

Hetai 合泰



CHANGZHOU HETAI ELECTRIC MOTORS&APPLIANCE CO., LTD.



World-leading Motor Supplier

Keep Creating Value for Customers

Improving the Life Quality for Staff

Keep Elevating Shareholder's Equity

COMPANY PROFILE

» ChangZhou Hetai (Stock code:834300) is a leading manufacturer with advanced technology and innovative management mode. Hetai specializes in producing servo motors, DC Motors, hybrid stepping motors, drivers and so on.

Hetai dedicates to professional electrical integration and automation strategies for customers. The products are almost applied in robots, packing machinery, textile machinery, medical instruments, printing machinery, intelligent logistics equipment... Hetai also sends its products to USA, Europe, Southeast Asia and all-around China.

Hetai is located in ChangZhou, JiangSu province and its workshop area is over 35,000. Since Hetai reformed in 1998, the specialization, scale of production has ensured to manufacture 3,000,000 motors every year.

» In the year 2003, Hetai was qualified by ISO9001/TS 16949 Certificate, and passed supervision successfully. The company also attained import and export right of external trade of self-management.

» In 2005, Hetai has qualified by EU Type Examination Certificate and get four Invention Patent, seven Utility Patent, and one Appearance Design Patent.

» Hetai was quoted on the stock market in 2015.

Hetai was authenticated by safety standardization management system in next year.

The company was qualified as high-tech enterprise in 2018.

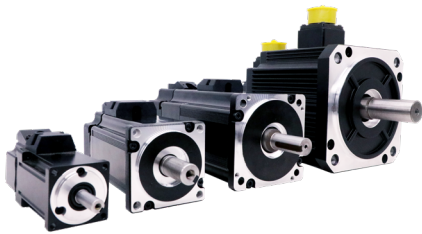


ISO9001

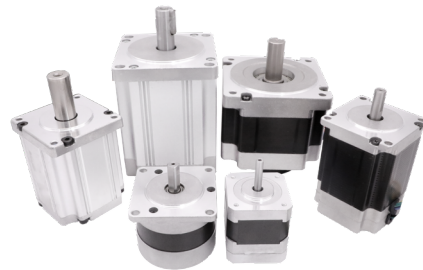


IATF16949

**General
Range**



Servo Motor



DC Brushless Motor



Planetary Gearbox



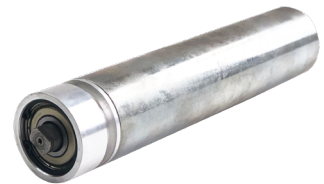
Stepping Motor



Gearbox Motor



Driver



Electric roller Motor

» Servo Motor Series

Model Naming Rules

ES 60 05 A -100 D 30 A I -001
 Series Seat NO. Polar logarithm Voltage Power Inertia Speed Encoder Structure Derivation of the same

For example: ES6005A-100D30A1

Series	Code	Meaning
	ES	High efficiency servo motor

Series	Code	Meaning
	40	40*40mm
	60	60*60mm
	80	80*80mm
	110	110*110mm
	130	130*130mm

Polar logarithm	Code	Meaning
	04	4对极
	05	5对极
	08	8对极

Voltage	Code	Meaning
	A	310VDC(220VAC)
	B	380VAC
	C	155VDC(110VAC)
	D	110VDC
	E	80VDC
	F	60VDC
	G	48VDC
	H	36VDC
K	24VDC	

Power	Code	Meaning
	10	100W
	20	200W
	40	400W
	75	750W
	95	950W
	100	1KW
	120	1.2KW
	135	1.35KW
	150	1.5KW
	180	1.8KW
	200	2KW
	240	2.4KW
	300	3KW
	330	3.3KW
	400	4KW
	420	4.2KW
	500	5KW
	510	5.1KW

Inertia	Code	Meaning
	S	Small inertia
	D	Medium inertia
	E	Large inertia
H	Increase of inertia	

Speed	Code	Meaning
	6	600rpm
	10	1000rpm
	15	1500rpm
	20	2000rpm
	30	3000rpm
	Other	code*100

