BERGERDA

Bergerda AC servo system catalogue

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

HangZhou bergerda Automation Technology Co.,Ltd

贝格达 BERGERDA

Serving customers and adding value to customers

Company Profile

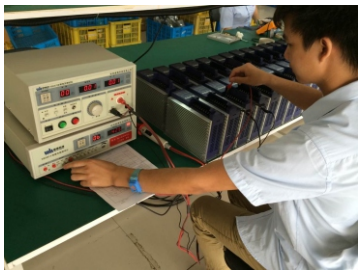
Hangzhou Bergerda Automation Technology Co., Ltd. is located in a beautiful paradise on earth - Hangzhou, China. It is a high-tech enterprise that provides global customers with servo, stepping, frequency conversion, brushless motor drive control products, and industrial drive control solutions. Excellence 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.





Contents




Drive Model Significance

SD 1 D 2 08 3 N 4 K8 5 D 6 – X 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 1 SM 2 — M 3 04 4 25 5 M 6 A 7 L 8 — Z 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

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	2.6	2500	10. 0
SDD50NK10D (SDD50NK12D)	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
SDD55HK12D (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
SDD75HK12D (380V)	180SM-M4815MAH	7. 5	1500	48. 0

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.

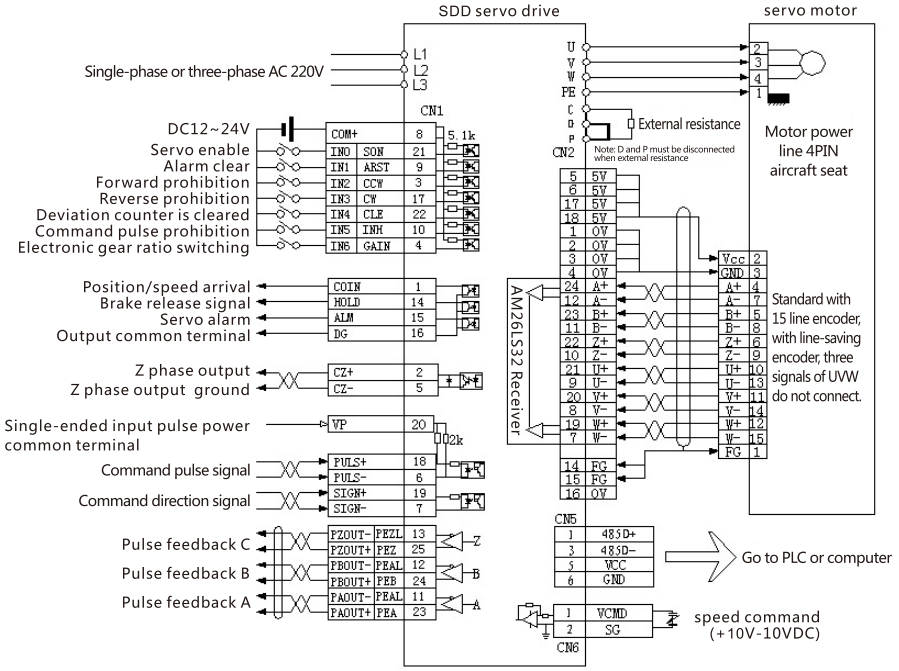
Note: MODBUS-RTU position control version standard model suffix D becomes R, such as:SDD08NK8R
Application direction: 4-16 axis servo point control application
Working principle :The servo control internal design of the relevant register, through 485 communication to the relevant register set, write 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"

D Series AC Servo

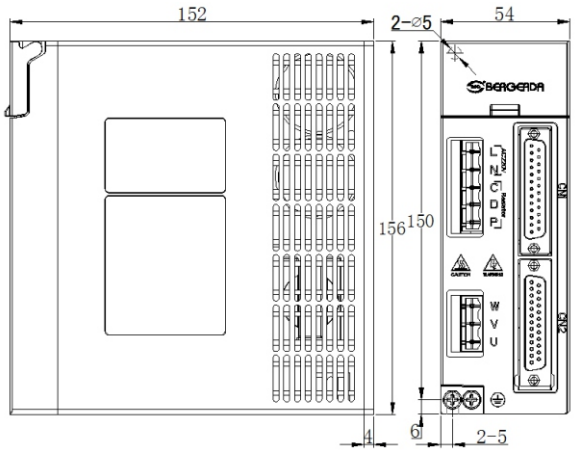
Performance Specifications

External connection	Input power		Single or Three phase AC170~253V Three phase 342V-418V
			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) Forward drive prohibited 4) Reverse drive prohibited 5) Position deviation counter reset 6) Input pulse prohibited 7) No definition
	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)

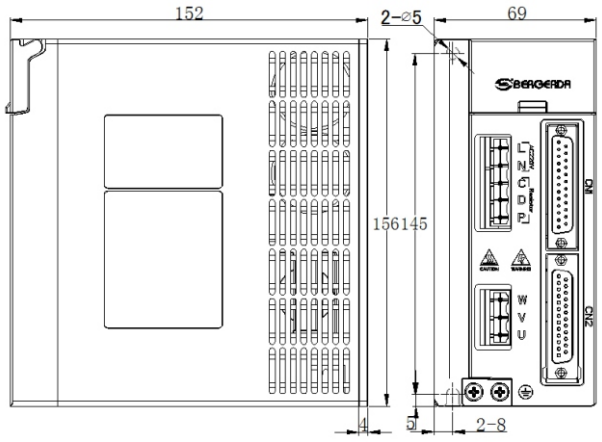
Typical application wiring diagram



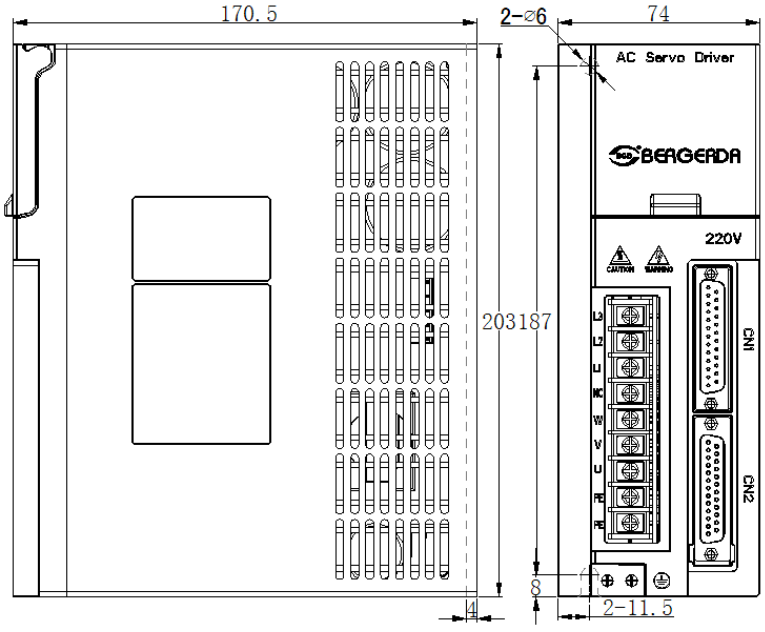
install dimensions



K7 install dimensions
Driver weight: 1.0kg



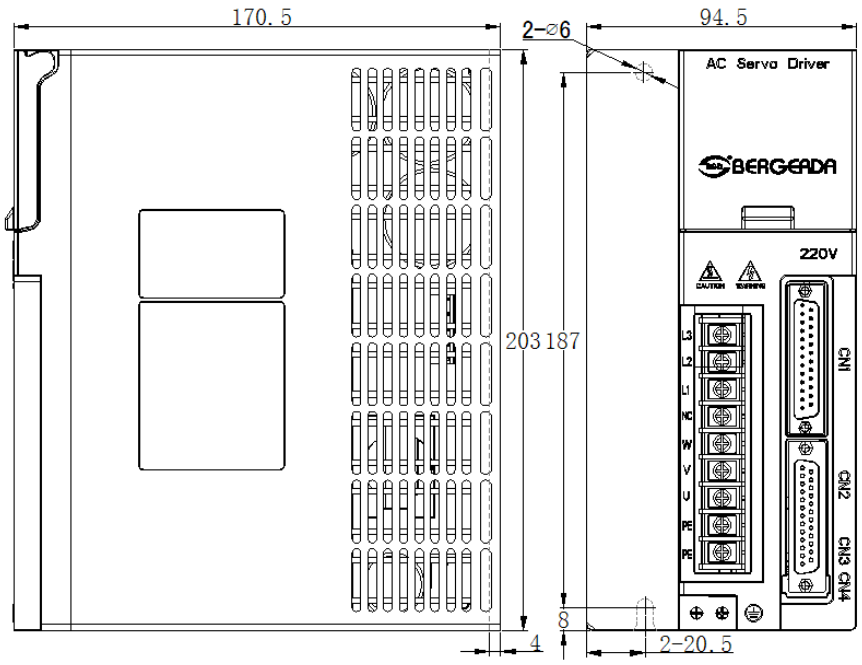
K8 install dimensions
Driver weight: 1.15kg



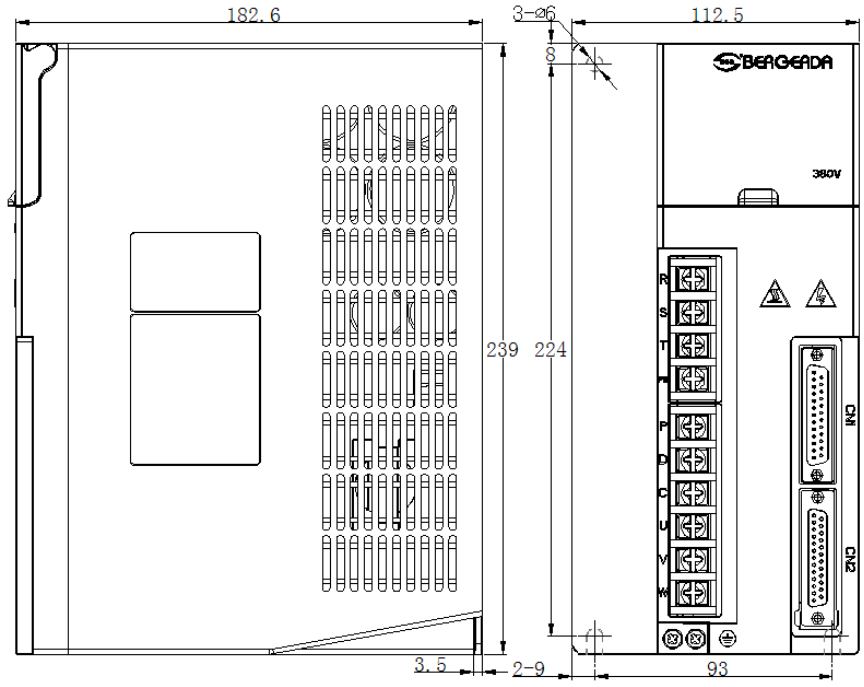
K9 install dimensions
Driver weight: 1.8kg

D Series AC Servo

install dimensions



K10 install dimensions
Driver weight: 2.15kg



K12 install dimensions
Driver weight: 2.15kg

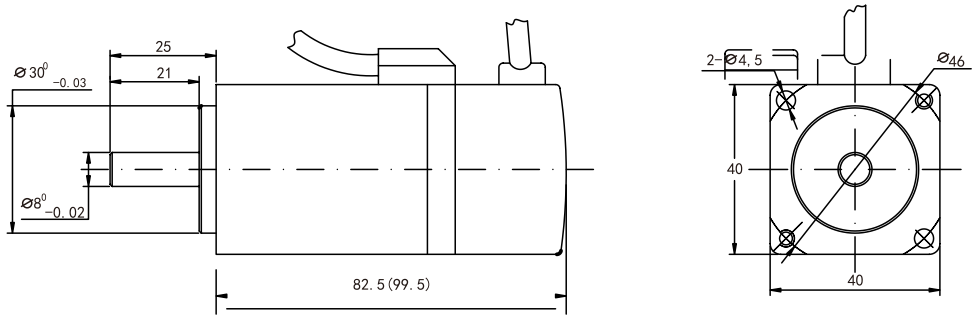
40, 60 series AC servo motor

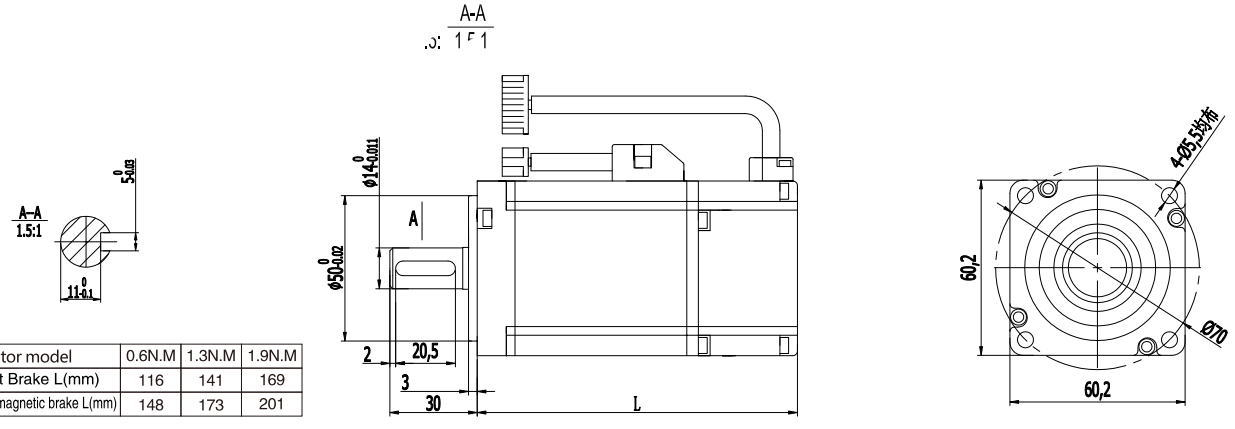
Specification model

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℃)				
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





