

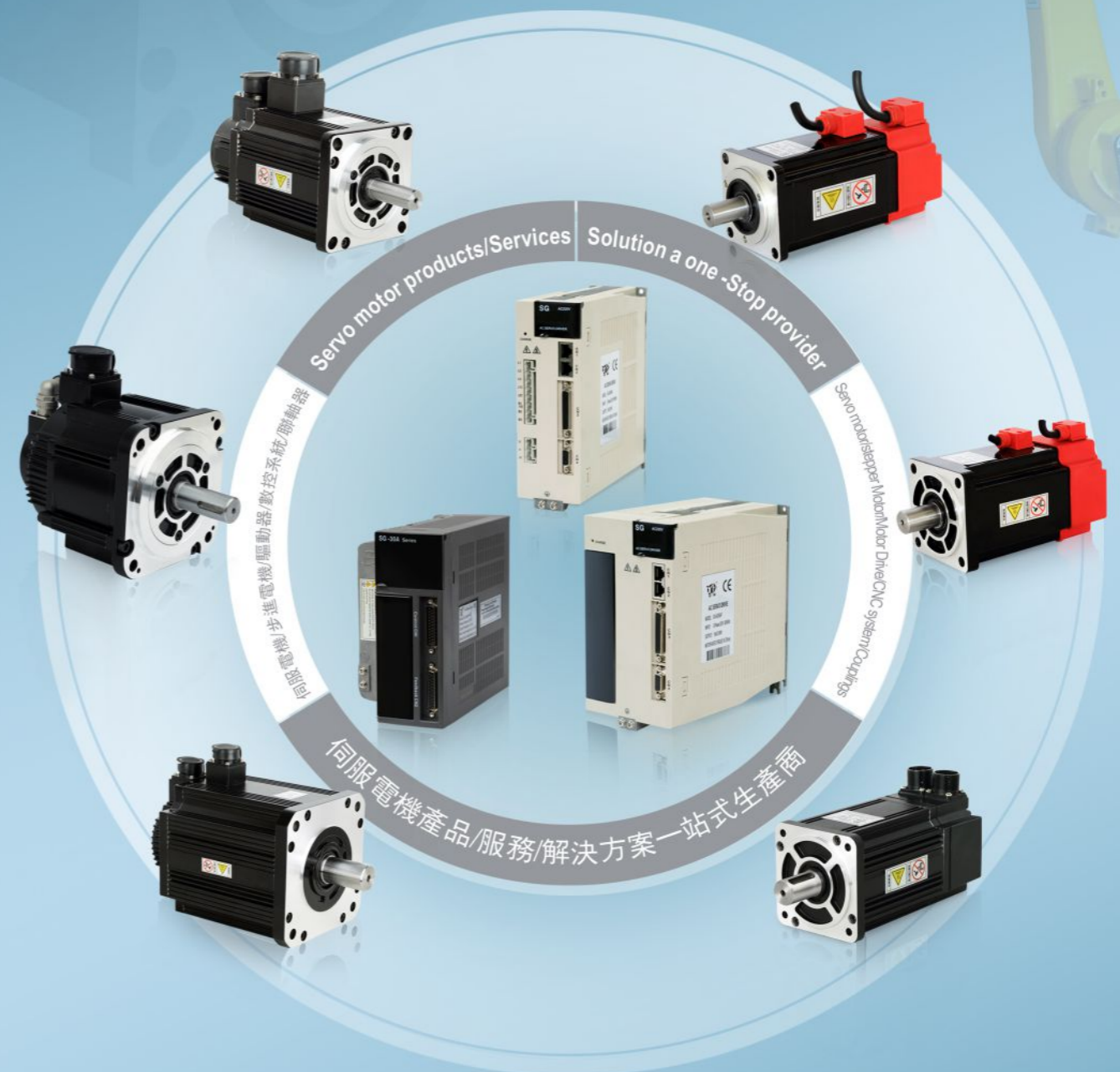


WENLING YUHAI ELECTROMECHANICAL CO.,LTD.
 Ministry of Foreign Trade
 Add: Tangxia industrial park Xinxhe Town
 Wenling City Zhejiang
 Sales Tex:0086-576-86580288 86518522
 86518511
 Fax:0086-576-86562022
<http://www.zjyuhai.cn>
 E-mail:zjyuhai@zjyuhai.cn

Energy-saving Stable Strong power
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- Stepper Motor ■ Servo Motor
- Motor Drive ■ Couplings



WENLING YUHAI ELECTROMECHANICAL CO.,LTD.
 China Professional Servo Motor Manufacture

High Performance
High Precision

Stable
Strong Power

Power Saving
Energy Saving

Company INTRODUCTION

Wenling Yuhai Electromechanical Co.,Ltd founded in 1995.,facing global market,is a intelligent technology company integrating of R&D,production,and sales.

The core products includes:1/ AC permanent magnet servo motor,flange no. 60-180,power from 200 to 5.5kw..2/ AC asynchronous motor asynchronous spindle servo motor:Power from 2kw to 15kw. 3/ AC servo driver: Power from 200w to 5.5kw,for incremental and absolute encoder.With field communication function:RS-485 communication protocol,Canopen communication protocol,M2/M3 bus communication protocol.4/ Hybrid stepper motor:Flange size from 86 to 150,torque from 2N.m to 60N.m.

The company pays attention to technological innovation and industrial innovation, focusing on making YUHAI MOTOR to be inalienable part of automation area.Its products widely used in automation machines,such as CNC lathe,milling machine,grinding machine,packing machine,textile machine,embroidery machine,engraving machine,printing machine,Sewing machine,medical apparatus,ATM machine,normal machine automatic reform and so on.Successfully export to Southeast Asia,Middle east,South America,North America,Europe market, and receive good evaluation from customers.

YUHAI insists on scientific and technological innovation casting quality,improving brand according quality as a guide.The company has a full set of production and testing equipment,higher quality research and development staff,the products are produced according to ISO9001 and CE standard.Perfect after-sales services and high efficiency service group to meet customers' high quality requirements.

HISTORY

2015-2017

YUHAI brand has the honour to win ZHEJIANG WENLING FAMOUS MARK. Products pass NEW-TECH ENTERPRISE reexamine and ENERGY-SAVING certification.YUHAI products go to the world. To be the main force of stimulating economic growth in global servo motor industry.

2013-2014

Yuhai quality become one of the leading company in China domestic market, and try to develop more new product every year

2009-2012

New factory with 50000 square meter finished and in use

2006-2008

Yuhai established the driver develop department, specially in servo driver research and CNC controller

1999-2005

In accordance to the developing of market, Yuhai successfully passed the CE certificate, CCC certificate and ISO9001 management certificate, and applied for different kinds of patent.

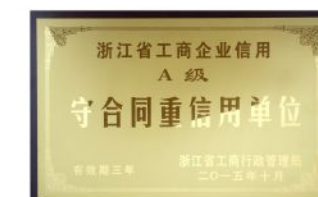
1996-1998

Along with the development of automation industrial, in the market, 80% customer choose to use imported servo motor, Yuhai catch this opportunity and start to produce servo motor to meet the domestic customer demand.

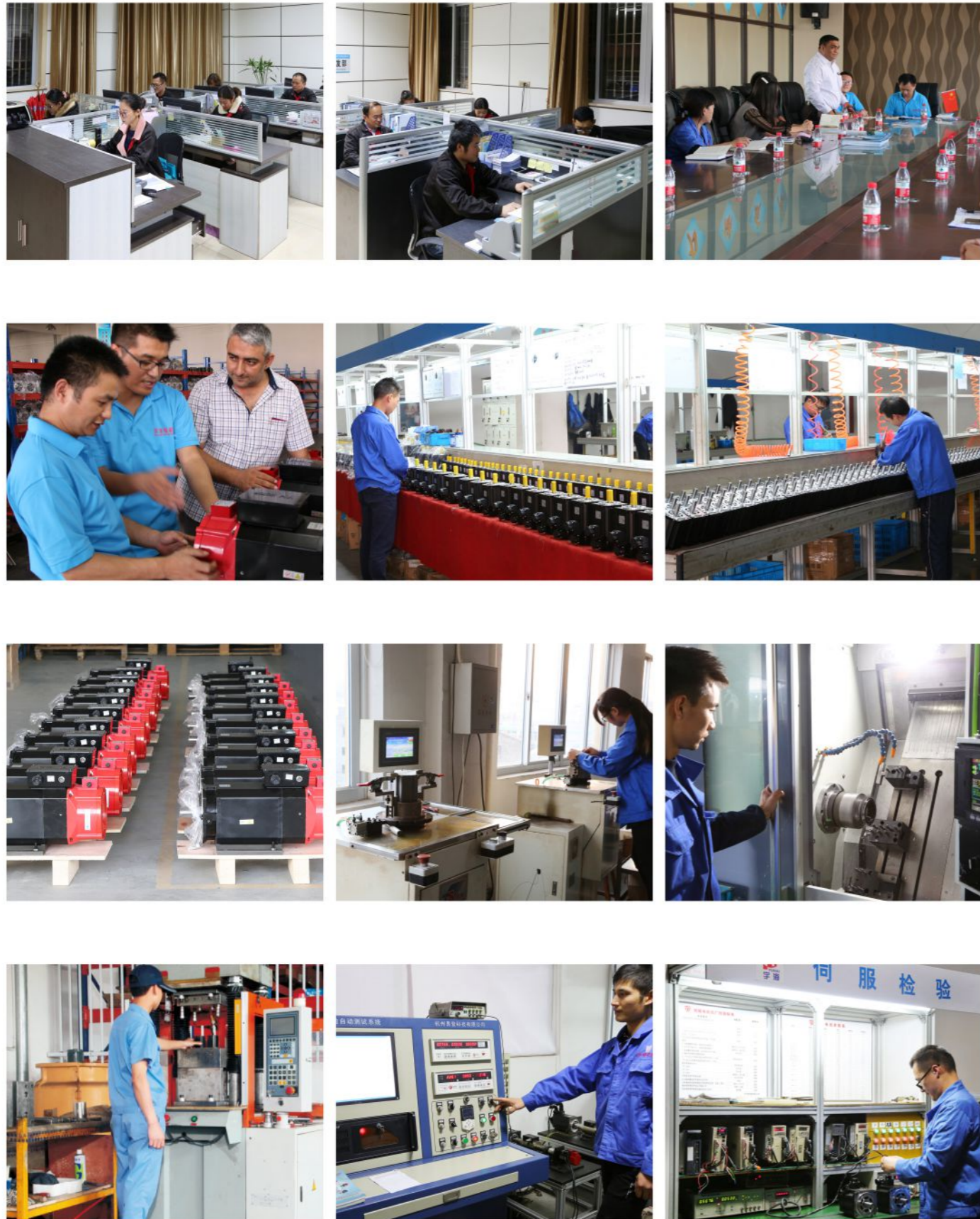
1995

Along with the China's reform and opening up policy, Yuhai company founded.

23 years
strength quality guarantee
23years production and sales,we have abundant R&D experience and advanced production equipment.which keep perfect product details and no inferior-quality products go to market.



Corner of office Production Testing



Global services



Product Contents



AC permanent magnet servo motor

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SG series servo driver	19
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86BYG 2/3 phase stepper motor series	22
110BYG 2/3 phase stepper motor series	23
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150BYG three-phase stepper motor series	25



Stepper motor driver

YH 3722 digital three-phase stepping driver	26
YH-2DM860 two-phase stepping driver	27

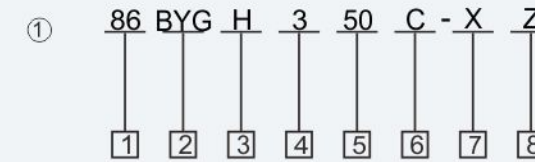
CNC system series

YH-990 two axis and three axis numerical control system	28-29
1000TD/MD series of two axis, three axis, four axis CNC systems	30-31

Coupling series

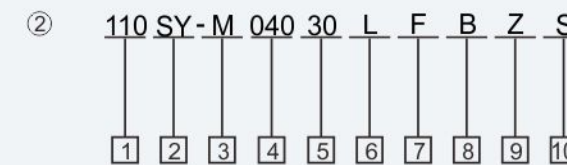
FAB Series	33-36
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FABR Series	37-40
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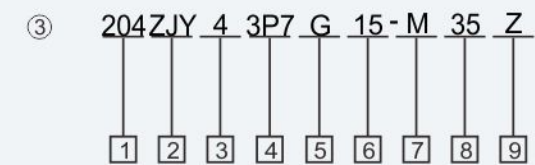
Hybrid stepper motor

- ① Flange size: 86mm, 110mm, 130mm, 150mm
- ② Hybrid stepper motor
- ③ Matched voltage: L: Low voltage type H: High voltage type
- ④ Motor phase: 2: two-phase stepping 3: three-phase stepping
- ⑤ Number of rotor gear: 50: The number of rotor teeth is 50
- ⑥ Same flange no. Different torque: A, B, C, D, E
- ⑦ Motor structure: No: General type motor X: Aluminum case motor S: S1
- ⑧ Z: Brake



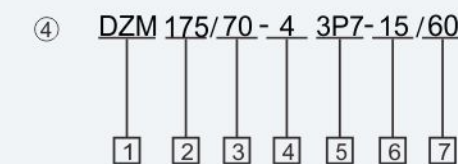
Permanent magnet AC servo motor

- ① Flange size: 60mm, 80mm, 90mm, 110mm, 130mm, 180mm
- ② AC synchronization servo motor
- ③ Feedback element: M: Optical-electricity encoder X: Rotary encoder
- ④ Rated torque: (x 0.1NM)
- ⑤ Rated speed: (x 100RPM)
- ⑥ Driver matched voltage: L: AC220V H: AC380V
- ⑦ Encoder type: F: Combined incremental encoder(2500PPR) F1: Saving line incremental encoder(2500PPR) F2: Combined incremental encoder(5000PPR) E: TAMAGAWA single circle (17bit) bus encoder En: NIKON single circle(22bit) bus encoder M: TAMAGAWA multi-circle(17/33bit) bus encoder M1: TAMAGAWA multi-circle(23/39bit) bus encoder Mn: NIKON multi-circle(22/38bit) bus encoder Mn1: NIKON multi-circle(24/40bit) bus encoder
- ⑧ Motor basic type
- ⑨ Z: Brake
- ⑩ Inner winding type: No: Distributed winding S: Centralization winding



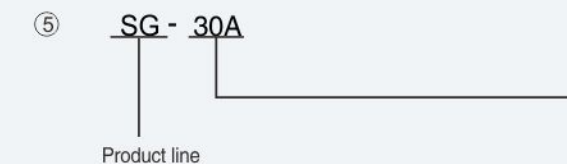
Spindle servo motor

- ① Flange size: 204mm, 250mm
- ② AC asynchronous spindle servo motor
- ③ Matched voltage: 2: AC220V 4: AC380V
- ④ Rated power: 2P2: 2.2KW 3P7: 3.7KW 5P5: 5.5KW 7P5: 7.5KW 9P5: 9.5KW 11P: 11KW 15P: 15KW
- ⑤ Encoder type: B: No encoder G: 1024 PPR optical-electricity encoder G1: 2500 PPR optical-electricity encoder
- ⑥ Basic speed: 07: 750RPM 10: 1000RPM 15: 1500RPM
- ⑦ Max. Speed: L: 3000RPM M: 6000RPM H: 8000RPM
- ⑧ Installation method: 3: Horizontal installation 5: Flange installation 35: Horizontal/Flange installation
- ⑨ Z: Brake



Built-in reaction motorized spindle motor

- ① Built-in reaction motorized spindle motor
- ② Stator piece diameter: 131(mm) 175(mm) 195(mm) 210(mm) 260(mm) 290(mm)
- ③ Rotor piece diameter: 50(mm) 70(mm) 80(mm) 95(mm) 112(mm) 122(mm)
- ④ Matched voltage: 2AC: 220V 4AC: 380V
- ⑤ Rated power: 1P0: 1.0KW 1P5: 1.5KW 2P2: 2.2KW 3P7: 3.7KW 5P5: 5.5KW 7P5: 7.5KW 9P5: 9.5KW 11P: 11KW
- ⑥ Rated speed: x100RPM
- ⑦ Max. speed: x100RPM



Servo driver specification

No.	Output power(KW)
15A	0.2-1.0
20A	0.4-1.5
30A	0.8-2.4
50A	2.0-3.5

- ① AC servo drive products range
- ② Input voltage: A: AC220V B: AC380V
- ③ Driver axis: S: Single axis D: Double axis
- ④ Power module current: 10: 10A 15: 15A 30: 30A 50: 50A 75: 75A
- ⑤ Input signal type: A: Pulse B: Analog C: Canopen bus M2: m2 BUS M3: M3 bus
- ⑥ Matched encoder type: F: Incremental optical-electricity encoder M: Absolute optical-electricity encoder

Purchase Concerned :

Our company has different type motors for your reference, please purchase according to your request like torque-frequency or contact with engineer and sales for more detail information. Our company available to customize to customer's request. This catalog and parameter maybe have some difference with product color due to the printing, please kindly refer to the real product, sorry for inconvenience caused.

Notice for installation :

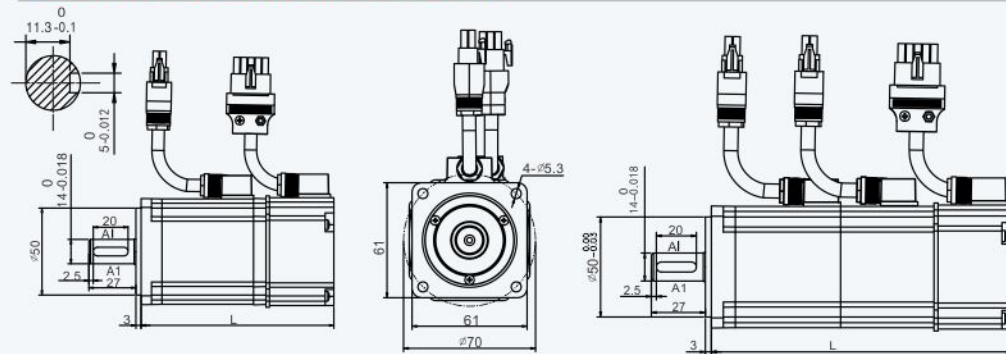
1. The place of installation should be no dust, corrosive gas or liquid, a void metal dust, oil, water getting into the inner motor. if have special requirments, pls add the protection device.
2. Installation spigot must be concentric with the axle load. use the flexible coupling to prevent the shaft being broken.
3. Ensure the radiation, high speed running of the motor will produce high temperature.
4. It is the inherent characteristics that the motor will produce high voltage when switched on.
5. When Motor or driver don't work, pls contact us or the distributors.

60 SY Series AC servo motor



Temperature	0°C ~55°C
Number of pole pairs	4
Incremental encoder line	2500/5000PPR
Absolute encoder	17/33bit, 22/38bit, 23/39bit
Humidity is less than	90%
Insulation class	B
Safety Class	IP65
Insulation and voltage resistance	AC 1500V, 1 Minute
Insulation resistance	DC500V, 10 Ω above
Structure	Plastic packaging, Self-cooling
Vibration	Under 2.5G
Altitude	Under 1000m
Work system	Continuous
Installation Method	Flange installation

Installation Dimension unit=mm



Model	L (mm) Incremental encoder	LA (mm) with brake	L (mm) Absolute encoder
60SY-M00630	110	148	115
60SY-M01330	133	171	138
60SY-M01930	154	192	159

*All above is the standard installation dimension, can be changed according to the customers' requirements
*Not hit the shaft, or the encoder in the other end would be damaged.

