


✦ The user manual describes all items concerning the operations of this AC servo motor in detail as much as possible. However, it's impractical to give particular descriptions for all unnecessary and/or unavailable operations on the motor due to the limit of the manual, specific operations of the product and other causes. Therefore, the operations not specified in this manual may be considered impossible or unallowable.

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Dear user,

It's our pleasure for your patronage and purchase of this GSK SJT series AC Servo Motor(hereinafter called "motor") made by GSK CNC Equipment Co., Ltd.

Company profile

GSK—GSK CNC Equipment Co., Ltd is the largest production and marketing enterprise of the CNC system in China currently. It is the Numerical Control industrial base of South China, and the undertaking enterprise of the 863 national main project Industrialization Support Technology for Medium Numerical Control System as well as one of the 20 basic equipment manufacture enterprises in Guangdong province. It has been taking up the research and development, design and the manufacture of machine CNC system (CNC device, drive unit and servo motor) in recent 10 years. Now it has developed into a large high-tech enterprise integrated with research, education, industry and trade by enhancing the popularization and trade of CNC machine tools. There are more than 1400 staffs in this company that involves 4 doctors, more than 50 graduate students and 500 engineers and more than 50 among them are qualified with senior technical post titles. The high performance-cost ratio products of GSK are popularized in China and Southeast Asia. And the market occupation of GSK's product dominates first and the turnout and sale ranks the top in internal industry for successive 7 years from the year 2000 to 2006, which makes it the largest CNC manufacture base throughout China.

The main products provided by our company includes the NC equipments and devices such as GSK series turning machine, milling machine, machining center CNC system, DA98, DA98A, DA98B, DA98D series full digital stepper motor drive device, DY3 series compound stepper driver device, DF3 series response stepper motor driver device, GSK SJT series AC servo motors, CT-L NC slider and so on. The current national standard (and international standard), industry standard, as well as the enterprise standard (or enterprise internal standard) as a supplementary, are completely implemented in our production process. The capability of abundant technology development and complete production and quality system qualified by us will undoubtedly ensure the reliable product to serve our customers. 24~48 hours technological support and service can be easily and promptly provided by our complete service mechanism and tens of service offices

distributed in provinces around China and abroad. The pursuit of “excellent product and superexcellent service” has made the GSK what it is now, and we will spare no efforts to continue to consummate this South China NC industry base and enhance our national NC industry by our managerial concept of “century enterprise, golden brand”.

Technological Spot Service

You can ask for spot service if you have the problems that can't be solved by telephone. We will send the engineers authorized to your place to resolve the technological problems for you.

Warning and Precaution

1. There is photoelectric encoder inside the motor, the motor must not be hammered when it is installed; the photoelectric encoder must not be demounted and installed by user independently, otherwise the corresponding position (zero) of wind between the encoder and motor is damaged to cause that the motor cannot run.
2. Under the normal environment, the insulated resistance of motor wind to shell measured by 1000V Ohmmeter should be less than 20 MΩ.
3. The wirings of motor and driver must be properly connected, which are described in the manual and which can ensure the grounding is safe and fastened.
4. The motor can run with load after there is no noise and vibration when it runs without load from zero to max. speed.
5. Don't touch the shaft and shell of the motor which is running.
6. The operator only with the corresponding qualification can tune and maintain the motor.
7. Do not move the motor by dragging its wires (cables) or shaft.
8. We are not responsible for the motor changed by user and the warranty for the motor will be void for the changing.

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1. Product Features

GSK ZJY spindle servo motor is new high performance three-phase induction one independently by GSK CNC Equipment Co., Ltd., employed with F-level insulation structure, exclusive corona enameled wire to frequency inverter and high speed and high precise encoder. It has the characteristics as follows; compact, high precision, low noise, high reliability, high cost-performance and so on.