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

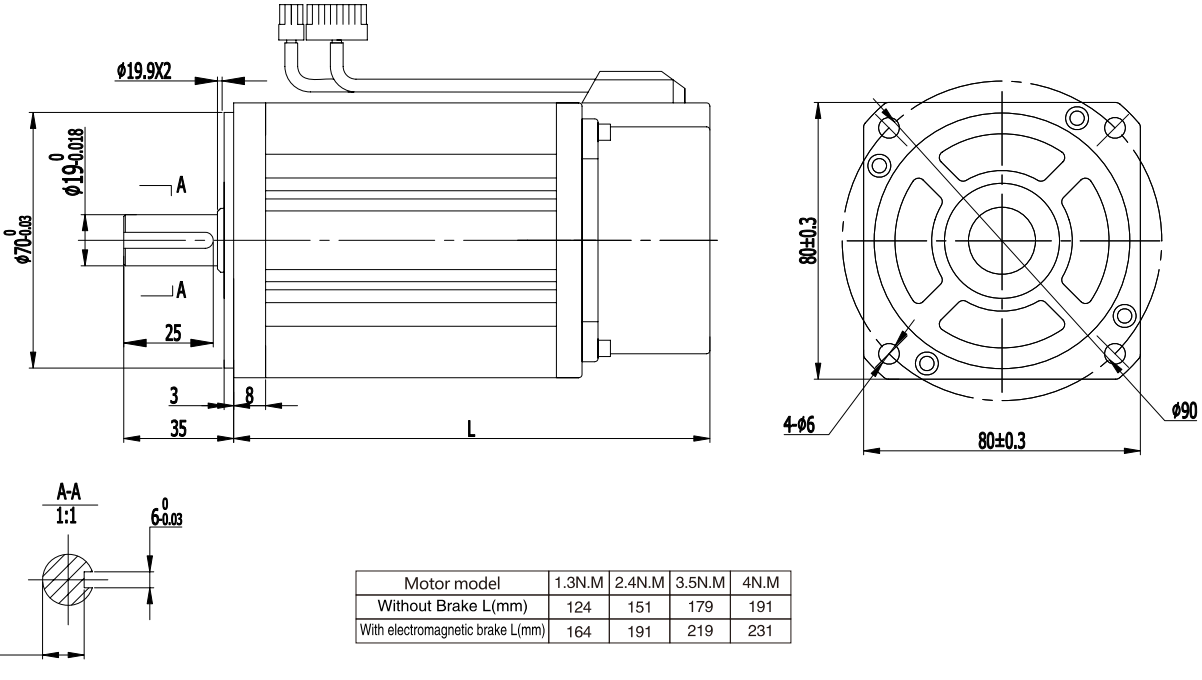
Specification model

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	($KG.M^2$)	$1.05x10^{-4}$	$1.82x10^{-4}$	$2.63x10^{-4}$	$2.97x10^{-4}$
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



Motor model	1.3N.M	2.4N.M	3.5N.M	4N.M
Without Brake L(mm)	124	151	179	191
With electromagnetic brake L(mm)	164	191	219	231

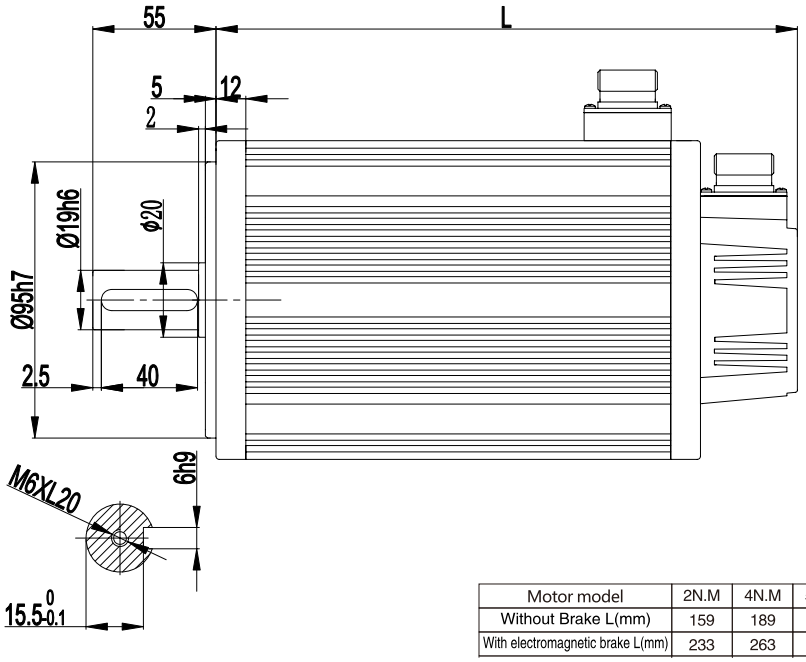
110 series AC servo motor

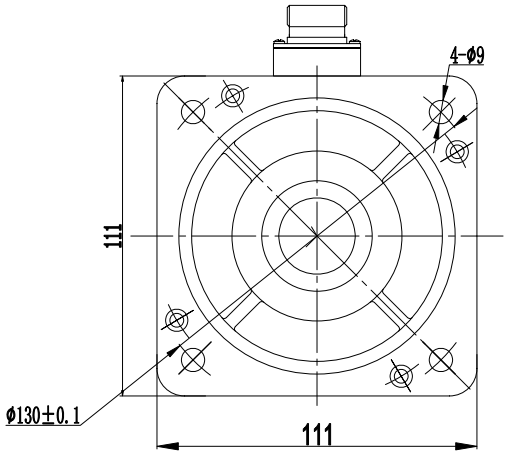
Specification model

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℃)					
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	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

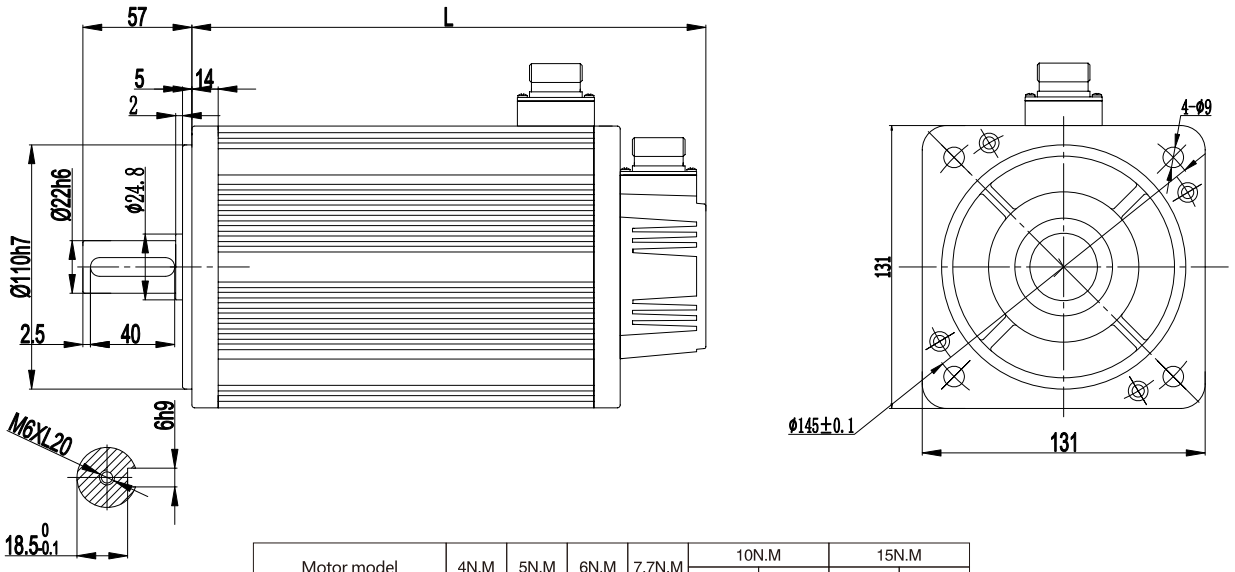
130 series AC servo motor

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)	$0.85x10^{-3}$	$1.06x10^{-3}$	$1.26x10^{-3}$	$1.53x10^{-3}$	$1.94x10^{-3}$	$1.94x10^{-3}$	$1.94x10^{-3}$	$2.77x10^{-3}$
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

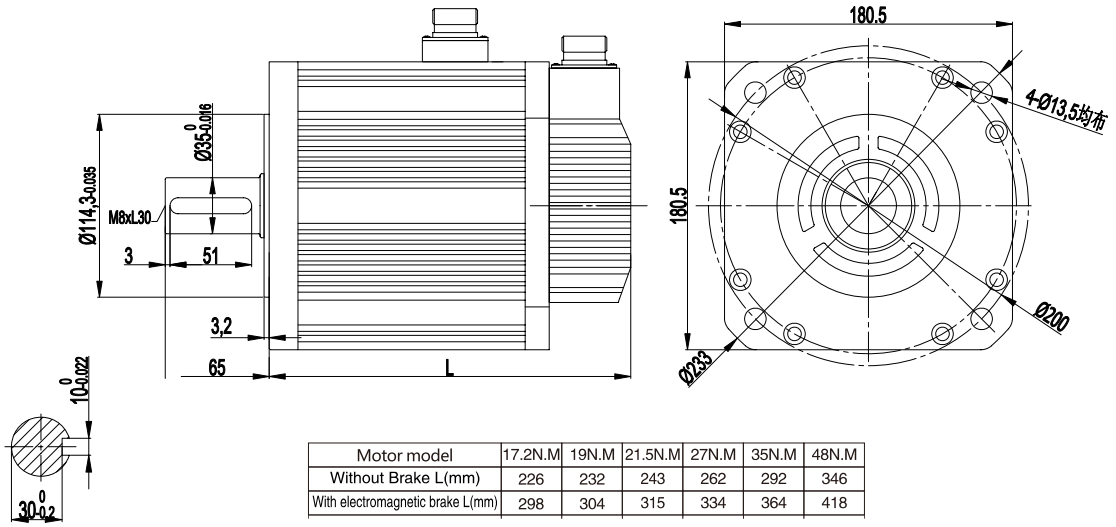
180 series AC servo motor

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



Motor model	17.2N.M	19N.M	21.5N.M	27N.M	35N.M	48N.M
Without Brake L(mm)	226	232	243	262	292	346
With electromagnetic brake L(mm)	298	304	315	334	364	418

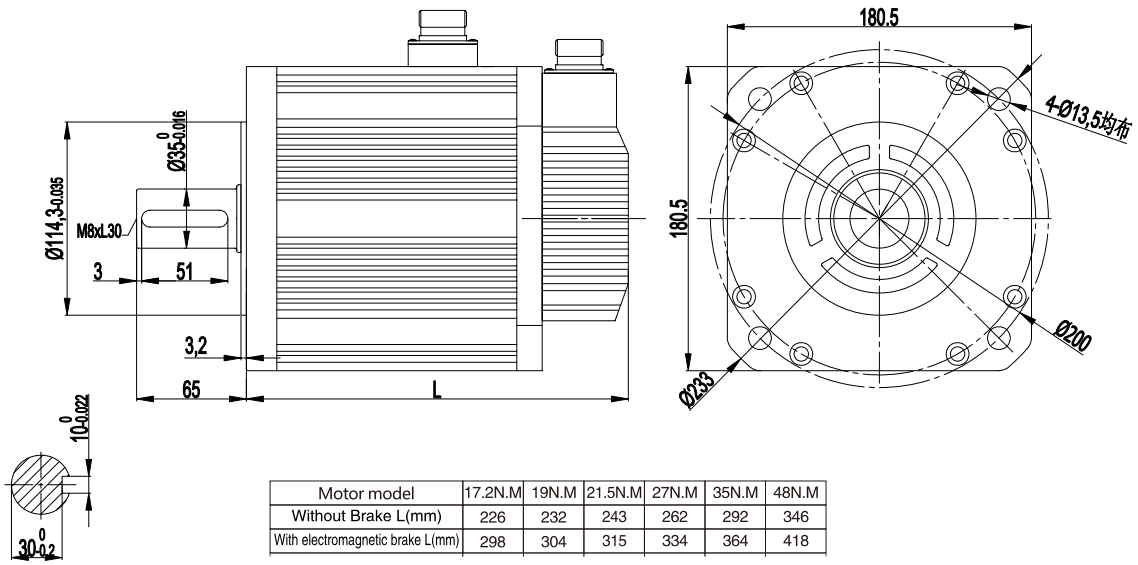
380 V series servo motor

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



Motor model	17.2N.M	19N.M	21.5N.M	27N.M	35N.M	48N.M
Without Brake L(mm)	226	232	243	262	292	346
With electromagnetic brake L(mm)	298	304	315	334	364	418