Specifications

Motor Model	60SY-M00630S	60SY-M01330S	60SY-M01930S
Rated Power(w)	200	400	600
Rated Torque(N.m)	0.637	1.27	1.91
Max Torque(N.m)	1.91	3.81	5.4
Rated Speed(rpm)	3000	3000	3000
Max Speed(rpm)	3600	3600	3600
Input Voltage (V)	(AC 220)		
Rated Current(A)	1.3	2.7	3.7
Rotor Inertia(KG.m ²)	0.264X10 ⁻⁴	0.407X10 ⁻⁴	0.526X10 ⁻⁴
Motor Weight (Kg)	1.18	1.70	2.10

Winding connection table

Winding wire	U	V	W	PE
Socket Number	1	2	3	4

Note : Brake voltage is DC 24V (Non polar requirement)

Brake Wiring	Brake	Brake
Socket number	1	2
Brake voltage	DC24V	

The encoder connection table

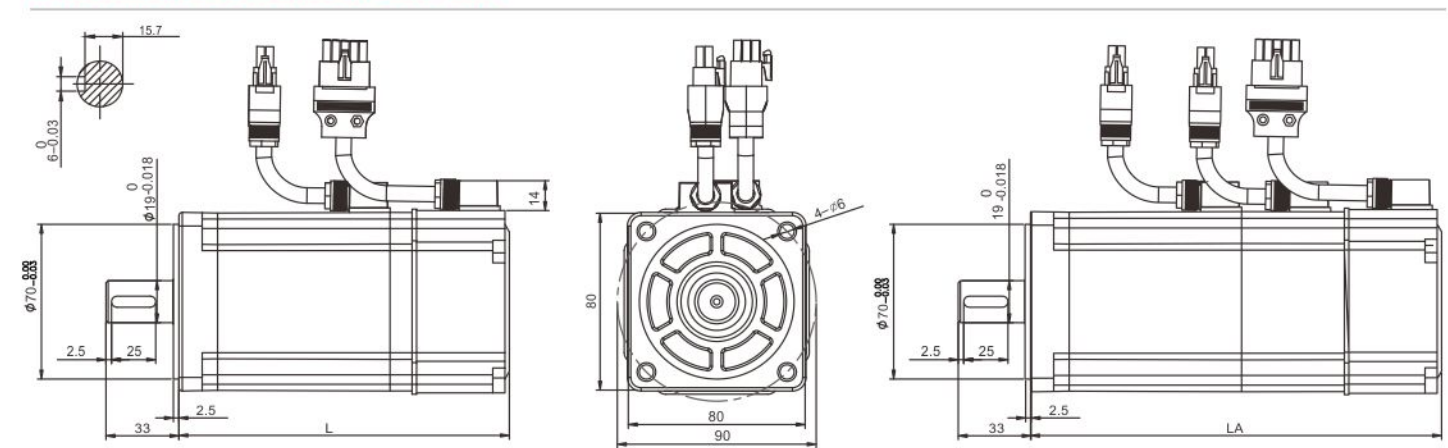
Signal Definitions	5V	OV	A+	B+	Z+	A-	B-	Z-	U+	V+	W+	U-	V-	W-	PE
Socket Number	2	3	9	4	7	13	14	5	6	10	11	8	12	15	1
Absolute signal definitions	PE		GND		VB		SD-		GND 0V		SD		Vcc 5V		
Socket Number	1		2		3		4		5		6		7		

80 SY Series AC servo motor (Plastic plug)



Temperature	0°C ~55°C
Number of pole pairs	4
Incremental encoder line	2500/5000PPR
Absolute encoder	17/33bit, 22/38bit, 23/39bit
Humidity is less than	90%
Insulation class	B
Safety Class	IP65
Insulation and voltage resistance	AC 1500V, 1 Minute
Insulation resistance	DC500V, 10 Ω above
Structure	Plastic packaging, Self-cooling
Vibration	Under 2.5G
Altitude	Under 1000m
Work system	Continuous
Installation Method	Flange installation

Installation Dimension unit=mm



Model	L(mm)	LA(mm) with brake
80SY-M01630S	132	168
80SY-M02430S	150	186
80SY-M02425S	178	214

Note:
*All above is the standard installation dimension, can be changed according to the customers' requirements
*Not hit the shaft, or the encoder in the other end would be damaged.

Specifications

Motor Model	80SY-M01630S	80SY-M02430S	80SY-M04025S
Rated Power(w)	500	750	1000
Rated Torque(N.m)	1.59	2.39	3.82
Max Torque(N.m)	4.77	7.17	11.46
Rated Speed(rpm)	3000	3000	2500
Rated Voltage (V)	220	220	220
Rated Current(A)	2.7	3.8	4.2
Max Current(A)	8.1	11.4	12.6
Rotor Inertia(Kg.m ²)	0.61*10 ⁻⁴	0.86*10 ⁻⁴	1.26*10 ⁻⁴
Motor Weight (Kg)	2.2	3	4

The encoder connection table

Winding wire	U	V	W	PE
Socket Number	1	2	3	4

Brake Wiring	Brake	Brake
Socket number	1	2
Brake voltage	DC24V	

Encoder wiring table

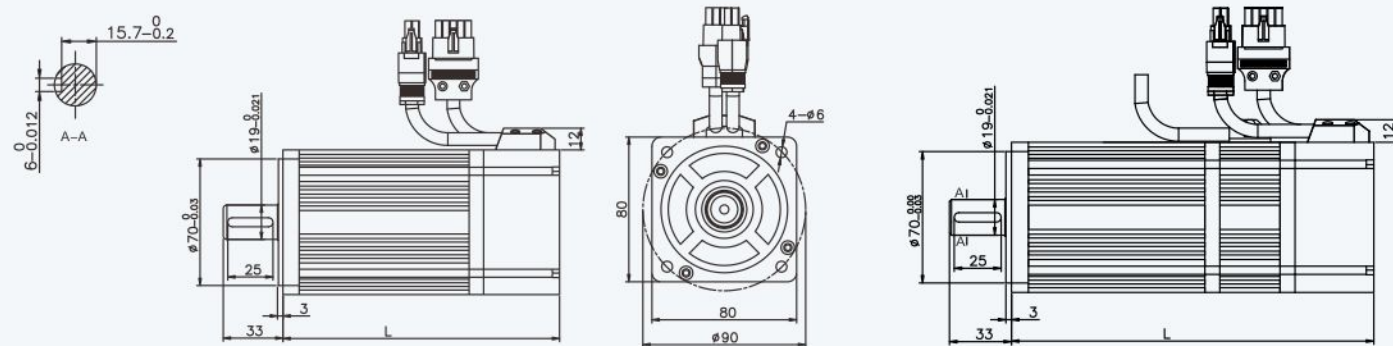
Signal definition	5V	OV	A+	B+	Z+	A-	B-	Z-	U+	V+	W+	U-	V-	W-	PE
Socket Number	2	3	9	4	7	13	14	5	6	10	11	8	12	15	1
Absolute signal definitions	PE		GND		VB		SD-		GND 0V		SD		Vcc 5V		
Socket Number	1		2		3		4		5		6		7		

80 SY Series AC servo motor (Aerial plug)



Temperature	0°C -55°C
Number of pole pairs	4
Incremental encoder line	2500/5000PPR
Absolute encoder	17/33bit , 22/38bit , 23/39bit
Humidity is less than	90%
Insulation class	B
Safety Class	IP54
Insulation and voltage resistance	AC 1500V, 1 Minute
Insulation resistance	DC500V, 10 Ω above
Structure	Plastic packaging, Self-cooling
Vibration	Under 2.5G
Altitude	Under 1000m
Work system	Continuous
Installation Method	Flange installation

Installation Dimension unit=mm



Model	L(mm)	LA(mm) with brake
80SY-M01330	123	163
80SY-M02430	158	198
80SY-M04025	197	237

Note:
*All above is the standard installation dimension, can be changed according to the customers' requirements
*Not hit the shaft, or the encoder in the other end would be damaged.

Specifications

Motor Model	80SY-M01330	80SY-M02430	80SY-M04025
Rated Power(W)	400	750	1000
Rated Torque(N.m)	1.3	2.4	4
Max Torque(N.m)	4.8	7.2	10
Rated Voltage (V)	220	220	220
Rated Speed(rpm)	3000	3000	2500
Max Speed(rpm)	3600	3600	3000
Rated Current(A)	2.2	3.5	4.2
Rotor Inertia(Kg.m ²)	1.22X10 ⁻⁴	1.96X10 ⁻⁴	2.8X10 ⁻⁴
Motor Weight (Kg)	2	2.85	3.8

The encoder connection table

Winding wire	U	V	W	PE	Brake Wiring	Brake	Brake
Socket Number (Aerial plug)	2	3	4	1	Socket number	1	2
Socket Number (Lead type)	1	2	3	4	Brake voltage	DC24V	

Note : Brake voltage is DC 24V (Non polar requirement)

Encoder wiring table

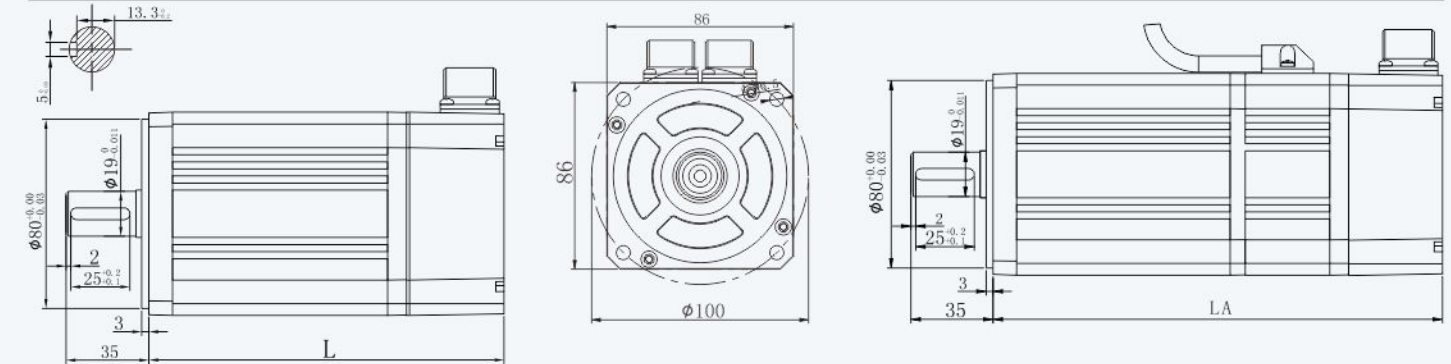
Signal definition	5V	OV	A+	B+	Z+	A-	B-	Z-	U+	V+	W+	U-	V-	W-	PE
Socket Number (Aerial plug)	2	3	4	5	6	7	8	9	10	11	12	13	14	15	1
Socket Number (Lead type)	2	3	9	4	7	13	14	5	6	10	11	8	12	15	1
Absolute signal definitions	PE	GND	VB	SD-	GND 0V	SD	Vcc 5V								
Socket Number	1	2	3	4	5	6	7								

90 SY Series AC servo motor



Temperature	0°C -55°C
Number of pole pairs	4
Incremental encoder line	2500/5000PPR
Absolute encoder	17/33bit , 22/38bit , 23/39bit
Humidity is less than	90%
Insulation class	B
Safety Class	IP54
Insulation and voltage resistance	AC 1500V, 1 Minute
Insulation resistance	DC500V, 10M above
Vibration	Under 2.5G
Altitude	Under 1000m
Work system	Continuous
Installation Method	Flange installation

Installation Dimension unit=mm



Model	L(mm)	LA(mm) with brake
90SY-M02430	149	190
90SY-M03520	171	212
90SY-M04025	181	222

Note:
*All above is the standard installation dimension, can be changed according to the customers' requirements
*Not hit the shaft, or the encoder in the other end would be damaged.

Specifications

Motor Model	90SY-M02430	90SY-M04025
Rated Power(W)	750	1000
Rated Torque(N.m)	2.4	4
Max Torque(N.m)	7.1	12
Rated Voltage (V)	220	220
Rated Speed(rpm)	3000	2500
Max Speed(rpm)	3600	3000
Rated Current(A)	3	4
Rotor Inertia(Kg.m ²)	2.45x10 ⁻⁴	3.7x10 ⁻⁴
Motor Weight (Kg)	3.1	4.13

The encoder connection table

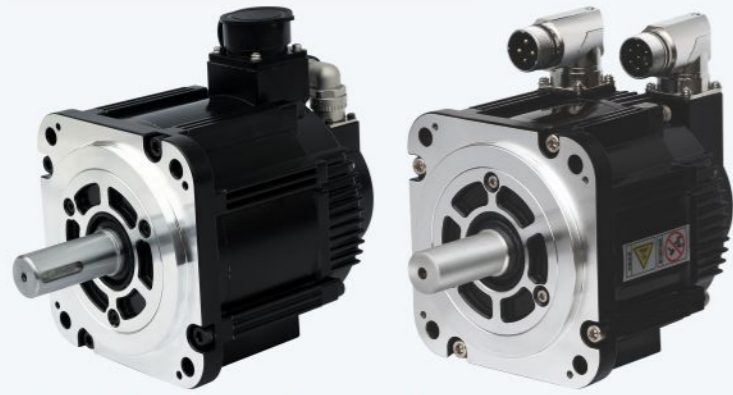
Winding wire	U	V	W	PE	Brake Wiring	Brake	Brake
Socket Number (Aerial plug)	2	3	4	1	Socket number	1	2
Socket Number (Lead type)	1	2	3	4	Brake voltage	DC24V	

Note : Brake voltage is DC 24V (Non polar requirement)

Encoder wiring table

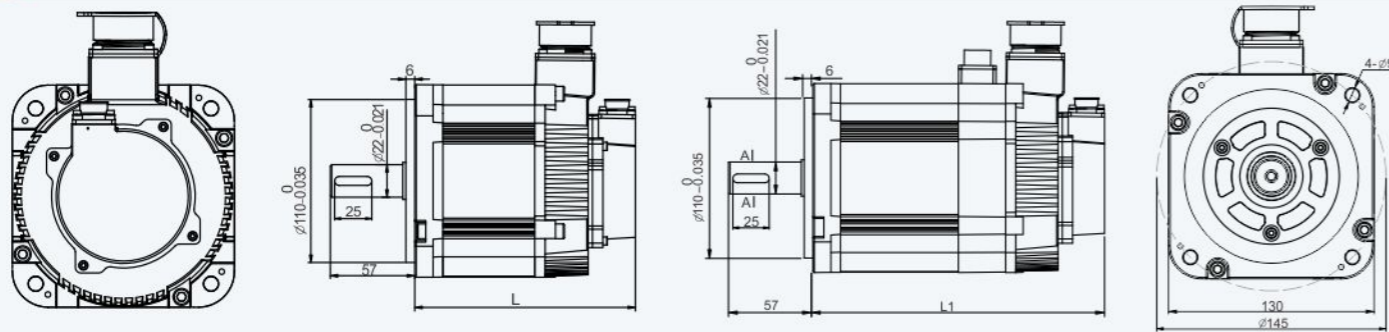
Signal definition	5V	OV	A+	B+	Z+	A-	B-	Z-	U+	V+	W+	U-	V-	W-	PE
Socket Number (Aerial plug)	2	3	4	5	6	7	8	9	10	11	12	13	14	15	1
Socket Number (Lead type)	2	3	9	4	7	13	14	5	6	10	11	8	12	15	1
Absolute signal definitions	PE	GND	VB	SD-	GND 0V	SD	Vcc 5V								
Socket Number	1	2	3	4	5	6	7								

130SY-S Series AC servo motor



Temperature	0°C -55°C
Number of pole pairs	4
Incremental encoder line	2500/5000PPR
Absolute encoder	17/33bit , 22/38bit , 23/39bit
Humidity is less than	90%
Insulation class	B
Safety Class	IP65
Insulation and voltage resistance	AC 1500V, 1 Minute
Insulation resistance	DC500V, 10M above
Vibration	Under 2.5G
Altitude	Under 1000m
Work system	Continuous
Installation Method	Flange installation

Installation size chart unit=mm



Specifications	1KW	1.5KW	2KW
L	149	174	199
L1(Built-in With brake)	180.5	205.5	230.5
L1(External With brake)	201.5	226.5	251.5

Note:
*All above is the standard installation dimension, can be changed according to the customers' requirements
*Not hit the shaft, or the encoder in the other end would be damaged.

Specifications

Motor Model	130SY-M05020-S	130SY-M07220-S	130SY-M10020-S
Rated Power(Kw)	1.0	1.5	2
Rated voltage(V)	220	220	220
Rated Current(A)	5	7.5	10
Peak current(A)	15.0	22.5	30.0
Rated Torque(N.m)	4.77	7.16	9.55
Max Torque(N.m)	14.31	21.48	28.65
Rated Speed(rpm)	2000	2000	2000
Max Speed(rpm)	4500	4500	4500
Rotor Inertia(Kg.m ²)	1.08x10 ⁻³	1.54x10 ⁻³	1.98x10 ⁻³
Motor Weight (Kg)	7.8	8.9	10.2

power line

130SY-M series motor's winding by the 4-core connector, for the corresponding please check the following form 1

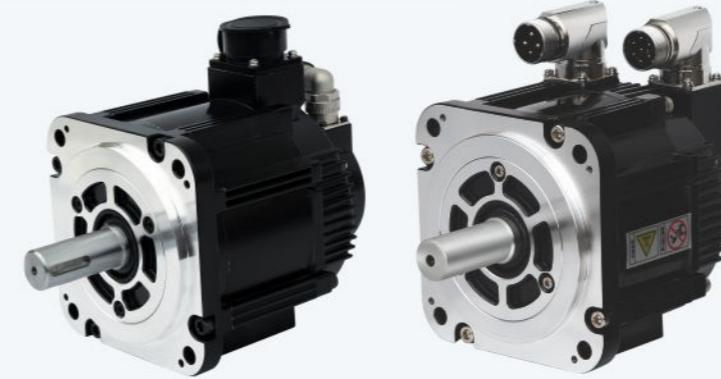
The encoder connection table

Winding wire	U	V	W	PE	Brake Wiring	Brake	Brake	Brake Voltage
Socket Number	2	3	4	1	External brake socket number	1	2	DC24V
Note : Brake voltage is DC 24V (Non polar requirement)					The built-in brake socket number	5	6	DC24V

Encoder wiring table

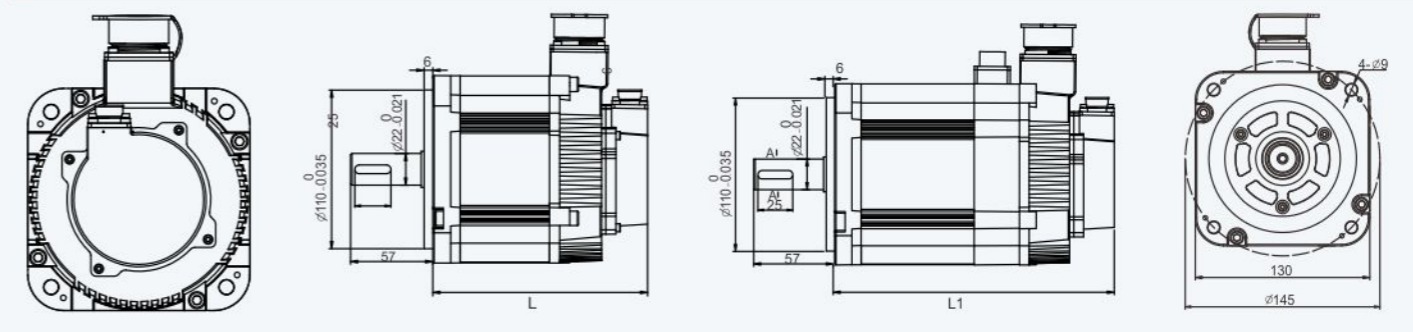
Signal definition	5V	0V	A+	B+	Z+	A-	B-	Z-	PE
Socket Number	2	3	4	5	6	7	8	9	1
Absolute signal definitions	PE	GND	VB	SD-	GND 0V	SD	Vcc 5V		
Socket Number	1	2	3	4	5	6	7		

130SY-S1 Series AC servo motor



Temperature	0°C -55°C
Number of pole pairs	5
Incremental encoder line	2500/5000PPR
Absolute encoder	17/33bit , 22/38bit , 23/39bit
Humidity is less than	90%
Insulation class	B
Safety Class	IP65
Insulation and voltage resistance	AC 1500V, 1 Minute
Insulation resistance	DC500V, 10M above
Vibration	Under 2.5G
Altitude	Under 1000m
Work system	Continuous
Installation Method	Flange installation

Installation size chart unit=mm



Specifications	0.85KW	1.3KW	1.8KW	2.4KW
L	138	154	174	199
L1(Built-in With brake)	169.5	185.5	205.5	230.5
L1(External With brake)	190.5	206.5	226.5	251.5

Note:
*All above is the standard installation dimension, can be changed according to the customers' requirements
*Not hit the shaft, or the encoder in the other end would be damaged.