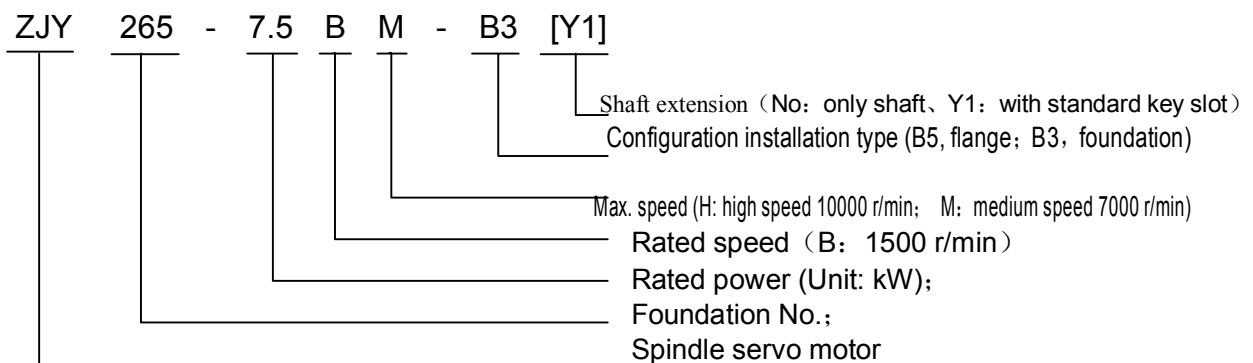


2. Working Ambient

- 2.1 The altitude should not less than 1000m
- 2.2 The environment temperature should be within $-10^{\circ}\text{C} \sim +70^{\circ}\text{C}$.
- 2.3 The relative humidity should be less than 90% (no condensing) .
- 2.4 AC steady voltage: $(1\pm 10\%) \times \text{AC rated voltage}$.

3. Motor model Explanation

Sample: ZJY265-7.5BM-B3Y1



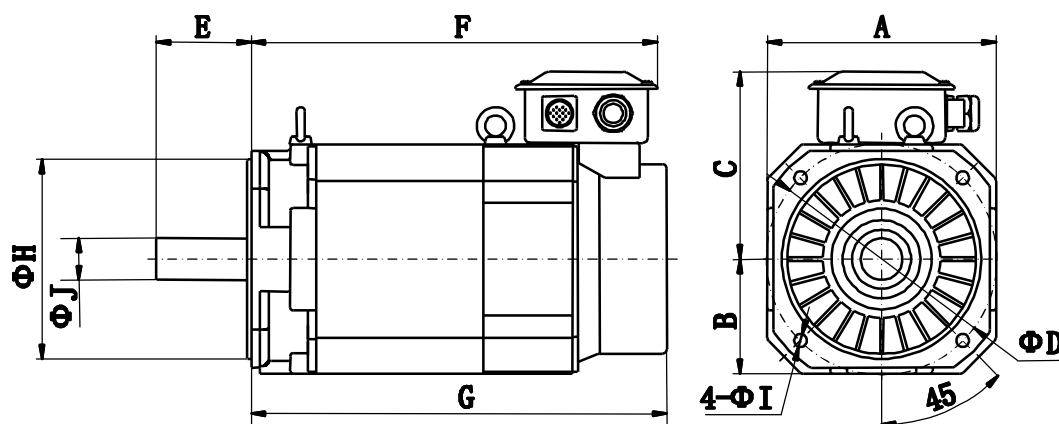
4. Motor primary technical parameters and dimensions

See table 1 for the motor primary technical parameters and dimensions.

