

Bergerda AC servo system catalogue



- AC servo
- Stepping drive motor
- Induction asynchronous servo
- Linear motor drive
- Industry-specific servo
- Control product integration customization

Serving customers and adding value to customers

Company Profile

Hangzhou Bergerda Automation Technology Co., Ltd. is located in a beautiful paradise on earth - Hangzhou, China. It is a high-tech enterprise that provides global customers with servo, stepping, frequency conversion, brushless motor drive control products, and industrial drive control solutions. Excellence in product development, efficient and high-quality production, enthusiastic and caring service. Always take the customer's needs as its responsibility.

Bergerda's motor control products include AC servo drives and servo motors, stepping drives and stepping motors, inductive asynchronous servo drives and motors, Brushless motor and drive, and custom control solutions for all types of industries. Widely used in textile packaging, CNC machine tools, printing, embroidery, sculpture, advertising, laser, electronics and other automated machinery. At present, there are twelve types of stepping systems, including B D E F four series, nearly 30 kinds of specifications servo systems, NS digital series and LS closed loop series. S series induction asynchronous servo, Brushless motor and drive (B L D C), T-series CNC turret-dedicated servos and P-series plastic machinery-specific servos and so on which include control and control integrated industrial solutions. We have become a professional company with a complete product line in Chinese motion control industry. Perfect pre-sale, sales, after-sales service, from customer design machine selection, equipment debugging, post-maintenance, always with patience, enthusiasm, professional service to return customers.

The company fully implements the concept of "professional, quality, and service". With high-tech products, excellent quality, and high-quality services, customers can be assured of their ease of use, adding value to customers and realizing the long-term development of the company.

Based in the domestic market, Bergerda has established sales and service networks in Zhejiang, Jiangsu, Guangdong, Fujian, Shandong, Hunan and Guangxi. In foreign markets, products are exported to the United States, Brazil, Colombia, Russia and other countries and regions.





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Drive Model Significance

SD D 08 N K8 D-X
1 2 3 4 5 6 7

- 1、 AC servo driver
- 2、 Series code
 B: Universal 1
 D: Universal 2
 E: Absolute type
- 3、 output power
 08:0.8 KW
 13:1.3KW
 20:2KW
- 4、 Input voltage
 N : 220v
 H : 380V
- 5、 Shape code : K7、 K8、 K9、 K10、 K11、 K12
- 6、 Version identification code : A、 B
- 7、 Affiliated features

Motor Model Significance

130 SM M 04 25 M A L Z
1 2 3 4 5 6 7 8 9

- 1、 Motor mounting flange : 40、 60、 80、 110、 130、 180
- 2、 AC servo motor
- 3、 Photoelectric encoder
- 4、 Torque : 04:4N.M
- 5、 Speed : 30-3000Turn25-2500Turn
- 6、 Manufacturer code : M、 N、 G、 Z
- 7、 encoder
 A : 2500 line incremental
 D : 2500 Line line-saving
 E : 17Bit absolute
- 8、 Voltage : L : 220V
 H : 380V
- 9、 Attributes : Z : Brake

D Series AC Servo



Applications

Suitable for the following occasions

Repeated positioning control occasions;
occasions with multiple input and output
requirements; Network Communication
Applications

Mature application industry

- ◆ Industrial robots
- ◆ semiconductor equipment
- ◆ engraving equipment
- ◆ measuring instrument equipment
- ◆ medical equipment
- ◆ robots.

Note: MODBUS-RTU position control version
standard model suffix D becomes R, such as: SDD08NK8R
Application direction: 4-16 axis servo point control
application

Working principle: The servo control internal design
of the relevant register, through 485 communication
to the relevant register set, write the start operation
command to the relevant register, the entire motion
control can be completed. Since the position control
uses absolute number programming, it has simple
control, accurate positioning, strong anti-interference
ability, and no external wiring. Only one communication
line is needed. For instructions, please refer to "SDD
Series Servo Modbus-RTU Motion Control Function
Detailed Explanation V1210 Edition"

Series features

- ◇ International leading control platform and algorithm
- ◇ Matches a variety of incremental, line-saving encoders
- ◇ Equipped with RS485 communication interface for multiple serial control
- ◇ A variety of intelligent monitoring functions and operation panel for customer debugging and diagnosis
- ◇ Can be matched with 0.1KW-7.5KW full range of servo motor, international motor standard
- ◇ Input/output ports can be freely defined and have strong applicability Full series CE certification

Specification sheet for order

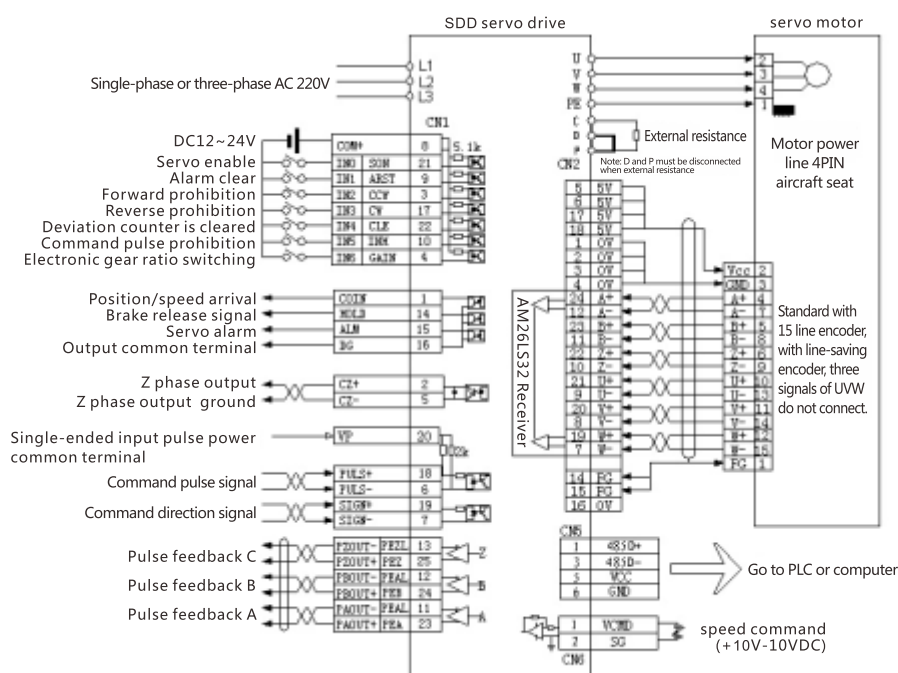
Servo model	motor model	Power(KW)	Rated speed(r/min)	Rated torque(Nm)
SDD04NK7D	40SM-M00230NAL	0.05	3000	0.16
	40SM-M00330NAL	0.1	3000	0.32
	60SM-M00630NAL	0.2	3000	0.64
	60SM-M0130NAL	0.4	3000	1.27
SDD08NK8D	60SM-M0230NAL	0.6	3000	1.91
	80SM-M0230NAL	0.75	3000	2.4
	80SM-M0425NAL	1.0	2500	4.0
SDD13NK9D	110SM-M0430NAL	1.2	3000	4.0
	110SM-M0530NAL	1.5	3000	5.0
SDD20NK9D	110SM-M0630NAL	1.8	3000	6.0
SDD13NK9D	130SM-M0425NAL	1.0	2500	4.0
	130SM-M0525NAL	1.3	2500	5.0
SDD20NK9D	130SM-M0625NAL	1.5	2500	6.0
	130SM-M0825NAL	2.0	2500	7.7
	130SM-M1025NAL	2.5	2500	10.0
SDD50NK10D	130SM-M1525NAL	3.8	2500	15.0
	180SM-M1915NAL	3.0	1500	19.0
	180SM-M2220NAL	4.5	2000	22.0
	180SM-M2715NAL	4.3	1500	27.0
SDD30HK10D (380V)	130SM-M0825MAH	2.0	2500	7.7
	130SM-M1025MAH	2.5	2500	10.0
	130SM-M1525MAH	3.8	2500	15.0
SDD55HK11 (380V)	180SM-M1915MAH	3.0	1500	19.0
	180SM-M2220MAH	4.5	2000	21.5
	180SM-M2715MAH	4.1	1500	27.0
	180SM-M3515MAH	5.5	1500	35.0
SDB75HK6 (380V)	180SM-M4815MAH	7.5	1500	48.0