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

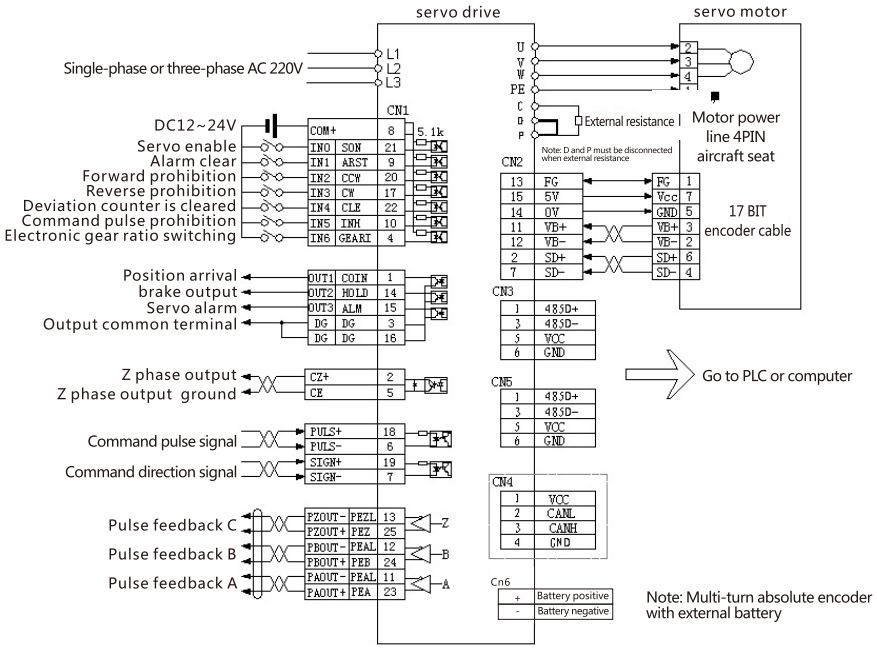
Servo model	motor model	Power(KW)	Rated speed(r/min)	Rated torque(Nm)
SDE04NK7E	40SM-M00230NEL	0. 05	3000	0. 16
	40SM-M00330NEL	0. 1	3000	0. 32
	40SM-M00630NEL	0. 2	3000	0. 64
	60SM-M0130NEL	0. 4	3000	1. 27
SDE08NK8E	60SM-M0230NEL	0. 6	3000	1. 91
	80SM-M0230NEL	0. 75	3000	2. 4
	80SM-M0425NEL	1. 0	2500	4. 0
SDE13NK9E	110SM-M0430NEL	1. 2	3000	4. 0
	110SM-M0530NEL	1. 5	3000	5. 0
SDE20NK9E	110SM-M0630NEL	1. 8	3000	6. 0
SDE13NK9E	130SM-M0425NEL	1. 0	2500	4. 0
	130SM-M0525NEL	1. 3	2500	5. 0
SDE20NK9E	130SM-M0625NEL	1. 5	2500	6. 0
	130SM-M0825NEL	2. 0	2500	7. 7
	130SM-M1025NEL	2.6	2500	10. 0
SDE50NK10E (SDE50NK12E)	130SM-M1525NEL	3. 8	2500	15. 0
	180SM-M1915NEL	3. 0	1500	19. 0
	180SM-M2220NEL	4. 5	2000	22. 0
	180SM-M2715NEL	4. 3	1500	27. 0
SDE30HK10E (380V)	130SM-M0825NEH	2. 0	2500	7. 7
	130SM-M1025NEH	2. 5	2500	10. 0
	130SM-M1525NEH	3. 8	2500	15. 0
SDE55HK12E (380V)	180SM-M1915NEH	3. 0	1500	19. 0
	180SM-M2220NEH	4. 5	2000	21. 5
	180SM-M2715NEH	4. 1	1500	27. 0
	180SM-M3515NEH	5. 5	1500	35. 0
SDE75HK12E (380V)	180SM-M4815NEH	7. 5	1500	48. 0

E series absolute AC servo

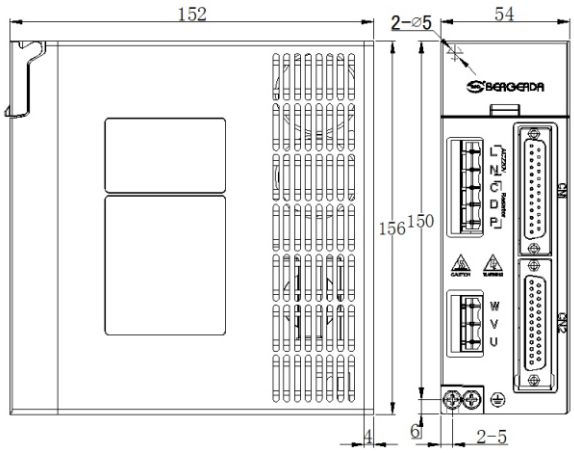
Performance Specifications

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)

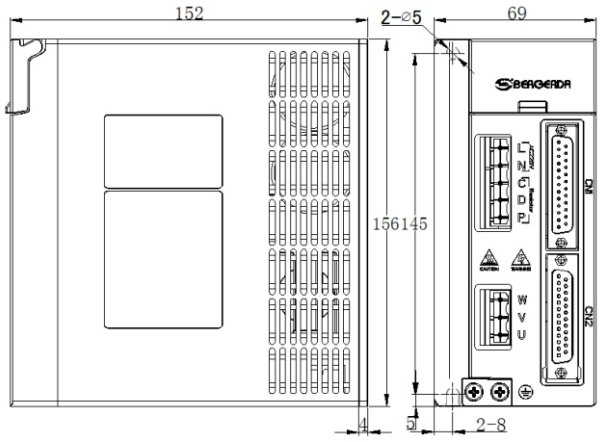
Typical application wiring diagram



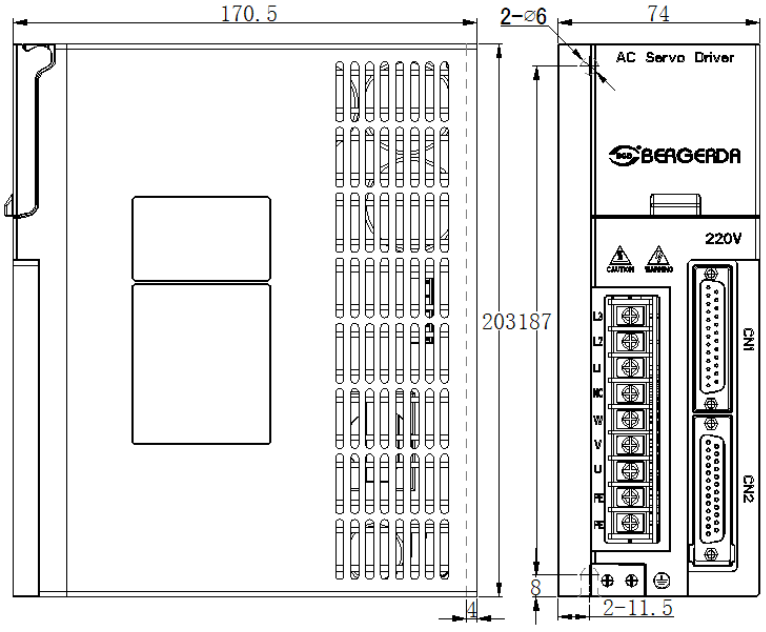
install dimensions



K7 install dimensions
Driver weight: 1.0kg



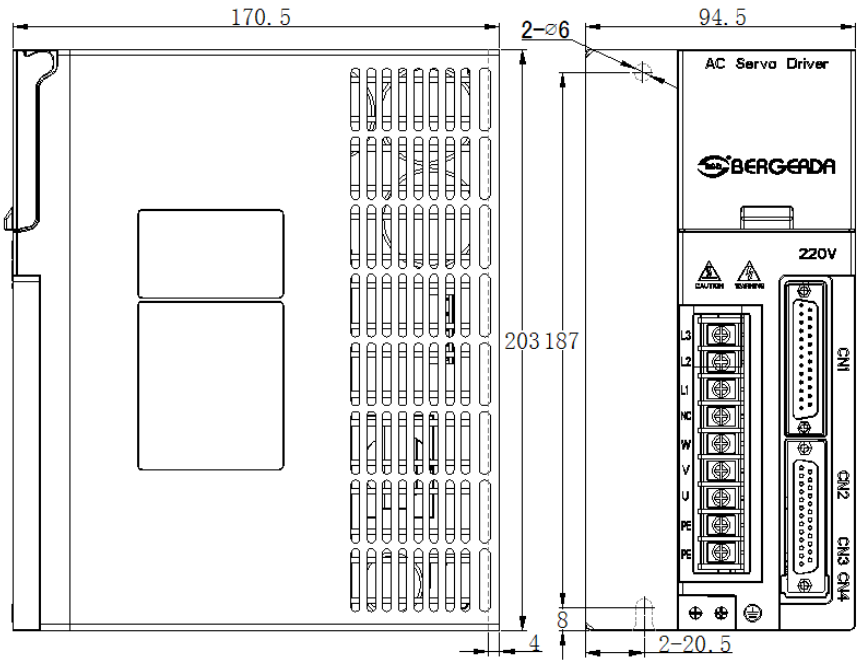
K8 install dimensions
Driver weight: 1.15kg



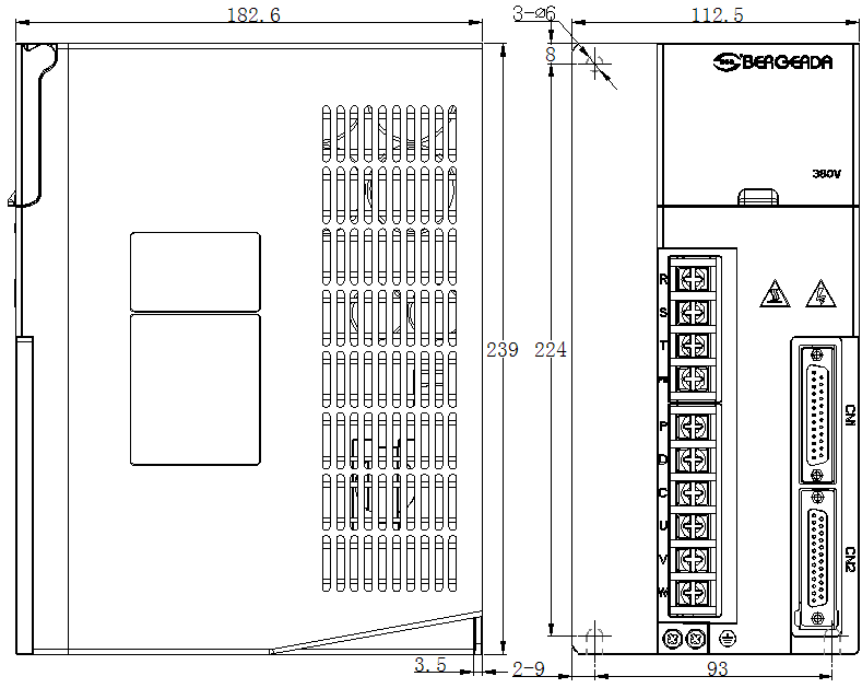
K9 install dimensions
Driver weight: 1.8kg

E series absolute AC servo

install dimensions



K10 install dimensions
Driver weight: 2.15kg



K12 install dimensions
Driver weight: 2.15kg

E series absolute AC servo

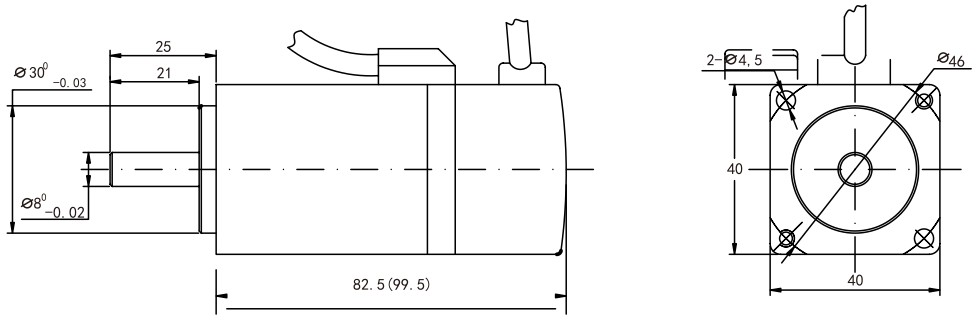
40, 60 series AC servo motor

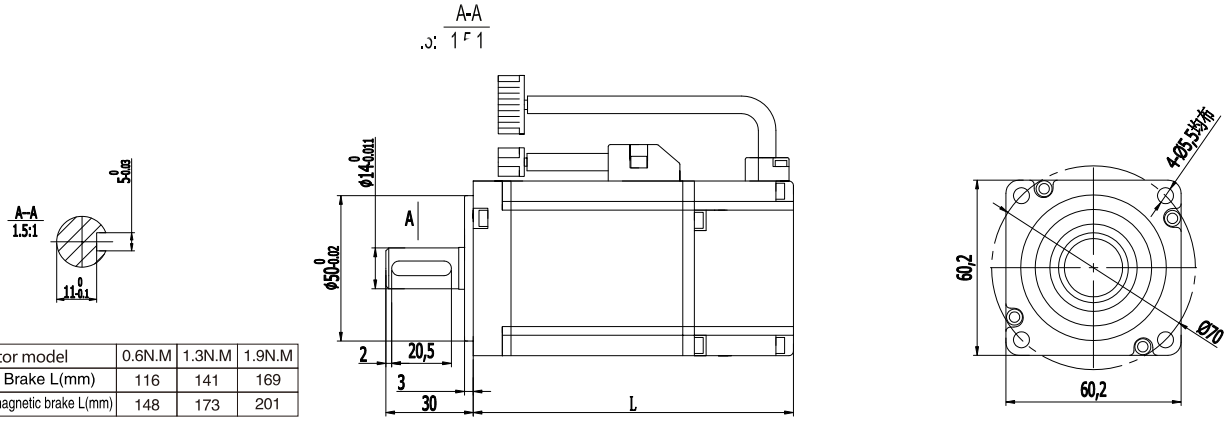
Specification model

motor model		40SM-M00230NEL	40SM-M00330NEL	60SM-M00630NEL	60SM-M0130NEL	60SM-M0230NEL
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
Encoder bit		17				
insulation class		Class B(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	FG	VCC	GND	VB+	VB-	SD+	SD-
	Socket number	1	7	5	3	2	6	4