Encoder	Code	Meaning
	A	Tamagawa single ring absolute value 17 bit (When the incremental 17 bit is used)
	B	Incremental 2500ppr (Optical encoder)
	L	Tamagawa single ring absolute value 17bit
	M	Rotary transformer
	Y	Yuheng multi ring absolute value 17bit
	No letter or K	No encoders
	P	Tamagawa single ring absolute value 23bit
	N	Nikon multi ring absolute value 24bit

Structure	Code	Meaning
	1	Key shaft, Oil seal, No brake
	2	Key shaft, Oil seal, Brake
	3	Key shaft, NO oil seal, No brake
	4	Key shaft, NO oil seal, Brake
	5	Optic axis, Oil seal, No brake
	6	Optic axis, Oil seal, Brake
	7	Optic axis, NO oil seal, No brake
8	Optic axis, NO oil seal, Brake	

Connection Details

1.1 40;60;80 Series

Motor Wire: 4 PIN

PIN	FUNCTION	COLOUR
1	U	Red
2	V	White
3	W	Black
4	GND	Yellow/Green



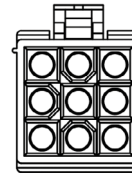
4 PIN



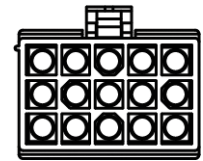
6 PIN

Motor Wire with Brake: 6 PIN

PIN	FUNCTION	COLOUR
1	U	Red
2	V	White
3	W	Black
4	GND	Yellow/Green
5	Brake	Yellow
6	Brake	Blue



9 PIN



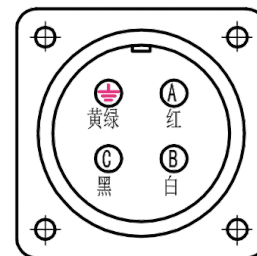
15 PIN

1.2 130 Series

Motor Wire: 4 PIN

PIN	FUNCTION	COLOUR
A	U	Red
B	V	White
C	W	Black
	Motor PE	Yellow/Green

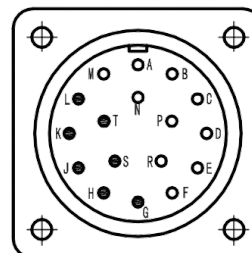
4 PIN (Resolver)



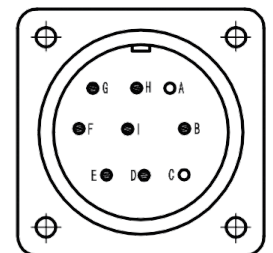
Motor Wire + Brake : 9 PIN

PIN	FUNCTION	COLOUR
F	U	Red
I	V	White
B	W	Black
H	Brake	Black
G	Brake	Black
E	Motor PE	Yellow/Green
D	Motor PE	Yellow/Green

17 PIN (Encoder)



9 PIN (Resolver)



2. Encoder Connection

Encoder Type A: 6 PIN

PIN	FUNCTION	COLOUR
1	NC	
2	SD	Blue
3	SD-	Purple
4	Vcc	White
5	GND	Black
6	Shield	/

Encoder Type B: 15 PIN

PIN	FUNCTION	COLOUR
1	Shield	NC
2	DC+5V	Red
3	GND	Black
4	B	Green
5	Z-	Yellow/White
6	U	Brown
7	Z	Yellow
8	U-	Brown/White
9	A	Grey
10	W	Orange
11	V	Blue
12	W-	Orange/White
13	A-	Grey/White
14	B-	Green/White
15	V-	Blue/White

Encoder Type L: 9 PIN

PIN	FUNCTION	COLOUR
1	OV	Black
2		/
3	SD+	Blue
4	+5V	Red
5	BAT-	Brown/Black
6	BAT+	Brown
7	SD-	Blue/Black
8		/
9	GND	Grey (Shield)

Encoder Type L: 17 PIN

PIN	FUNCTION	COLOUR
H	+5V	Red
G	OV	Black
T	BAT+	Brown
S	BAT-	Brown/Black
K	SD+	Blue
L	SD-	Blue/Black
J	GND	Grey

