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## ▶ **CNC SYSTEM CATALOGUE**

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**GSK CNC EQUIPMENT CO., LTD.**



## GS2000T SERIES AC SERVO DRIVER

### Brief introduction

Depended on proven servo technology, inducted with industrial design idea, employed three-dimensional digital simulation and thermal emulation techniques, GSK researched and designed GS2000T series servo drive unit, and the performances have greatly improved on drive capacity, heat emission, product design and manufacturability, etc. GS2000T series drive unit is divided into 4 structures based on different output powers. It can be adaptive to 0.5kW~6 kW AC permanent magnet synchronous motor and completely satisfied with requirements of CNC machine and automatic equipments.



GS2000T-C SERIES



GS2000T-N SERIES

Design patent NO: 201030232117.5 200930077667.1 200930077666.7 200930077665.2

### Characteristics

- New industrial level IPM module, ultra strong overload drive capacity
- High power brake tube is built in, support external brake resistor, adaptive to motor's frequent on-off
- Air cooling is adopted, large thermal capacity and large surface area, the radiator has strong heat emission capacity
- Obtained design patent with brand-new structure, appearance, and good manufacturability
- GS2000T-N adopts D-SUB interface, adaptive with 5000ppr incremental encoder
- GS2000T-C adopts MDR interface, support GSK-CAN bus, adaptive with 5000ppr incremental encoder and absolute encoders of many types

### Technical Specification

Type	GS2025T	GS2030T	GS2045T	GS2050T	GS2075T	GS2100T
Adaptive rated current I (A)	$I \leq 4$	$4 < I \leq 6$	$6 < I \leq 8$	$8 < I \leq 10.5$	$10.5 < I \leq 15.5$	$15.5 < I \leq 29$
Overall dimension (mm) (W × H × L)	90 × 190 × 182			112 × 230 × 182	120 × 270 × 218	130 × 305 × 248.5
Main power	3 phase AC 220 (85%~110%) 50/60Hz					
Speed ratio	5000:1					
Speed fluctuation ratio	< rated speed * 0.01%					
Speed frequency response	≥300Hz					
Mode	Manual, JOG, internal speed, external speed and position					
Speed control	Internal speed	Manual, JOG, internal speed, external speed and position				
	External speed	Input signal to select one running speed in three levels.				
Position mode	Position command	The external given analog voltage speed command (0V~10V or -10V~10V)				
	Electronic gear	Pulse/direction, CCW pulse/CW pulse, A/B two phase quadrature pulse, pulse frequency = 1MHz				
	Position precision	Electronic gear ratio numerator: 1~32767; denominator: 1~32767.				
Motor feedback input	$\pm 0.005^\circ$ (suit for 17 bit absolute encoder) $\pm 0.018^\circ$ (suit for 5000ppr incremental encoder)					
Position feedback output	GS2000T-N: Adaptive to incremental encoder; GS2000T-C: Adaptive to absolute or the incremental encoder;					
Communication bus	GS2000T-N: Motor feedback input signal 1:1 output; GS2000T-C: Motor feedback input signal frequency demultiplication output, electronic gear ratio setting Electronic gear ratio numerator: 1~32767; denominator: 1~32767.					
Input signals	GS2000T-N: Free of communication bus; GS2000T-C: GSK-CAN bus					
Output signals	The six points include servo ready, servo alarm, position arrival/speed arrival, band-type brake release, zero speed output, Z pulse (encoder zero point)					
Protection functions	The functions include overvoltage, undervoltage, drive unit overcurrent, motor thermal overload, drive overheat, overspeed, position excess error, brake abnormal, encoder abnormal and motor overheat, etc.					
Operation and display	Five buttons for manual, JOG, rewriting parameters, setting, write-in and backup, etc; LED in 6 bits displays revolving speed, current position, command pulse accumulation, position offset, motor torque, motor current, rotor absolute position and states of input and output signals, etc.					
Brake resistance specification	Internal brake resistor (300W/30Ω)			Internal brake resistor (500W/22Ω)	800W/15Ω	1200W/10Ω