Installation dimension drawing





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

E series absolute AC servo

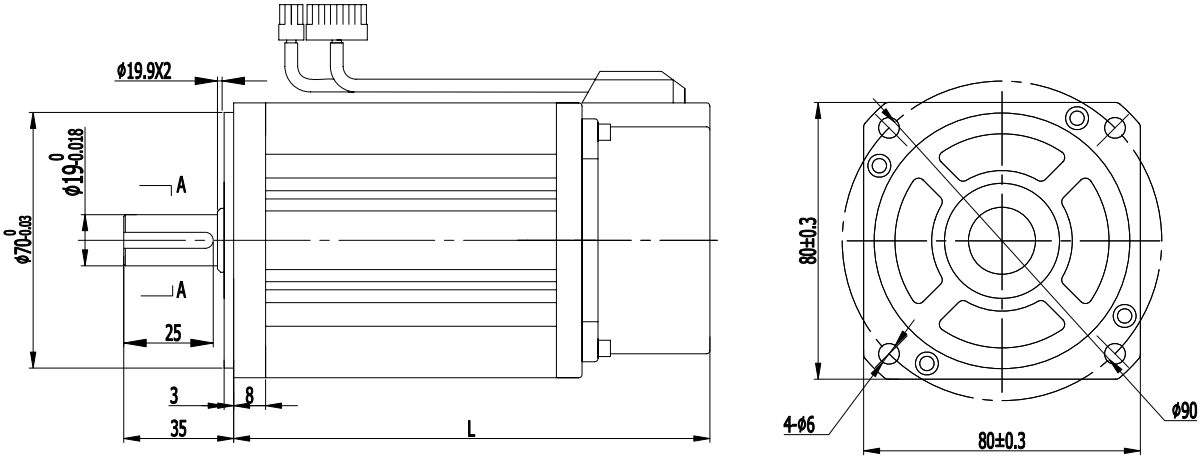
80 series AC servo motor

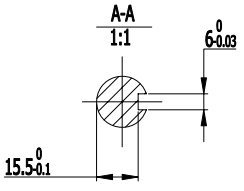
Specification model

motor model		80SM-M0130NEL	80SM-M0230NEL	80SM-M0320NEL	80SM-M0425NEL
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	($KG.M^2$)	$1.05x10^{-4}$	$1.82x10^{-4}$	$2.63x10^{-4}$	$2.97x10^{-4}$
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
Encoder bit		17			
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	FG	VCC	GND	VB+	VB-	SD+	SD-
	Socket number	1	7	5	3	2	6	4

Installation dimension drawing





Motor model	1.3N.M	2.4N.M	3.5N.M	4N.M
Without Brake L(mm)	124	151	179	191
With electromagnetic brake L(mm)	164	191	219	231

E series absolute AC servo

110 series AC servo motor

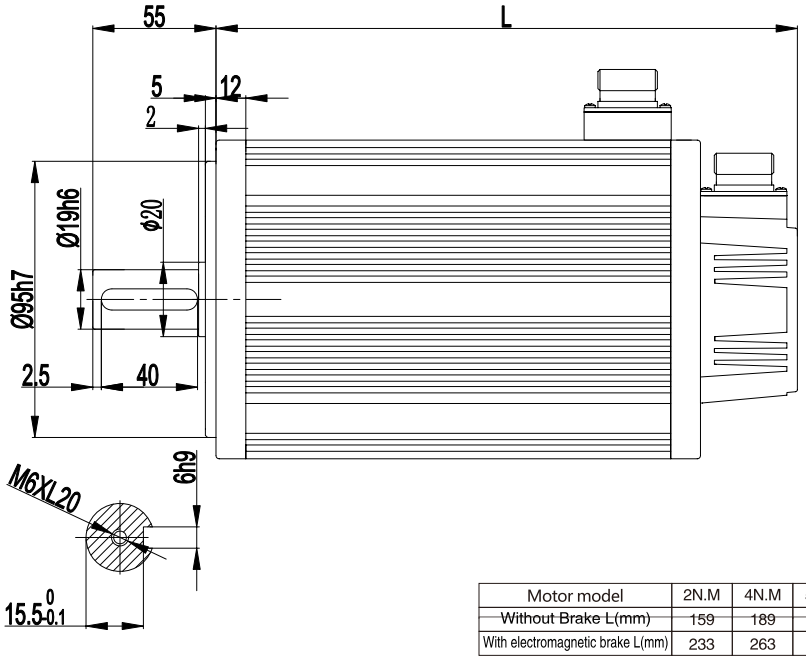
Specification model

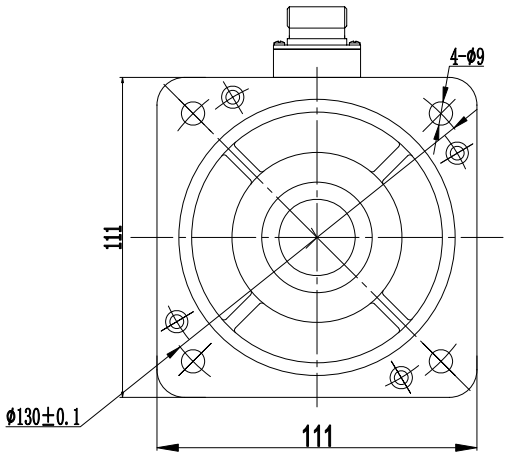
motor model		110SM-M0230NEL	110SM-M0420NEL	110SM-M0430NEL	110SM-M0530NEL	110SM-M0620NEL	110SM-M0630NEL
rated power	(KW)	0.6	0.8	1.2	1.5	1.2	1.8
Rated voltage	(V)	220	220	220	220	220	220
Rated current	(A)	2.5	3.5	5.0	6	4.5	6.0
Rated Speed	(RPM)	3000	2000	3000	3000	2000	3000
Rated torque	(N.M)	2	4	4	5	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
Encoder bit		17					
insulation class		Class F(130°C)					
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	FG	VCC	GND	VB+	VB-	SD+	SD-	
Socket number	1	7	5	3	2	6	4	

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

E series absolute AC servo

130 series AC servo motor

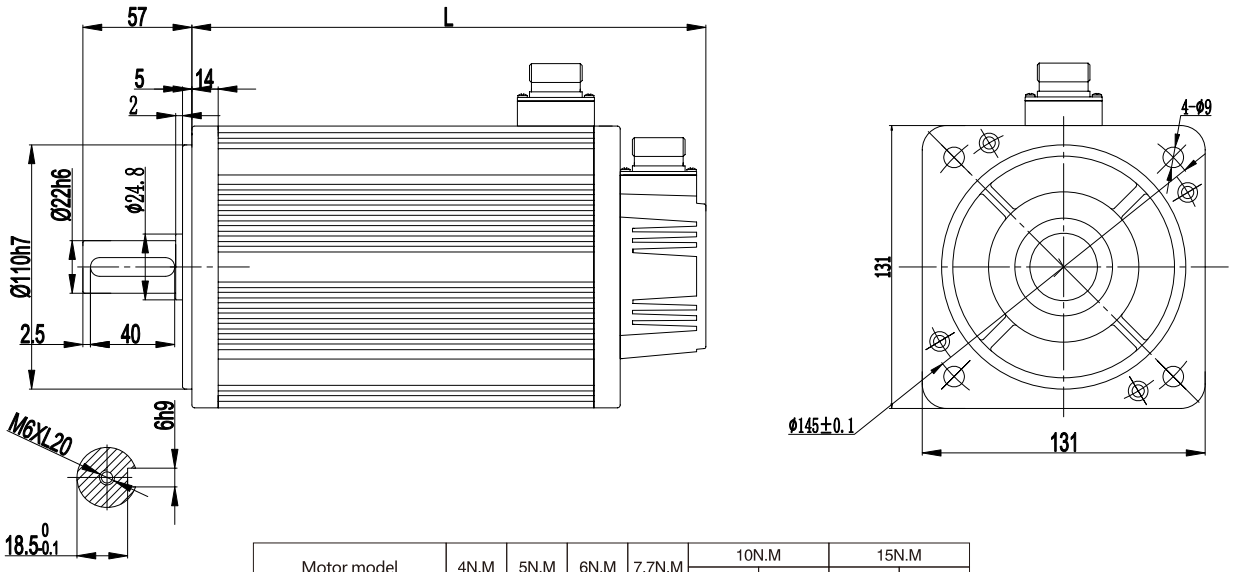
Specification model

motor model	130SM-M0425NEL	130SM-M0525NEL	130SM-M0625NEL	130SM-M0825NEL	130SM-M1010NEL	130SM-M1015NEL	130SM-M1025NEL	130SM-M1525NEL
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)	$0.85x10^{-3}$	$1.06x10^{-3}$	$1.26x10^{-3}$	$1.53x10^{-3}$	$1.94x10^{-3}$	$1.94x10^{-3}$	$1.94x10^{-3}$	$2.77x10^{-3}$
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
Encoder bit	17							
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	FG	VCC	GND	VB+	VB-	SD+	SD-
	Socket number	1	7	5	3	2	6	4

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

E series absolute AC servo

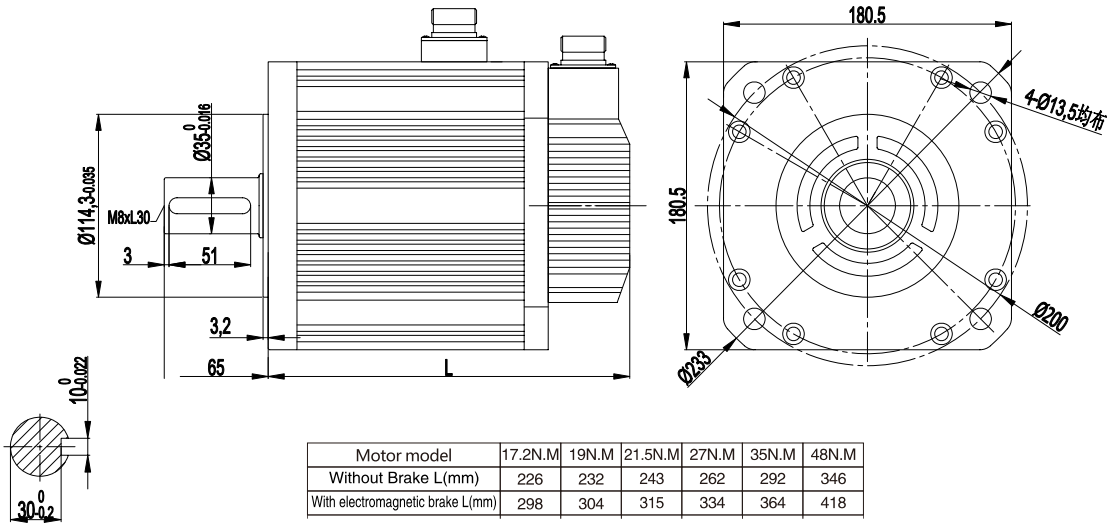
180 series AC servo motor

Specification model

motor model		180SM-M1915NEL	180SM-M2220NEL	180SM-M2715NEL	180SM-M3515NEL
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
Encoder bit		17			
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	FG	VCC	GND	VB+	VB-	SD+	SD-
	Socket number	1	7	5	3	2	6	4

Installation dimension drawing



Motor model	17.2N.M	19N.M	21.5N.M	27N.M	35N.M	48N.M
Without Brake L(mm)	226	232	243	262	292	346
With electromagnetic brake L(mm)	298	304	315	334	364	418