Specifications

Motor Model	130SY-M05415S1	130SY-M08415S1	130SY-M11515S1	130SY-M15215S1	130SY-M115 10S1	130SY-M152 10S1
Rated Power(Kw)	0.85	1.3	1.8	2.4	1.2	1.6
Rated Torque(N.m)	5.4	8.4	11.5	15.2	11.5	15.2
Max Torque(N.m)	13.8	23.3	28.7	38.2	28.7	37.7
Rated Speed(rpm)	1500	1500	1500	1500	1000	1000
Max Speed(rpm)	3000	3000	3000	3000	2300	1800
Rated voltage(V)	220	380	220	380	220	380
Rated Current(A)	6.4	3.75	9.5	5.5	13	7.5
Peak current(A)	16	9.5	24.9	14.2	33.8	18
Rotor Inertia(Kg.m ²)	1.92x10 ⁻³	2.68x10 ⁻³	3.53x10 ⁻³	4.46x10 ⁻³	3.35x10 ⁻³	4.46x10 ⁻³
Motor Weight (Kg)	5.86	7.32	9.02	11.06	9.02	11.06

power line

130SY-M series motor's winding by the 4-core connector, for the corresponding please check the following form 1

The encoder connection table

Winding wire	U	V	W	PE	Brake Wiring	Brake	Brake	Brake Voltage
Socket Number	2	3	4	1	External brake socket number	1	2	DC24V
Note : Brake voltage is DC 24V (Non polar requirement)					The built-in brake socket number	5	6	DC24V

Encoder wiring table

Signal definition	5V	0V	A+	B+	Z+	A-	B-	Z-	PE
Socket Number	2	3	4	5	6	7	8	9	1
Absolute signal definitions	PE	GND	VB	SD-	GND 0V	SD	Vcc 5V		
Socket Number	1	2	3	4	5	6	7		

180 SY Series AC servo motor



Temperature	0°C -55°C
Number of pole pairs	4
Incremental encoder line	2500/5000PPR
Absolute encoder	17/33bit、22/38bit、23/39bit
Humidity is less than	90%
Insulation class	B
Safety Class	IP65
Insulation and voltage resistance	AC 1500V, 1 Minute
Insulation resistance	DC500V, 10M above
Vibration	Under 2.5G
Altitude	Under 1000m
Work system	Continuous
Installation Method	Flange installation

Specifications

Motor Model	180SY-M17015	180SY-M17015-H	180SY-M19015	180SY-M19015-H	180SY-M27015	180SY-M27015-H	180SY-M35015	180SY-M35015-H
Rated Power(Kw)	2.7	2.7	3.0	3.0	4.3	4.3	5.5	5.5
Rated Torque(N.m)	17	17	19	19	27	27	35	35
Max Torque(N.m)	34	34	47	47	54	54	70	70
Rated Speed(rpm)	1500	1500	1500	1500	1500	1500	1500	1500
Max Speed(rpm)	1800	1800	1800	1800	1800	1800	1800	1800
Rated Voltage (V)	220	380	220	380	220	380	220	380
Rated Current(A)	10.5	6.5	12	7.5	16	10	19	12
Rotor Inertia(Kg.m ²)	3.4x10 ⁻³	3.4x10 ⁻³	3.8x10 ⁻³	3.8x10 ⁻³	6.1x10 ⁻³	6.1x10 ⁻³	8.6x10 ⁻³	8.6x10 ⁻³
Motor Weight (Kg)	19.5	19.5	20.5	20.5	25.5	25.5	30.5	30.5

The encoder connection table

Winding wire	U	V	W	PE
Socket Number	2	3	4	1

Brake Wiring	Brake	Brake
Socket number	1	2
Brake voltage	DC24V	

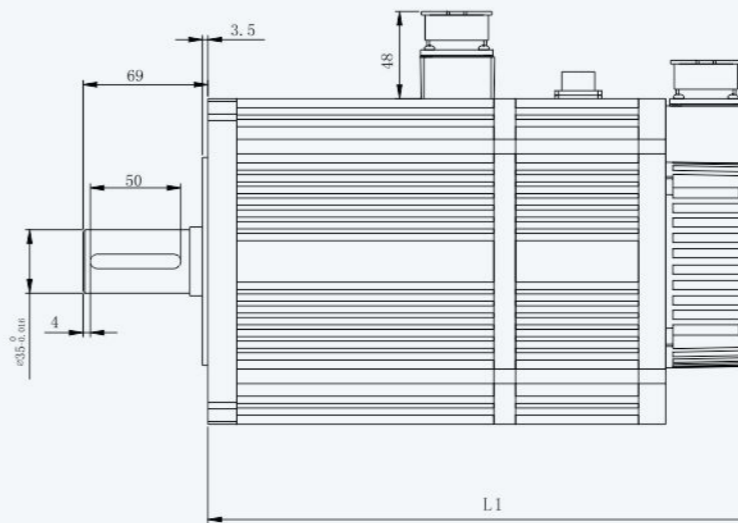
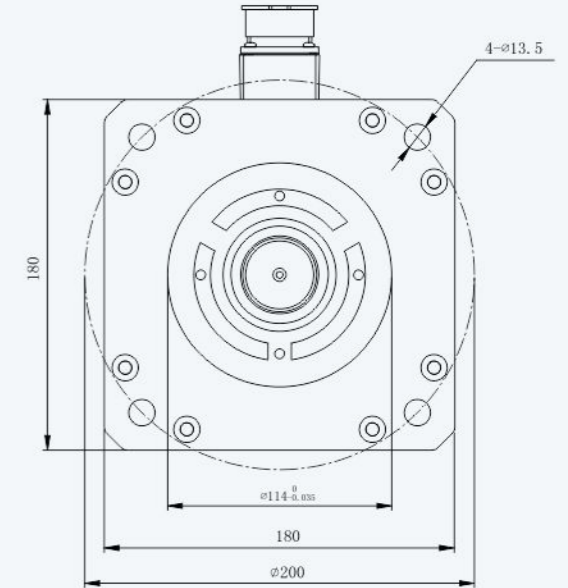
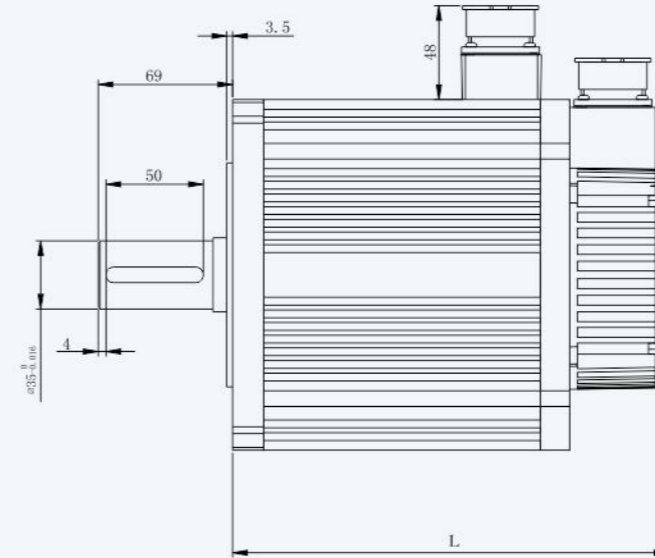
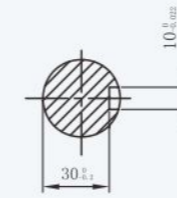
Note : Brake voltage is DC 24V (Non polar requirement)

Encoder wiring table

Signal definition	5V	OV	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

Absolute signal definitions	PE	GND	VB	SD-	GND 0V	SD	Vcc 5V
Socket Number	1	2	3	4	5	6	7

Installation size chart unit=mm



Specifications	17N.m	19N.m	27N.m	35N.m
L	226	232	262	292
L1	306	312	342	372

Note:
*All above is the standard installation dimension, can be changed according to the customers' requirements
*Not hit the shaft, or the encoder in the other end would be damaged.

204ZJY Series Ac Asynchronous Spindle Servo Motor



Temperature	0°C ~55°C
Number of poles	4
Incremental encoder line	1024/2500PPR
Humidity is less than	90%
Insulation class	F
Safety Class	IP54
Insulation and voltage resistance	AC 1500V, 1 Minute
Insulation resistance	DC500V, 10M above
Vibration	Under 2.5G
Altitude	Under 1000m
Work system	Continuous
Installation Method	Flange installation

Performance introduction

204ZJY series AC asynchronous spindle servo motor is a new AC induction servo motor, it is independent research and development, design, and produced by Wenling yuhai electromechanical CO.,LTD. The product has the advantages of compact structure, beautiful appearance. It adopts optimum electromagnetic design, high speed photoelectric encoder, high precision bearings and F level insulation. It is in stable operation, high control precision, low electromagnetic noise, high efficiency, long service life and high performance price ratio. It is particularly suitable for the spindle control of CNC machine tool and the speed control of high performance automation.

Notice

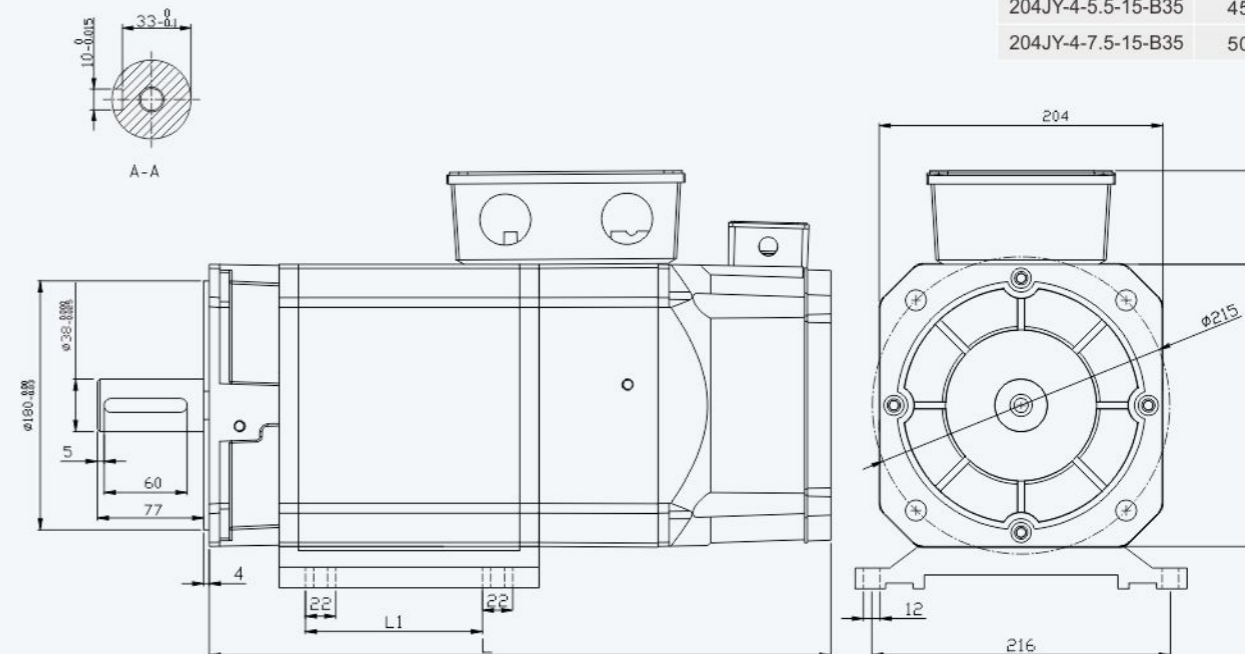
1. Motor U, V, W wiring must keep corresponding relation with the drive U, V, W.
2. Prohibit to hit the end of axis or let the motor axial force, To avoid damaging the encoder and motor bearing.
3. Ensure the terminal in the motor's junction box grounded effectively.
4. Ensure that the cooling fan is in the normal work when the motor adjust speed.
5. The motor's surface temperature is higher during operation, avoid touching by hand to prevent burns.
6. Fan wind direction must be consistent with the signage when wiring.

Specifications

Motor Model	204ZJY-4-2.2-15-X	204ZJY-4-3.7-15-X	204ZJY-4-5.5-15-X	204ZJY-4-7.5-15-X
Rated Power(Kw)	2.2	3.7	5.5	7.5
Rated Torque(N.m)	14	24	35	50
Rated Voltage (V)	380	380	380	380
Rated Current(A)	5.1	8	11.5	16
Rated Speed(rpm)	1450	1460	1460	1460
Max Speed(rpm)	6000	6000	6000	6000
Rated frequency(Hz)	50	50	50	50
Rotor Inertia(G. D2)	0.01	0.014	0.018	0.025
Fan power(w)	75	75	75	75
Fan voltage(v)	380	380	380	380
Vertical weight (Kg)	33	43	57	66.5
Horizontal weight (Kg)	35.6	46	61	71.5

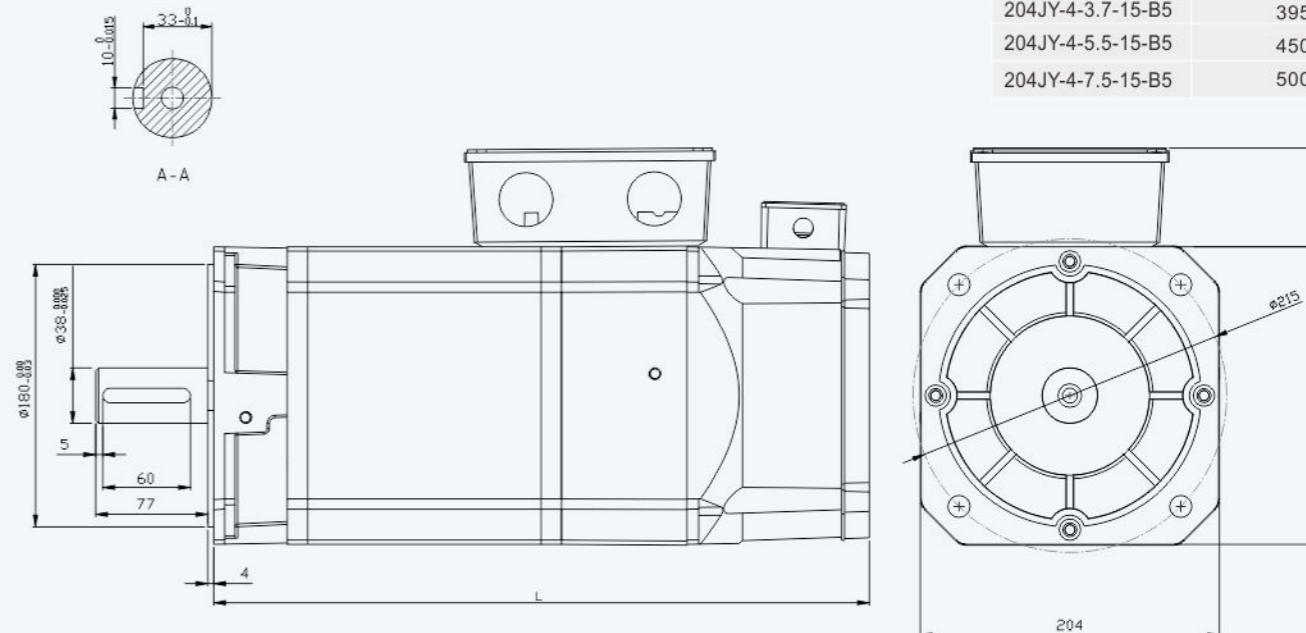
Installation size chart unit=mm

Model	L	L1
204JY-4-2.2-15-X	355	43
204JY-4-3.7-15-B35	395	73
204JY-4-5.5-15-B35	450	128
204JY-4-7.5-15-B35	500	178



Flange installation Dimension unit=mm

Model	L
204JY-4-2.2-15-B5	355
204JY-4-3.7-15-B5	395
204JY-4-5.5-15-B5	450
204JY-4-7.5-15-B5	500



Encoder wiring table

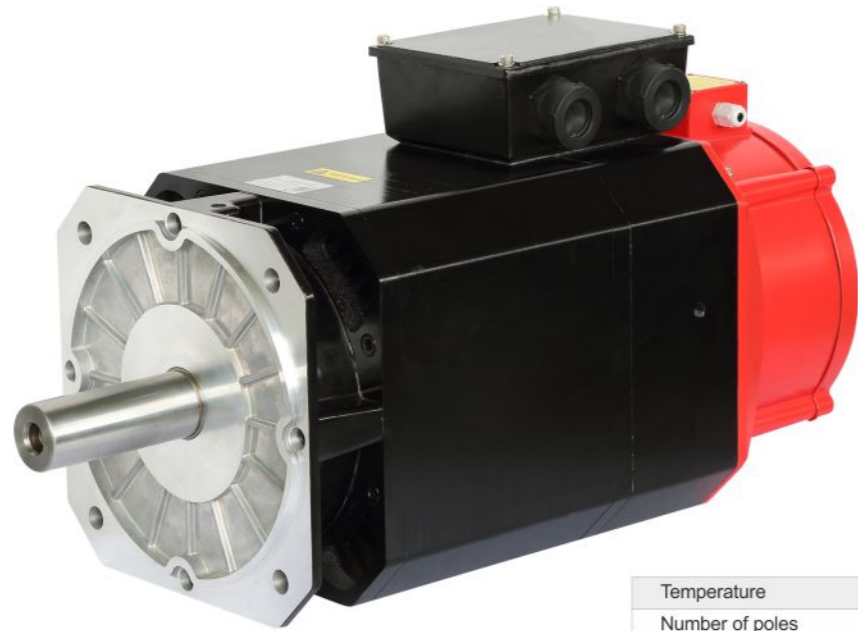
Serial Number	1	2	3	4	5	6	7	8	9	10
Signal	Shield	Z+	B+	A+	+5V		Z-	B-	A-	0

Note: T is motor heat protection switch

250ZJY Series AC asynchronous spindle servo motor

P15-16

Create perfect automation control

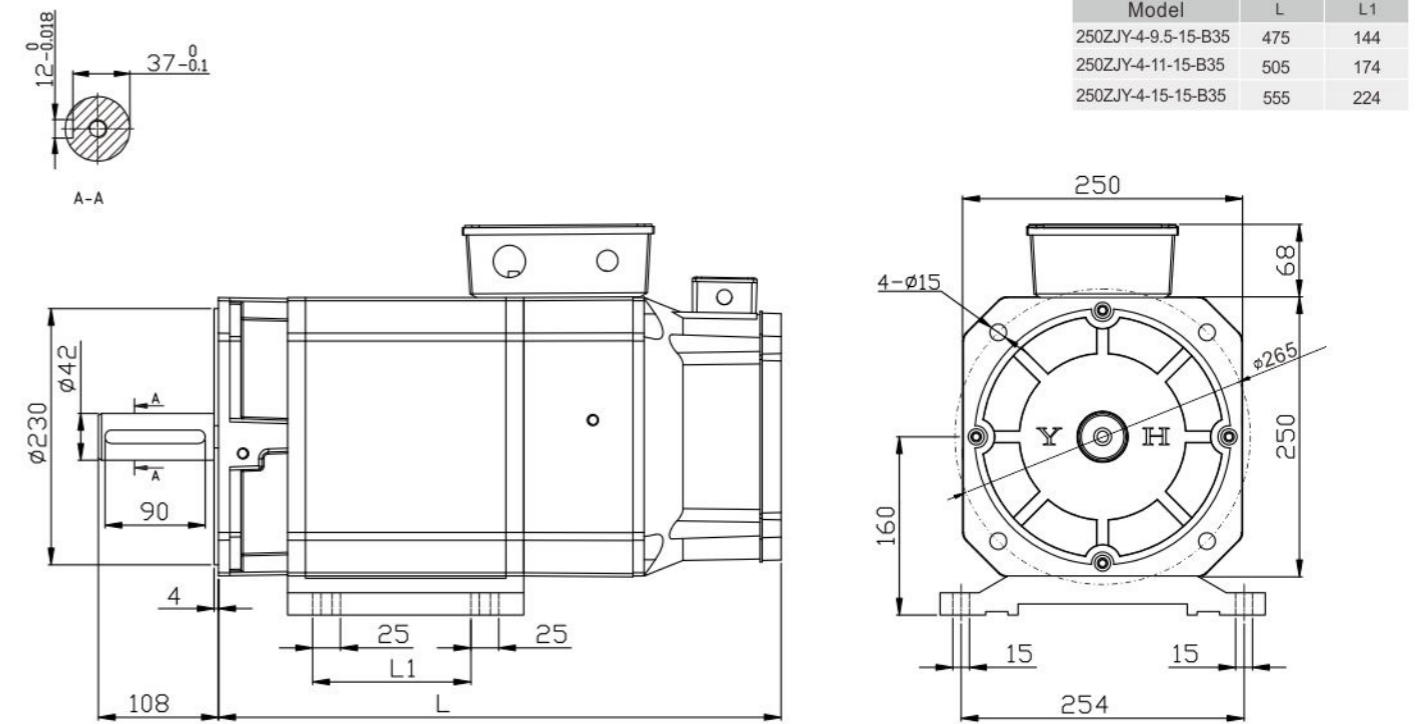


Temperature	0°C -55°C
Number of poles	4
Incremental encoder line	1024/2500PPR
Humidity is less than	90%
Insulation class	F
Safety Class	IP54
Insulation and voltage resistance	AC 1500V, 1 Minute
Insulation resistance	DC500V, 10M above
Vibration	Under 2.5G
Altitude	Under 1000m
Work system	Continuous
Installation Method	Flange installation