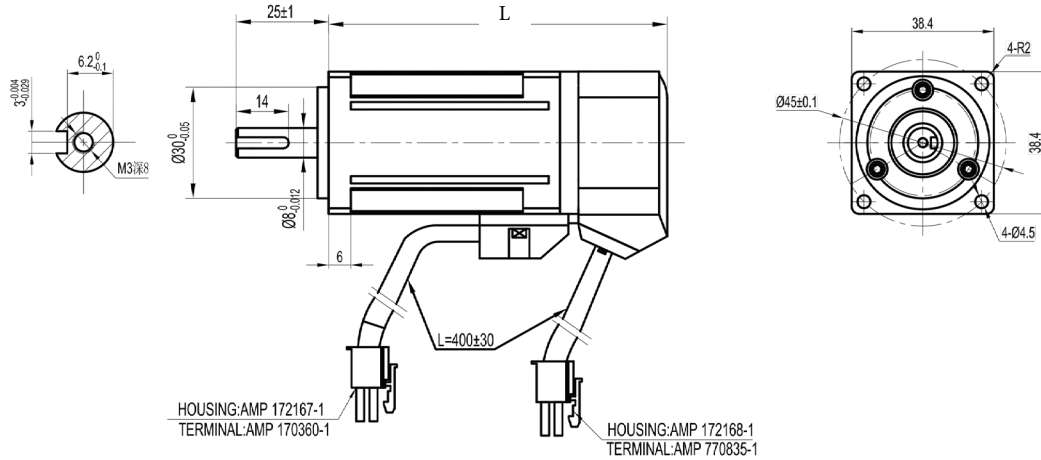
Encoder Type N: 9 PIN

PIN	FUNCTION	COLOUR
1	SD+	Blue
2	SD-	Purple
3	BAT+	Orange
4		/
5		/
6	+5V	White
7	OV	Black
8	BAT-	Brown
9	Shield	Shield