D Series AC Servo

Performance Specifications

External connection	Input power		Single or Three phase AC170~253V Three phase 380V
			50/60Hz
	control type		SVPWM control
	encoder		2500 line or 2500 saving-line
Internal function	Display and operation		Six bits seven-segment display LED: Four function keys
	Control mode		Position control/speed test run/jog run/internal positioning PLC function/RS485 communication
	Braking function		built-in ,External optional
	Protection function		Undervoltage, overvoltage, overload, overcurrent, encoder abnormality, brake abnormal, position excess error, etc.
Position control mode	Command control method		External pulse
	External command pulse input	Form	pulse + direction ;CW/CCW pulse ;A/B quadrature
		Maximum frequency	Differential: 1MHZ open collector: 200KHZ
	Electronic gear ratio		1~32767/1~32767
Speed control mode	Internal speed control		I/Oterminal control
Input/output signal	Position signal output	Output type	ABZ phase drive output / Z phase collector open circuit output
		Frequency division ratio	1/255/~1
	input signal	7points photoelectric isolation input	1) Servo enable 2) Alarm clear 3) Deviation counter clear/speed select 1 4) Command pulse inhibit/speed select 2 5) Position 0 6) Position 1 7) Position trigger
	output signal	4points open collector	1) Servo ready output 2) Servo alarm output 3) Z signal output 4) Brake output
Use environment	temperature		Working: 0°C~55°C Storage: -20°C~80°C
	humidity		Less than 90% (without condensation)

Typical application wiring diagram



E series absolute AC servo



Series features

- ◇ Advanced digital control algorithm, precision current control, reduce motor heating
- ◇ Can match variety of 17BIT, 23BIT absolute encoders
- ◇ Power frequency 220V or high voltage 380V power input, make you easy choice.
- ◇ Concise display operation panel, supporting PC debugging software for customer debugging and diagnosis
- ◇ With RS485 communication function, low-cost communication can be realized
- ◇ Support 2-18 poles, 0.1KW-7.5KW full range of servo motors, more types
- ◇ Full series CE certification

Applications

As a high-performance product, its control accuracy has reached the international level, and it can completely replace Panasonic, Fuji, Delta servos in automation equipment and other industries, allowing machines to maintain high performance standards, reduce costs and enhance competitiveness.

Suitable for the following occasions

High accuracy, high response application expectations; high performance, moderate cost

Mature application industry

- ◆ Industrial robots
- ◆ semiconductor equipment
- ◆ engraving equipment
- ◆ measuring instrument equipment
- ◆ medical equipment
- ◆ robots.

Specification sheet for order

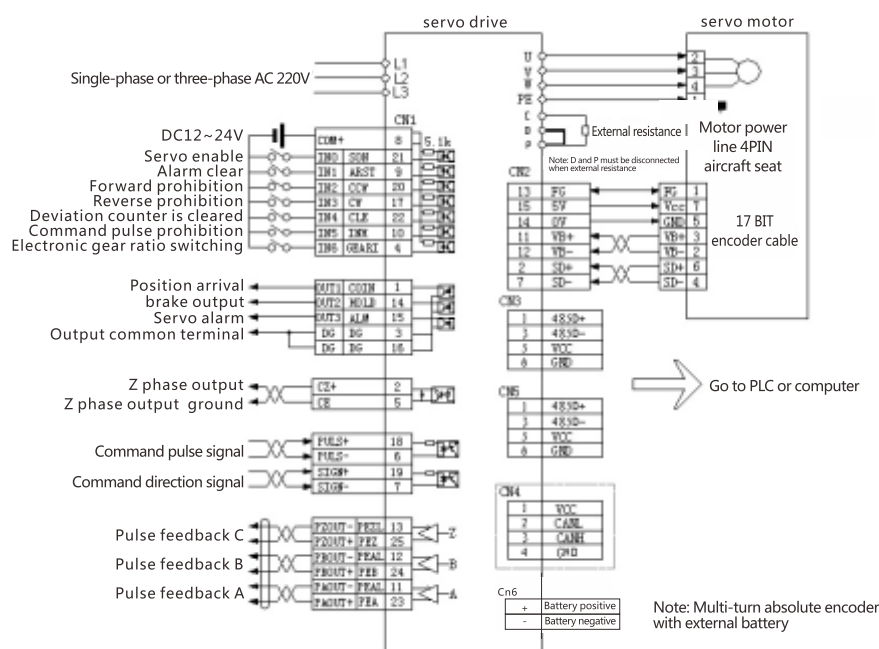
Servo model	motor model	Power(KW)	Rated speed(r/min)	Rated torque(Nm)
SDE04NK7E	40SM-M00330GEL	0.1	3000	0.32
	60SM-M00630GEL	0.2	3000	0.64
	60SM-M0130GEL	0.4	3000	1.27
SDE08NK8E	80SM-M0230GEL	0.75	3000	2.4
	80SM-M0330GEL	1.0	3000	3.3
SDE13NK9E	130SM-M0520NEL	1.0	2000	4.77
SDE20NK9E	130SM-M0820NEL	1.5	2000	7.16
	130SM-M1020NEL	2.0	2000	9.55
SDE50NK10E	130SM-M1520NEL	3.0	2000	15.0
	180SM-M2715NEL	4.3	1500	27.0
	180SM-M2220NEL	4.5	2000	21.5

E series absolute AC servo

Performance Specifications

External connection	Input power		Single or Three phase AC170~253V
			50/60Hz
	control type		SVPWM control
	encoder		17Bit absolute
Internal function	Display and operation		Six bits seven-segment display LED: Four function keys
	Control mode		Position control/speed test run/jog run/internal positioningPLC function/RS485 communication
	Braking function		built-in,External optional
	Protection function		Undervoltage, overvoltage, overload, overcurrent, encoder abnormality,brake abnormal, position excess error, etc.
Position control mode	Command control method		External pulse
	External command pulse input	Form	pulse + direction ;CW/CCW pulse ;A/B quadrature
		Maximum frequency	Differential: 2MHZ open collector: 200KHZ
	Electronic gear ratio		1~32767/1~32767
Speed control mode	Internal speed control		I/Oterminal control
Input/output signal	Position signal output	Output type	ABZ phase drive output / Z phase collector open circuit output
		Frequency division ratio	1/255/~1
	input signal	7points photoelectric isolation input	1) Servo enable 2) Alarm clear 3) Deviation counter clear/speed select 1 4) Command pulse inhibit/speed select 2 5) Position 0 6) Position 1 7) Position trigger
	output signal	4points open collector	1) Servo ready output 2) Servo alarm output 3) Z signal output 4) Brake output
Use environment	temperature		Working: 0°C~55°C Storage: -20°C~80°C
	humidity		Less than 90% (without condensation)

Typical application wiring diagram



F series high speed and high precision AC servo



Series features

- ◇ High speed, 4000 rpm is still 2 times overload , 5000 rpm for short time operation greatly improving equipment efficiency
- ◇ Match 20BIT incremental encoder, 10 pole magnetic circuit design, guarantee one -millionth of positioning accuracy
- ◇ Low temperature, small size, reduced volume by 1/5, lower temperature by 1/5 compared with the previous generation
- ◇ Standard Rs485 communication function for uploading and downloading network control
- ◇ Position control, speed control, torque control Modbus communication can be switched to meet common applications
- ◇ Full range of CE certification

Applications

The product has been further improved on the basis of the third-generation D series products, with more complete functions and significantly improved performance. The compatibility of the drive and the motor is enhanced, the operation is more stable, and the control precision reaches the international level

Specification sheet for order

Suitable for the following occasions

Repeat positioning control occasions;
occasions where input and output points are
in high demand; occasions for network
communication applications

Mature application industry

Industrial robot
Semiconductor equipment
Engraving equipment
Measuring equipment
Medical equipment
robot

Servo model	motor model	Power(KW)	Rated speed(r/min)	Rated torque(Nm)
SDF04NK7	40F-00230TBL	0.05	3000	0.16
	40F-00330TBL	0.1	3000	0.32
	60F-00630TBL	0.2	3000	0.64
	60F-0130TBL	0.4	3000	1.27
SDF08NK8	80F-0230TBL	0.75	3000	2.39
	80F-0330TBL	1.0	3000	3.18
SDF13NK9	110F-0425TBL	1.0	2500	3.82
	130F-0520TBL	1.0	2000	4.78
SDF20NK9	110F-0625TBL	1.5	2500	5.73
	130F-0820TBL	1.5	2000	7.16
	130F-1020TBL	2.0	2000	9.55
SDF50NK10	130F-1520TBL	3.0	2000	14.33
	130F-1915TBL	3.0	1500	19.10