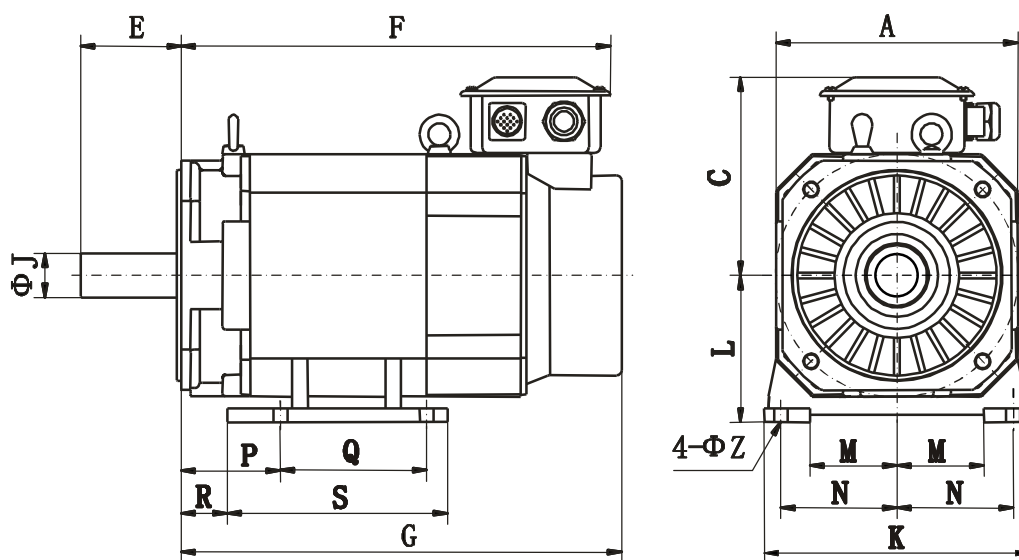
Table 1

Specification Items	ZJY208-2.2B (Substitution of ZJY132-2.2)	ZJY208-3.7B (Substitution of ZJY132-3.7)	ZJY208-5.5B (Substitution of ZJY132-5.5)	ZJY208-7.5B (Substitution of ZJY132-7.5)	ZJY265-7.5B (Substitution of ZJY160-7.5)	ZJY265-11B (Substitution of ZJY160-11)	ZJY265-15B (Substitution of ZJY160-15)	
Rated power (kW)	2.2	3.7	5.5	7.5	7.5	11	15	
Driver voltage (V)	3-phase AC 380							
Rated current (A)	9.3	8.9	13.7	18.4	18	26	35	
Rated frequency (Hz)	50	50	50	50	50	50	50	
Rated torque (N·m)	14	24	35	48	49	72	98	
30min power (kW)	3.7	5.5	7.5	11	11	15	18.5	
30min current (A)	13.6	13	18	25	26	34	42	
30min torque (N·m)	24	35	48	70	74	100	123	
Rated speed (r/min)	1500	1500	1500	1500	1500	1500	1500	
Constant power range (r/min)	When max. speed is H: 1500~6000; When max. speed is M: 1500~5000							
Max. speed (r/min)	M、H	M、H	M、H	M、H	M	M	M	
Moment inertia (kg·m ²)	0.0103	0.0168	0.0238	0.0309	0.0413	0.0744	0.0826	
Weight (kg)	49	51	66	77	89	107	125	
Installation type	IM B5 or B3							
Protection degree	IP54 (GB/T 4942.1—2001)							
Insulation degree	F (GB 1094.3—2003)							
Vibration degree	R (GB 10068—2000)							
Imbedded encoder	Incremental 1024 p/r							
Cooling fan power (V)	3-phase AC 380V 50Hz 40W 0.14A				3-phase AC 380V 50Hz 70W 0.21A			
External dimensions (See figures)	A	208	208	208	208	265	265	265
	B	104	104	104	104	132	132	132
	C	188	188	188	188	216	216	216
	D	215	215	215	215	265	265	265
	E	60	60	80	80	110	110	110
	F	363	413	468	523	443	488	533
	G	187	237	292	347	260	305	350
	H	180h7	180h7	180h7	180h7	230h7	230h7	230h7
	I	15	15	15	15	15	15	15
	J	28h6	28h6	38h6	38h6	48h6	48h6	48h6
	K	272	272	272	272	300	300	300
	L	106	106	106	106	135	135	135
	N	180	180	180	180	230	230	230

Specification	ZJY208-2.2B (Substitution of ZJY132-2.2)	ZJY208-3.7B (Substitution of ZJY132-3.7)	ZJY208-5.5B (Substitution of ZJY132-5.5)	ZJY208-7.5B (Substitution of ZJY132-7.5)	ZJY265-7.5B (Substitution of ZJY160-7.5)	ZJY265-11B (Substitution of ZJY160-11)	ZJY265-15B (Substitution of ZJY160-15)
Items							
	P	40	40	40	40	40	40
	Q	160	210	265	320	225	315
	Z	12	12	12	12	15	15



Flange installation pattern (B5)

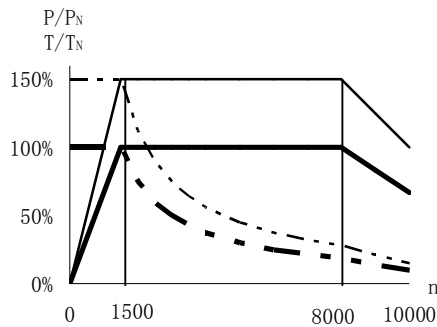


Foot installation pattern (B3)

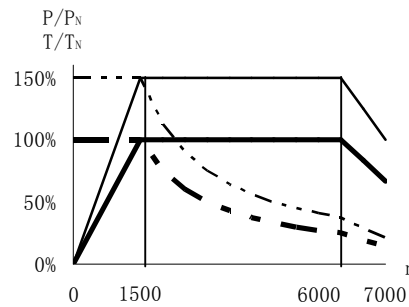
Fig. 1

5. Mechanical Characteristic Curve

P/P_N _____ Power/rated power; T/T_N _____ Torque/rated torque;
 n _____ Rated speed



ZJY132 serial motor characteristic curve



ZJY160 serial motor characteristic curve

Illustration:

_____ Power for continuous working status; _____ Power for 30min working status;
 Torque for continuous working status; Torque for 30min working status

Fig.2

6. Connecting the Motor with the Drive Unit

6.1 The 3-phase windings U, V, W of the motor and the shell (grounding) are led out by a 4-core socket connector and the correspondence table is as Fig.6: U, V, W and the shell of the motor are connected with the circuit U, V, W, PE terminals of the driver respectively. The cooling direction is from the shaft head to the end.