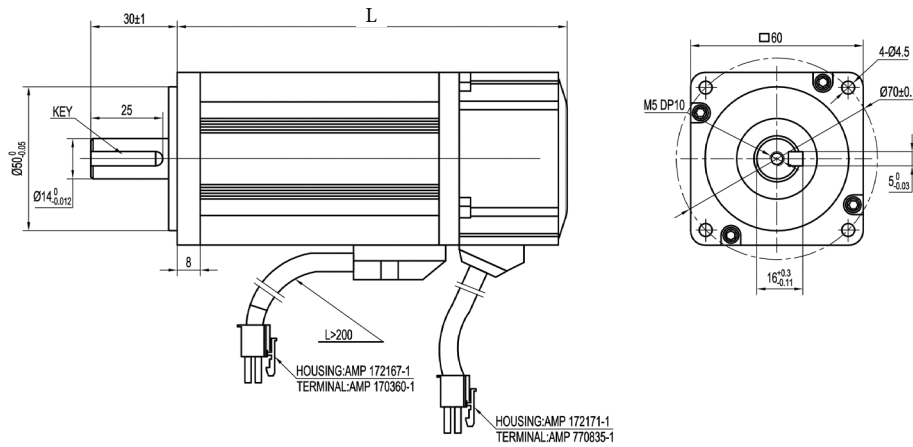
Mechanical Dimension

1. Without Brake Series

40 Series



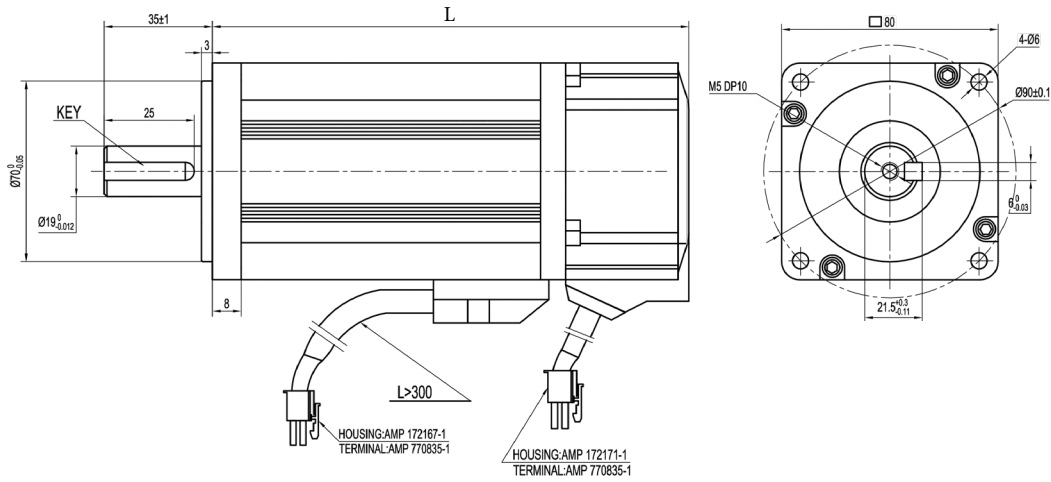
60 Series



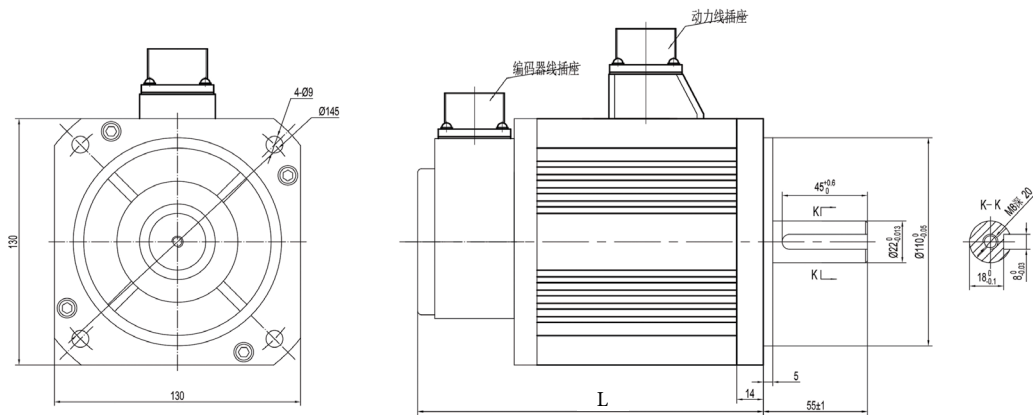
Type		40		60	
Encoder	Power	50W	100W	200W	400W
	Motor Length L (mm)				
	A		91.5	101	121
	B				136
	L		97	116	136
	N	65	85	81	

Type		40		60	
Encoder	Power	50W	100W	200W	400W
	Motor Weight (Kg)				
	A		0.48	0.98	1.28
	B				1.35
	L		0.52	1.05	1.42
	N	0.34	0.45	0.86	

80 Series



130 Series

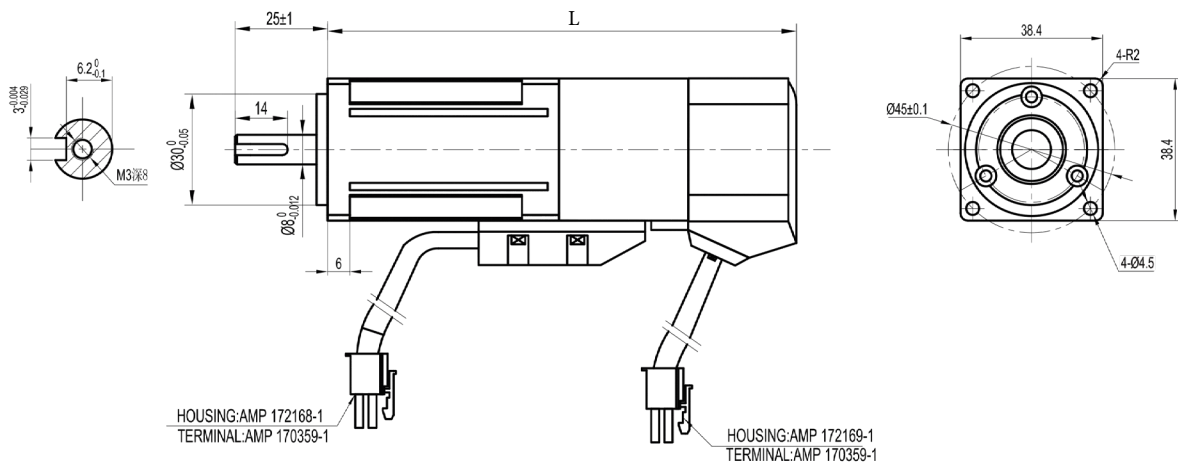


Type		80	130				
Encoder	Power	750W	1kW	1.5kW	2kW	4kW	
	机身高度 L (mm)	A: 125	B: 141	L: 141	143.5	157	171