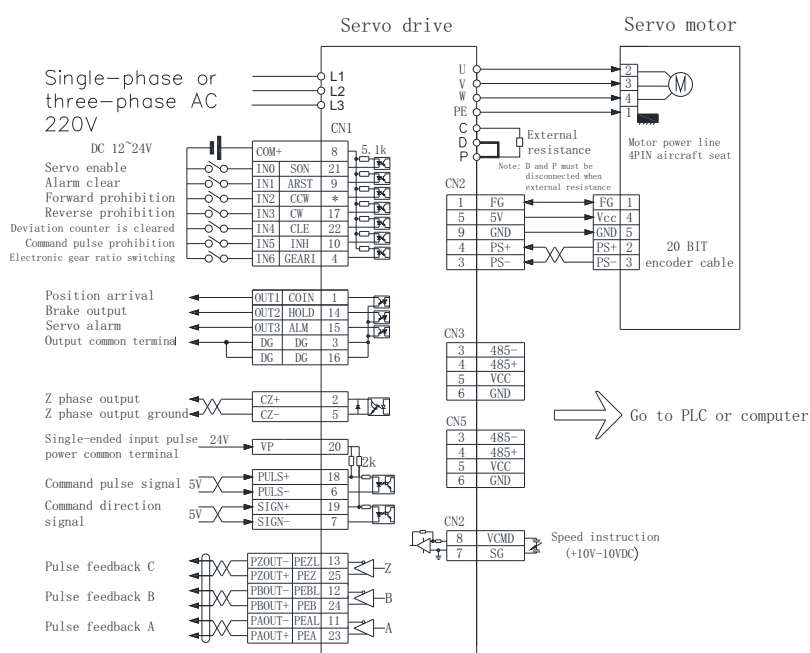
Note: The suffix with the brake motor
is Z. example:60F-00630TBL-Z

F series high speed and high precision AC servo

Performance Specifications

External connection	Input power		Single or Three phase AC170~253V
			50/60Hz
	control type		SVPWM control
	encoder		20 BIT incremental
Internal function	Display and operation		Six bits seven-segment display LED: Four function keys
	Control mode		Position control/speed test run/jog run/internal positioningPLC function/RS485 communication
	Braking function		built-in,External optional
	Protection function		Undervoltage, overvoltage, overload, overcurrent, encoder abnormality,brake abnormal, position excess error, etc.
Position control mode	Command control method		External pulse
	External command pulse input	Form	pulse + direction ;CW/CCW pulse ;A/B quadrature
		Maximum frequency	Differential: 2MHZ open collector: 200KHZ
	Electronic gear ratio		1~32767/1~32767
Speed control mode	Internal speed control		I/Oterminal control
Input/output signal	Position signal output	Output type	ABZ phase drive output / Z phase collector open circuit output
		Frequency division ratio	1/255/~1
	input signal	7points photoelectric isolation input	1) Servo enable 2) Alarm clear 3) Deviation counter clear/speed select 1 4) Command pulse inhibit/speed select 2 5) Position 0 6) Position 1 7) Position trigger
	output signal	4points open collector	1) Servo ready output 2) Servo alarm output 3) Z signal output 4) Brake output
Use environment	temperature		Working: 0°C~55°C Storage: -20°C~80°C
	humidity		Less than 90% (without condensation)

Typical application wiring diagram



Embroidery machine servo

Series features

- ◇ Advanced control algorithm for high-precision positioning
- ◇ Can be adapted to Dahao, Shanlong, Tianhong, Jialichuang and other kinds of embroidery electronic control
- ◇ Fast parking response and stable speed
- ◇ Stable performance and simple operation
- ◇ Complete product line, spindle servo, XY frame servo, towel embroidery servo
- ◇ Supply whole set of servo motor and drive

Specification sheet for order

Servo model	Servo model	motor model	Power(KW)	Rated speed(r/min)	Rated torque(Nm)
Flat embroidery three-one axis	SDV-303	110DH-M0630MAL	1.8	3000	6.0
Double spindle	SDV-302A	130DH-M1520MALF	3.0	2000	15.0
XY frame servo	SDV-302B	110DH-M0630MAL	1.8	3000	6.0
Spindle servo	SDD10NK9	130SM-M0425MAL	1.0	2500	4.0
	SDD13NK9	130SM-M0525MAL	1.3	2500	5.0
	SDD20NK9	130SM-M0825MALF	2.0	2500	7.7
	SDD26NK9	130SM-M1025MALF	2.6	2500	10.0
	SDD30NK10	130SM-M1520MALF	3.0	2000	15.0
High-voltage spindle servo	SDD30HK10	130SM-M1520MAHF	3.0	2000	15
	SDD55HK11	130SM-M1820MAHF	3.6	2000	18
	SDD55HK11	180SM-M2220MAHF	4.5	2000	22
XY frame servo	SDD20NK9	110SM-M1020MAL	2.0	2000	10

Application product



SD100/SD200 series CNC machine servo

Series features

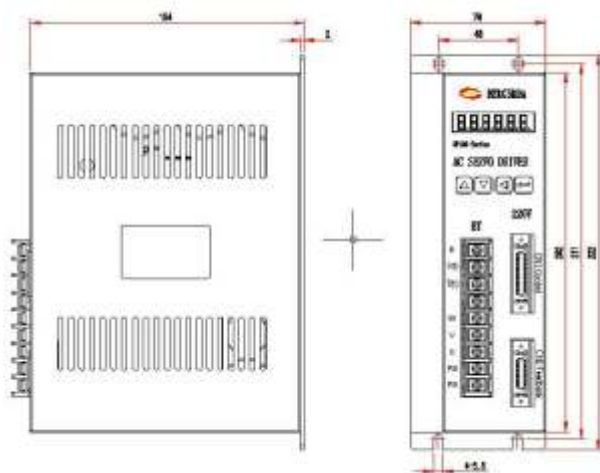


- ◇Complete specifications, can match the entire system of 100,130 flange servo motor
- ◇Good stability, fast response, strong anti-interference ability, high precision
- ◇Installation size, interface, parameter settings are compatible with the market mainstream, easy to install and debug
- ◇Input internal power supply and control circuit power supply internal short circuit, no external jumper, convenient wiring
- ◇With position and speed analog control, including encoder feedback function to facilitate the composition of semi-closed closed loop numerical control system
- ◇Maturely used in all kinds of lathes, milling machines, boring machines, drilling machines, grinding machines, punching machines, machining centers
- ◇Optional 2500P/R, 5000P/R and other encoders for more precise positioning

Specification sheet for order

Servo model	Servo model	motor model	Power (KW)	Rated speed(r/min)	Rated torque(Nm)
SD100-2AB	SD200-2AE	110SM-M0430MAL	1.2	3000	4.0
SD100-2AB	SD200-2AE	110SM-M0530MAL	1.5	3000	5.0
SD100-3AB	SD200-3AE	110SM-M0620MAL	1.2	2000	6.0
SD100-3AB	SD200-3AE	110SM-M0630MAL	1.8	3000	6.0
SD100-2AB	SD200-2AE	130SM-M0425MAL	1.0	2500	4.0
SD100-2AB	SD200-2AE	130SM-M0525MAL	1.3	2500	5.0
SD100-3AB	SD200-3AE	130SM-M0625MAL	1.5	2500	6.0
SD100-3AB	SD200-3AE	130SM-M0825MAL	2.0	2500	7.7
SD100-3AB	SD200-3AE	130SM-M1015MAL	1.5	1500	10.0
SD100-3AB	SD200-3AE	130SM-M1025MAL	2.5	2500	10.0
SD100-3AB	SD200-3AE	130SM-M1515MAL	2.3	1500	15.0
SD100-3AB	SD200-3AE	130SM-M1525MAL	3.8	2500	15.0

Installation dimension drawing



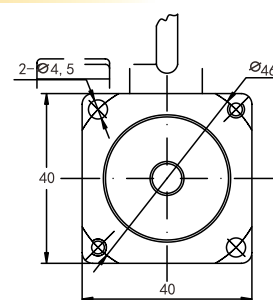
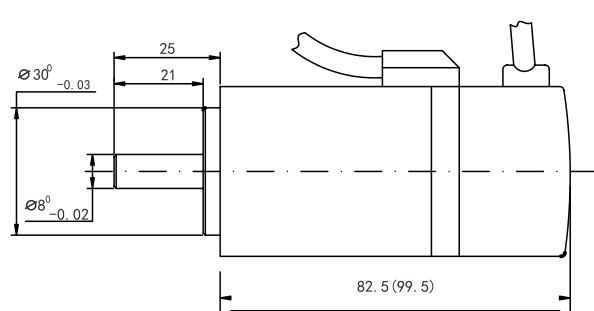
40, 60 series AC servo motor