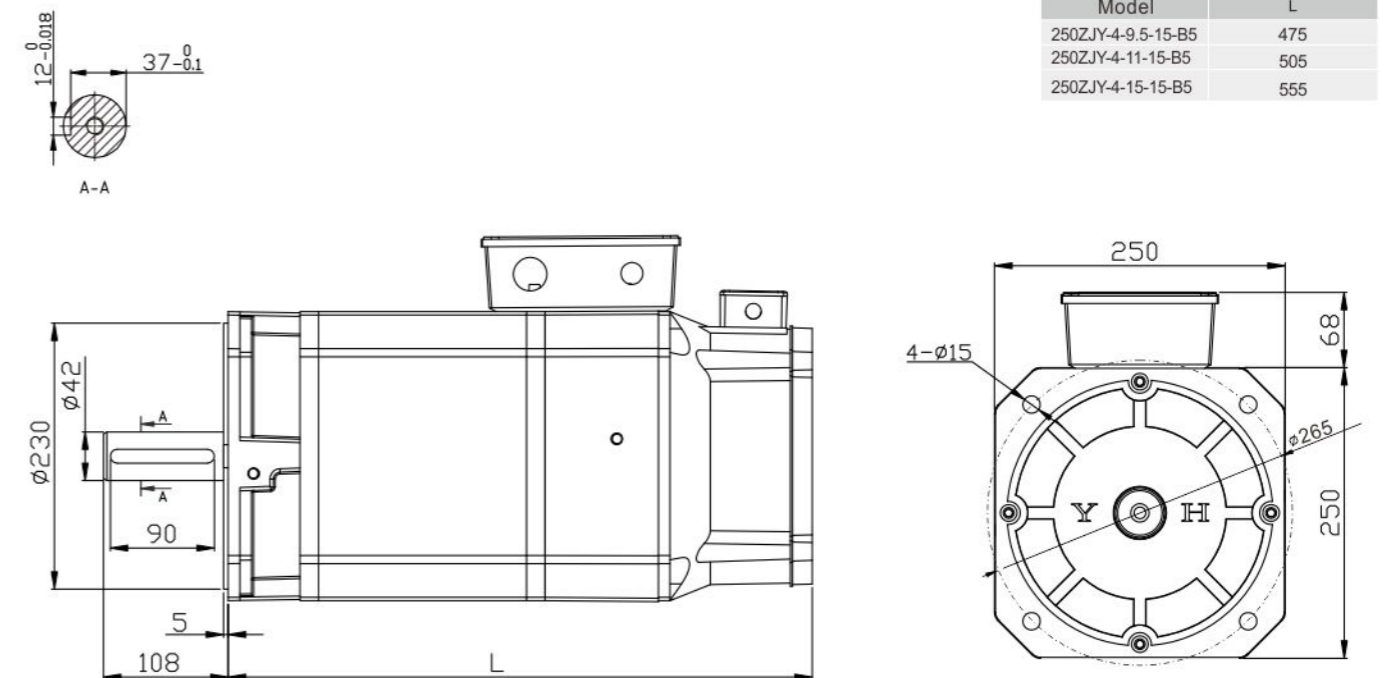
Specifications

Motor Model	250ZJY-4-9.5-15	250ZJY-4-11-15	250ZJY-4-15-15
Rated Power(Kw)	9.5	11	15
Rated Voltage (V)	380	380	380
Rated Current(A)	19	22	30
Rated Torque(N.m)	60	70	95
Rated frequency(Hz)	50	50	50
Rated Speed(rpm)	1500	1500	1500
Max Speed(rpm)	6000	6000	6000
Rotor Inertia(G. D2)	0.01	0.014	0.018
Fan power(w)	75	75	75
Fan voltage(v)	380	380	380
Vertical weight (Kg)	80	89	119
Horizontal weight (Kg)	92	101	131

Installation size chart unit=mm



Flange installation Dimension unit=mm



Encoder wiring table

Serial Number	1	2	3	4	5	6	7	8	9	10
Signal	Shield	Z+	B+	A+	+5V		Z-	B-	A-	0

Note: T is motor heat protection switch

SG-AS Series Servo motor driver



SG-AS15**



SG-AS20**



SG-AS30**

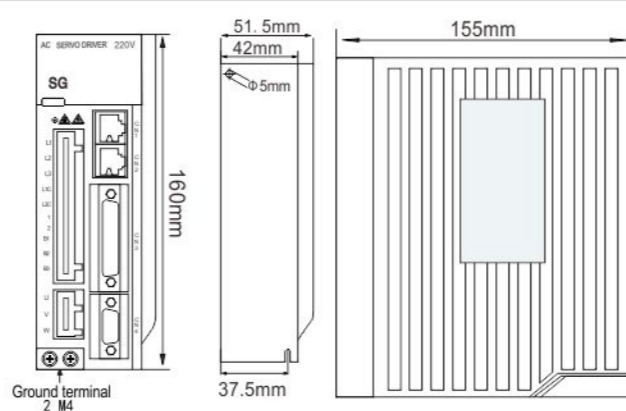
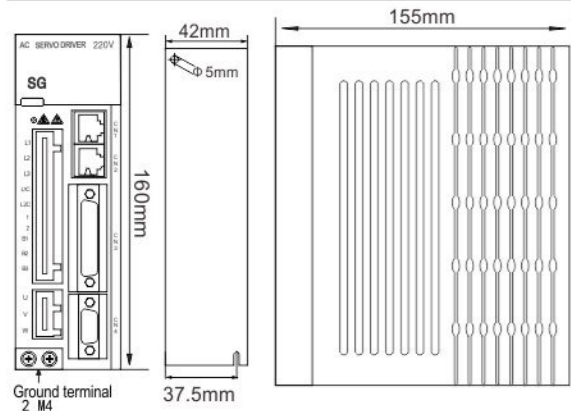


SG-AS50**/SG-AS75**

Dimension drawing (pedestal type)

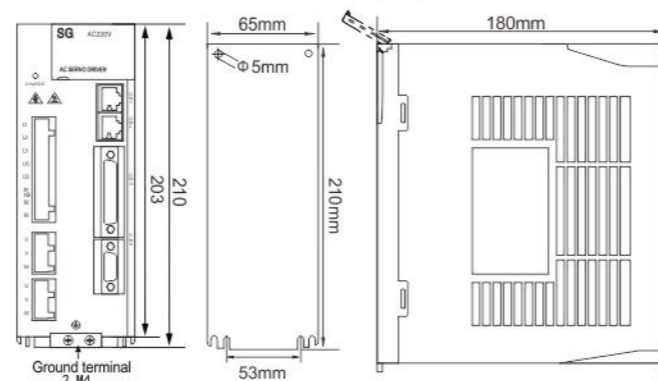
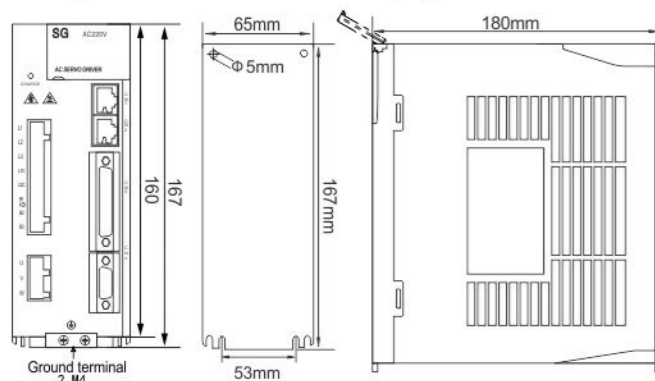
Three-phase AC 220V SG-AS15** output power: 200W-400W

Three-phase AC 220V SG-AS15** output power: 400W-1000W



Three-phase AC 220V SG-AS30** output power: 1KW-2.6KW

Three-phase AC 380V SG-BS30** output power: 1KW-2.6KW

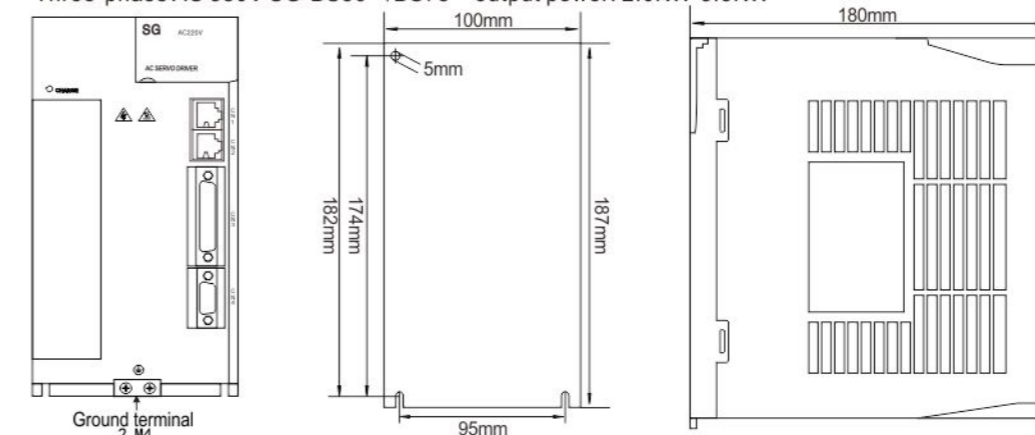


Model	SG-AS15**(400W)	SG-AS15**(750W)	SG-AS30**	SG-AS50**	SG-AS75**
Output Power	200-400W	400-1000W	1.0-2.6KW	2.0-5KW	2.0-5.5KW
Control Model	Position Analog control, JOG operation, speed contacts, etc.				
Encoder feedback	Ordinary incremental encoder: 2500 lines incremental standard type 2500 line incremental province-wire serial encoder: 17/23 bit absolute encoder				
Conditions of Use	Ambient temperature / storage temperature				
	Humidity / storage humidity				
	Resistance to vibration / impact resistance				
Performance	Structure				
	Speed control range				
	Speed response				
	Rate volatility (load variation)				
	Rate volatility (voltage variation)				
	Rate volatility (temperature variation)				
Analog speed command input	Command voltage				
	Input impedance				
	Circuit time parameter				
Analog torque command in input	Command voltage				
	Input impedance				
	Circuit time parameter				
Sequence input signal	Count				
	Function (distribution)				
Sequence output signal	Count				
	Function (distribution)				
Encoder Dividing pulse output	A phase, B phase, C: linear drive output; divider pulses: can be arbitrarily set				
	Protocol				
	1: N Communication				
RS-485 Communications	Axis address setting				
	CAN Communications				
CAN Communications	1: N Communication				
	Axis address setting				
Yaskawa M2 Communication	Communication protocol				
	1: N Communication				
	Station number agreement				
Yaskawa M3 Communication	Communication protocol				
	1: N Communication				
	Station number agreement				
Display Function	CHARGE LED, 7-segment 5				
Regeneration treatment	Built-in regenerative resistor or external regenerative resistor (optional)				
Overtravel (OT) prevention function	P-OT, N-OT Enter the action of dynamic brake (DB) stop, deceleration stop or free-run stop				
Protection	Overcurrent, overvoltage, undervoltage, overload, speeding, regeneration fault, encoder feedback error, etc.				
Monitoring functions	Speed, current position, command pulse accumulation, position deviation, motor current, operating status, input and output signals				
Accessibility Features	Gain adjustment, alarm recording, JOG operation, origin search, inertia testing				
Smart features	Built-in automatic gain tuning function				
Use load inert	Less than 5 times of motor inertia				
Position control	Feedforward compensation				
	Input pulse types				
	Input pulse form				
	Maximum input pulse frequency				
	Linear drive				
	Sign + pulse train, CW + CCW pulse sequence: 500K pps				
90° phase difference between the two-phase pulse (A phase + B-phase): 500K pps					
Open Collector					
Sign + pulse train, CW + CCW pulse sequence: 200K pps					
90° phase difference between the two-phase pulse (A phase + B-phase): 200K pps					

Dimension drawing (pedestal type)

Three-phase AC 220V SG-AS50**/AS75** output power: 2.0KW-5.5KW

Three-phase AC 380V SG-BS50**/BS75** output power: 2.0KW-5.5KW



SG Series Servo Motor Drive

Operating temperature: -10°C ~ 55°C
 Humidity: <90% (no condensation)
 Vibration: <0.5g (4.8m/s²)
 Working system: continuous work

Specifications

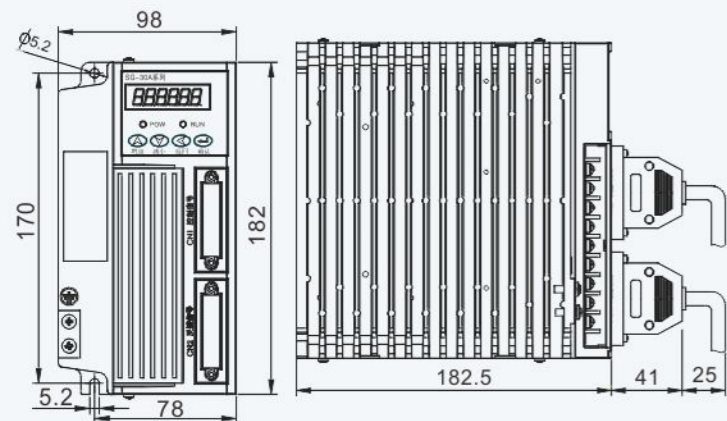
Model	SG15A	SG20A	SG30A
Output power(Kw)	0.2-1.0	0.4-1.5	0.8-2.6
Motor rated torque(N.m)	0.6-4.0	2.4-6.0	4.0-15.0
Input power supply	3-phase AC220 -15%~+10% 50/60Hz		
Control way	SG series	position control, speed control	
Speed frequency response	≥250Hz		
Control Rate volatility	< ±0.03 (load 0-100%) ; < ±0.02 (power -15%~+10%) value corresponding to the rated speed.		
feature Speed ratio	1 : 5000		
Pulse frequency	≤500kHz		
Input control	1.servo enable 2. alarm clearance Input control 3.ccw drive prohibition 4.cw drive prohibition 5.deviation/counter reset/ speed selection 6.command pulse prohibition/speed selection2		
Output control	1. servo ready to output 2.servo alarm output 3. positioning to complete the output/ Speed reach to the output 4. mechanical		
Position control	input way: 1.pulse+ symbols 2.ccw pulse/cw pulse 3.2 phase A/B orthogonal pulse The electronic gear: 1~32767/ 1~32767 Feedback pulse :2500 ppr		
Mouitoring functions	rotate speed,current position,command pulse accumulation,position deviation, motor torque, motor current,Linear speed,The absolute rotor position,command pulse frequency,Running state,input/output terminal signal, etc.		
Acceleration deceleration function	parameters set 1~10000ms/1000r/min		
Protection function	overspeed,The main power over-voltage and under-voltage, over curret,overload,abnormal braking,the encoder abnormal, control power abnormal position error,ect..		



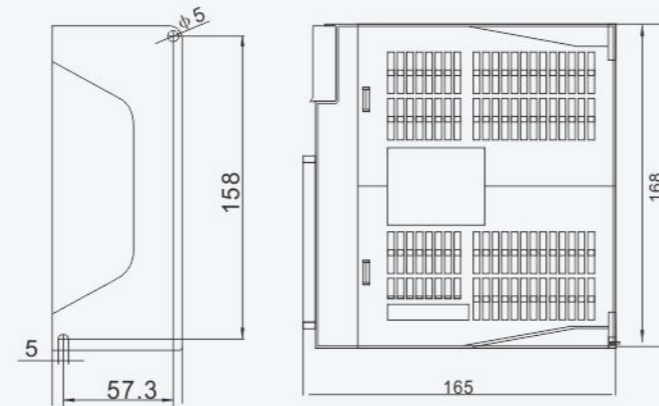
Product brief

Ac servo technology has developed from the early 80s, application technology become more mature and the property improved every year.It is widely used in the cnc turning machine,packaging machine, printer,textile machine,and other automated equipment.SG series ac servo drive , a new generation product,use the latest 32-bit DSP unit As the center core work unit,which we research and devolop independently.Adopt the complex programmable device EPLD and Mitsubishi intelligent power module.This ac servo drive has the advantages of high integration, small volume, fast response speed, perfect protection, high reliability etc.

SG20A/30A Installation size chart unit=mm



SG15A Installation size chart unit=mm



SD-S/A Series Spindle Servo Motor Drives

Specifications

Input Power	Input Voltage	3 phase AC 380/400V
	Input Frequency	50Hz/60Hz
	Allow Voltage Fluctuation	+10%,-15%
	Allow Frequency Fluctuation	±5%
Control Characteristics	Control Mode	Vector control
	Speed Control Range	0.01~500Hz, If 4 pole motor max speed 15000rpm
	Speed Control Precision	±0.1%
	Acceleration Timing	0.05~300Hz/s
	Torque control Character	Under base frequency 200% rated torque output:precision ± 5%
	Position Control Precision	±1 pulse
	Brake Mode	Energy brake, inner brake unit
I/O Interface	Overload Capacity	Two times
	Digital Input	10 points,NPN type,PNP type for options
	Digital Output	4 Points,NPN type,PNP type
	Relay Output	2 pcs,DC30V/1A or AC250V/1A
	Analog Quantity input	Two ways,A0:±10V;A1:0~+10V or 4~20mA
	External Pulse Input	1 pcs,high speed optocoupler,ABZ phase pulse, direction+Pulse, CW pulse for option
	Motor Encoder Input	1 pcs,RS422 electrical level or rotary connector for option
	Motor Encoder Output	1 pcs,RS422 electrical leve, output frequency range 0~1MHz
	Expansion Interface	Available to set inner or external function module like RS485(Modbus,RTU)
	Protect Function	Over Voltage Protect, Low Voltage Protect, Over Current Protect, Motor Overheat Protect, Power Module Overheat Protect, Overload Protect, Output Short Circuit Protection, Encoder Abnormal Protect.
Working Environment	Installation Condition	Avoid direct sunshine,no dust,no corrosion,no flammable gas
	Working Ambient Temperature	-10°C ~ +45°C
	Working Ambient Humidity	5~90%,No frost
	Working Altitude Height	0~3000M, Up 1000m, should derating use
Allow Vibration Range	Under 20Hz:1G;20~50Gz:0.2G	



High performance

Comprehensive and precise control functions: steady speed control, precision position control, excellent torque control.

Safe and dependable

Products meet international standards, through the CE certification. Set multiple protection circuit, comprehensive protection safety equipment.

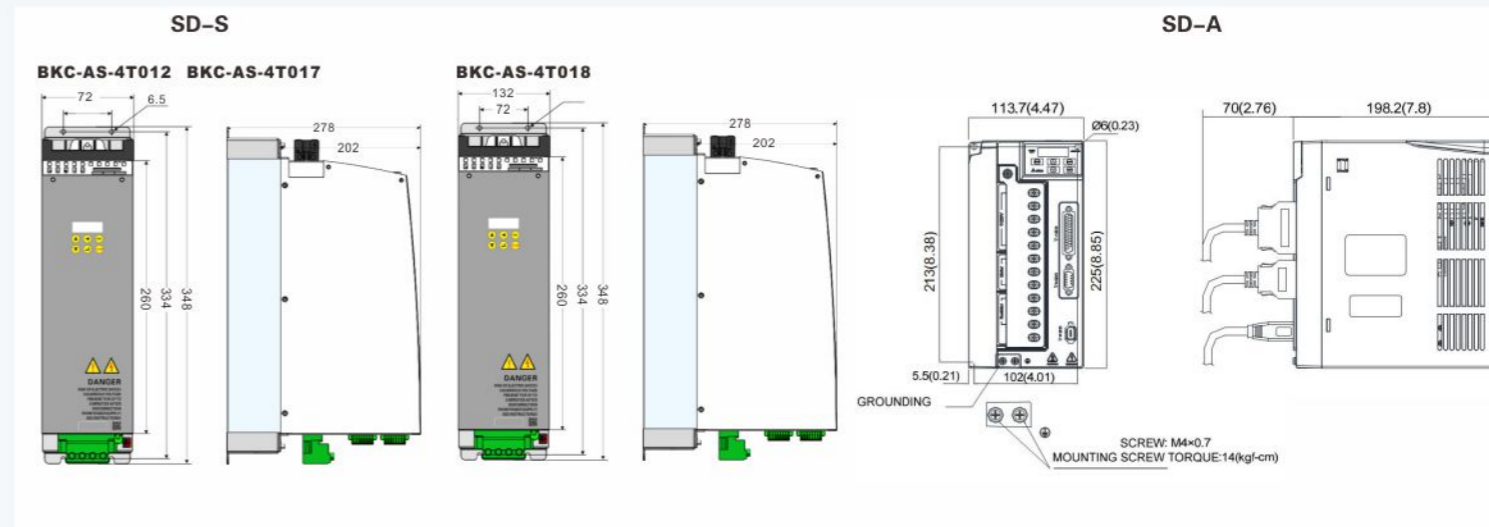
Horoscope communication function (optional)

Products with remote communication capabilities, simply connect a SIM card module, you can remotely operate the controller via the mobile phone network.

Strong expansion capability (optional)

You can configure a variety of expansion modules within the controller, such as a digital terminal expansion modules, analog terminal expansion modules, encoder feedback divider output, 485 (ModBus/RTU), CANopen, GSM / GPRS module, digital display module, double position loop module and other interfaces, it can also develop a variety of control devices connected function module, such as convenience and PLC, touch screen, text display, etc. according to the user's specific application.