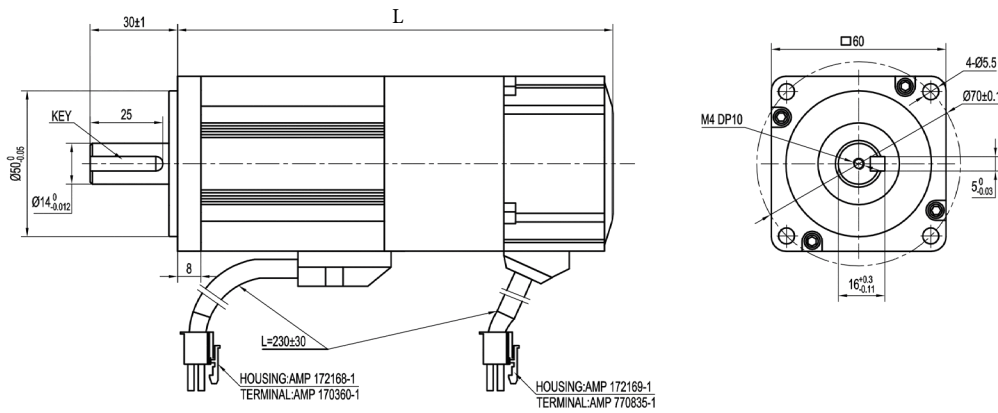
Type		80	130				
Encoder	Power	750W	1kW	1.5kW	2kW	4kW	
	Motor Weight (Kg)	A: 2.42	B: 2.43	L: 2.43	5	6.09	7.2