Specification model

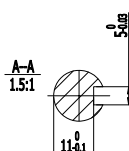


motor model	40SM-M00230MAL	40SM-M00330MAL	60SM-M00630MAL	60SM-M0130MAL	60SM-M0230MAL
rated power (KW)	0.05	0.1	0.2	0.4	0.6
Rated voltage (V)	220	220	220	220	220
Rated current (A)	0.7	1.3	1.2	2.8	3.5
Rated Speed (RPM)	3000	3000	3000	3000	3000
Rated torque (N.M)	0.16	0.32	0.637	1.27	1.91
Peak torque (N.M)	0.48	0.96	1.91	3.9	5.73
Back EMF (V/1000r/min)	10	15	30.9	29.6	34
Torque coefficient (N.M/A)	0.23	0.25	0.53	0.45	0.55
Rotor inertia (KG.M ²)	0.025x10 ⁻⁴	0.046x10 ⁻⁴	0.17x10 ⁻⁴	0.29x10 ⁻⁴	0.39x10 ⁻⁴
winding resistance (Ω)	30.8	11.5	6.18	2.35	1.93
Winding inductance (MH)	24.5	10.9	29.3	14.5	10.7
Electrical time constant (MS)	0.8	0.95	4.74	6.17	5.5
weight (KG)	0.46	0.59	1.16	1.63	2.07
Number of encoder lines(PPR)	2500				
insulation class	Class B(130°C)				
Safety class	IP65				
Use environment	Temperature : -20°C~+40°C ;humidity : relative humidity < 90% (No dewing)				
Motor winding socket	Winding lead	U (black)		V (blue)	W (Brown)
	Socket number	1		2	3
Encoder socket	Signal leads	5V	0V	B+	Z-
	Socket number	2	3	4	5

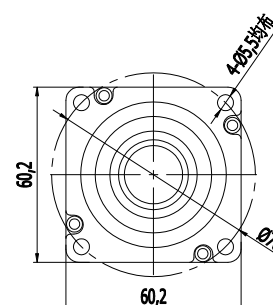
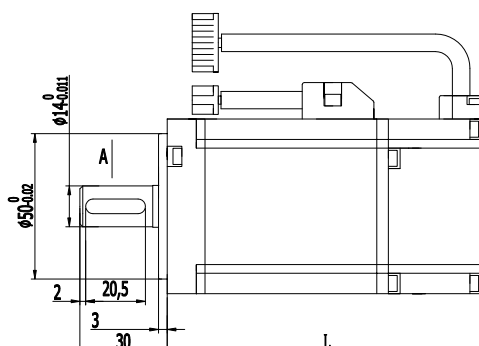
Installation dimension drawing



A-A
1:1



Motor model	0.6N.M	1.3N.M	1.9N.M
Without Brake L(mm)	116	141	169
With electromagnetic brake L(mm)	148	173	201



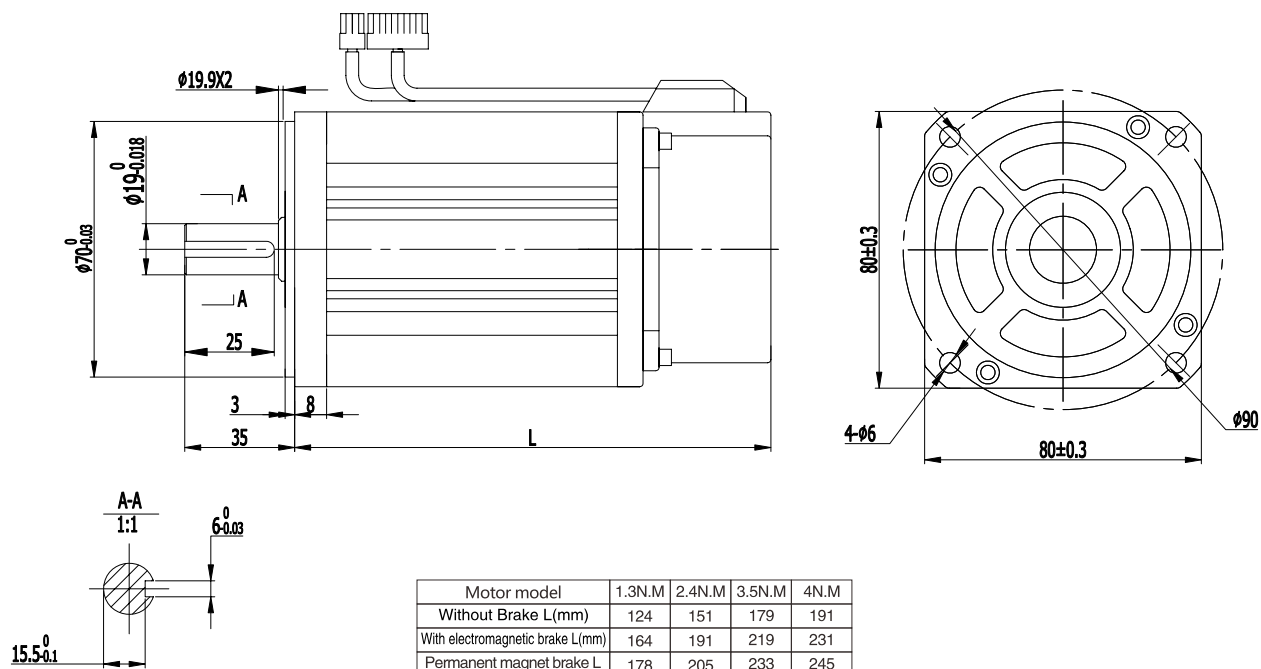
80 series AC servo motor

Specification model



motor model	80SM-M0130MAL	80SM-M0230MAL	80SM-M0320MAL	80SM-M0425MAL												
rated power (KW)	0.4	0.75	0.73	1.0												
Rated voltage (V)	220	220	220	220												
Rated current (A)	2	3	3	4.4												
Rated Speed (RPM)	3000	3000	2000	2500												
Rated torque (N.M)	1.27	2.39	3.5	4												
Peak torque (N.M)	3.8	7.1	10.5	12												
Peak current (A)	6	9	9	13.2												
Back EMF (V/1000r/min)	40	48	71	56												
Torque coefficient (N.M/A)	0.64	0.8	1.17	0.9												
Rotor inertia (KG.M²)	1.05x10 ⁻⁴	1.82x10 ⁻⁴	2.63x10 ⁻⁴	2.97x10 ⁻⁴												
winding resistance (Ω)	4.44	2.88	3.65	1.83												
Winding inductance (MH)	7.93	6.4	8.8	4.72												
Electrical time constant(MS)	1.66	2.22	2.4	2.58												
weight (KG)	1.78	2.86	3.7	3.8												
Number of encoder lines(PPR)	2500															
insulation class	Class F(130℃)															
Safety class	IP65															
Use environment	Temperature : -20℃~+40℃ ;humidity : relative humidity < 90% (No dewing)															
Motor winding socket	Winding lead	U (black)		V (blue)		W (Brown)		PE(Yellow green)								
	Socket number	1		2		3		4								
Encoder socket	Signal leads	5V	0V	B+	Z-	U+	Z+	U-	A+	V+	W+	V-	A-	B-	W-	PE
	Socket number	2	3	4	5	6	7	8	9	10	11	12	13	14	15	1

Installation dimension drawing



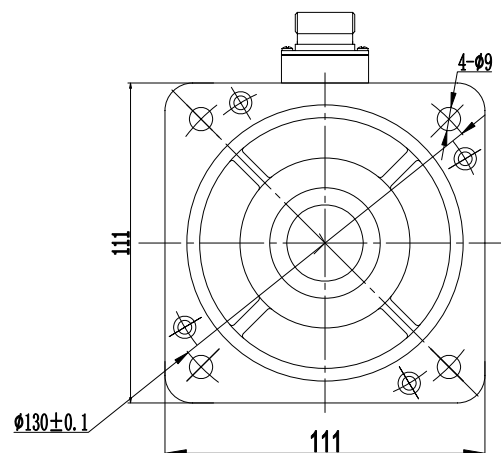
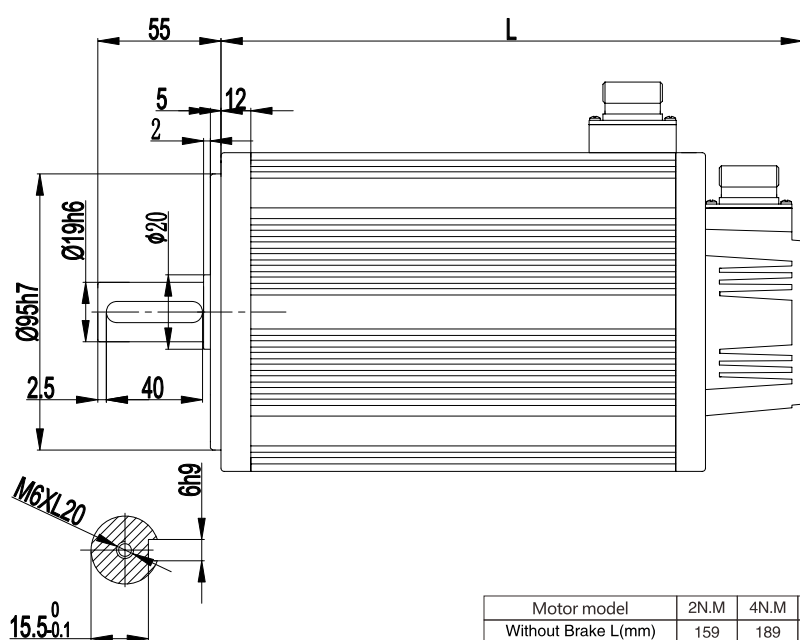
110 series AC servo motor