E series absolute AC servo

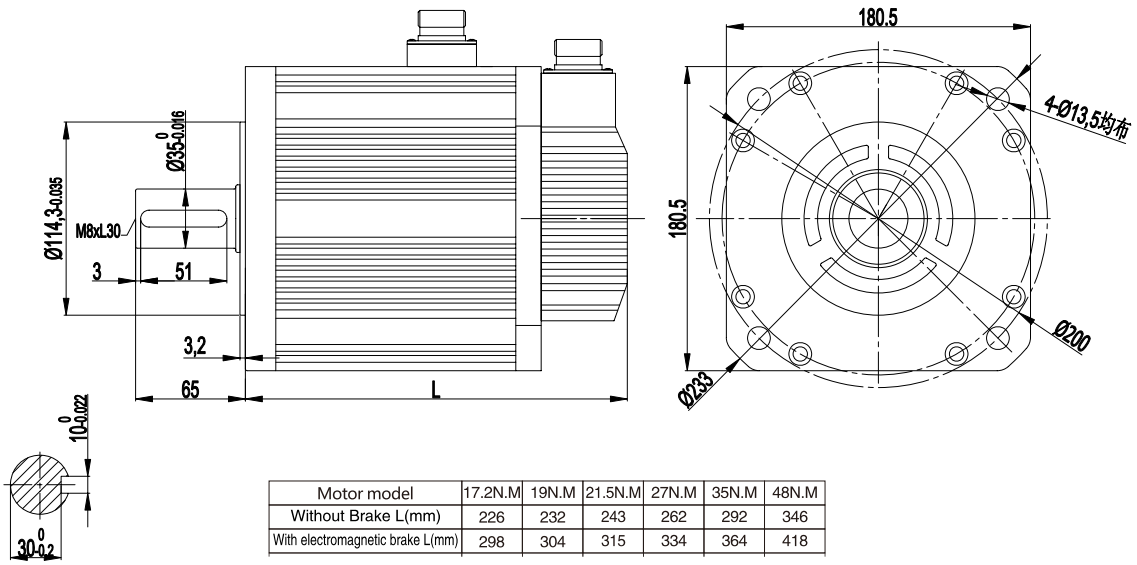
380 V series servo motor

Specification model

motor model		180SM-M1915NEH	180SM–M2220NEH	180SM-M2715NEH	180SM-M3515NEH	180SM-M4815NEH
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
Encoder bit		17				
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	FG	VCC	GND	VB+	VB-	SD+	SD-
	Socket number	1	7	5	3	2	6	4

Installation dimension drawing



Motor model	17.2N.M	19N.M	21.5N.M	27N.M	35N.M	48N.M
Without Brake L(mm)	226	232	243	262	292	346
With electromagnetic brake L(mm)	298	304	315	334	364	418

F series high speed and high precision AC servo

Series features

- ◇ Compatible with magnetic encoder and optical encoder motors, fewer cores than SDD series encoder cables, more reliable connection
- ◇ 5 pairs of magnetic circuit design, low speed is more stable, the body is 1/3 shorter than the NAL series motor, easy to install
- ◇ Dust-proof, oil-proof, anti-vibration, strong ability to carry interference, suitable for long-term output
- ◇ Standard RS485 communication function, realize upload and download network control
- ◇ Position control, speed control, torque control Modbus communication can be converted to each other to meet general applications
- ◇ Full range of CE certification

Applications

This product can be adapted to magnetically encoded TCL, optically encoded GDL, and absolute NEL encoders to meet multiple performance and environmental requirements. The powerful internal position mode can plan multi-path continuous operation for rich motion control functions.

Suitable for the following occasions

High precision
High response
Installation space is limited
Bad work environment

Mature application industry

Industrial robot
Semiconductor equipment
Engraving equipment
Measuring equipment
Medical equipment
robot

SDF-X Specification sheet for order

Servo model	motor model	Power (KW)	Rated speed (r/min)	Max speed (r/min)	Rated torque (Nm)	
SDF04NK7X	40F-00330GCL	0.1	3000	5000	0.32	17-bit magnetoelectric encoder
	60F-00630TCL	0.2	3000	5000	0.64	
	60F-0130TCL	0.4	3000	5000	1.27	
SDF08NK8X	80F-0230TCL	0.75	3000	5000	2.39	
	80F-0330TCL	1. 0	3000	5000	3. 18	
SDF04NK7X	40F-00330GDL	0.1	3000	5000	0.32	17-bit photoelectric encoder
	60F-00630GDL	0.2	3000	5000	0.64	
	60F-0130GDL	0.4	3000	5000	1.27	
SDF08NK8X	80F-0230GDL	0.75	3000	5000	2.39	
SDF20NK9X (SDF30HK10X)	130F-0515GDL	1.0	1500	3000	5.39	
	130F-0815GDL	1.5	1500	3000	8.34	
	130F-1115GDL	2.0	1500	3000	11.5	
SDF55HK12X (380V)	180F-1915GDH	3.0	1500	3000	18.6	
	180F-2815GDH	4.5	1500	3000	28.4	
	180F-3515GDH	5.5	1500	3000	35	
SDF75HK12X (380V)	180F-4815GDH	7.5	1500	3000	48	

F series high speed and high precision AC servo

SDF-E Specification sheet for order

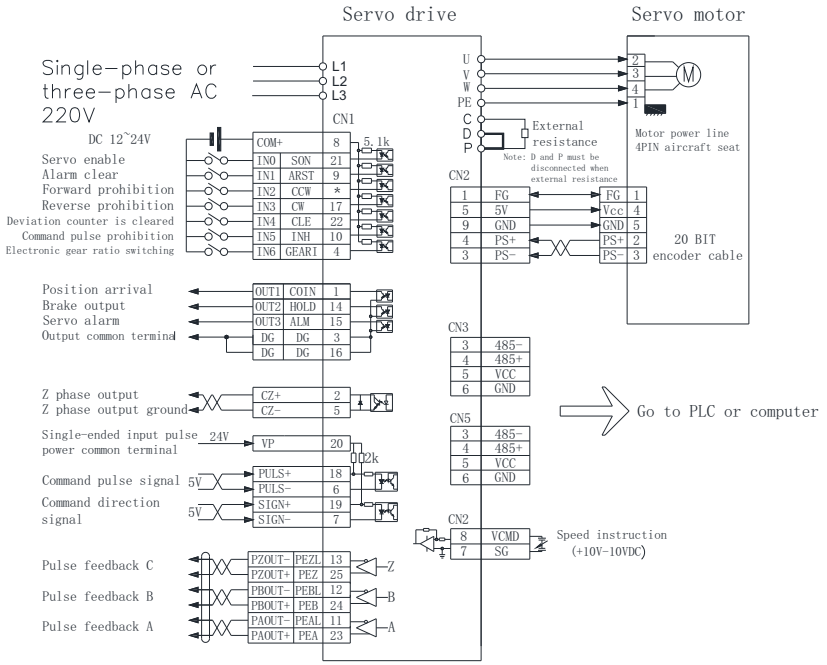
Servo model	motor model	Power (KW)	Rated speed (r/min)	Max speed (r/min)	Rated torque (Nm)	
SDF04NK7E	40SM-M00330NEL	0. 1	3000	3500	0. 32	
	40SM-M00630NEL	0. 2	3000	3500	0. 64	
	60SM-M0130NEL	0. 4	3000	3500	1. 27	
SDF08NK8E	60SM-M0230NEL	0. 6	3000	3500	1. 91	
	80SM-M0230NEL	0. 75	3000	3500	2. 4	
	80SM-M0425NEL	1. 0	2500	3000	4. 0	
SDF13NK9E	110SM-M0430NEL	1. 2	3000	3500	4. 0	
	110SM-M0530NEL	1. 5	3000	3500	5. 0	
SDF20NK9E	110SM-M0630NEL	1. 8	3000	3500	6. 0	
SDF13NK9E	130SM-M0425NEL	1. 0	2500	3000	4. 0	17-bit multi-turn absolute ncoder
	130SM-M0525NEL	1. 3	2500	3000	5. 0	
SDF20NK9E	130SM-M0625NEL	1. 5	2500	3000	6. 0	
	130SM-M0825NEL	2. 0	2500	3000	7. 7	
	130SM-M1025NEL	2.6	2500	3000	10. 0	
SDF50NK12E	130SM-M1525NEL	3 8	2500	3000	15. 0	
	180SM-M1915NEL	3. 0	1500	2000	19. 0	
	180SM-M2220NEL	4. 5	2000	2500	22. 0	
	180SM-M2715NEL	4. 3	1500	2000	27. 0	
SDF30HK12E (380V)	130SM-M0825NEH	2. 0	2500	3000	7. 7	
	130SM-M1025NEH	2. 5	2500	3000	10. 0	
	130SM-M1525NEH	3. 8	2500	3000	15. 0	
SDF55HK12E (380V)	180SM-M1915NEH	3. 0	1500	2000	19. 0	
	180SM-M2220NEH	4. 5	2000	2500	21. 5	
	180SM-M2715NEH	4. 1	1500	2000	27. 0	
	180SM-M3515NEH	5. 5	1500	2000	35. 0	
SDF75HK12E (380V)	180SM-M4815NEH	7. 5	1500	2000	48. 0	

F series high speed and high precision AC servo

Performance Specifications

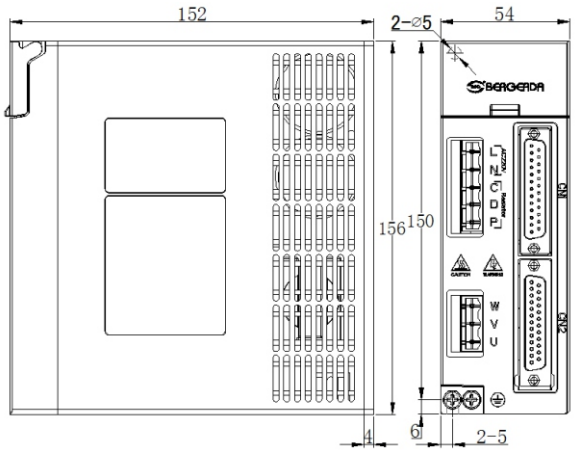
External connection	Input power		Single or Three phase AC170~253V
			50/60Hz
	control type		SVPWM control
	encoder		17-bit optical encoder, magnetic encoder, absolute encoder
Internal function	Display and operation		Six bits seven-segment display LED: Four function keys
	Control mode		Position control/speed 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
		Output pulse	**1-65535**
	input signal	7points photoelectric isolation input	1) Servo enable 2) Alarm clear 3) Forward drive prohibited 4) Reverse drive prohibited 5) Position deviation counter reset 6) Input pulse prohibited 7) No definition
	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

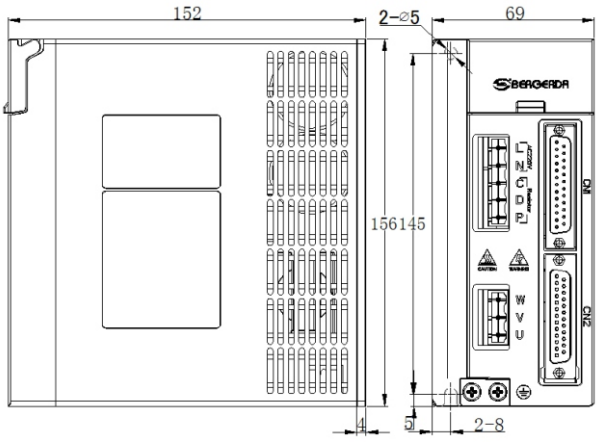


F series high speed and high precision AC servo

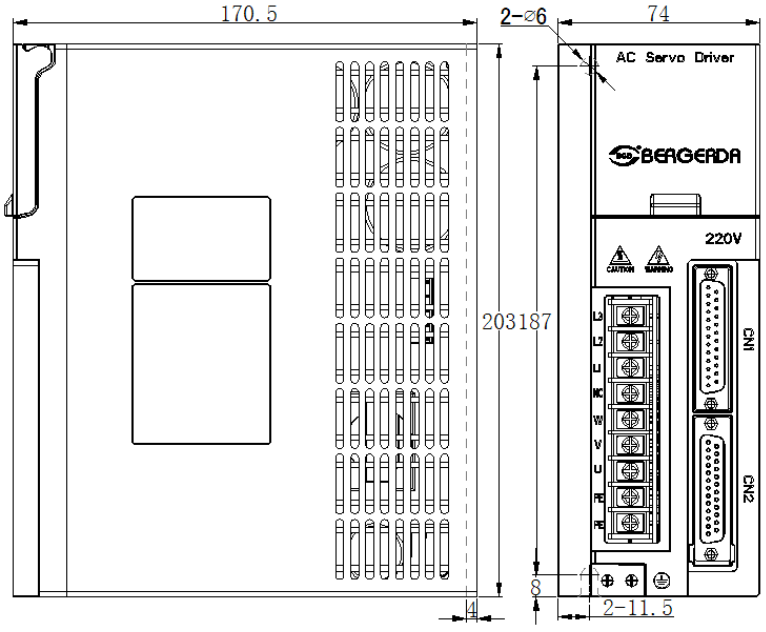
install dimensions



K7 install dimensions
Driver weight: 1.0kg



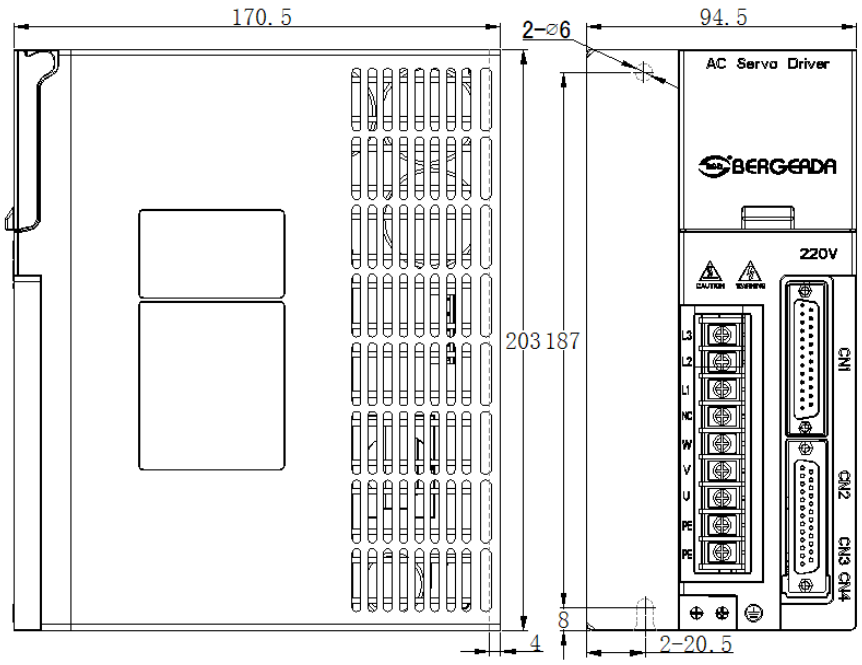
K8 install dimensions
Driver weight: 1.15kg