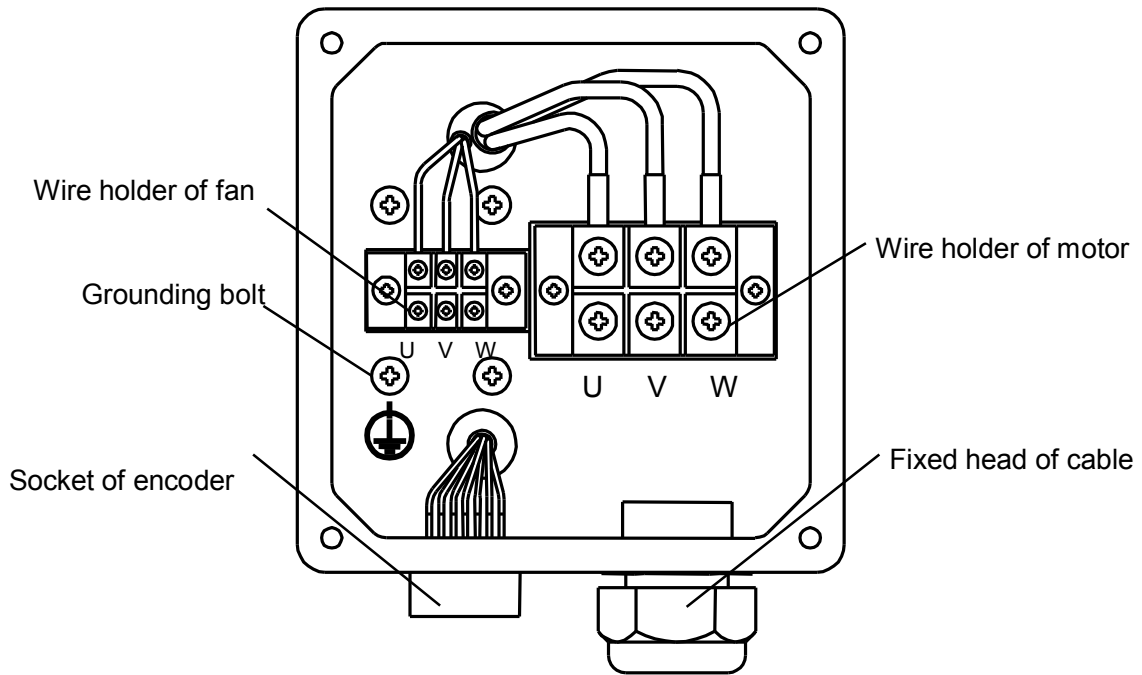


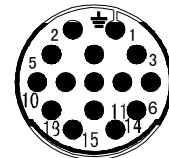
Fig. 3

6.2 The photoelectric encoder lead wires are led out by a 15-core connector shown in table 6.

The leading wires are connected with the plug of driver feedback signal CN2.

Table 2

Lead wire of encode	Machine shell	V _{CC}	GND	A	\bar{A}	B	\bar{B}	Z	\bar{Z}
Socket No.	1	2	3	4	7	5	8	6	9



7. Motor Storage

The motor should be stored in a clean and well ventilated place within $-40^{\circ}\text{C}\sim+55^{\circ}\text{C}$ with the relative humidity less than 95% and without corrosive in air.

8. Motor Transportation

Handle the motor with care in transportation to prevent the collision and impact from the motor and from the corrosive materials such as acid and alkaline.

9. Quality guarantee

We are responsible for the free reparation for the motor that can't run or damaged because of the inferior quality within 18 months after delivery date (by delivery credence) on the condition that the transportation, storage, installation, debugging, maintenance regulations for the motor usage are properly observed by user.

All specifications and designs are subject to change without notice.

Sincere thanks for your friendly patronage for the products made by GSK CNC Equipment Co.,. Ltd.