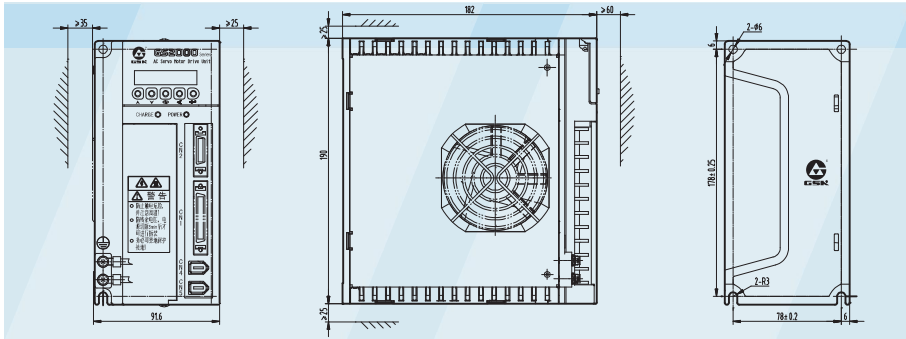
#### Remark:

- If GS2025T is adaptive to the servo motor below 0.8KW, the single phase and 220V power supply input can be adopted, but the drive unit performance will be lowered down.
- In the brake resistor, the bracketed are the optional external brake resistor specifications, and when the load inertia is big, they can be selected; GS2075T and GS2100T are without internal brake resistor.

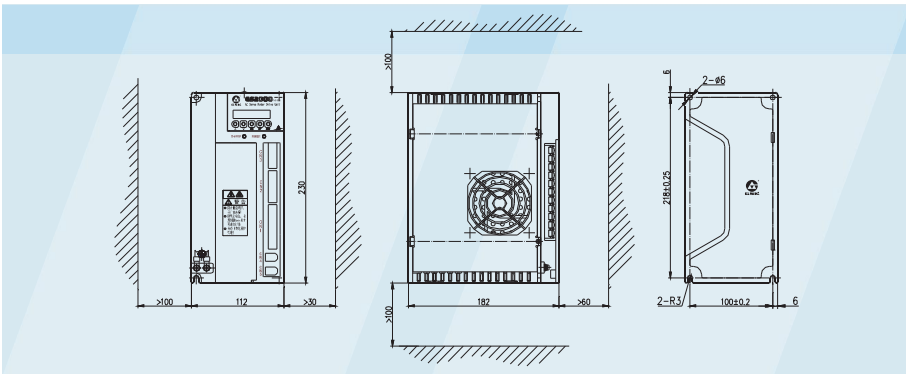


## Overall Installation Dimensions

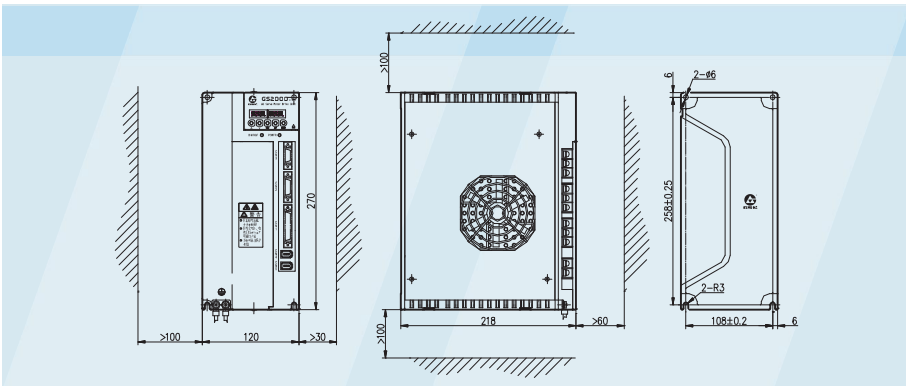
### ●GS2025T, GS2030T and GS2045T installation dimension figure (unit:mm)