Installation Size unit=mm

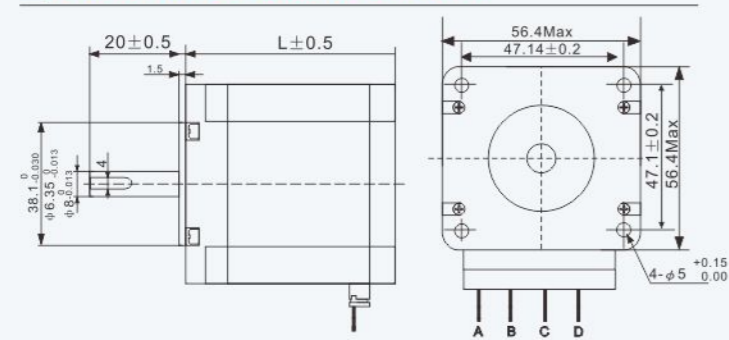


57BYG Series

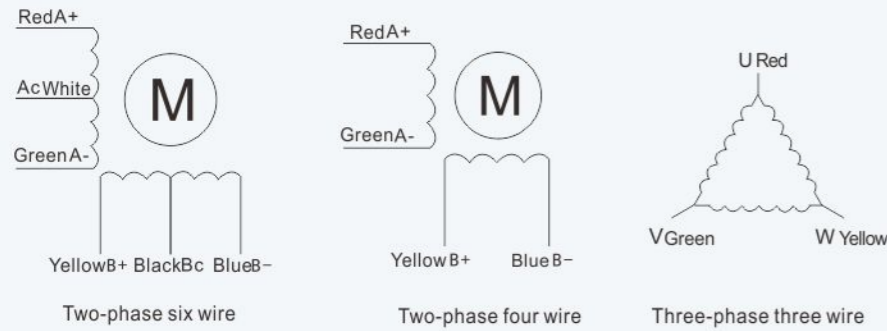
Two-Phase three-phase Stepper Motor

Temperature Rise:80°CMax (Rated current)
 Step Angle Accuracy:5%
 Ambient temperature:-20°C +50°C
 Insulation Resistance:100MΩ 500V DC
 Dielectric Strength:500V AC 1min
 Insulation class: B

Installation Dimension unit=mm



Wiring Diagram



Two phase		Three phase	
Lead wire	definition	color	definition
A	A+	Red	U
B	A-	Green	V
C	B+	Yellow	W
D	B-	Blue	

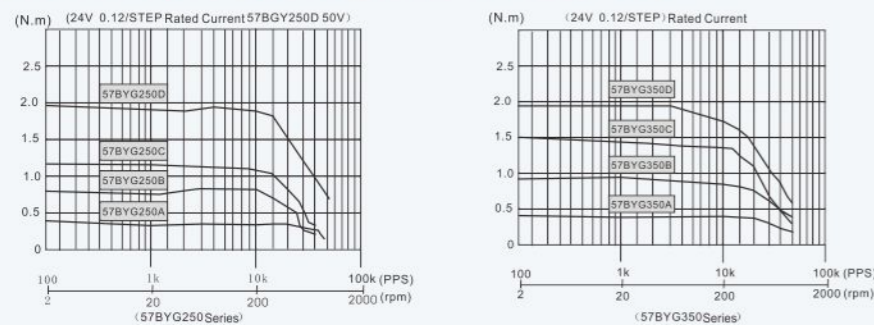
Lead wire length(L) 300mm

Note: The motor wiring method can be changed according to the customers' requirements

Specifications

Motor Model	Step Angle (°)	Holding torque (N.m)	(Drive) Operating Voltage(V)	Rated Current (A)	Phase Inductance (mH)	Phase Resistance (Ω)	Rotor inertia (Kg.cm ²)	Weight (Kg)	Motor Length (mm)
57BYG250A	1.8°	0.45	24	2.0	3.5	1.5	0.15	0.45	41
57BYG250B	1.8°	0.8	24	2.5	3.4	1.34	0.29	0.70	56
57BYG250C	1.8°	1.2	24	3.0	8.1	2.3	0.52	1.15	76
57BYG250D	1.8°	2.0	40-60	4.0	3.5	1.0	0.8	1.62	112
57BYG350A	1.2°	0.45	24	5.2	0.5	0.3	0.1	0.5	41
57BYG350B	1.2°	0.9	24	5.6	0.77	0.3	0.26	0.75	56
57BYG350C	1.2°	1.5	24	5.8	1.0	0.33	0.4	1.15	76
57BYG350D	1.2°	2.0	24	5.8	2.22	0.73	0.7	1.62	102

The torque-speed characteristic curve



attention:

- Characteristic data of the motor is measured with the specific driver. When change the drive or the voltage, the current and the torque frequency characteristic are also changed, we can change the data to design another torque frequency characteristic according to the customers' requirements.
- Motor shaft must be concentric with the load in order to avoid unnecessary of breaking axis
- When the motor is selected, please adjust according to the rated parameter and wiring well in order to avoid the motor burned out.

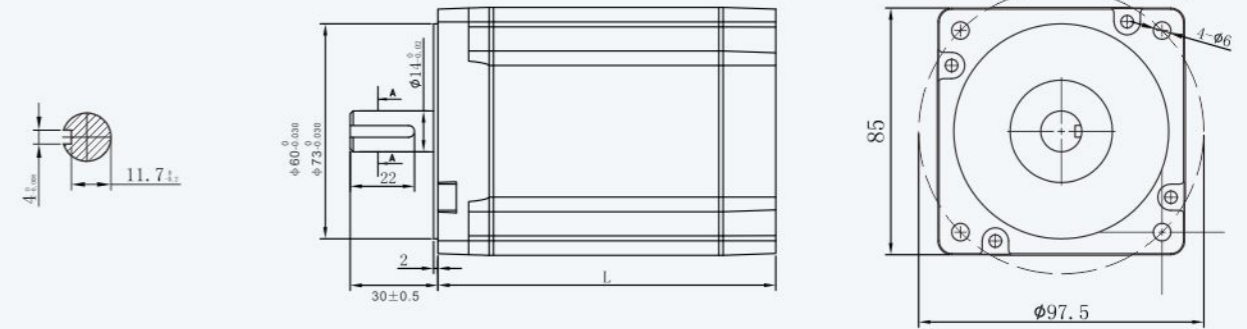
86BYG Series

Two-Phase three-phase Stepper Motor

Temperature Rise:80°CMax (Rated current)
 Step Angle Accuracy:5%
 Ambient temperature:-20°C +50°C
 Insulation Resistance:100MΩ 500V DC
 Dielectric Strength:500V AC 1min
 Insulation class: B

Installation Dimension unit=mm

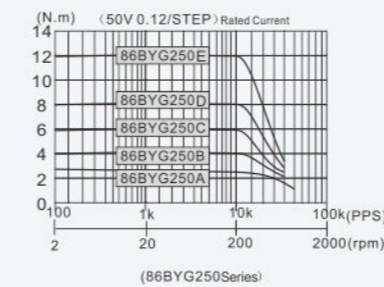
Note: φ12 and φ14 of shaft diameter for choice, 1mm flat-square and 4mm/5mm keyway on shaft for choice



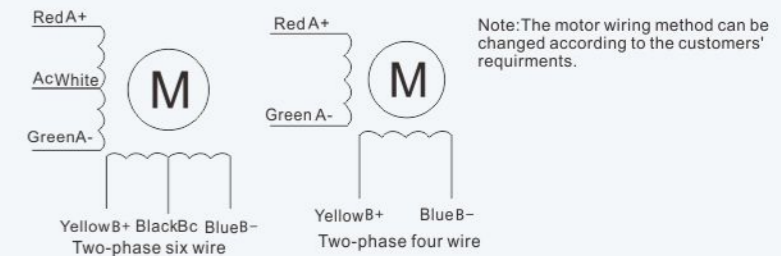
Specifications

Motor Model	Step Angle (°)	Holding torque (N.m)	(Drive) Operating Voltage(V)	Rated Current (A)	Phase Inductance (mH)	Phase Resistance (Ω)	Rotor inertia (Kg.cm ²)	Weight (Kg)	Motor Length (mm)
86BYG250A	1.8	2.4	60	4.3	3.1	0.5	1.92	2.2	78
86BYG250B	1.8	4	60	4.5	7.0	1.0	2.55	2.95	99
86BYG250C	1.8	6	60	5	7.1	0.8	3.57	3.7	115
86BYG250D	1.8	8	60	6	7.3	0.95	3.96	4.3	145
86BYG250E	1.8	12	60	7.5	7.8	1.0	4.57	5.2	155
86BYG350A	1.2	2	60	5.2	2.4	0.5	1.49	1.84	78
86BYG350B	1.2	4	60	5.6	4.5	0.71	2.55	2.95	99
86BYG350B-5	1.2	5	60	5.6	5.5	0.83	3.21	3.52	110
86BYG350C	1.2	6	60	5.8	6.5	0.95	3.99	3.9	125
86BYGH350A	1.2	2	220	1.75	4.0	1.11	1.49	1.98	78
86BYGH350B	1.2	4	220	2.1	7.4	1.4	2.55	3.0	99
86BYGH350C	1.2	6	220	3.2	12.8	1.87	3.96	4.4	135
86BYGH350D	1.2	8	220	4.0	16.2	2.01	4.95	5.9	145

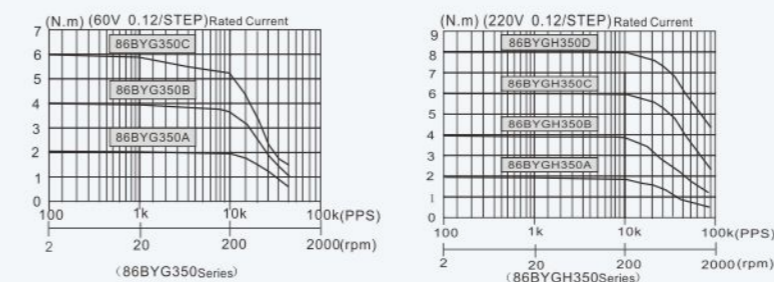
The torque-speed characteristic curve



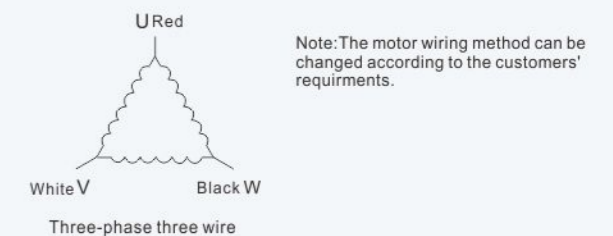
Wiring Diagram



The torque-speed characteristic curve



Wiring Diagram



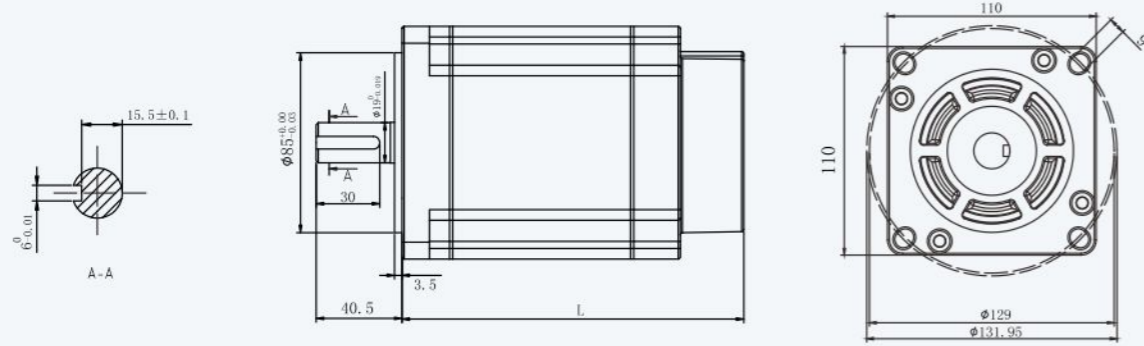
110BYG Series

Two-Phase three-phase Stepper Motor

Temperature Rise:80°CMax (Rated current)
 Step Angle Accuracy:5%
 Ambient temperature:-20°C +50°C
 Insulation Resistance:100MΩ 500V DC
 Dielectric Strength:500V AC 1min
 Insulation class: B



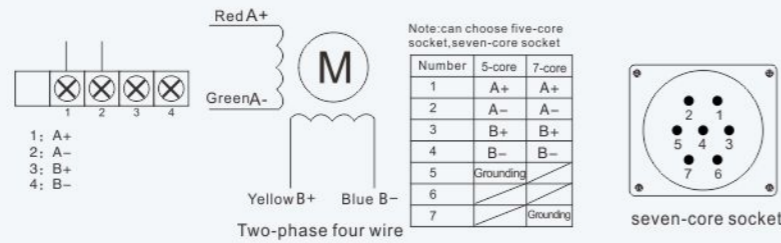
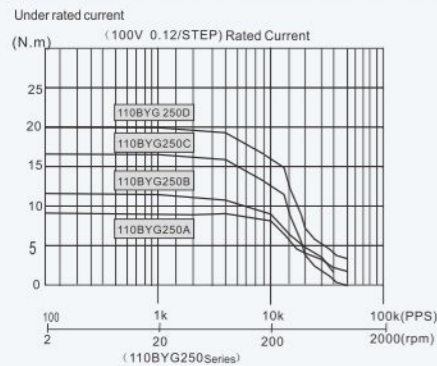
Installation Dimension unit=mm



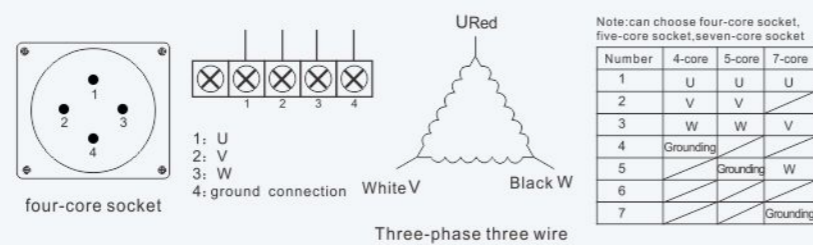
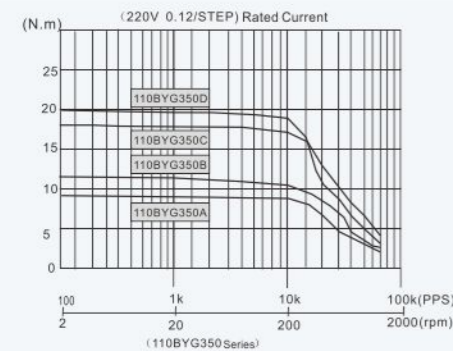
Specifications

Motor Model	Step Angle (°)	Holding torque (N.m)	(Drive) Operating Voltage (V)	Rated Current (A)	Phase Inductance (mH)	Phase Resistance (Ω)	Rotor inertia (Kg.cm ²)	Weight (Kg)	Motor Length (mm)
110BYG250A	1.8	8	110	5	17.3	1.3	7.3	4.8	109
110BYG250B	1.8	12	110	6	12.7	0.78	10	6.4	134
110BYG250C	1.8	18	110	6.5	15.5	0.87	12.35	8.1	159
110BYG250D	1.8	20	110	6.8	17.5	0.97	13.8	9.2	193
110BYG350A	1.2	8	220	3.7	11.9	1	8.6	5.5	139
110BYG350B	1.2	12	220	4.5	11.5	0.76	11.9	7.1	162
110BYG350C	1.2	16	220	6.0	19	1.28	14.8	8.8	187
110BYG350D	1.2	20	220	6.8	22	1.24	19.8	11	221

The encoder connection table Wiring Diagram



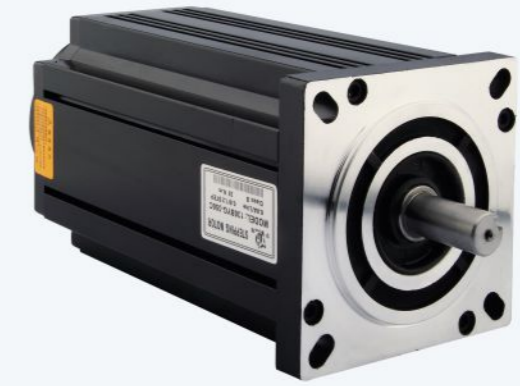
The encoder connection table Wiring Diagram



130BYG Series

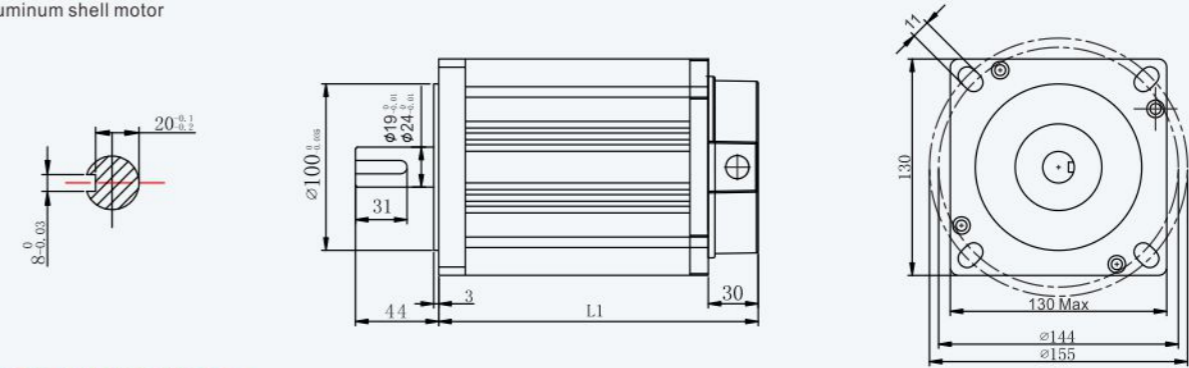
Two-Phase three-phase Stepper Motor

Temperature Rise:80°CMax (Rated current)
 Step Angle Accuracy:5%
 Ambient temperature:-20°C +50°C
 Insulation Resistance:100MΩ 500V DC
 Dielectric Strength:500V AC 1min
 Insulation class: B



Installation Dimension unit=mm

Aluminum shell motor

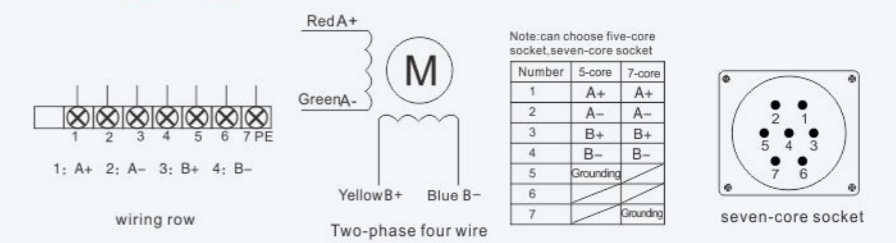
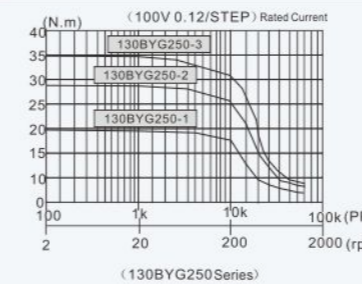


Specifications

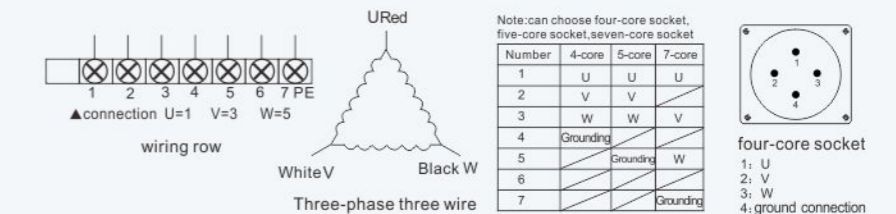
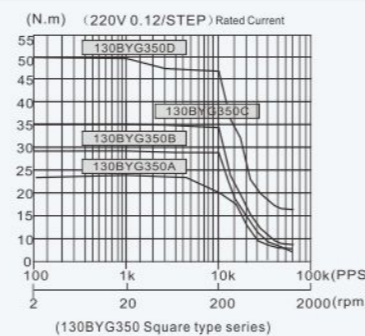
Motor Model	Step Angle (°)	Holding torque (N.m)	(Drive) Operating Voltage (V)	Rated Current (A)	Phase Inductance (mH)	Phase Resistance (Ω)	Rotor inertia (Kg.cm ²)	Weight (Kg)	Motor Length (mm)
130BYG250A-X	1.8	20	110~220	6.8	8.2	0.89	26.8	12.5	189
130BYG250B-X	1.8	28	110~220	7.5	12	1.1	33.5	15.1	236
130BYG250C-X	1.8	35	110~220	8	15	1.3	40	17.2	256
130BYG350A-X	1.2	24	220	6.8	9.9	0.89	26.8	14.58	189
130BYG350B-X	1.2	28	220	6.8	11.3	0.80	34.9	17.14	236
130BYG350C-X	1.2	37	220	6.8	13.8	0.92	39.2	19.7	256
130BYG350D-X	1.2	50	220	6.8	18.3	0.99	42.5	20.5	271