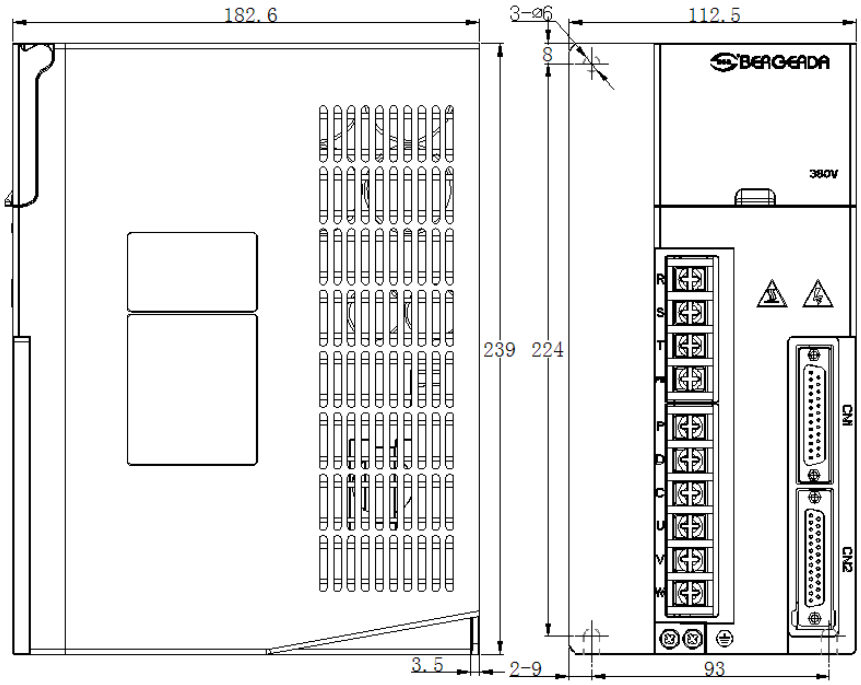
K9 install dimensions
Driver weight: 1.8kg

F series high speed and high precision AC servo

install dimensions

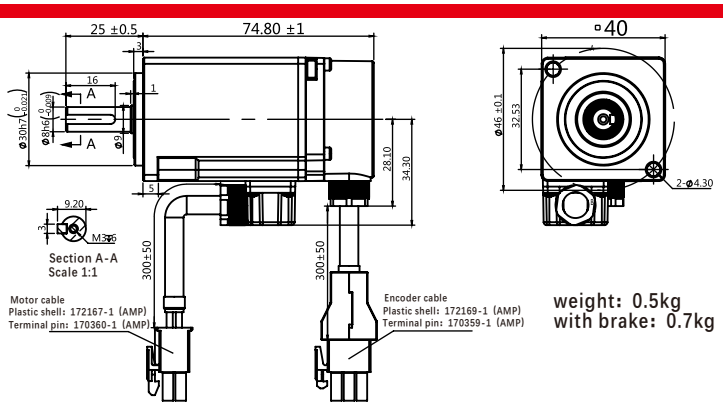


K10 install dimensions
Driver weight: 2.15kg



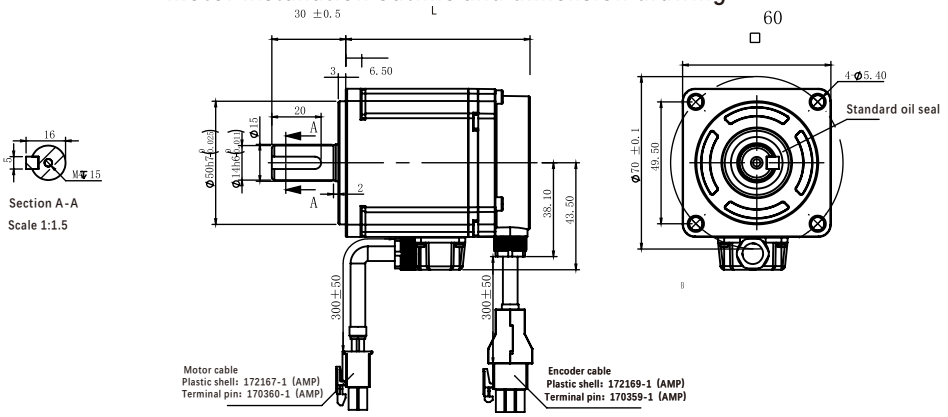
K12 install dimensions
Driver weight: 2.15kg

GDL series servo motor



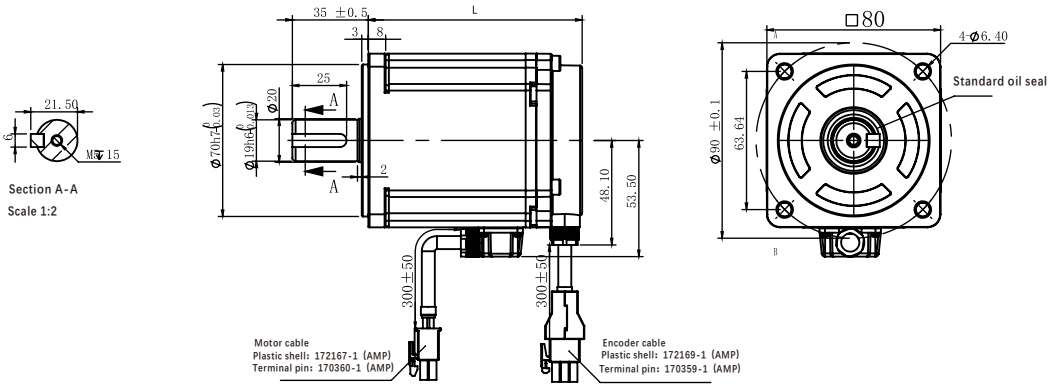
weight: 0.5kg
with brake: 0.7kg

GDL series 40 flange 100W optical encoder 5-pair servo motor installation outline and dimension drawing



GDL series 60 flange optical encoder servo motor installation outline and dimension drawing

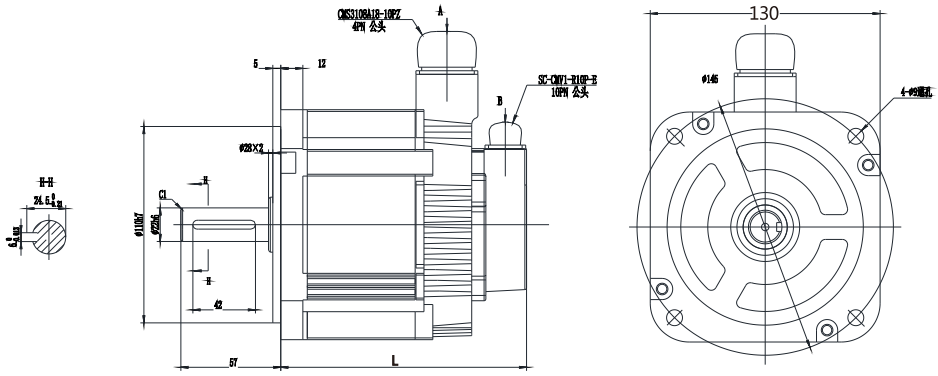
motor model	60F-00630GDL(Z)		60F-0130GDL(Z)	
L(mm)	without brake	with brake	without brake	with brake
	75	104.5	92	121.5
weight (kg)	0.8	1.1	1.1	1.4
Shaft (mm)	14			



GDL series 80 flange optical encoder servo motor installation outline and dimension drawing

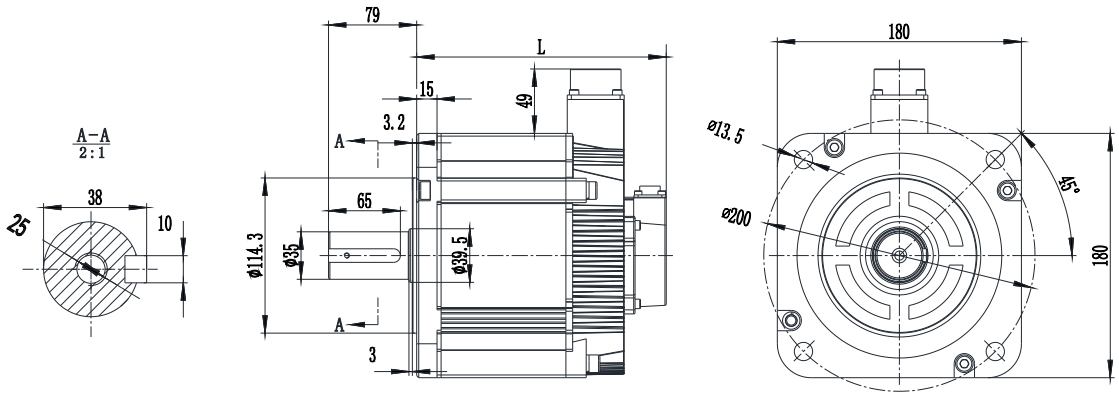
motor model	80F-0230GDL(Z)	
L(mm)	without brake	with brake
	98.5	132.5
weight (kg)	2.1	2.8
Shaft (mm)	19	

GDL series servo motor



GDL series 130 flange optical encoder servo motor installation outline and dimension drawing

motor model	130F-0515GDL(Z)		130F-0815GDL(Z)		130F-1115GDL(Z)	
L(mm)	without brake	with brake	without brake	with brake	without brake	with brake
	138	171	159	192	177	210
weight (kg)	5. 7	7. 8	7. 6	9. 7	9. 3	11. 4
Shaft (mm)	22					



GDL series 180 flange optical encoder servo motor installation outline and dimension drawing

motor model	180F-1915GDL(Z)		180F-2815GDL(Z)		180F-3515GDL(Z)		180F-4815GDL(Z)	
L(mm)	without brake	with brake	without brake	with brake	without brake	with brake	without brake	with brake
	184	231	211	258	239	286	263	310
weight (kg)	16. 7	21. 2	21. 1	25. 6	25. 6	30. 1	30. 8	35. 3
Shaft (mm)	35							

Note: Please refer to page 32 for the installation dimension of the magnetically coded TCL motor

F-W series economical servo driver

Series Features

- ◇ Small size, new concept of appearance design, save space in electric cabinet
- ◇ Matching 5 pairs of 17bit optical/magnetic encoders, good high-speed performance and high cost performance
- ◇ With a variety of protection and alarm functions
- ◇ Standard RS485 communication function, realize upload and download network control
- ◇ Position control, speed control, torque control Modbus communication can be converted to each other to meet general applications
- ◇ Full range of CE certification

Applications

This product is positioned in the field of automation equipment and instruments in various motion control fields of medium and small power.Adopt advanced control algorithm to realize high-precision control of servo motor,It is the first choice for users expecting space saving, superior high-speed performance and strong price-performance competition.

Suitable for the following occasions

High precision
High response
Installation space is limited
low power

Mature application industry

Industrial robot
Semiconductor equipment
Engraving equipment
Measuring equipment
Medical equipment
robot

Specification sheet for order

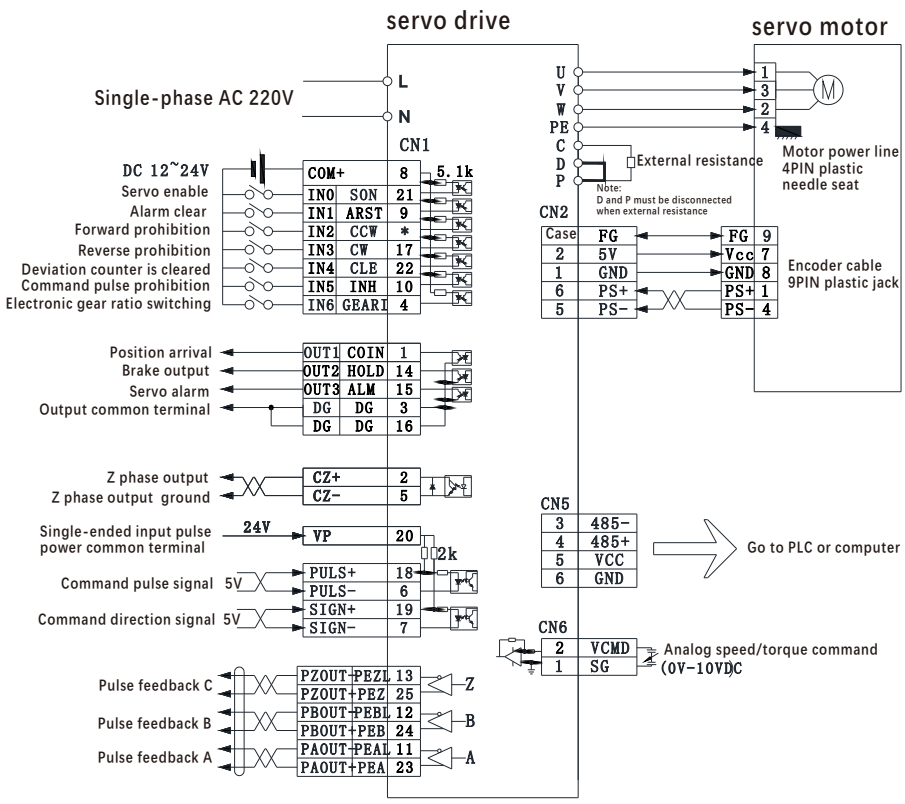
Servo model	motor model	Power (KW)	Rated speed (r/min)	Max speed (r/min)	Rated torque (Nm)	
SDF04NKW	40F-00330GCL	0.1	3000	5000	0.32	17-bit magnetoelectric encoder
	60F-00630TCL	0.2	3000	5000	0.64	
	60F-0130TCL	0.4	3000	5000	1.27	
SDF08NKW	80F-0230TCL	0.75	3000	5000	2.39	
	80F-0330TCL	1.0	3000	5000	3.18	
SDF04NKW	40F-00330GDL	0.1	3000	5000	0.32	17-bit photoelectric encoder
	60F-00630GDL	0.2	3000	5000	0.64	
	60F-0130GDL	0.4	3000	5000	1.27	
SDF08NKW	80F-0230GDL	0.75	3000	5000	2.39	
	80F-0330GDL	1.0	3000	5000	3.18	

