CM(T)-L15-length	/	JAM-C10-L4
MS5G-130STE-CS11515BZ-21P8-S01		CP(T)-SC-M-length	CMB(T)-L15-length	/	JAM-C10-L7
MS5G-130STE-CM11515BZ-21P8-S01		CP(T)-SC-B-length	CMB(T)-L15-length	/	JAM-C10-L7
MS5G-130STE-TL11515B-21P8-S01		CP(T)-SC-B-length	CM(T)-L15-length	/	JAM-C10-L4
MS5G-130STE-TL11515BZ-21P8-S01		CP(T)-SC-B-length	CMB(T)-L15-length	/	JAM-C10-L7
MS5S-110STE-TL06030B□-21P8-S01		CP(T)-SL-B-length	CM(T)-L15-length	/	JAM-L15-L4
MS5S-110STE-CS06030B□-21P8-S01		CP(T)-SL-M-length	CM(T)-L15-length	/	JAM-L15-L4
MS5S-110STE-CM06030B□-21P8-S01		CP(T)-SL-B-length	CM(T)-L15-length	/	JAM-L15-L4
MS5G-130STE-CS14615B-22P3-S01		CP(T)-SC-M-length	CM(T)-L15-length	/	JAM-C10-L4
MS5G-130STE-CM14615B-22P3-S01		CP(T)-SC-B-length	CM(T)-L15-length	/	JAM-C10-L4
MS5G-130STE-CS14615BZ-22P3-S01		CP(T)-SC-M-length	CMB(T)-L15-length	/	JAM-C10-L7
MS5G-130STE-CM14615BZ-22P3-S01		CP(T)-SC-B-length	CMB(T)-L15-length	/	JAM-C10-L7
MS5G-130STE-TL14615B-22P3-S01		CP(T)-SC-B-length	CM(T)-L15-length	/	JAM-C10-L4
MS5G-130STE-TL14615BZ-22P3-S01		CP(T)-SC-B-length	CMB(T)-L15-length	/	JAM-C10-L7
MS-130STE-T07730B□-22P4		CP(T)-SL-B-length	CM(T)-L15-length	/	JAM-L15-L4
MS-130STE-T07730B□-22P4	DS5E/L/C/F/K-22P6-PTA	CP(T)-SL-B-length	CM(T)-L15-length	/	JAM-L15-L4
MS-130ST-TL10025B□-22P6		CP(T)-SL-B-length	CM(T)-L15-length	/	JAM-L15-L4
MS5G-130STE-CS11515B-41P8-S01	DS5E/C-41P5-PTA	CP(T)-SC-M-length	CM(T)-L15-length	/	JAM-C10-L4
MS5G-130STE-CM11515B-41P8-S01		CP(T)-SC-B-length	CM(T)-L15-length	/	JAM-C10-L4
MS5G-130STE-CS1515BZ-41P8-S01		CP(T)-SC-M-length	CMB(T)-L15-length	/	JAM-C10-L7
MS5G-130STE-CM11515BZ-41P8-S01		CP(T)-SC-B-length	CMB(T)-L15-length	/	JAM-C10-L7
MS5G-130STE-TL11515B-41P8-S01		CP(T)-SC-B-length	CM(T)-L15-length	/	JAM-C10-L4
MS5G-130STE-TL11515BZ-41P8-S01		CP(T)-SC-B-length	CMB(T)-L15-length	/	JAM-C10-L7
MS5G-130ST-CS14615B-42P3-S01	DS5E/C/F/K-43P0-PTA	CP(T)-SC-M-length	CM(T)-L15-length	/	JAM-C10-L4
MS5G-130ST-CM14615B-42P3-S01		CP(T)-SC-B-length	CM(T)-L15-length	/	JAM-C10-L4
MS5G-130ST-CS14615BZ-42P3-S01		CP(T)-SC-M-length	CMB(T)-L15-length	/	JAM-C10-L7
MS5G-130ST-CM14615BZ-42P3-S01		CP(T)-SC-B-length	CMB(T)-L15-length	/	JAM-C10-L7
MS5G-130ST-TL14615B-42P3-S01		CP(T)-SC-B-length	CM(T)-L15-length	/	JAM-C10-L4
MS5G-130ST-TL14615BZ-42P3-S01		CP(T)-SC-B-length	CMB(T)-L15-length	/	JAM-C10-L7
MS5G-180STE-TL19015B□-42P9-S01		CP(T)-SL-B-length	CM(T)-XL25-length	/	JAM-L15-XL4
MS-130ST-TL10030B(Z)-43P0		CP(T)-SL-B-length	CM(T)-L15-length	/	JAM-L15-L4
MS5G-180STE-TL28015B□-44P4-S01	DS5E/C/F-45P5-PTA	CP(T)-SL-B-length	CM(T)-XL60-length	/	JAM-L15-XL4
MS5G-180STE-TL35015B□-45P5-S01		CP(T)-SL-B-length	CM(T)-XL60-length	/	JAM-L15-XL4
MS5G-180STE-TL48015B□-47P5-S01	DS5E/C/F-47P5-PTA	CP(T)-SL-B-length	CM(T)-XL60-length	/	JAM-L15-XL4
MS-220STE-TL70015B□-411P0-XJ	DS5E-411P0-PTA	CPT-ZDL-B-length	CM(T)-D60-length	/	/
MS-220STE-TL96015B□-415P0-XJ	DS5E-415P0-PTA	CPT-ZDL-B-length	CM(T)-D60-length	/	/