Specification model



motor model	110SM-M0230MAL	110SM-M0420MAL	110SM-M0430MAL	110SM-M0530MAL	110SM-M0620MAL	110SM-M0630MAL
rated power (KW)	0.6	0.8	1.2	1.5	1.2	1.8
Rated voltage (V)	220	220	220	220	220	220
Rated current (A)	2.5	3.5	5.0	6	4.5	6.0
Rated Speed (RPM)	3000	2000	3000	3000	2000	3000
Rated torque (N.M)	2	4	4	5	6	6
Peak torque (N.M)	6	12	12	15	12	18
Peak current (A)	7.5	10.5	15	18	13.5	18
Back EMF (V/1000r/min)	56	79	54	62	83	60
Torque coefficient (N.M/A)	0.8	1.14	0.8	0.83	1.3	1.0
Rotor inertia (KG.M ²)	0.31x10 ⁻³	0.54x10 ⁻³	0.54x10 ⁻³	0.63x10 ⁻³	0.76x10 ⁻³	0.76x10 ⁻³
winding resistance (Ω)	3.6	2.41	1.09	1.03	1.46	0.81
Winding inductance (MH)	8.32	7.3	3.3	3.43	4.7	2.59
Electrical time constant (MS)	2.3	3	3.0	3.3	3.2	3.2
weight (KG)	4.5	5.5	5.5	6.1	6.7	6.7
Number of encoder lines(PPR)	2500					
insulation class	Class F(130°C)					
Safety class	IP65					
Use environment	Temperature : -20°C~+40°C ;humidity : relative humidity < 90% (No dewing)					
Motor winding socket	Winding lead	U (black)		V (blue)		W (Brown)
	Socket number	2		3		4
Encoder socket	Signal leads	5V	0V	A+	B+	Z+
	Socket number	2	3	4	5	6

Installation dimension drawing



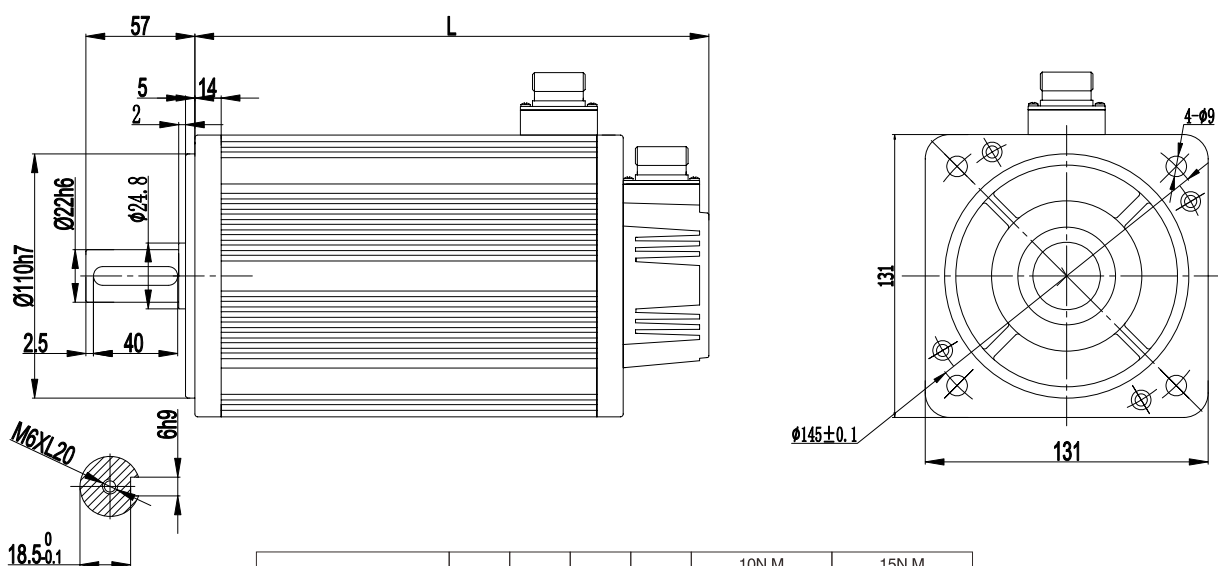
Motor model	2N.M	4N.M	5N.M	6N.M
Without Brake L(mm)	159	189	204	219
With electromagnetic brake L(mm)	233	263	278	293
Permanent magnet brake L	215	245	260	275

130 series AC servo motor

Specification model

motor model	130SM-M0425MAL	130SM-M0525MAL	130SM-M0625MAL	130SM-M0825MAL	130SM-M1010MAL	130SM-M1015MAL	130SM-M1025MAL	130SM-M1525MAL								
rated power (KW)	1.0	1.3	1.5	2.0	1.0	1.5	2.6	3.8								
Rated voltage (V)	220	220	220	220	220	220	220	220								
Rated current (A)	4.0	5.0	6.0	7.5	4.5	6.0	10	13.5								
Rated Speed (RPM)	2500	2500	2500	2500	1000	1500	2500	2500								
Rated torque (N.M)	4	5	6	7.7	10	10	10	15								
Peak torque (N.M)	12	15	18	22	20	25	25	30								
Peak current (A)	12	15	18	22.5	13.5	18	28	27								
Back EMF (V/1000r/min)	72	68	65	68	140	103	70	67								
Torque coefficient(N.M/A)	1.0	1.0	1.0	1.03	2.2	1.67	1.0	1.11								
Rotor inertia (KG.M²)	0.85×10 ⁻³	1.06×10 ⁻³	1.26×10 ⁻³	1.53×10 ⁻³	1.94×10 ⁻³	1.94×10 ⁻³	1.94×10 ⁻³	2.77×10 ⁻³								
winding resistance (Ω)	2.76	1.84	1.21	1.01	2.7	1.29	0.73	0.49								
Winding inductance(MH)	6.42	4.9	3.87	2.94	8.8	5.07	2.45	1.68								
Electrical time constant (MS)	2.32	2.66	3.26	3.8	3.26	3.93	3.36	3.43								
weight (KG)	7.7	8.2	8.9	10	11.5	11.5	11.5	11.7								
Number of encoder lines(PPR)	2500															
insulation class	Class F(130℃)															
Safety class	IP65															
Use environment	Temperature : -20℃~+40℃;humidity : relative humidity < 90% (No dewing)															
Motor winding socket	Winding lead	U (black)			V (blue)			W (Brown)			PE(Yellow green)					
	Socket number	2			3			4			1					
Encoder socket	Signal leads	5V	0V	A+	B+	Z+	A-	B-	Z-	U+	V+	W+	U-	V-	W-	PE
	Socket number	2	3	4	5	6	7	8	9	10	11	12	13	14	15	1

Installation dimension drawing



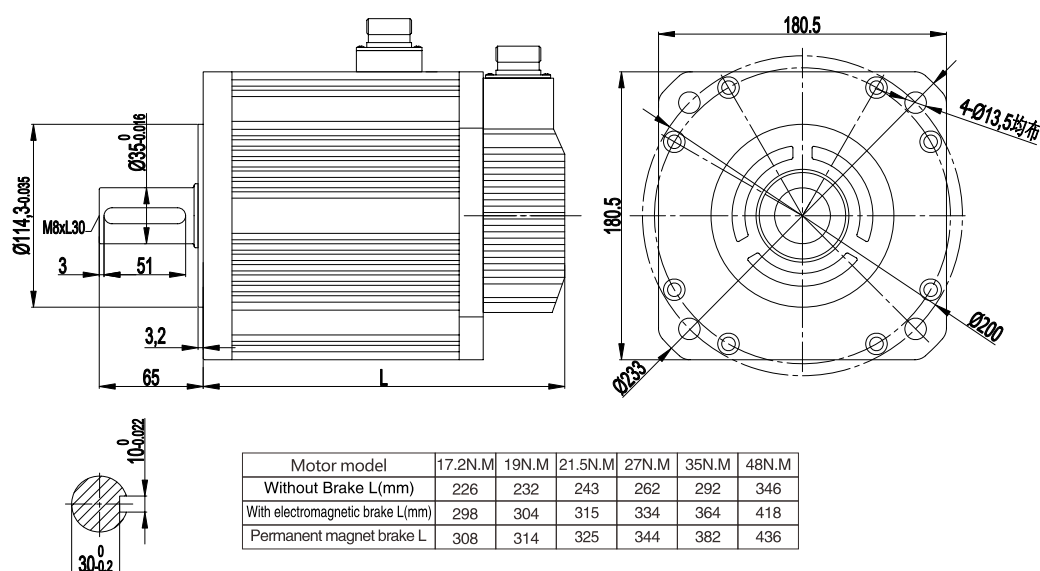
Motor model	4N.M	5N.M	6N.M	7.7N.M	10N.M		15N.M	
					1500rpm	2500rpm	1500rpm	2500rpm
Without Brake L(mm)	166	171	179	192	213	209	241	231
With electromagnetic brake L(mm)	223	228	236	249	294	290	322	312
Permanent magnet brake L	236	241	249	262	283	279	311	301