F-W series economical servo driver

Performance Specifications

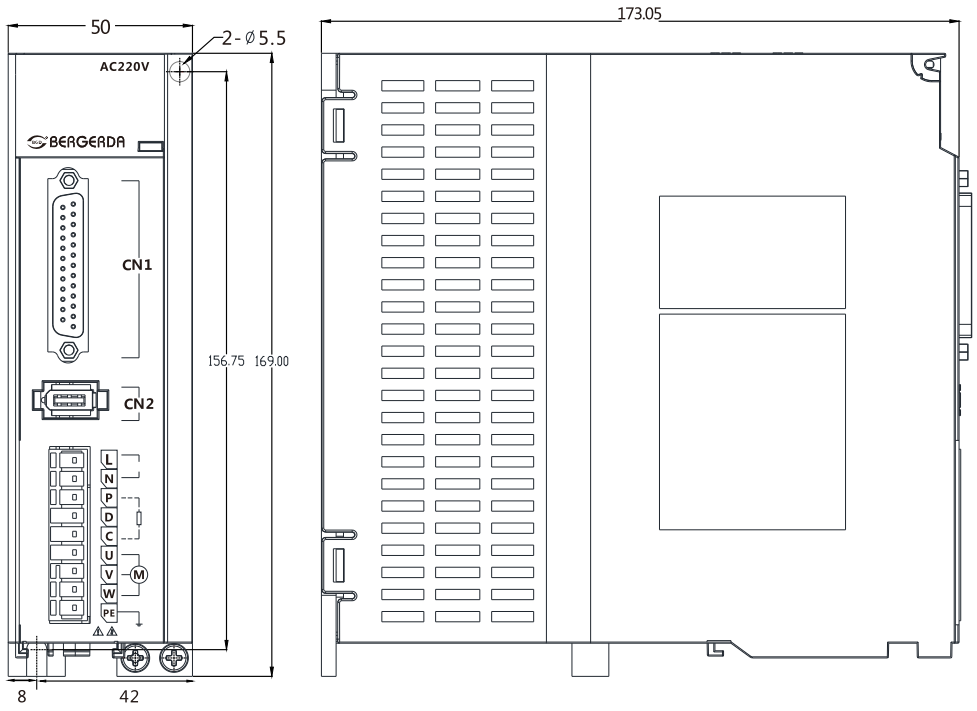
External connection	Input power		Single or Three phase AC170~253V
			50/60Hz
	control type		SVPWM control
	encoder		17bit magnetoelectric/photoelectric encoder
Internal function	Display and operation		Six bits seven-segment display LED: Four function keys
	Control mode		Position control/speed test run/jog 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) Forward drive prohibited 4) Reverse drive prohibited 5) Position deviation counter reset 6) Input pulse prohibited 7) No definition
	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

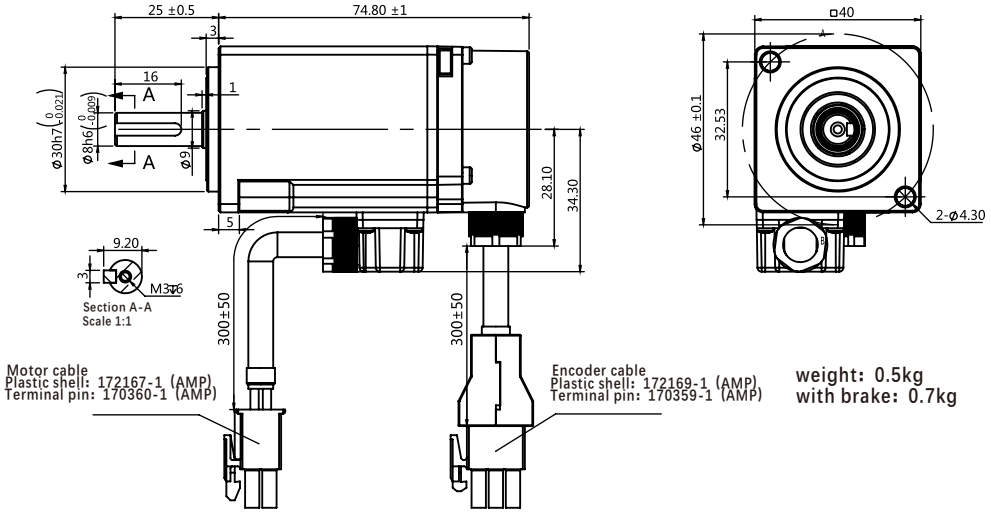


F-W series economical servo driver

install dimensions



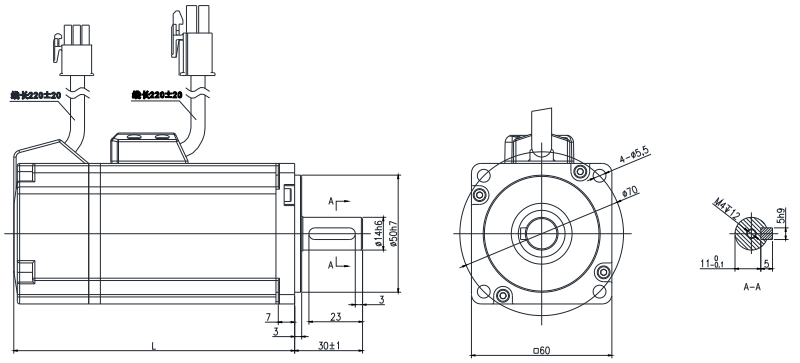
SDF04NKW/SDF08NKW
Weight: 0.8kg



weight: 0.5kg
with brake: 0.7kg

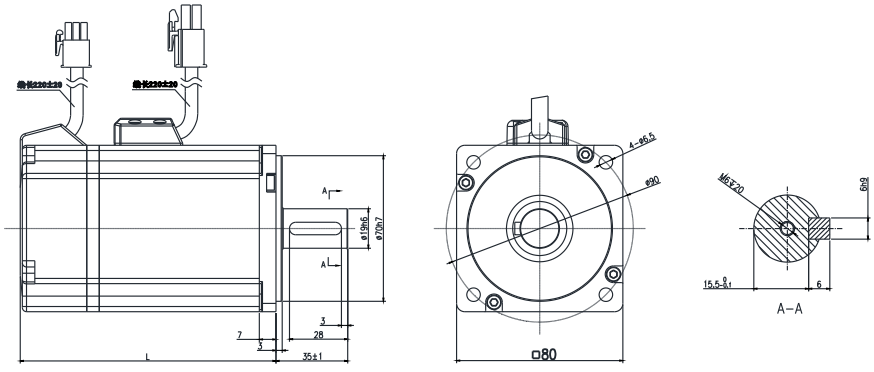
40 flange 100W magnetic encoder servo motor
installation outline and installation dimension drawing

TCL series servo motor



TCL series 60 flange magnetic braided servo motor installation outline and installation dimension

motor model	60F-00630TCL Z		60F-0130TCL Z	
L mm	without brake	with brake	without brake	with brake
	82.5	110	99.5	127
Weight (kg)	1.12	1.52	1.2	1.6



TCL series 80 flange magnetic encoder servo motor installation outline and installation dimension drawing

motor model	80F-0230TCL Z		80F-0330TCL Z	
L mm	without brake	with brake	without brake	with brake
	109.5	141.6	122.5	154.6
Weight (kg)	2.2	2.8	3.7	4.3

Note: Please refer to page 27 for the installation dimension of the Photoelectric coded GDL motor

EtherCAT bus servo drive

Series Features

◇ Standard Ether CAT high-speed bus supports COE (CIA402 protocol)

◇ Operating voltage range single/three-phase AC180-240V

◇ Support control modes such as CSP PP PV HM

◇ Compatible with mainstream Ether CAT masters on the market, the bus transfer rate can reach 100MB/S

Applications

The bus type servo driver adds the Ether CAT bus communication function on the basis of the digital s ervo driver. Compared with ordinary pulse servo drives, bus-type servo drives can truly achieve isochronous synchronization, because the speed of bus communication is faster, and the speed or position setting value can be sent directly. The bus-type driver can also save wiring costs, reduce wiring time, and reduce the probability of errors. One bus communication port of the host computer can be connected to multiple servos, and a simple RJ45 port can be used to plug in between the servos, shortening the construction period.

Order Specification Sheet

Servo model	motor model	Power (KW)	Rated speed (r/min)	Rated torque (Nm)	
SDC04NK7	40SM-M00330NEL	0. 1	3000	0. 32	
	40SM-M00630NEL	0. 2	3000	0. 64	
	60SM-M0130NEL	0. 4	3000	1. 27	
SDC08NK8	60SM-M0230NEL	0. 6	3000	1. 91	
	80SM-M0230NEL	0. 75	3000	2. 4	
	80SM-M0425NEL	1. 0	2500	4. 0	
SDC13NK9	110SM-M0430NEL	1. 2	3000	4. 0	17-bit multi-turn absolute ncoder
	110SM-M0530NEL	1. 5	3000	5. 0	
SDC20NK9	110SM-M0630NEL	1. 8	3000	6. 0	
SDC13NK9	130SM-M0425NEL	1. 0	2500	4. 0	
	130SM-M0525NEL	1. 3	2500	5. 0	
SDC20NK9	130SM-M0625NEL	1. 5	2500	6. 0	
	130SM-M0825NEL	2. 0	2500	7. 7	
	130SM-M1025NEL	2.6	2500	10. 0	

Suitable for the following occasions

High precision
High response
EtherCAT bus
Strong magnetic interferencer

Mature application industry

Industrial robot
Semiconductor equipment
Engraving equipment
Measuring equipment
Medical equipment
robot

EtherCAT bus servo drive

Order Specification Sheet

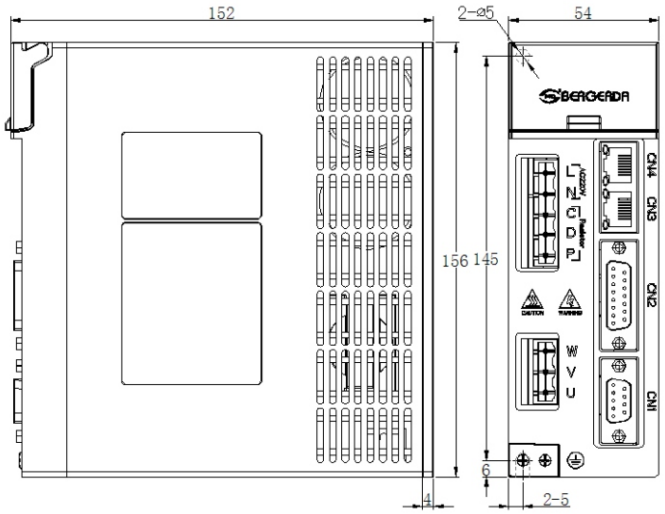
Servo model	motor model	Power (KW)	Rated speed (r/min)	Rated torque (Nm)	
SDC04NK7	60F-00630TCL	0.2	3000	0.64	17-bit magnet oelectric encoder
	60F-0130TCL	0.4	3000	1.27	
SDC08NK8	80F-0230TCL	0.75	3000	2.39	
	80F-0330TCL	1. 0	3000	3. 18	
SDC04NK7	40F-00330GDL	0.1	3000	0.32	17-bit photoel ectric encoder
	60F-00630GDL	0.2	3000	0.64	
	60F-0130GDL	0.4	3000	1.27	
SDC08NK8	80F-0230GDL	0.75	3000	2.39	
	80F-0330GDL	1. 0	3000	3. 18	
SDC20NK9 (SDC30HK10)	130F-0515GDL	1.0	1500	5.39	
	130F-0815GDL	1.5	1500	8.34	
	130F-1115GDL	2.0	1500	11.5	