Model configuration list

Suffix S02 series (below 750W small aviation plug)

Motor model	Adapted driver	Encoder cable	Power cable
MS5S-40ST□-CS00330B-20P1-S02	DS5E/L/C/F/K-20P1-PTA	CPT-SW-M-length	CMT-W07-M-length
MS5S-40ST□-CM00330B-20P1-S02		CPT-SW-BM-length	CMT-W07-M-length
MS5S-40ST□-CS00330BZ-20P1-S02		CPT-SW-M-length	CMBT-W07-M-length
MS5S-40ST□-CM00330BZ-20P1-S02		CPT-SW-BM-length	CMBT-W07-M-length
MS5S-60ST□-CS00630B-20P2-S02	DS5E/L/C/F/K-20P2-PTA	CPT-SW-M-length	CMT-W07-M-length
MS5S-60ST□-CM00630B-20P2-S02		CPT-SW-BM-length	CMT-W07-M-length
MS5S-60ST□-CS00630BZ-20P2-S02		CPT-SW-M-length	CMBT-W07-M-length
MS5S-60ST□-CM00630BZ-20P2-S02		CPT-SW-BM-length	CMBT-W07-M-length
MS5H-60ST□-CS00630B-20P2-S02		CPT-SW-M-length	CMT-W07-M-length
MS5H-60ST□-CM00630B-20P2-S02		CPT-SW-BM-length	CMT-W07-M-length
MS5H-60ST□-CSOO630BZ-20P2-S02		CPT-SW-M-length	CMBT-W07-M-length
MS5H-60ST□-CM0O630BZ-20P2-S02		CPT-SW-BM-length	CMBT-W07-M-length
MS5S-60ST□-CS01330B-20P4-S02	DS5E/L/C/F/K-20P4-PTA	CPT-SW-M-length	CMT-W07-M-length
MS5S-60ST□-CM01330B-20P4-S02		CPT-SW-BM-length	CMT-W07-M-length
MS5S-60ST□-CS01330BZ-20P4-S02		CPT-SW-M-length	CMBT-W07-M-length
MS5S-60ST□-CM01330BZ-20P4-S02		CPT-SW-BM-length	CMBT-W07-M-length
MS5H-60ST□-CS01330B-20P4-S02		CPT-SW-M-length	CMT-W07-M-length
MS5H-60ST□-CM01330B-20P4-S02		CPT-SW-BM-length	CMT-W07-M-length
MS5H-60ST□-CS01330BZ-20P4-S02		CPT-SW-M-length	CMBT-W07-M-length
MS5H-60ST□-CM01330BZ-20P4-S02		CPT-SW-BM-length	CMBT-W07-M-length
MS5S-80ST□-CS02430B-20P7-S02	DS5E/L/C/F/K-20P7-PTA	CPT-SW-M-length	CMT-W07-M-length
MS5S-80ST□-CM02430B-20P7-S02		CPT-SW-BM-length	CMT-W07-M-length
MS5S-80ST□-CS02430BZ-20P7-S02		CPT-SW-M-length	CMBT-W07-M-length
MS5S-80ST□-CM02430BZ-20P7-S02		CPT-SW-BM-length	CMBT-W07-M-length
MS5H-80ST□-CS02430B-20P7-S02		CPT-SW-M-length	CMT-W07-M-length
MS5H-80ST□-CM02430B-20P7-S02		CPT-SW-BM-length	CMT-W07-M-length
MS5H-80ST□-CS02430BZ-20P7-S02		CPT-SW-M-length	CMBT-W07-M-length
MS5H-80ST□-CM02430BZ-20P7-S02		CPT-SW-BM-length	CMBT-W07-M-length
MS5S-80ST□-CS03230B-21P0-S02		CPT-SW-M-length	CMT-W07-M-length
MS5S-80ST□-CM03230B-21P0-S02		CPT-SW-BM-length	CMT-W07-M-length
MS5S-80ST□-CS03230BZ-21P0-S02		CPT-SW-M-length	CMBT-W07-M-length
MS5S-80ST□-CM03230BZ-21P0-S02		CPT-SW-BM-length	CMBT-W07-M-length
MS5H-80ST□-CS03230B-21P0-S02		CPT-SW-M-length	CMT-W07-M-length
MS5H-80ST□-CM03230B-21P0-S02		CPT-SW-BM-length	CMT-W07-M-length
MS5H-80ST□-CS03230BZ-21P0-S02		CPT-SW-M-length	CMBT-W07-M-length
MS5H-80ST□-CM03230BZ-21P0-S02		CPT-SW-BM-length	CMBT-W07-M-length