2. With Brake Series

40 Series



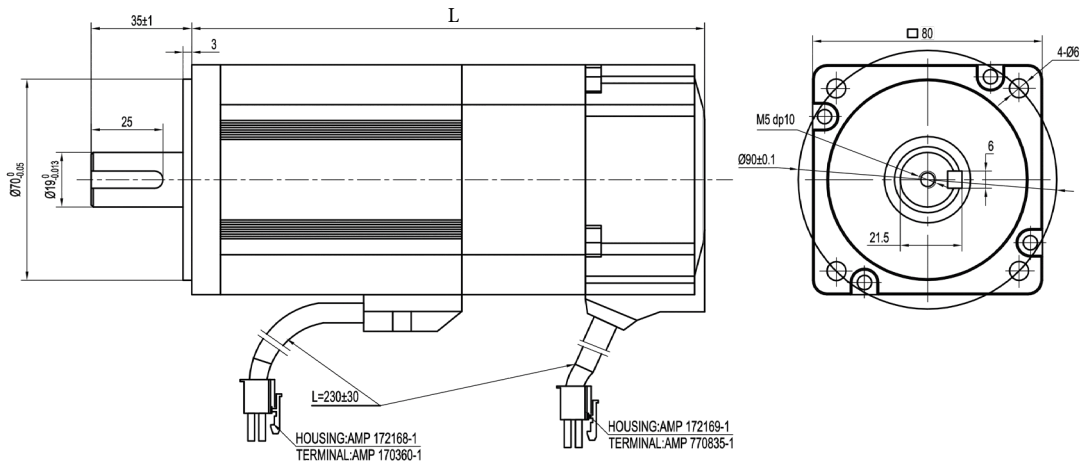
60 Series



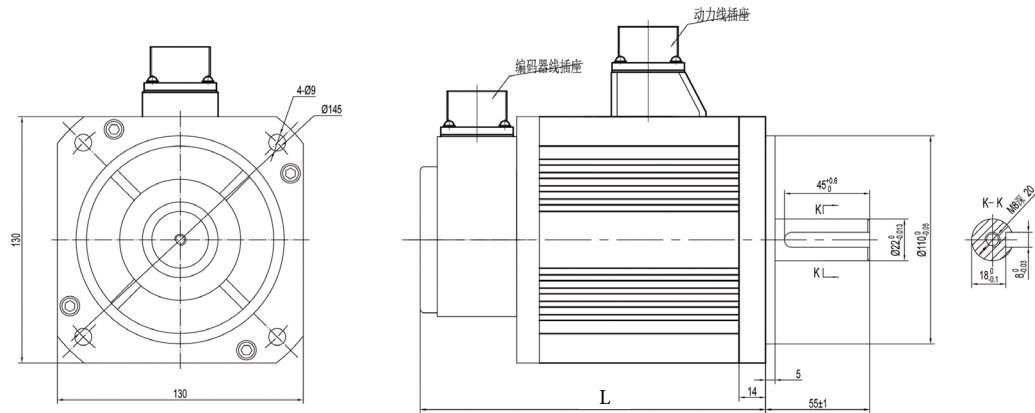
Type		40		60	
Encoder	Power	50W	100W	200W	400W
	Motor Length L (mm)				
	A		127	135	155
	B				169
	L		127	150	170
	N	95	115	113	

Type		40		60	
Encoder	Power	50W	100W	200W	400W
	Motor Weight (Kg)				
	A		0.72	1.46	1.85
	B				1.80
	L		0.72	1.47	1.86
	N	0.58	0.76	1.23	

80 Series



130 Series



Type		80	130			
Encoder	Power	750W	1kW	1.5kW	2kW	4kW
	Motor Length L (mm)	A: 125.5 B: 172 L: 179 N:		182.5 196	210	262

Type		80	130			
Encoder	Power	750W	1kW	1.5kW	2kW	4kW
	Motor Weight (Kg)	A: 3.47 B: 2.45 L: 3.49 N:		7.26 8.34	9.47	13.6

40 Series

» SERVO MOTOR



General Specifications

Insulation Class	F
Protection Level	IP65
Environment Requirement	Work: 0°C~+55°C Preserve: 20°C~80°C Work or Preserve: 90%RH (No Condensation) Above Sea Level 1000m Vibration: 5.88/S 2.10-60Hz

Technical Specifications

Model	ES4004A-10D30A1 ES4004A-10D30N1 ES4004A-10D30A2	ES4004A-10D30N2-001 ES4004A-10D30L1 ES4004A-10D30L2	ES4005A-05S30N1-001 ES4005A-05S30N2-001	Low Voltage Servo Motor ES40004K-10D30L3
Rated Power (Watts)	100		50	100
Rated Voltage (VDC)	310		310	24
Rated Current (Amps)	1.2		0.56	5.6
Rated Speed (RPM)	3000		3000	3000
Rated Torque (N.m)	0.32		0.16	0.32
Peak Torque (N.m)	0.96		0.48	0.9
Back EMF Constant (V/kRPM)	16		16	6
Torque Coefficient (N.M/Amps)	0.265		0.265	0.057
Rotor Inertia (kg.cm ²)	0.045		0.03	0.045
Line-line Resistance (Ω)	11		23	0.6
Line-line Inductance (mH)	8		16	0.86
Mechanical time-constant (Ms)	0.86		0.86	1.08

60 Series

» SERVO MOTOR



General Specifications

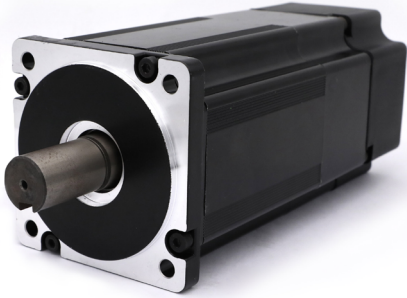
Insulation Class	F
Protection Level	IP65
Environment Requirement	Work: 0°C~+55°C Preserve: 20°C~80°C Work or Preserve: 90%RH (No Condensation) Above Sea Level 1000m Vibration: 5.88/S 2.10-60Hz