Order Specification Sheet

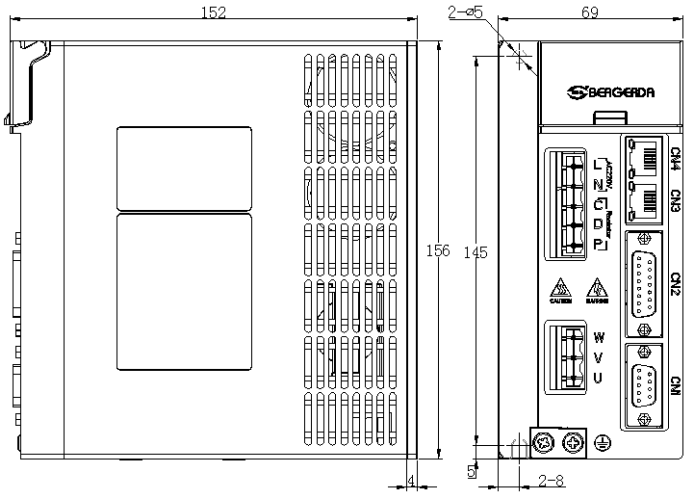
External connection	input power	005-015:single/three phase180V/-240V 030-050: three phase180V/-240V
		50/60Hz
	control way	PWM sine wave vector control
	encoder	17BIT Optical/Magnetic
Internal function	display and operation	Six-digit seven-segment display LED: four function operation keys
	control mode	Position/speed/torque/homing
	Brake function	Built-in or external optional
	protection function	Overspeed/overvoltage/overcurrent/overload/brake abnormality/ encoder abnormality/position out of tolerance, etc.
Protection class		Ip20
Fieldbus		The SDC series is compatible with the Ether cat industrial Ethernet fieldbus, and supports the expansion of the internal IO of the servo drive into the IO of the system PLC
control input		Up to 7 input terminals (photoelectric isolation) functions can be configured as: servo enable, alarm clear, forward torque limit, reverse torque limit, zero speed clamp, internal speed selection 1, internal speed selection 2, mode switching 1, mode switch 2, positive jog, negative jog, torque command direction setting, speed command direction setting, electronic gear selection 1, electronic gear selection 2, position deviation clear, pulse input prohibition, origin return trigger, origin Return to reference, external hand crank
control output		Up to 5 output terminals (optical isolation), the functions can be configured as: servo ready, alarm, zero speed, orientate complete, speed reached, torque reached, electromagnetic brake, servo running, near orientate, torque limit, speed limit, the origin return is completed
position	Electronic gear ratio	numerator:1~32767 denominator:1~32767
	command source	Internal position command,bus command
speed	Command ac /deceleration	parameter settings
	command source	Internal speed command , bus command
Torque	speed limit	parameter settings
	command source	Internal torque command , bus command
Special functions		return to origin, Gain switching, Mechanical Resonant Notch Filters
Monitoring function		Speed, current position, position deviation, motor torque, motor current, etc.

EtherCAT bus servo drive

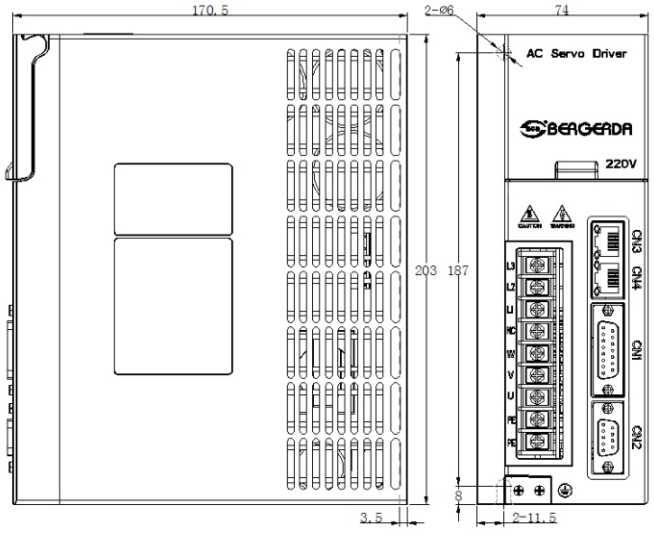
install dimensions



SDC04NK7
Weight 1.0kg



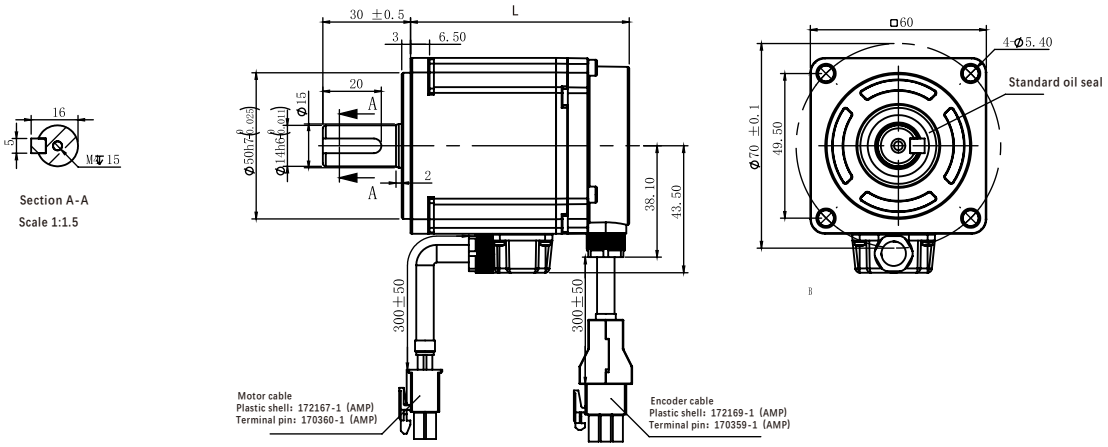
SDC08NK8
Weight 1.15kg



SDC20NK9
Weight 1.8kg

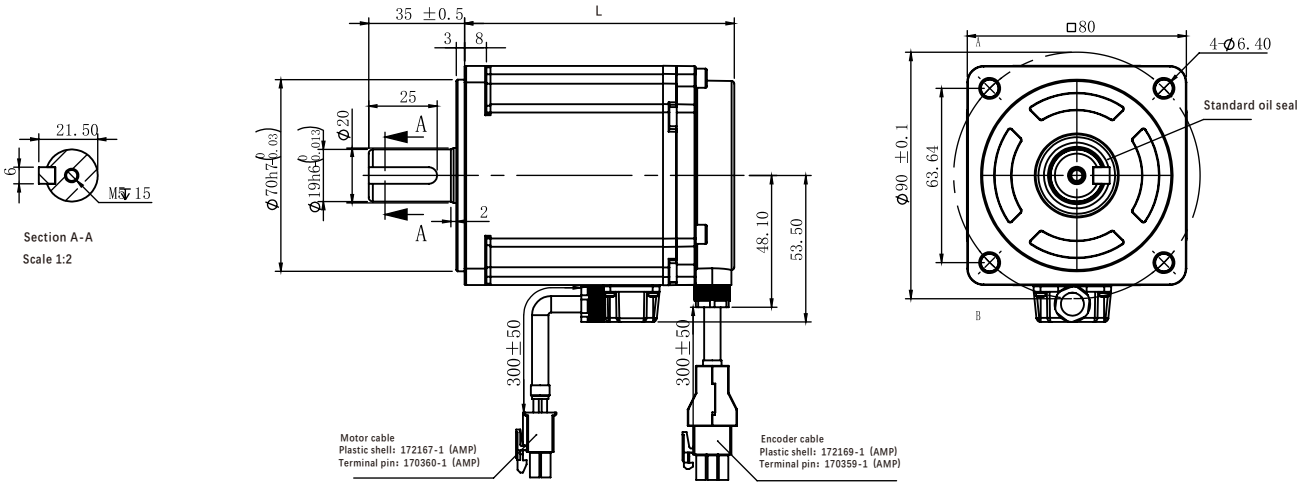
Note: K10, K12 driver dimension drawing refer to page 26

EtherCAT bus servo drive



60 flange optical encoder servo motor installation outline and dimension drawing

Motor model	60F-00630GDL（Z）		60F-0130GDL（Z）	
L（mm）	without brake	with brake	without brake	with brake
	75	104.5	92	121.5

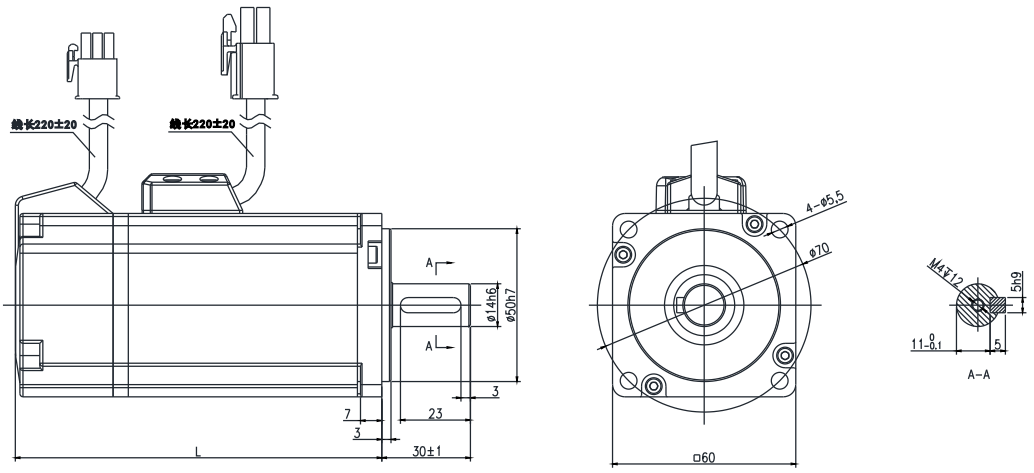


80 flange optical encoder servo motor installation outline and dimension drawing

motor model	80F-0230GDL（Z）	
L（mm）	without brake	with brake
	98.5	132.5

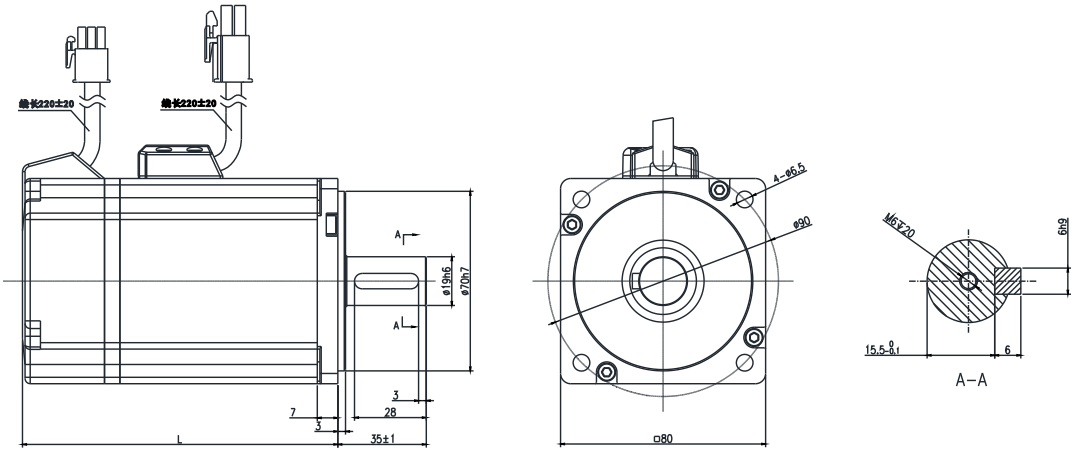
Note: Refer to page 28 for the dimension drawing of the 130/180 flange light knitting motor

EtherCAT bus servo drive



60 法兰磁编 总线 伺服电机安装外形及安装尺寸图

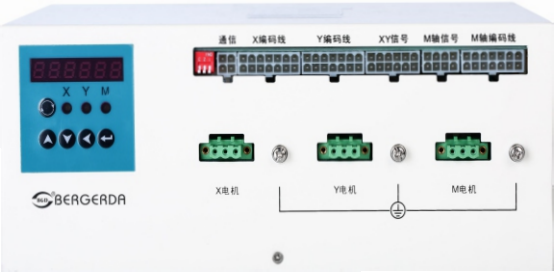
	60F-00630TCL Z		60F-0130TBL Z	
L mm				
	82.5	110	99.5	127



80法兰磁编总线伺服电机安装外形及安装尺寸图

	80F-0230TCL Z		80F-0330TCL Z	
L mm				
	109.5	141.6	122.5	154.6

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

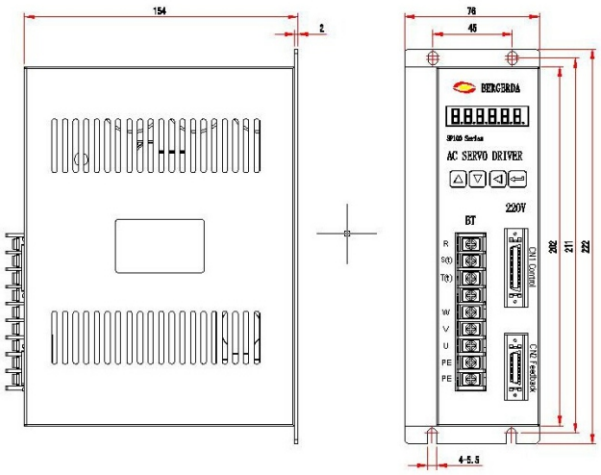
◇Maturely used in all kinds of lathes, milling machines, boring machines, drilling machines, grinding machines, punching machines, machining centers

◇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	2.6	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



COMMITTED TO MACHINE INTELLIGENCE,FOCUS MOTOR CONTROL

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