Note:X representative Aluminum Material

The encoder connection table Wiring Diagram



The encoder connection table Wiring Diagram

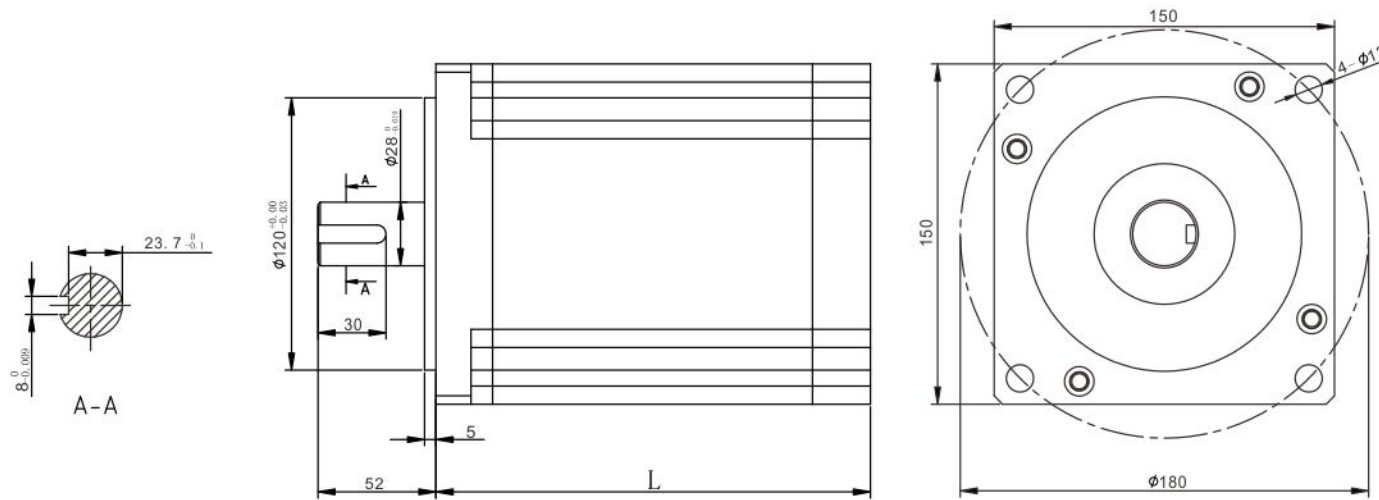


150BYG Series Three Phase Stepper Motor

Temperature Rise:80°CMax (Rated current)
Step Angle Accuracy:5%
Ambient temperature:-20°C +50°C
Insulation Resistance:100MΩ 500V DC
Dielectric Strength:500V AC 1min
Insulation class: B



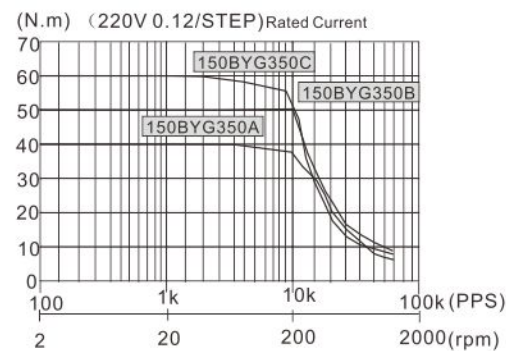
Installation Dimension unit=mm



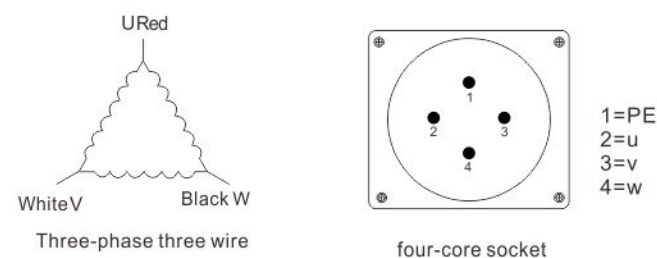
Specifications

Motor Model	Step Angle (°)	Holding torque (N.m)	(Drive) Operating Voltage(V)	Rated Current (A)	Phase Inductance (mH)	Phase Resistance (Ω)	Rotor inertia (Kg.cm ²)	Weight (Kg)	Motor Length (mm)
150BYG350A	1.2	40	220	8.5	12	0.5	65	22.5	191
150BYG350B	1.2	50	220	8.5	19.2	0.79	83	25.7	230
150BYG350	1.2	60	220	8.5	22.8	0.86	100	29.6	255

The encoder connection table



Wiring Diagram



YH-3722 Series Three-Phase Stepper Driver

Specifications

Input power	Single-phase AC220V-15~+10% 50/60Hz
Output phase current	1.5A-7.0A(Up to 8A for customization)
Adaptation of motor	Three phase hybrid stepping motor
Operate environment	0°C ~55°C 15 85%RH No frost, non corrosive, flammability, explosive, conductive gas, liquid and dust
Storage environment	-25°C ~70°C 15 85%RH No frost
Driving mode	pwm
Step angle	400/480/500/600/800/1000/2000/3000/4000/4800/5000/6000/8000/10000/12000
Step angle setting	DIP switch setting
Input signal	CP+/CP-; CW+/CW-; FREE+/FREE-;
Input level	5V, 5~10MA; Connet 510Ω~1K resistance when input 12v voltage; Connet 1.2K~2K resistance when input 12v voltage
Out signal	ALM+/ALM-
Position pulse input mode	ingle pulse mode: CP(pulse)+CW(direction), pulse width ≥ 1us, pulse frequency ≤ 300khz (10000P/r); Double pulse mode: CW(positive pulse)+CCW(reverse pulse)
Status indication	Green LED power indication; driving power, normal state indication Green LED pulse indication, pulse status indication Green LED fault indication; drive fault indication
Size and shape	170.4x94.2x127mm
Weight	1.3kg

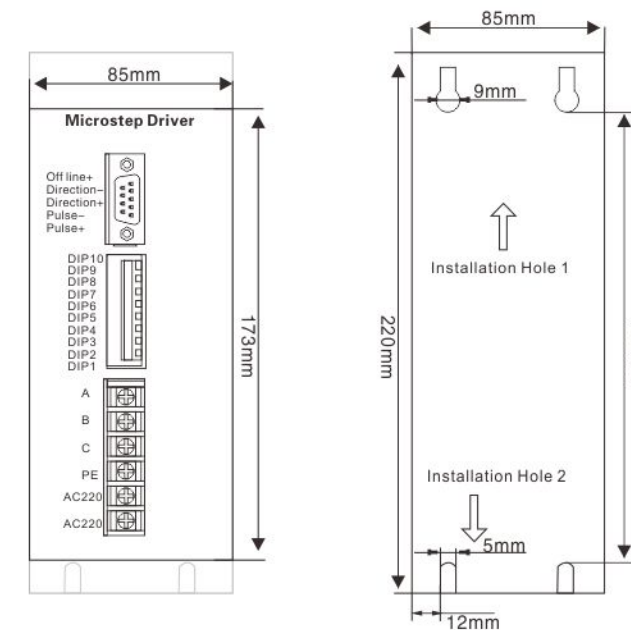


YH-3722

Properties

- Added full digital loop control in the mode by AC servo control principle, three-phase sine wave current driver' output can make three-phase hybrid motor low speed, no creep, no vibration area and minimal noise.
- When voltage amplifier stage reaches DC325V, stepper motor of high speed still can output a high torque.
- With perfect protection function of short circuit voltage and under voltage over heating, high reliability.
- With subdivision and semi flow function, variety of subdivision choices' minimum step angle can be set to 0.036°

YH-3722 Installation Dimension unit=mm



1000TDC & 1000MDC CNC system

Specifications

Function	Describe	Specifications	
Control axis	Controlled axis number	2 axis (X,Z axis)	
	Simultaneously controlled axes	2 axis	
Input instruction	Min unit	X:0.001mm Z:0.001mm	
	Min movement	0.001mm	
Feed	Max instruction	+99999.999mm	
	Max moving speed	60000mm/min	
	screw lead	0.000 1mm-500.000mm	
	Automatic deceleration and acceleration	Straight line,before the deceleration and acceleration	
	Feed speed ratio	0-150%	
	Fast speed ratio	Fo-100%,Fo setted by parameter	
Manual	Manual feed continuously	x,z;manual feed speed set by button.	
	Return to zero point of the machine	Three kinds of Back to zero: method B(Z pulse interruption), method c(Back to zero position switches),method A (floating zero)	
	Return to zero point of program	Back to the starting point Quickly	
	Single step increment feed	Feed equivalent0.001 1 mm , 0.01mm,0.1mm	
	Handwheel feed	Ratio:x 1 , x 10, x 100,axis choose: X - Z;button or external input to choose control ratio and axis	
Interpolation	Positioning, interpolation function	Straight line,arc,thread loop, tapping,drilling cycle,cylindrical, end face combined cycle,etc	
Storage and editing	Program storage capacity	PQI DOM:32M BIT	
	Stored program number	480	
	Program to edit	Insert, modify, delete, copy	
Parameters stored	Parameters stored	Parameter recovery, backup restore the factory low parameters, U disk import and export	
Display	LCD	8.4 inches, FTF true color display	
Display	Location, program, knife repairing, alarm, diagnosis, parameter, Set, U disk	Display content rich and intuitive	
U disk function	Program import and export	Yes	
	Parameters import and export	Yes	
	U disk system upgrade	Yes	
Serial communication	RS232	19200bps,use for program's import and export,system upgrade.	
Input port	Input port	54 way switch	
Output port	Output port	48 way switch output(OC output)	
Spindle function	Spindle function	Frequency converter analog contro or S1 ~ S4 gear control; spindle analog output ratio adjustable 0 ~ 150%	
M, S, T function	Tool function	Tool number: T01 - T08, knife repairing number: 01-24. Electric tool rest, cutter head or special tool rest; Trim knife repairing value during the operation; Program control dynamic cutter compensation	
		T auxiliary fuction	Yes,T remember code perform specific subroutine.
		M auxiliary function	Yes,M remember code perform specific subroutine
		MDI method	MDI shortcut
MDI traditional way	Enter the MDI input interface, input field		

Function	Describe	Specifications
Compensation function	Compensation function	Tool compensation/Backlash compensation/Screw pitch error compensation
Fixed cycle function	G90	Outer circle,inner circle turning circle(Cylindrical surface,Conical surface)
	G94	End face turning circle(Plane, cone)
	G92	Thread circle(Straight, tapered thread, male, inch, single, multiple threads, any thread angle)
	G86 · G87	Thread compound cycle
	G70,G71,G72,G73	compound cycle
	G74	End face drilling cycle
	G75	Cutting or cutting cycle
	G33	Rigid tapping cycle
Other thread function	G32	Single thread function
	G34	Variable pitch screw function
Chamfering function	G01 I/K/R	Straight line or arc chamfering
Signal jump function	G31	Signal jump in feed operation
Segment transition smoothly	G61 · G64	Program segment automatic speed transition, Transition curve dynamic adjust automatically
		Program or part of program segment carry out an infinite loop and domain and Limited cycle processing
Unlimited/limited circulatory function	M92	Program or part of program segment carry out an infinite loop and domain and Limited cycle processing
Condition of program jump function	M91	According to the external condition signal, jump to execute different instruction flow of the program
Extension export control	M20 M21 M22	Level or pulse output control at the extension export
Waiting function for external condition	M01	Wait for an external signal inputting, alarm when overtime
Output automatic repeat control function	M35	Suitable for automatically Feeding/ blanking ,test the feeding status, repeat continuous feeding
Rotation axis control (Y axis)	M26 M27 M28	Set rotation speed and direction, combined with G09(fast stopping) to locate indexing quickly after rotation stopping.
Other function	Chuck function	Inner card,outside card,foot switch input, and key operation
Lubrication function		Continuous/intermittent lubrication
Timing function		Boot processing time, cumulative chronograph
Incentive function		Single boot piece and cumulative machining piece
Three switch function		Yes
Run, pause, alarm status indicator function		Yes
The external switch signal C turn on, pause the program operation		Yes
Diagnostic display	Input state	Yes
	Output status display and control	Switch control of the output in the diagnosis
	Axis shift pulse number	Yes
	Spindle encoder line number	Yes
	Spindle analog voltage	Yes
Input wiring and terminal definition		Yes
Output wiring and terminal definition		Yes
Safety function	Forward/reverse direction hardware limit	Yes
	Forward/re verse direction software limit	Yes
	Emergency stop	Yes
	User defined alarm	Yes,2 self-defined alarm input
Debug function	Single stage operation, machine lock function	Yes
Driver interface	AC servo or three-phase hybrid drive	Control mode: "direction + pulse"



Type A



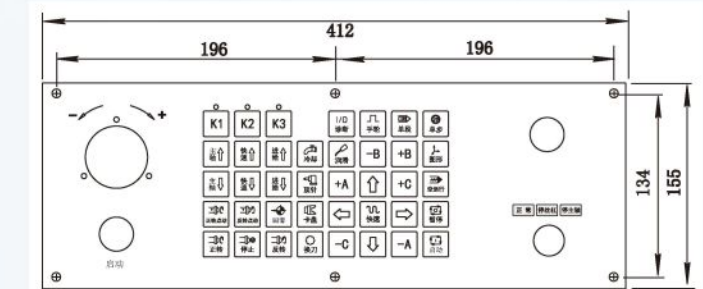
Type B



Type C

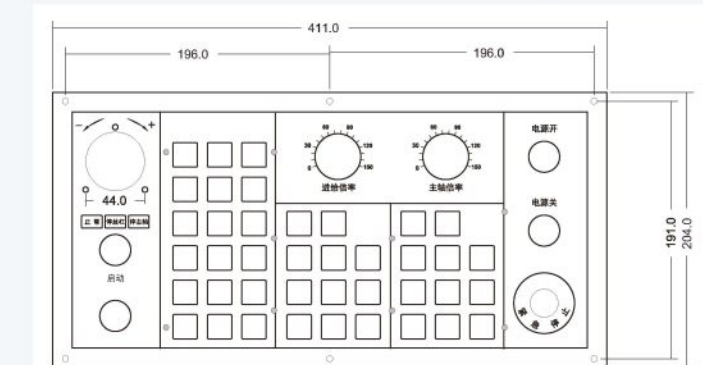


Installation dimensions (390x130mm)



Type (A, B)

Installation dimensions (390x183mm)



Type (C)

Application: 1000TDC: 2-5 axis CNC turning machine, CNC lathe
1000MDC: 2-5axis CNC milling machine, CNC router, CNC machining center

Product features

- ★By adopting the technology of bus modbus,ARM + DSP + FPGA technology
- ★Usb and RS232 interface,usb DNC functions (new);
- ★Network remote technology, on-line diagnosis user system directly(new);
- ★128 MB of user program space, an infinite number of program(new);
- ★Absolute type motor control technology(new);
- ★The fastest speed is 300 m/min, the processing speed is 0.01~30 m/min(new);
- ★Interpolation cycle is only 2ms,The control accuracy of 0.1 um(new);
- ★Grating ruler full closed loop control technology, the machining accuracy or less 2 um(new);
- ★Short linear program pre-reading technology, satisfy the high speed cutting carved(new);
- ★Chinese program name input technology, the intelligent human-machine interface(new);

System function

Number of control shaft	2~5 (X、Z、A、B、C)
The smallest programming	0.001mm
The most programming	±99999.999mm
The highest speed	60m/min
Feed speed	0.001~30m/min
Continuous manual	one axis or multiple axis at the same time
Line interpolation	Straight line, arc, screw thread interpolation
Cutter compensation	length of the compensation, nose of tool compensation
Cutter compensation input	Try to cut measuring input mode
Spindle function	gear, Double analog control, Rigid tapping
Handwheel function	panel, handheld
Handwheel processing	The handwheel processing function
Screen protection	The screen protection function
Tool rest function	Row tool rest, Electric tool post 99 knife
Communication function	RS232, Usb interface
Compensation function	Cutter, Clearance, Screw, Radius compensation
The program to edit	Relative/Absolute programming, Hybrid programming
Limit position function	Soft limit, hard limit
Thread function	Metric and inch Format, Straight thread, Taper thread and so on
Read ahead function	Short line pretreatment line 10000
Password protection	Multi-level password-protected
Input and output	I/O56x24
PLC programming	The user free design PLC function
The control of acceleration and deceleration	Line acceleration and deceleration, Exponential acceleration and deceleration
The encoder line number	Any Settings
User macro program	yes
Electronic gear function	yes
Deputy panel	Type A;Type B
For machine tools	lathe, Grinding machines, Gen bed, All kinds of special heavy machine tools

G code shows

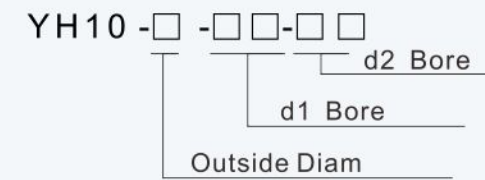
Rapid positioning	G00
Line interpolation	G01
Arc interpolation	G02/G03
Thread cutting	G32
cylinder or cone cutting loop	G90
End face cutting loop	G94
Screw thread cutting loop	G92
Fixed cycle of tapping	G93
Cylindrical rough turning loop	G71
End face rough turning loop	G72
Close cutting loop	G73
End face deep hole drilling loop	G74
Outside diameter grooving loop	G75
Composite thread cutting loop	G76
Program loop	G22, G800
Local coordinate system	G52
Check skip	G31, G311
Polar programming	G15, G16
Metric and inch programming	G20, G21
Coordinate setup, offset	G184, G185
Workpiece Coordinate System	G54-G59
Tool radius compensation	G40, G41, G42
Accurate positioning/Continuous path processing	G60/G64
Constant speed cutting	G96/G97
Feed mode	G98, G99
Returns the starting point	G26
Returns the fixed point	G25, G61, G60
Returns the reference point	G28
Delay instruction	G04
Macro program	G65, G66, G67
Miscellaneous Function	S, M, T

YH 10 Series Plum Flexible Spring Coupling



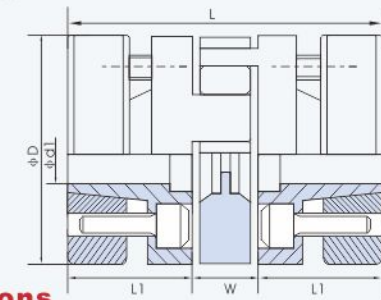
Body: Aluminum Alloy

YH 10 series plum flexible spring coupling, which adopt the expansion sleeve connection, is of zero backlash and high density. It can transfer big torque. Furthermore, the characteristics are quite same when it runs in a clockwise or anti-clockwise rotation. So it can absorb the vibration and compensate for radial, angle and axial deviation. It is usually used in the connection of servo motor, stepper motor, etc.



For example: YH10-55x19x24x78

YH10: series No. Aluminum material
55: Outside Diam: $\phi D=55\text{mm}$
d1 Bore: $\phi d1=19\text{mm}$
d2 Bore: $\phi d2=24\text{mm}$
Length: 78mm



Specifications

Model	Rated Torque (N.m)	Max Torque (N.m)	Max Speed (rpm)	Inertia torque (Kg.m ²)	Static torque (N.m/rad)	Radial deviation (mm)	Angular deviation (°)	Axial deviation (mm)	Weight (G)
YH10-20	7.4	14.8	20000	8.7×10^{-4}	510	0.02	1	±0.06	50
YH10-30	7.4	14.8	20000	8.7×10^{-4}	510	0.02	1	±0.06	50
YH10-40	9.5	19.0	15000	1.12×10^{-3}	550	0.02	1	±0.08	120
YH10-46	20	40	14000	3.2×10^{-3}	1510	0.02	1	±0.08	280
YH10-55	34	68	13000	4.5×10^{-3}	1510	0.02	1	±0.08	280
YH10-65	95	190	10500	9.1×10^{-3}	2800	0.02	1	±0.08	450
YH10-80	135	270	8600	1.9×10^{-2}	3600	0.02	1	±0.08	960
YH10-95	230	460	7500	2.2×10^{-2}	4700	0.02	1	±1.00	2310
YH10-95	380	760	6000	3.3×10^{-2}	5800	0.02	1	±1.00	3090

Note: The calculation of Inertia torque and weight is based on the max bore

Size of coupling

Model	$\phi d1$ $\phi d2$ Bore	ϕD	L	L1	W	M	Tighten torque (N.m)
YH10-20	4 5 6 8 9 10	20	30	10	10	M3	1.1
YH10-30	8 9 10 10 12 14	30	50	18.5	13	M4	1.3
YH10-40	11 12 14 16 19 20	40	66	25	16	M5	2.7
YH10-46	16 18 20 22 24 25	46	70	28	17	M6	4.5
YH10-55	14 16 19 24 25 28	55	78	30	18	M8	6.0
YH10-65	19 20 24 28 30 35 38	65	90	35	20	M8	6.0
YH10-80	24 28 30 35 38 40 45	80	114	45	24	M8	10.0
YH10-95	30 35 38 40 45 50	95	126	50	26	M8	35
YH10-105	35 40 45 50 55 60	105	140	56	28	M8	35

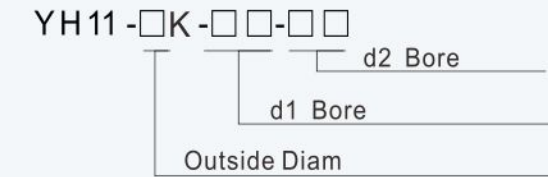
YH 11 Series Keyway Connect Diaphragm Coupling



Body: Aluminum Alloy

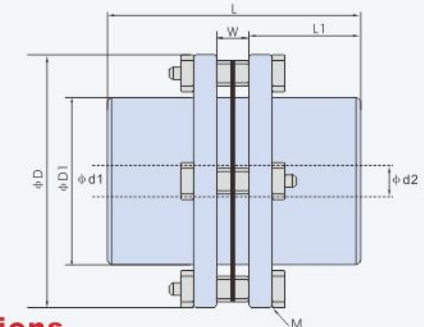
Body: Aluminum Alloy

Diaphragm coupling, which adopts the expansion sleeve connection of zero backlash and high density. It can transfer big torque. Furthermore, the characteristics are quite same when it runs in a clockwise and anti-clockwise rotation. So it can absorb the vibration and compensate for radial, angle and axial deviation. It is usually used in the connection of servo motor, stepper motor, etc.