Technical Specifications

Model	ES6004A-40S30B1	ES6005A-40D30A2	ES6005A-40D30L2	ES6005A-20S30N1-T	ES6005A-20D30L2	Low Voltage Servo Motor	
	ES6004A-40S30B2	ES6005A-40D30L1	ES6005A-40D30A1	ES6005A-20S30N2-T	ES6005A-20D30A1	ES6004H-20S30B1	ES6004G-40S30B1
Rated Power (Watts)	400			200		200	400
Rated Voltage (VDC)	310					36	48
Rated Current (Amps)	2.65			1.6		9	12
Rated Speed (RPM)				3000			
Rated Torque (N.m)	1.27			0.64		0.64	1.27
Peak Torque (N.m)	3.81			1.91		1.92	3.81
Back EMF Constant (V/kRPM)	32					—	—
Torque Coefficient (N.M/Amps)	0.48			0.45		—	—
Rotor Inertia (Kg.cm ²)	0.67			0.42		0.32	0.45
Line-line Resistance (Ω)	3.5	3.7		8.8		0.25	0.29
Line-line Inductance (mH)	8.0	12.0		24.0		0.5	0.65
Mechanical time-constant (Ms)				1.3			

80 Series

» SERVO MOTOR



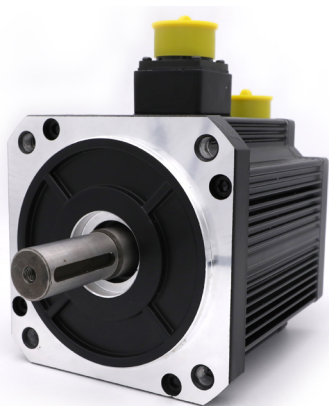
General Specifications

Insulation Class	F
Protection Level	IP65
Environment Requirement	Work: 0°C~+55°C Preserve: 20°C~80°C Work or Preserve: 90%RH (No Condensation) Above Sea Level 1000m Vibration: 5.88/S 2.10-60Hz

Technical Specifications

Model	ES8004A-75S30B1	ES8005A-75D30A1 ES8005A-75D30A2	ES8005A-75D30B2 ES8005A-75D30L1	ES8005A-75D30L2	Low Voltage Servo Motor ES8004G-75S30B1
Rated Power (Watts)		750			750
Rated Voltage (VDC)		310			48
Rated Current (Amps)		4.0			20
Rated Speed (RPM)		3000			3000
Rated Torque (N.m)		2.4			2.38
Peak Torque (N.m)		7.2			7.2
Back EMF Constant (V/kRPM)		39			8
Torque Coefficient (N.M/Amps)		0.6			0.132
Rotor Inertia (Kg.cm ²)		1.51			1.51
Line-line Resistance (Ω)	1.4	1.5			0.15
Line-line Inductance (mH)	9.0	11.0			0.5

130 Series



» SERVO MOTOR

General Specifications

Insulation Class	F
Protection Level	IP65
Environment Requirement	Work: 0°C~+55°C Preserve: 20°C~80°C Work or Preserve: 90%RH (No Condensation) Above Sea Level 1000m Vibration: 5.88/S 2.10-60Hz

Technical Specifications

Model	ES13005A-100D20L1	ES13005A-100D20L2	ES13005A-150D20L1	ES13005A-150D20L2	ES13005A-200D20L1	ES13005A-200D20L2	ES13005A-400D10L1	ES13005A-400D10L2
Rated Power (Watts)	1000		1500		2000		2000	
Rated Voltage (VDC)	310							
Rated Current (Amps)	5.5		8.8		12.0		9.5	
Rated Speed (RPM)	2000						1000	
Rated Torque (N.m)	4.70		8.80		9.55		20.00	
Peak Torque (N.m)	14.70		21.60		28.65		40.00	
Back EMF Constant (V/kRPM)	55		62		80	55	153	
Torque Coefficient (N.M/Amps)	0.6				0.79	0.6	1.5	
Rotor Inertia (Kg.cm ²)	4.5		6.7		8.9		17.8	
Line-line Resistance (Ω)	1.20		0.80		0.50	0.46	1.10	
Line-line Inductance (mH)	12.0		8.4		5.4	6.5	13.7	