180 series AC servo motor

Specification model

motor model	180SM-M1915MAL	180SM-M2220MAL	180SM-M2715MAL	180SM-M3515MAL													
rated power (KW)	3.0	4.5	4.3	5.5													
Rated voltage (V)	220	220	220	220													
Rated current (A)	12	16	16	24													
Rated Speed (RPM)	1500	2000	1500	1500													
Rated torque (N.M)	19	21.5	27	35													
Peak torque (N.M)	47	53	67	70													
Back EMF (V/1000r/min)	97	84	103	90													
Torque coefficient (N.M/A)	1.58	1.34	1.69	1.45													
Rotor inertia (KG.M ²)	3.8×10 ⁻³	4.7×10 ⁻³	6.1×10 ⁻³	8.6×10 ⁻³													
winding resistance (Ω)	0.4	0.24	0.28	0.14													
Winding inductance (MH)	2.42	1.45	1.74	1.0													
Electrical time constant (MS)	6	6	6.2	7.14													
weight (KG)	20.5	22.2	25.5	30.5													
Number of encoder lines(PPR)	2500																
insulation class	Class F(155℃)																
Safety class	IP65																
Use environment	Temperature : -20℃~+40℃;humidity : relative humidity < 90% (No dewing)																
Motor winding socket	Winding lead	U (black)				V (blue)				W (Brown)				PE(Yellow green)			
	Socket number	2				3				4				1			
Encoder socket	Signal leads	5V	0V	A+	B+	Z+	A-	B-	Z-	U+	V+	W+	U-	V-	W-	PE	
	Socket number	2	3	4	5	6	7	8	9	10	11	12	13	14	15	1	

Installation dimension drawing

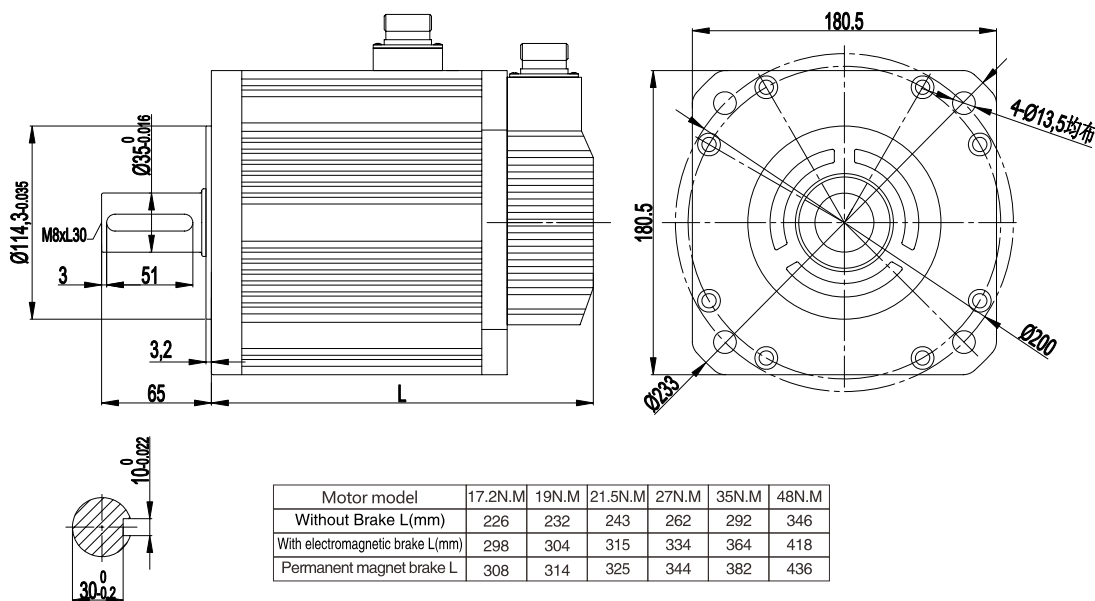


380 series AC servo motor

Specification model

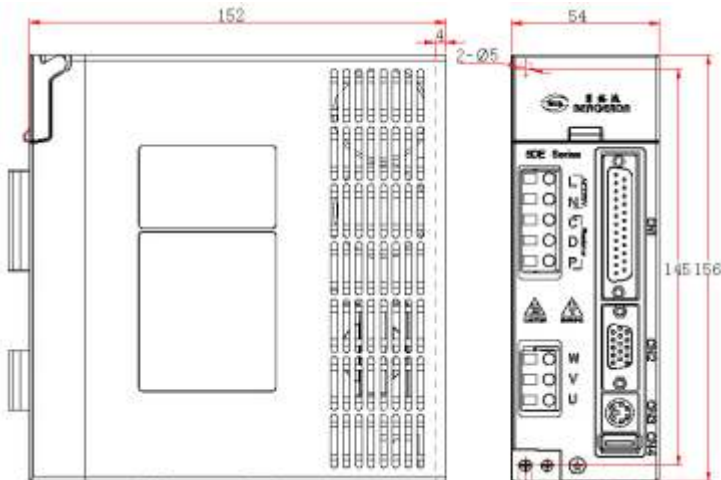
motor model	180SM-M1915MAH	180SM-M2220MAH		180SM-M2715MAH			180SM-M3515MAH			180SM-M4815MAH						
rated power (KW)	3.0	4.5		4.3			5.5			7.5						
Rated voltage (V)	380	380		380			380			380						
Rated current (A)	7.5	9.5		10			12			20						
Rated Speed (RPM)	1500	2000		1500			1500			1500						
Rated torque (N.M)	19	21.5		27			35			48						
Peak torque (N.M)	47	53		67			70			96						
Back EMF (V/1000r/min)	158	140		172			181			156						
Torque coefficient (N.M/A)	2.5	2.26		2.7			2.9			2.4						
Rotor inertia (KG.M ²)	3.8X10 ⁻³	4.7X10 ⁻³		6.1X10 ⁻³			8.6X10 ⁻³			9.5X10 ⁻³						
winding resistance (Ω)	1.15	0.71		0.79			0.62			0.27						
Winding inductance (MH)	6.4	4.0		4.83			4.0			2.14						
Electrical time constant (MS)	5.57	5.6		6			6.45			7.8						
weight (KG)	20.5	22.2		25.5			30.5			40						
Number of encoder lines(PPR)	2500															
insulation class	Class F(155℃)															
Safety class	IP65															
Use environment	Temperature：-20℃~+40℃;humidity：relative humidity < 90% (No dewing)															
Motor winding socket	Winding lead	U (black)				V (blue)				W (Brown)			PE(Yellow green)			
	Socket number	2				3				4			1			
Encoder socket	Signal leads	5V	0V	A+	B+	Z+	A-	B-	Z-	U+	V+	W+	U-	V-	W-	PE
	Socket number	2	3	4	5	6	7	8	9	10	11	12	13	14	15	1