For example: YH11-56Kx14x10x45

YH11: series No. Aluminum material
56K: Outside Diam: $\phi D=56\text{mm}$ 键槽联接
d1 Bore: $\phi d1=14\text{mm}$
d2 Bore: $\phi d2=10\text{mm}$
Length: 45mm



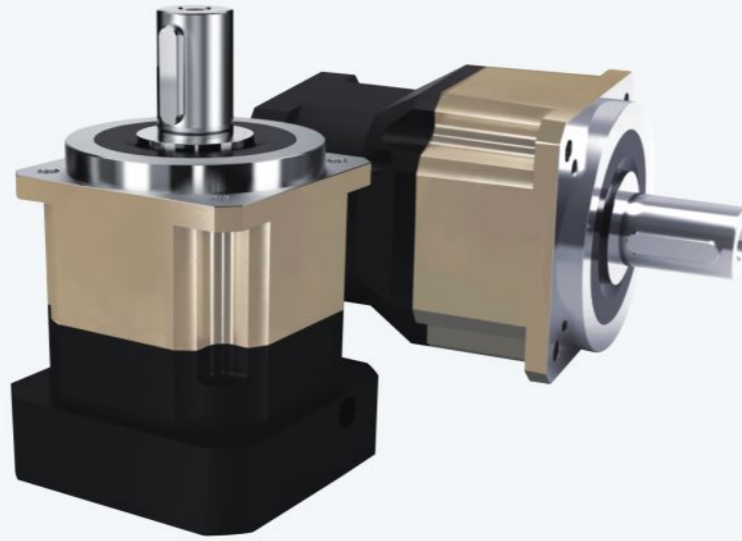
Specifications

Model	Rated Torque (N.m)	Max Torque (N.m)	Max Speed (rpm)	Inertia torque (Kg.m ²)	Static torque (N.m/rad)	Radial deviation (mm)	Angular deviation (°)	Axial deviation (mm)	Weight (G)
YH11-46K	25	50	20000	0.1×10^{-3}	15×10^{-3}	0.02	1	±0.5	300
YH11-56K	25	50	20000	0.1×10^{-3}	15×10^{-3}	0.02	1	±0.5	300
YH11-68K	55	110	15000	0.28×10^{-3}	28×10^{-3}	0.02	1	±0.8	500
YH11-82K	80	160	14000	0.85×10^{-3}	81×10^{-3}	0.02	1	±1.0	1000
YH11-94K	170	340	11000	1.5×10^{-3}	165×10^{-3}	0.02	1	±1.0	1400
YH11-104K	240	480	9800	2.4×10^{-3}	240×10^{-3}	0.02	1	±1.0	2100
YH11-126K	420	840	8000	6.3×10^{-3}	410×10^{-3}	0.02	1	±1.0	3410
YH11-144K	700	1400	6800	9.2×10^{-3}	760×10^{-3}	0.02	1	±1.0	4900

Note: The calculation of Inertia torque and weight is based on the max bore

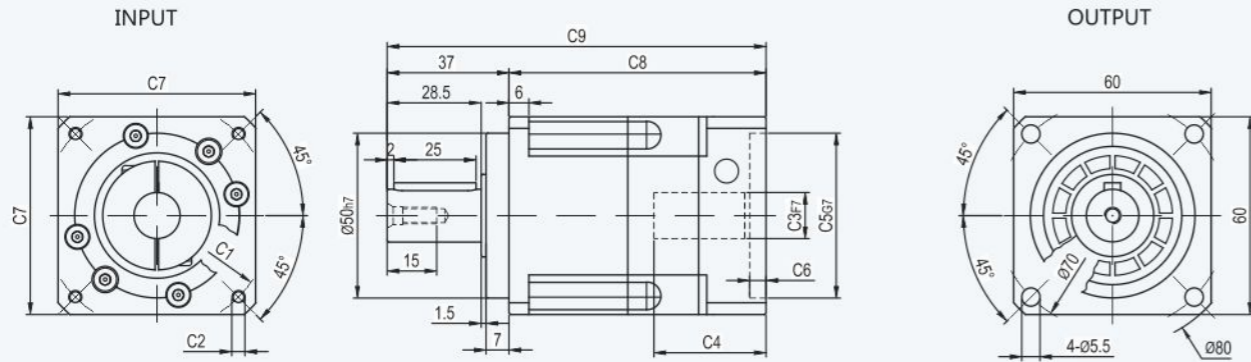
Size of coupling

Model	$\phi d1$ $\phi d2$ Bore	ϕD	$\phi D1$	L	L1	W	M
YH11-46K	10 11 12 14 16 19 20	46	32	45	20	5	M5
YH11-56K	8 10 11 12 14 16 18 19 20	56	32	45	20	5	M5
YH11-68K	11 14 16 18 19 20 22 24 25	68	40	56	25	6	M6
YH11-82K	14 16 18 19 20 24 25 28 30 35	82	54	66	30	6	M6
YH11-94K	19 20 24 28 30 35 38	94	58	68	30	8	M8
YH11-104K	24 28 30 35 38 40 45	104	68	80	35	10	M8
YH11-126K	30 35 38 40 45 50	126	78	91	40	11	M10
YH11-144K	35 40 45 50 55 60	144	88	102	45	12	M12

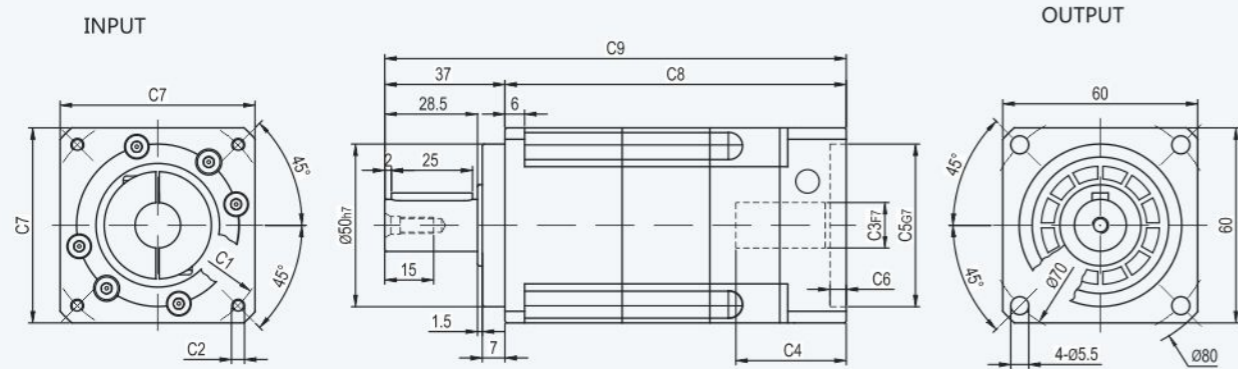


Outline dimension sheet

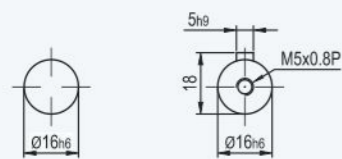
FAB-060-L1



FAB-060-L2



Output Diameter



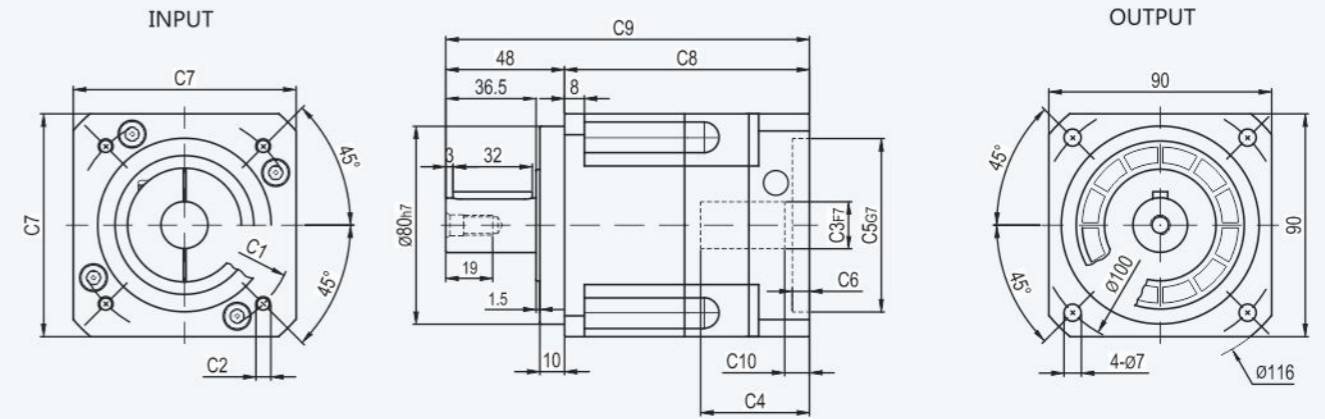
axial type S1 axial type S2

Dimensions	C1	C2	C3	C4	C5	C6	C7	C8	C9
FAB-060-L1	Ø70	4-M4x10, 4-M5x12	Ø11, Ø14	34	Ø50	5	60	78	115
	Ø90	4-M5x12, 4-M6x12	Ø19	44	Ø70	5	80	88	125
FAB-060-L2	Ø70	4-M4x10, 4-M5x12	Ø11, Ø14	34	Ø50	5	60	105	142

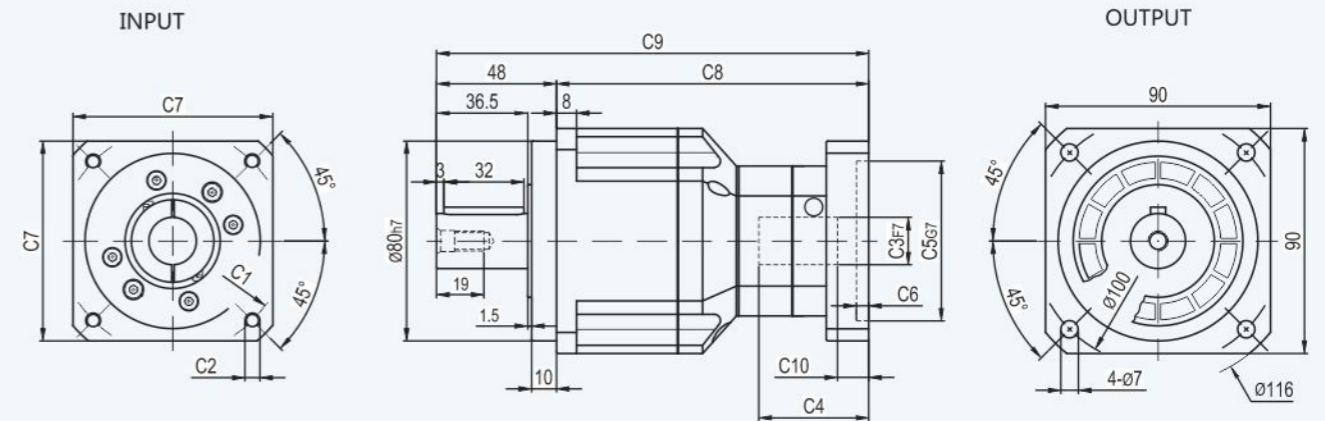
* C1~C7 are motor (metric standard) specific dimensions, which could be customised.

Outline dimension sheet

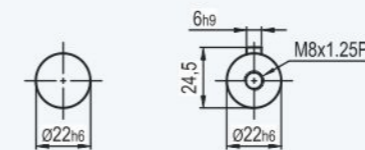
FAB-090-L1



FAB-090-L2



Output Diameter



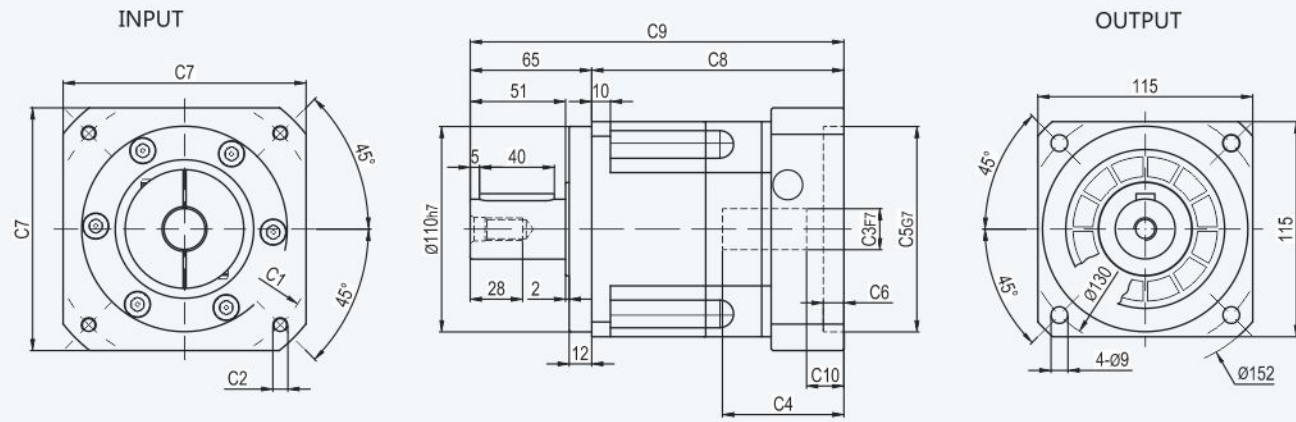
axial type S1 axial type S2

Dimensions	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10
	Ø90	4-M5x12, 4-M6x12	Ø19	44	Ø70	7	90	99	147	8
	Ø100	4-M6x12	Ø16	44	Ø80	7	90	99	147	7
FAB-090-L1	Ø115	4-M8x20	Ø19, Ø22	50	Ø95	7	100	105	153	13
	Ø115	4-M8x25	Ø19, Ø22	60	Ø95	8	100	115	163	23
	Ø145	4-M8x25	Ø19, Ø22, Ø24	60	Ø110	8	130	115	163	23
	Ø70	4-M4x10, 4-M5x12	Ø11, Ø14	34	Ø50	5	60	115	163	5.5
FAB-090-L2	Ø90	4-M5x12, 4-M6x12	Ø19	44	Ø70	5	80	125	173	16.5
	Ø100	4-M6x12	Ø16	38.5	Ø80	5	86	119.5	167.5	10

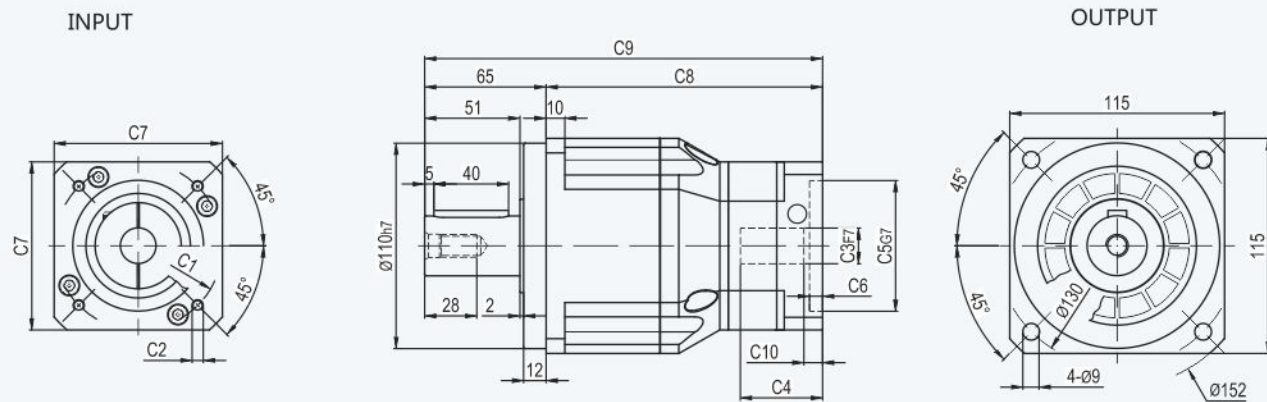
* C1~C7 are motor (metric standard) specific dimensions, which could be customised.

■ Outline dimension sheet

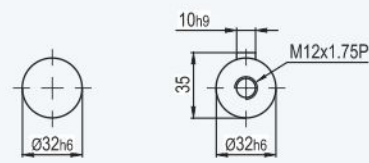
FAB-115-L1



FAB-115-L2



Output Diameter



axial type S1

axial type S2

Dimensions	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10
FAB-115-L1	Ø145	4-M8x25	Ø19,Ø22,Ø24	65	Ø110	11	130	135	200	20
	Ø200	4-M12x28	Ø35	80.5	Ø114.3	6	180	150.5	215.5	36.5
	Ø90	4-M5x12, 4-M6x12	Ø19	44	Ø70	7	90	148	213	8
	Ø100	4-M6x12	Ø16	44	Ø80	7	90	148	213	7
FAB-115-L2	Ø115	4-M8x20	Ø19,Ø22	50	Ø95	7	100	154	219	13
	Ø115	4-M8x25	Ø19,Ø22	60	Ø95	8	100	164	229	23
	Ø145	4-M8x25	Ø19,Ø22,Ø24	60	Ø110	8	130	164	229	23

* C1~C7 are motor (metric standard) specific dimensions, which could be customised.