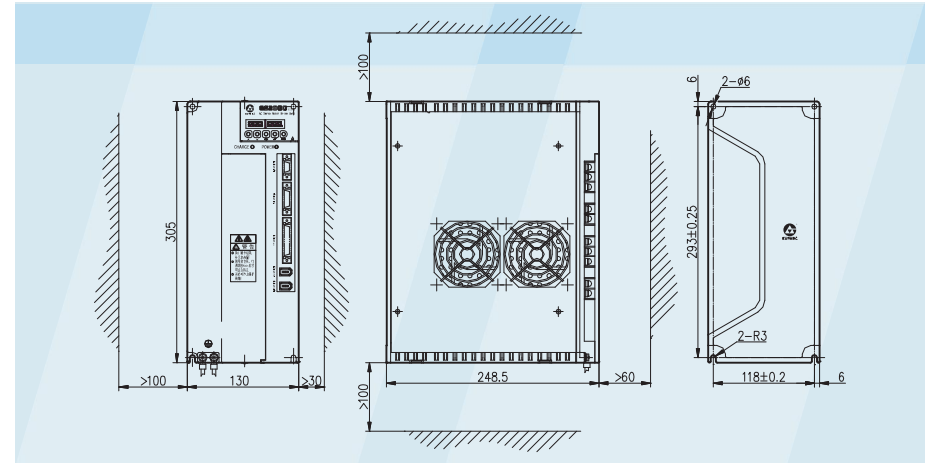
### ●GS2050T installation dimension figure (unit:mm)



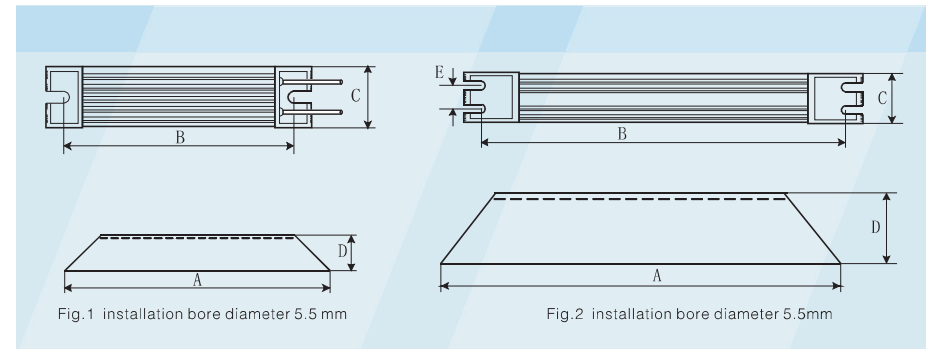
### ●GS2075T installation dimension figure (unit:mm)



### ●GS2100T installation dimension figure (unit:mm)



### ●Aluminum cabinet brake resistor installation dimension



Power(W)	Overall drawing	Dimension (mm)					Wiring (mm <sup>2</sup> )	Lead length (mm)	Terminal
		A	B	C	D	E			
300	Fig. 1	215	205	60	30	/	2.5	1000	M5
500		335	323	60	30	/	2.5	1000	M5
800		400	388	61	59	/	2.5	1000	M5
1200	Fig.2	450	438	50	107	30	2.5	1000	M5