Installation dimension drawing

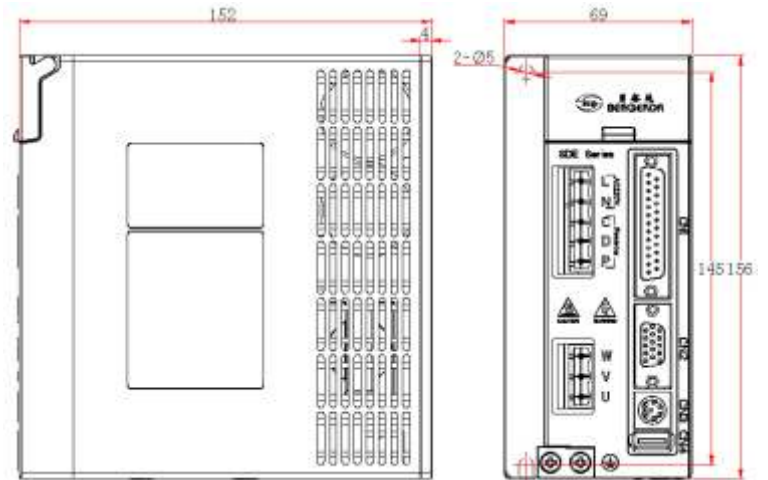


Appendix A: Servo Drive Installation Dimension drawing

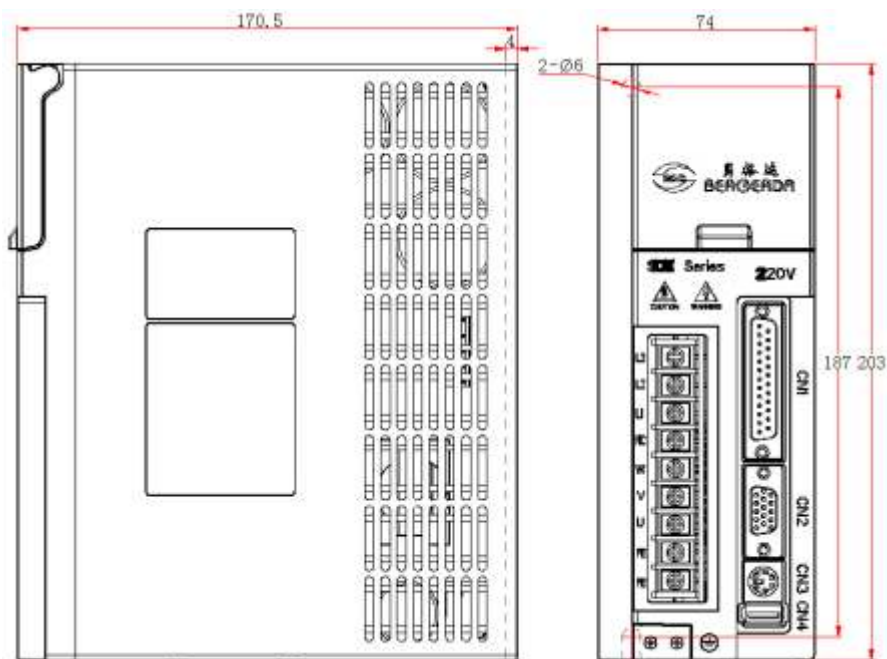
Installation dimension drawing



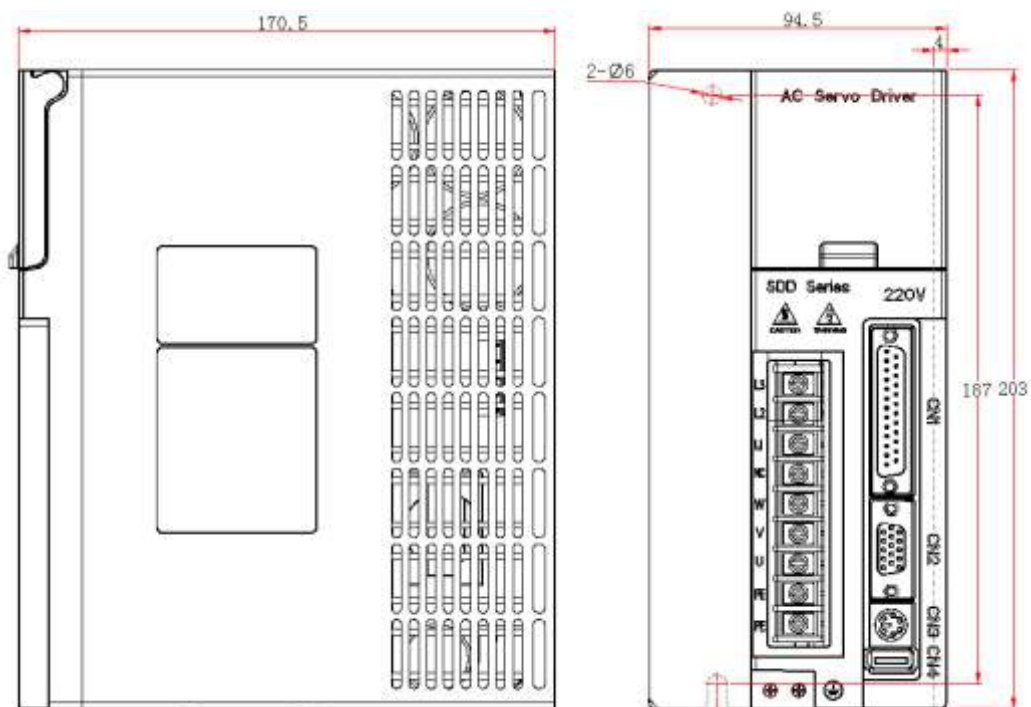
K7 installation dimension drawing



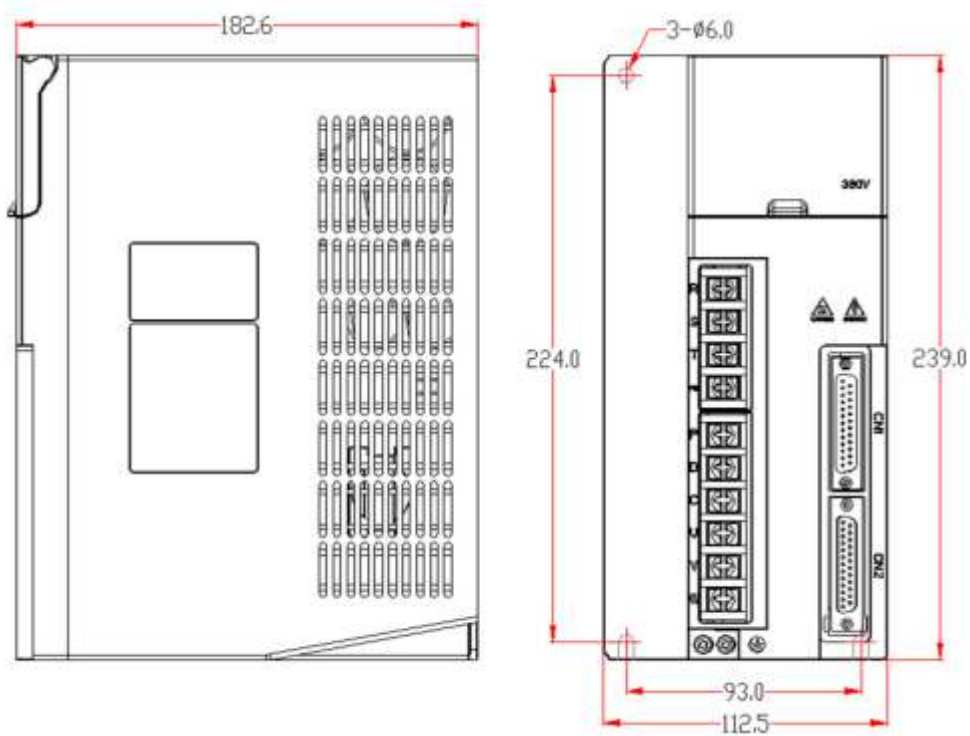
K8 installation dimension drawing



K9 installation dimension drawing

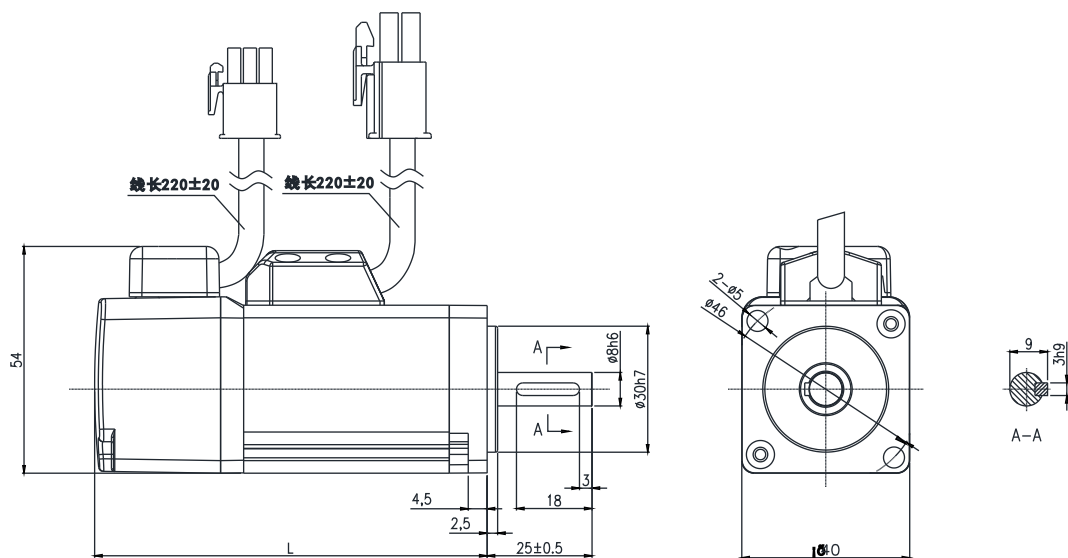


K10 installation dimension drawing



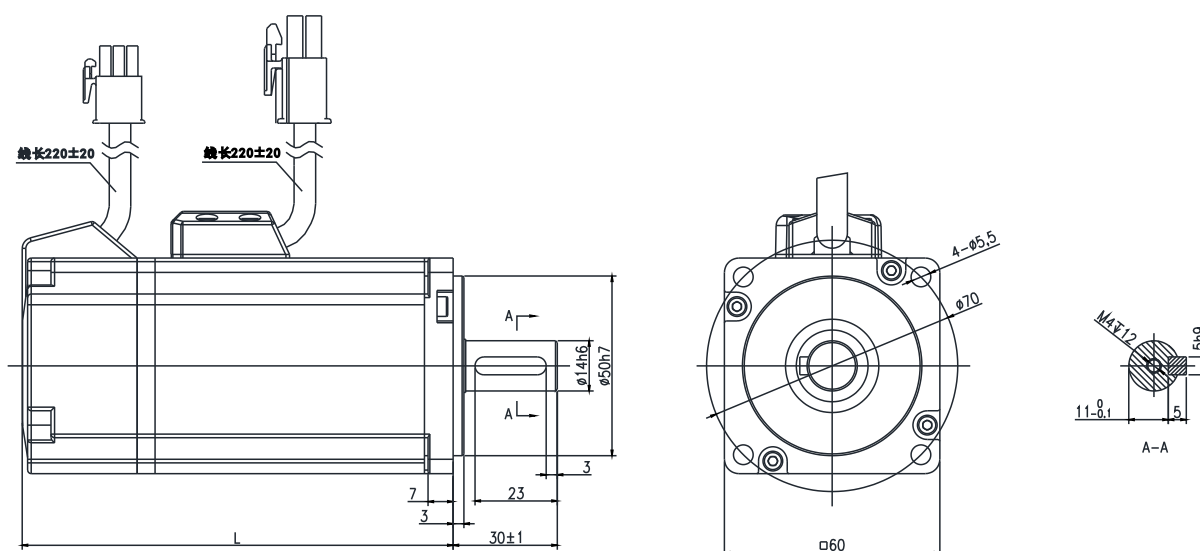
K11 installation dimension drawing

Appendix B : TBL series servo motor installation dimensions



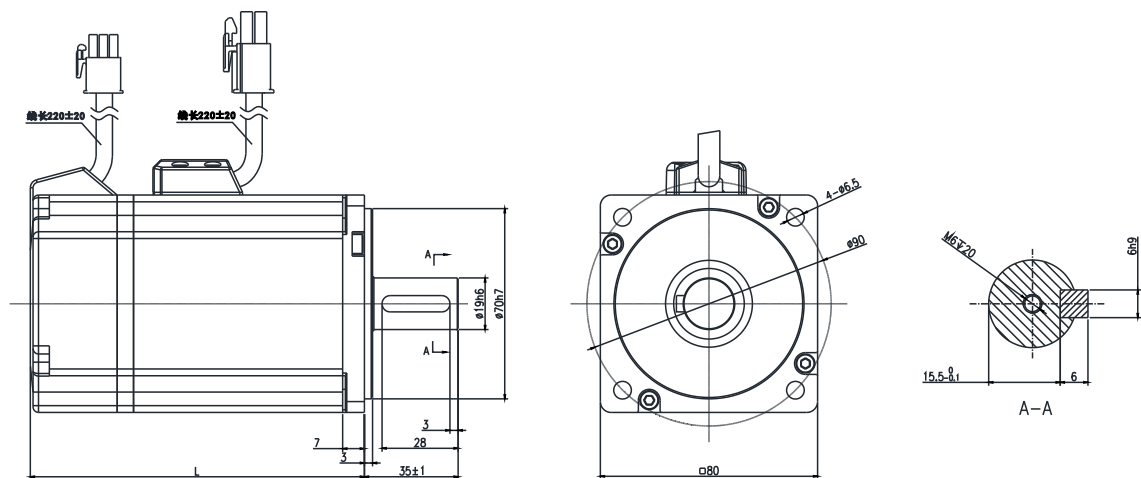
F series 40 Flange AC motor installation outline and installation dimensions

Motor	40F-00230TBL (Z)		40F-00330TBL (Z)	
L (mm)	Without brake	With brake	Without brake	With brake
	93.5	123.5	104.5	134.5



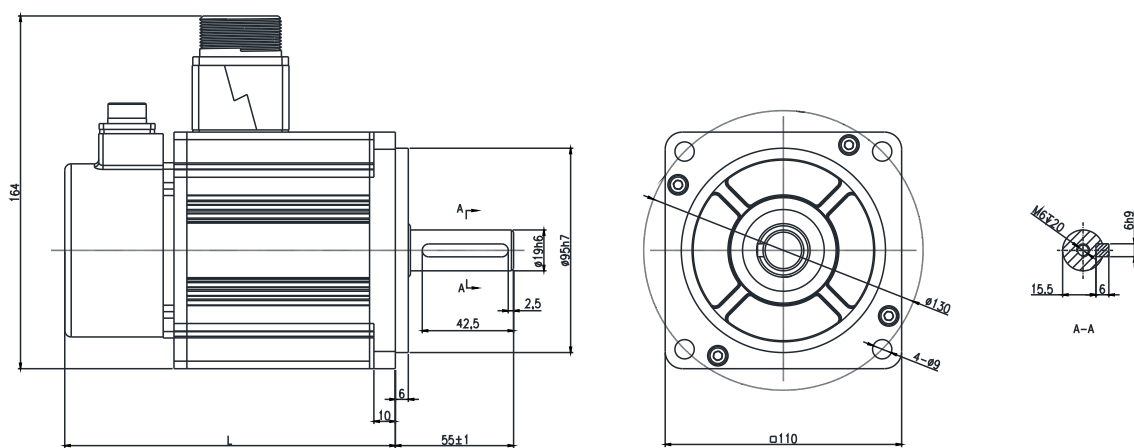
F series 60 Flange AC motor installation outline and installation dimensions

motor	60F-00630TBL (Z)		60F-0130TBL (Z)	
L (mm)	Without brake	With brake	Without brake	With brake
	100.5	130.5	120	150



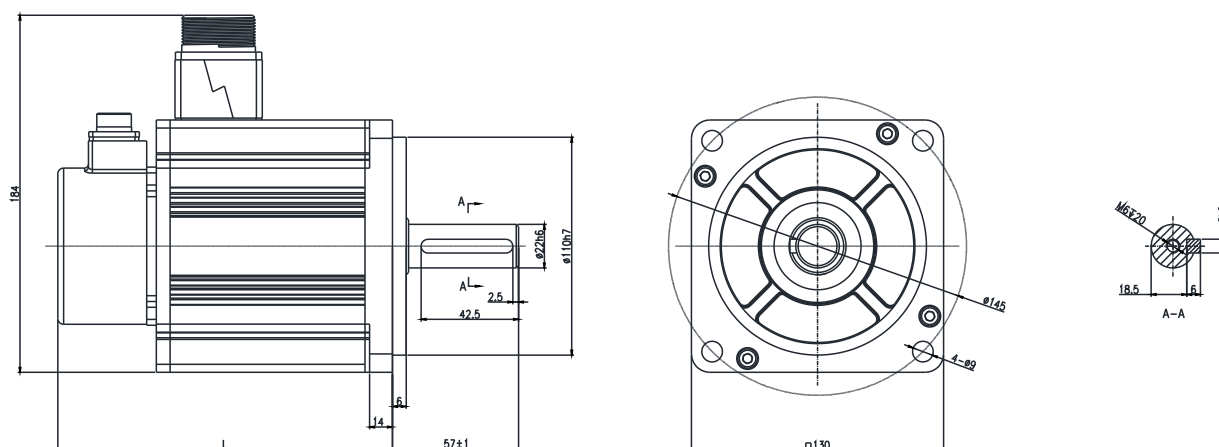