■ Gear box performance information

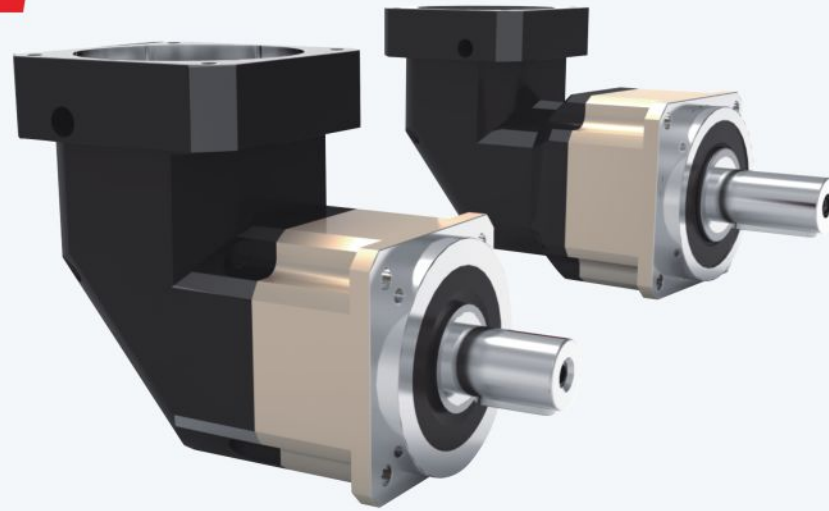
Pecifications	stage	ratio ¹	FAB042	FAB060	FAB090	FAB115	FAB142	FAB180	FAB220	
Rated output torque T _{2N}	Nm	1	3	20	55	130	208	342	588	1,140
			4	19	50	140	290	542	1,050	1,700
			5	22	60	160	330	650	1,200	2,000
			6	20	55	150	310	600	1,100	1,900
			7	19	35	140	300	550	1,100	1,800
			8	17	35	120	260	500	1,000	1,600
			10	14	23	48	140	370	520	1,220
			12	20	55	130	208	342	588	1,140
		2	15	20	55	130	208	342	588	1,140
			20	19	50	140	290	542	1,050	1,700
			25	22	60	160	330	650	1,200	2,000
			30	22	60	160	330	650	1,200	2,000
			35	22	60	160	330	650	1,200	2,000
			40	22	60	160	330	650	1,200	2,000
50	22		60	160	330	650	1,200	2,000		
60	20		55	150	310	600	1,100	1,900		
Max output torque T _{2m}	Nm	1,2	3~100	5,000	5,000	8,000	8,000	6,000	6,000	4,000
			3~100	10,000	10,000	8,000	8,000	6,000	6,000	4,000
			3~10	-	-	≤1	≤1	≤1	≤1	≤1
			12~100	-	-	≤3	≤3	≤3	≤3	≤3
			3~10	≤3	≤3	≤3	≤3	≤3	≤3	≤3
			12~100	≤5	≤5	≤5	≤5	≤5	≤5	≤5
			3~10	≤5	≤5	≤5	≤5	≤5	≤5	≤5
			12~100	≤7	≤7	≤7	≤7	≤7	≤7	≤7
			3~100	3	7	14	25	50	145	225
			3~100	780	1,530	3,250	6,700	9,400	14,500	50,000
3~100	350	630	1,300	3,000	4,000	6,200	35,000			
3~100	390	765	1,625	3,350	4,700	7,250	25,000			
3~100	20,000*									
3~10	≥97%									
12~100	≥94%									
3~10	0.5	1.3	3.7	7.8	14.5	29	48			
12~100	0.8	1.9	4.1	9	17.5	33	60			
3~100	-10°C~+90°C									
3~100	Synthetic Lubricant									
3~100	IP65									
3~100	Any direction									
3~100	≤56	≤58	≤60	≤63	≤65	≤67	≤70			

■ Gearbox rotate inertia

Pecifications	stage	ratio ¹	FAB042	FAB060	FAB090	FAB115	FAB142	FAB180	FAB220	
Inertia (J1)	kg · cm ²	1	3	0.03	0.16	0.61	3.25	9.21	28.98	69.61
			4	0.03	0.14	0.48	2.74	7.54	23.67	54.37
			5	0.03	0.13	0.47	2.71	7.42	23.29	53.27
			6	0.03	0.13	0.45	2.65	7.25	22.75	51.72
			7	0.03	0.13	0.45	2.62	7.14	22.48	50.97
			8	0.03	0.13	0.44	2.58	7.07	22.59	50.84
			10	0.03	0.13	0.44	2.57	7.03	22.51	50.56
			12	0.03	0.03	0.13	0.47	2.71	7.42	23.29
		2	15	0.03	0.03	0.13	0.47	2.71	7.42	23.29
			20	0.03	0.03	0.13	0.47	2.71	7.42	23.29
			25	0.03	0.03	0.13	0.47	2.71	7.42	23.29
			30	0.03	0.03	0.13	0.47	2.71	7.42	23.29
			35	0.03	0.03	0.13	0.47	2.71	7.42	23.29
			40	0.03	0.03	0.13	0.47	2.71	7.42	23.29
50	0.03		0.03	0.13	0.44	2.57	7.03	22.51		
60	0.03		0.03	0.13	0.44	2.57	7.03	22.51		
70	0.03	0.03	0.13	0.44	2.57	7.03	22.51			
80	0.03	0.03	0.13	0.44	2.57	7.03	22.51			
100	0.03	0.03	0.13	0.44	2.57	7.03	22.51			

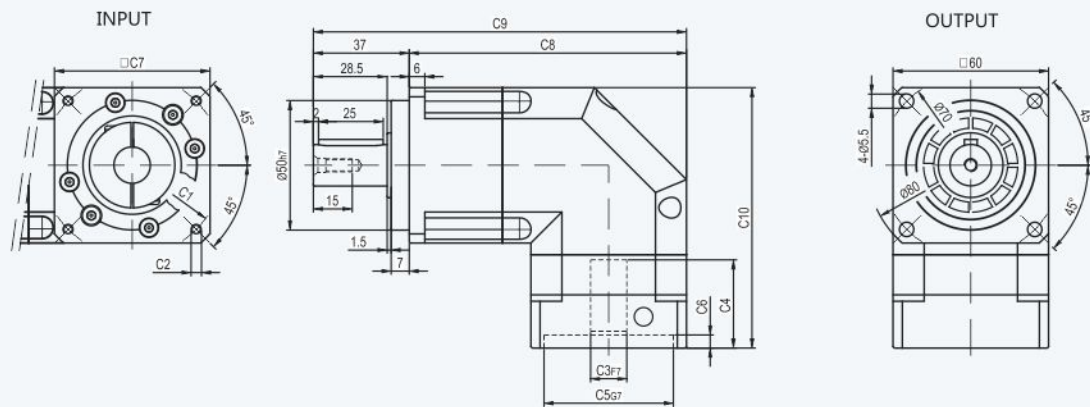
1. ratio (i = N_{in} / N_{out})
*continue running will cut the half service life

2. Applied to the output shaft center when output 100 rpm

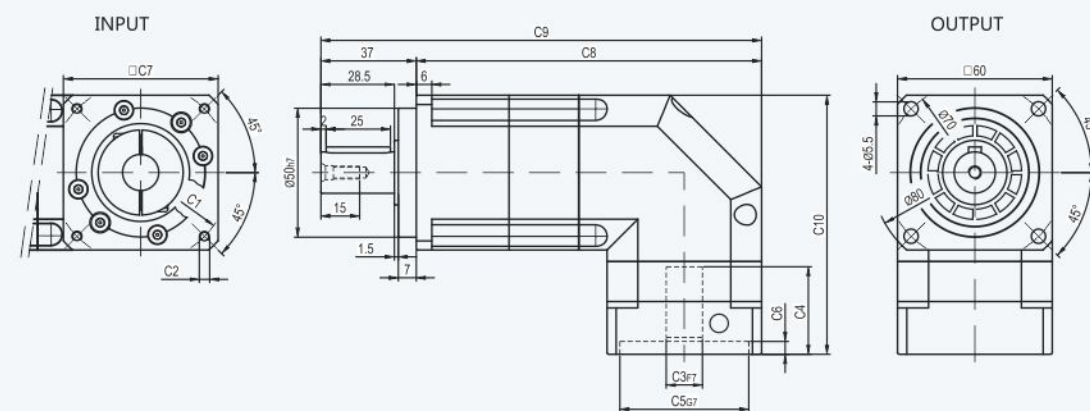


Outline dimension sheet

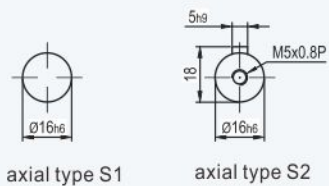
FABR-060-L1



FABR-060-L2



Output Diameter

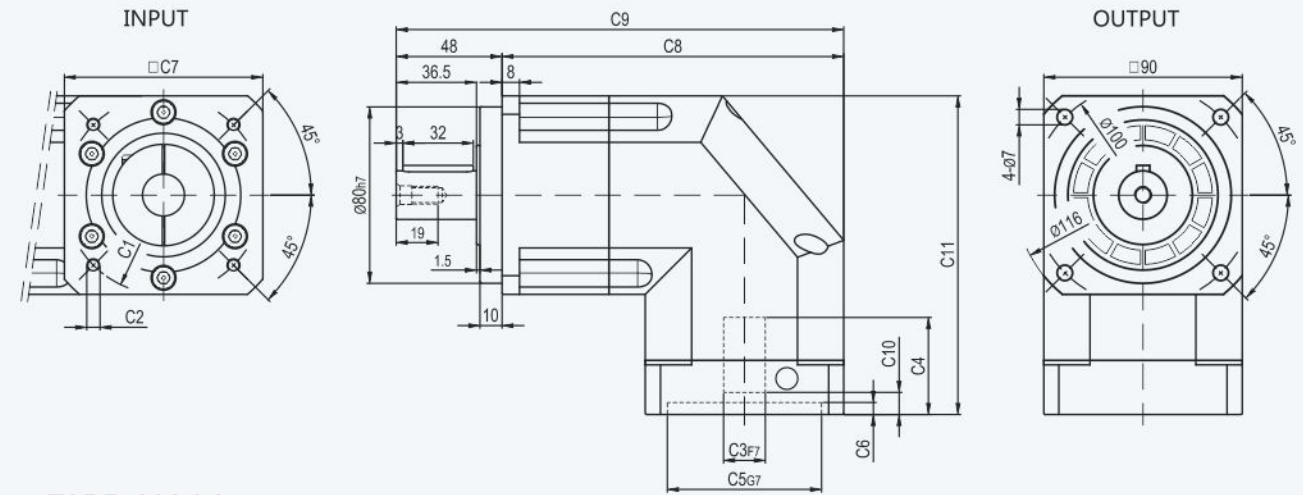


Dimensions	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10
FABR-060-L1	Ø70	4-M4x10, 4-M5x12	Ø11, Ø14	34	Ø50	5	60	107	144	100.5
	Ø90	4-M5x12, 4-M6x12	Ø19	44	Ø70	5	80	117	154	110.5
FABR-060-L2	Ø70	4-M4x10, 4-M5x12	Ø11, Ø14	34	Ø50	5	60	134	171	100.5

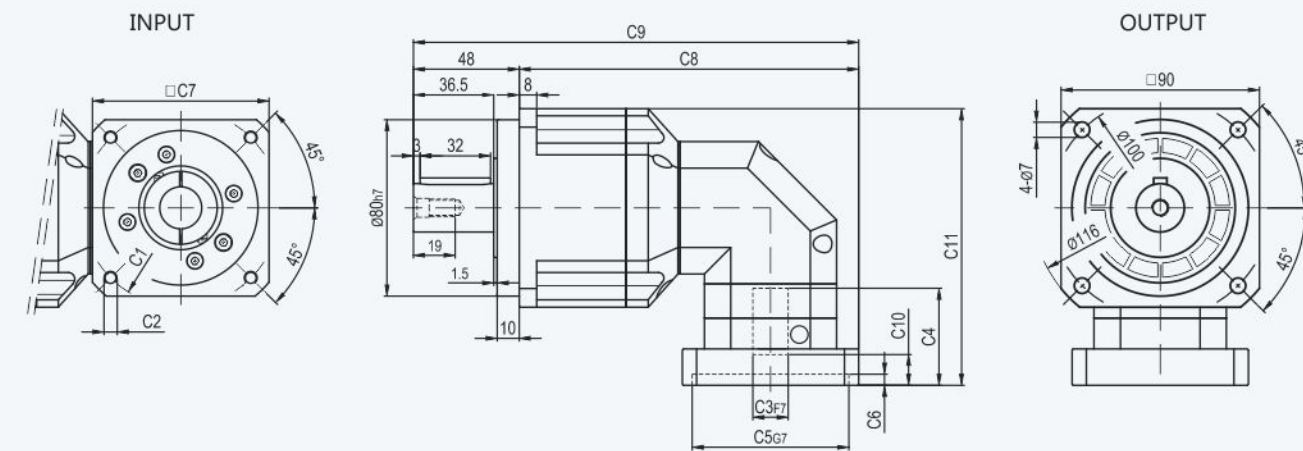
* C1~C7 are motor (metric standard) specific dimensions, which could be customised.

Outline dimension sheet

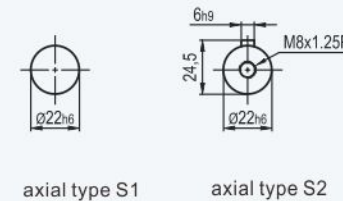
FABR-090-L1



FABR-090-L2



Output Diameter

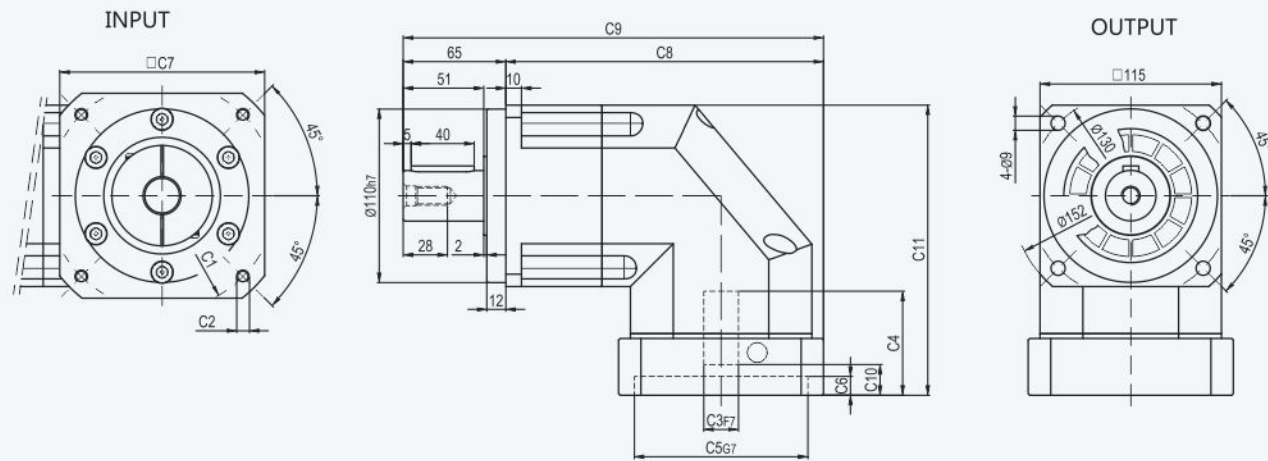


Dimensions	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11
	Ø90	4-M5x12, 4-M6x12	Ø19	44	Ø70	6	90	155	203	9	142
	Ø100	4-M6x12	Ø16	44	Ø80	5	90	155	203	8	142
FABR-090-L1	Ø115	4-M8x20	Ø19, Ø22	50	Ø95	8	100	160	208	14	148
	Ø115	4-M8x25	Ø19, Ø22	57	Ø95	8	100	160	208	21	155
	Ø145	4-M8x25	Ø19, Ø22, Ø24	60	Ø110	11	130	175	223	24	158
	Ø70	4-M4x10, 4-M5x12	Ø11, Ø14	34	Ø50	5	60	144	192	5.5	115.5
FABR-090-L2	Ø90	4-M5x12, 4-M6x12	Ø19	44	Ø70	5	80	154	202	16.5	125.5
	Ø100	4-M6x12	Ø16	38.5	Ø80	5	86	157	205	10	120

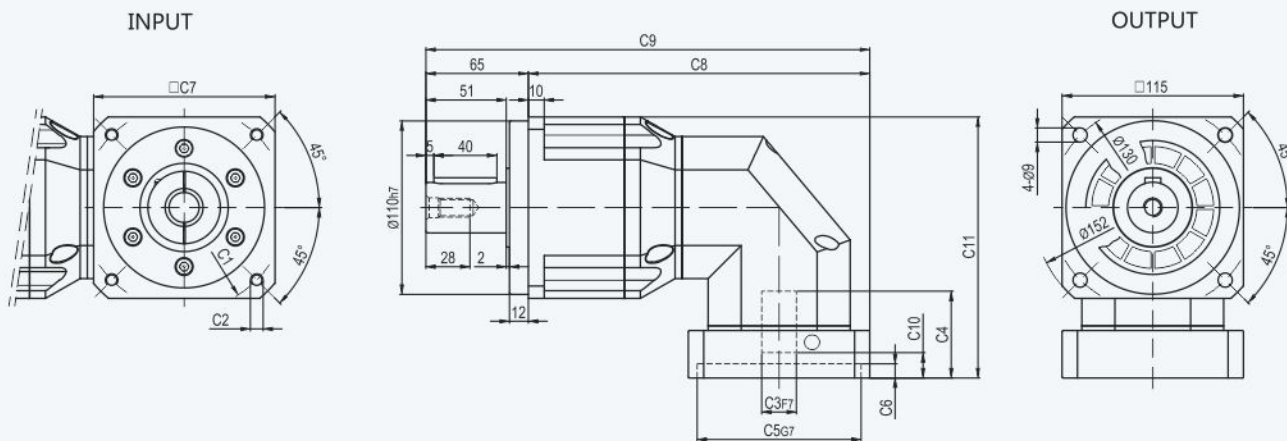
* C1~C7 are motor (metric standard) specific dimensions, which could be customised.

■ Outline dimension sheet

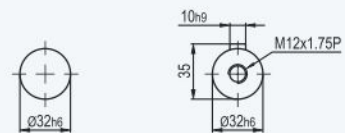
FABR-115-L1



FABR-115-L2



Output Diameter



axial type S1 axial type S2

Dimensions	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11
FABR-115-L1	Ø145	4-M8x25	Ø19,Ø22,Ø24	66	Ø110	14	130	201.5	266.5	19.5	184
	Ø200	4-M12x28	Ø35	81	Ø114.3	21	180	226.5	291.5	35.5	199
	Ø90	4-M5x12, 4-M6x12	Ø19	44	Ø70	6	90	204	269	9	154.5
	Ø100	4-M6x12	Ø16	44	Ø80	5	90	204	269	8	154.5
FABR-115-L2	Ø115	4-M8x20	Ø19,Ø22	50	Ø95	8	100	209	274	14	160.5
	Ø115	4-M8x25	Ø19,Ø22	57	Ø95	8	100	209	274	21	167.5
	Ø145	4-M8x25	Ø19,Ø22,Ø24	60	Ø110	11	130	224	289	24	170.5

* C1~C7are motor(metric standard) specific dimensions, which could be customised.

■ Gear box performance information

Pecifications		stage	ratio ¹	FABR042	FABR060	FABR090	FABR115	FABR142	FABR180	FABR220
Rated output torque T _{2N}	Nm	1	3	20	55	130	208	342	588	1,140
			4	19	50	140	290	542	1,050	1,700
			5	22	60	160	330	650	1,200	2,000
			6	20	55	150	310	600	1,100	1,900
			7	19	35	140	300	550	1,100	1,800
			8	17	35	120	260	500	1,000	1,600
			10	14	23	48	140	370	520	1,220
			14	-	35	140	300	550	1,100	1,800
			20	-	23	48	140	370	520	1,220
			15	20	55	130	208	342	588	1,140
		20	19	50	140	290	542	1,050	1,700	
		25	22	60	160	330	650	1,200	2,000	
		30	22	60	160	330	650	1,200	2,000	
		35	22	60	160	330	650	1,200	2,000	
		40	22	60	160	330	650	1,200	2,000	
		50	22	60	160	330	650	1,200	2,000	
		60	22	60	160	330	650	1,200	2,000	
		70	22	60	160	330	650	1,200	2,000	
		80	22	60	160	330	650	1,200	2,000	
		100	22	60	160	330	650	1,200	2,000	
120	-	-	150	310	600	1,100	1,900			
140	-	-	140	300	550	1,100	1,800			
160	-	-	120	260	500	1,000	1,600			
200	-	-	48	140	370	520	1,220			
Max output torque T _{2B}	Nm	1,2	3~200	Three times rated output torque						
Rated input Speed n ₁	rpm	1,2	3~200	5,000	5,000	4,000	4,000	3,000	3,000	2,000
Max input Speed n _{1B}	rpm	1,2	3~200	10,000	10,000	8,000	8,000	6,000	6,000	4,000
Micro Backlash P0	arcmin	1	3~20	-	-	≤2	≤2	≤2	≤2	≤2
		2	15~200	-	-	≤4	≤4	≤4	≤4	≤4
Precision Backlash P1	arcmin	1	3~20	≤4	≤4	≤4	≤4	≤4	≤4	≤4
		2	15~200	≤7	≤7	≤7	≤7	≤7	≤7	≤7
Standard Backlash P2	arcmin	1	3~20	≤6	≤6	≤6	≤6	≤6	≤6	≤6
		2	15~200	≤9	≤9	≤9	≤9	≤9	≤9	≤9
Torsional Rigidity	Nm/arcmin	1,2	3~200	3	7	14	25	50	145	225
Max.Radial Load F _{2B} ²	N	1,2	3~200	780	1,530	3,250	6,700	9,400	14,500	50,000
Max. Axial Load F _{2A1B} ²	N	1,2	3~200	350	630	1,300	3,000	4,000	6,200	35,000
Max. Axial Load F _{2A2B} ²	N	1,2	3~200	390	765	1,625	3,350	4,700	7,250	25,000
Service life	hr	1,2	3~200	20,000*						
		1	3~20	≥95%						
Efficiency η	%	2	15~200	≥92%						
		1	3~20	0.9	2.1	6.4	13	24.5	51	83
Weight	kg	2	15~200	1.2	1.5	7.8	14.2	27.5	54	95
Operating Temp.	°C	1,2	3~200	-10°C~+90°C						
Lubrication		1,2	3~200	Synthetic Lubricant						
Protection Index		1,2	3~200	IP65						
Mounting Direction		1,2	3~200	Any direction						
Noise Level(n ₁ =3000rpm)	dB	1,2	3~200	≤61	≤63	≤65	≤68	≤70	≤72	≤74

■ Gearbox rotate inertia

Pecifications		stage	ratio ¹	FABR042	FABR060	FABR090	FABR115	FABR142	FABR180	FABR220
Inertia (J1)	kg · cm ²	1	3~10	0.09	0.35	2.25	6.84	23.4	68.9	135.4
			14	-	0.07	1.87	6.25	21.8	65.6	119.8
			20	-	0.07	1.87	6.25	21.8	65.6	119.8
		2	15~100	0.09	0.09	0.35	2.25	6.84	23.4	68.9
			120~200	-	-	0.31	1.87	6.25	21.8	65.6

1.ratio(i=N_{in}/N_{out})
*continue running will cut the half service life

2. Applied to the output shaft center when output 100 rpm