## Models and Adapted Motors

Servo unit model	Adaptive servo motor					
	Motor model	Rated power	Rated current	Rated torque	Rated speed	Encoder
GS2025T-CA1	80SJT-M024C(A4I)	0.5kW	3A	2.4N·m	2000rpm	17bit multiturn absolute encoder
GS2030T-CA1	80SJT-M024E(A4I)	0.75kW	4.8A	2.4N·m	3000 rpm	17bit multiturn absolute encoder
GS2030T-CA1	80SJT-M032C(A4I)	0.66kW	5A	3.2N·m	2000 rpm	17bit multiturn absolute encoder
GS2045T-CA1	80SJT-M032E(A4I)	1.0kW	6.2A	3.2N·m	3000 rpm	17bit multiturn absolute encoder
GS2030T-CA1	110SJT-M040D(A4I)	1.0kW	4.5A	4N·m	2500 rpm	17bit multiturn absolute encoder
GS2045T-CA1	110SJT-M060D(A4I)	1.5kW	7A	6N·m	2500 rpm	17bit multiturn absolute encoder
GS2025T-CA1	130SJT-M040D(A4I)	1.0kW	4A	4N·m	2500 rpm	17bit multiturn absolute encoder
GS2030T-CA1	130SJT-M050D(A4I)	1.3kW	5A	5N·m	2500 rpm	17bit multiturn absolute encoder
GS2045T-CA1	130SJT-M060D(A4I)	1.5kW	6A	6N·m	2500 rpm	17bit multiturn absolute encoder
GS2050T-CA1	130SJT-M075D(A4I)	1.88kW	7.5A	7.5N·m	2500 rpm	17bit multiturn absolute encoder
GS2045T-CA1	130SJT-M100B(A4I)	1.5kW	6A	10N·m	1500rpm	17bit multiturn absolute encoder
GS2050T-CA1	130SJT-M100D(A4I)	2.5kW	10A	10N·m	2500rpm	17bit multiturn absolute encoder
GS2050T-CA1	130SJT-M150B(A4I)	2.3kW	8.5A	15N·m	1500rpm	17bit multiturn absolute encoder
GS2075T-CA1	130SJT-M150D(A4I)	3.9kW	14.5A	15N·m	2500rpm	17bit multiturn absolute encoder
GS2075T-CA1	175SJT-M150D(A4I)	3.1kW	14A	12N·m	2500rpm	17bit multiturn absolute encoder
GS2075T-CA1	175SJT-M180B(A4I)	2.8kW	15A	18N·m	1500rpm	17bit multiturn absolute encoder
GS2100T-CA1	175SJT-M180D(A4I)	3.8kW	16.5A	14.5N·m	2500rpm	17bit multiturn absolute encoder
GS2100T-CA1	175SJT-M220B(A4I)	3.5kW	17.5A	22N·m	1500rpm	17bit multiturn absolute encoder
GS2100T-CA1	175SJT-M220D(A4I)	4.5kW	19A	17.6N·m	2500rpm	17bit multiturn absolute encoder
GS2100T-CA1	175SJT-M300B(A4I)	4.7kW	24A	30N·m	1500rpm	17bit multiturn absolute encoder
GS2100T-CA1	175SJT-M300D(A4I)	6kW	27.5A	24N·m	2500rpm	17bit multiturn absolute encoder
GS2100T-CA1	175SJT-M380B(A4I)	6 kW	29 A	38 N·m	1500rpm	17bit multiturn absolute encoder

### Remark:

- GS2000T-CA1 series support GSK-CAN bus, and are adaptive to GSK988T CNC system, configured with 17bit multiturn absolute encoder motor;
- In the chart above, no brakes are included, if needed, please specify when make orders; Motor Model begins with "80" have no brake for the moment; about the installation dimensions, please refer to the samples or contact us.