F series 80 Flange AC motor installation outline and installation dimensions

Motor	80F-0230TBL (Z)		80F-0330TBL (Z)	
L (mm)	Without brake	With brake	Without brake	With brake
	125	155	138	170



F series 110 Flange AC motor installation outline and installation dimensions

motor	110F-0425TBL (Z)		110F-0625TBL (Z)	
L (mm)	Without brake	With brake	Without brake	With brake
	154	186	170	202



F series 180 Flange AC motor installation outline and installation dimensions

motor	L (mm)			
	130F-0520TBL	130F-0820TBL	130F-1020TBL	130F-1520TBL 130F-1915TBL
Without brake	151	166	180	193
With brake	187	202	214.5	229.5

F series low-power servo motor wiring diagram (encoder socket is 9-pin AMP)

Motor winding socket	W (black)		V (white)	U (red)	PE (yellow-green)
	2		3	1	4
Encoder socket	5V	0V	PS+	PS-	PE
	7	8	1	4	9
	Red	Red-white	Blue	Blue-Black	Shield

F series medium(high) power servo motor wiring diagram (without brake)

Motor Winding socket	W (yellow)		V (blue)	U (red)	PE (yellow-green)
	3		4	2	1
Encoder socket	5V	0V	PS+	PS-	PE
	4	5	2	3	1
	red	Red-white	blue	Blue-black	shield

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