Servo unit model	Adaptive servo motor					
	Motor model	Rated power	Rated current	Rated torque	Rated speed	Encoder
GS2030T-NP1	110SJT-M040D(A2)	1.0kW	4.5A	4N·m	2500rpm	5000 ppr incremental encoder
GS2030T-NP1	110SJT-M040E(A2)	1.2kW	5A	4N·m	3000rpm	5000 ppr incremental encoder
GS2045T-NP1	110SJT-M060D(A2)	1.5kW	7A	6N·m	2500rpm	5000 ppr incremental encoder
GS2050T-NP1	110SJT-M060E(A2)	1.8kW	8A	6N·m	3000rpm	5000 ppr incremental encoder
GS2025T-NP1	130SJT-M040D(A2)	1.0kW	4A	4N·m	2500rpm	5000 ppr incremental encoder
GS2030T-NP1	130SJT-M050D(A2)	1.3kW	5A	5N·m	2500rpm	5000 ppr incremental encoder
GS2045T-NP1	130SJT-M060D(A2)	1.5kW	6A	6N·m	2500rpm	5000 ppr incremental encoder
GS2050T-NP1	130SJT-M075D(A2)	1.88kW	7.5A	7.5N·m	2500rpm	5000 ppr incremental encoder
GS2045T-NP1	130SJT-M100B(A2)	1.5kW	6A	10N·m	1500rpm	5000 ppr incremental encoder
GS2050T-NP1	130SJT-M100D(A2)	2.5kW	10A	10N·m	2500rpm	5000 ppr incremental encoder
GS2050T-NP1	130SJT-M150B(A2)	2.3kW	8.5A	15N·m	1500rpm	5000 ppr incremental encoder
GS2075T-NP1	130SJT-M150D(A2)	3.9kW	14.5A	15N·m	2500rpm	5000 ppr incremental encoder
GS2075T-NP1	175SJT-M180B(A2)	2.8kW	15A	18N·m	1500rpm	5000 ppr incremental encoder
GS2100T-NP1	175SJT-M180D(A2)	3.8kW	16.5A	14.5N·m	2500rpm	5000 ppr incremental encoder
GS2100T-NP1	175SJT-M220B(A2)	3.5kW	17.5A	22N·m	1500rpm	5000 ppr incremental encoder
GS2100T-NP1	175SJT-M220D(A2)	4.5kW	19A	17.6N·m	2500rpm	5000 ppr incremental encoder
Gs2100T-NP1	175SJT-M300B(A2)	4.7kW	24A	30N·m	1500rpm	5000 ppr incremental encoder
Gs2100T-NP1	175SJT-M300D(A2)	6kW	27.5A	24N·m	2500rpm	5000 ppr incremental encoder

### Remark:

- GS2000T-NP1 series are adaptive to GSK980TDC and GSK980MDC CNC system, configured with 5000 ppr incremental encoder servo motor;
- In the chart above, no brakes are included, if needed, please specify when make orders; about the installation dimensions, please refer to the samples or contact us.





## SJT SERIES AC SERVO MOTOR

### Motor Model Significance



#### EXAMPLE:

80 SJT - M □ 032 E (A□ Y□ X)

AC synchronous servo motor

Foundation Number
80
110
130
175

Code	Feedback element
M	Photoelectric encoder

Code	Drop-out brake
no	no
Z	With

Note: The zero torque is expressed by a 3-digit number, its value is 3 digits 0.1, unit: Nm  
e.g. 0320.1=3.2Nm

Zero torque

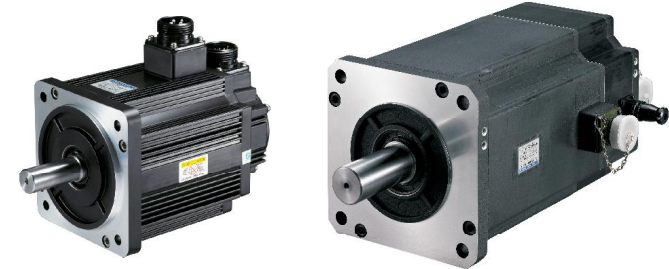
Code	Rated speed (r/min)
B	1500
C	2000
D	2500
E	3000

Code	Encoder type
A or no	Incremental 2500 p/r
A1	Absolute
A2	Incremental 5000 p/r
A3	Incremental Separated 2500 p/r

Code	Lead-out type
no	Aviation socket
X	Cable

Code	Shaft extension or installation form
no	Standard shaft extension
(Y□)	Special cylindrical shaft extension
(Z□)	Special conical shaft extension
(S□)	Stepper motor installation form

Note: "□" stands for Arab number code, some digit means a special shaft extension, see details in the installation outline for this motor.



### Product feature



- Optimizing design, compact, beautiful contour, long-term continuous working in rated working mode;
- High performance rare earth permanent magnet material, high power, large load;
- Excellent reverse potential sine, sine wave current drive and excellent low speed performance;
- Motor inertia meeting machine feed driver;
- F level insulation material to extend motor life;
- Imported feedback components, original imported low-noise motor bearing to reduce vibration and noise;
- Full airproof and high reliability to meet industry environment;
- Optimum matching with our AC servo driver to realize optimum servo performance.

### 80SJT Series Motor Specifications

Item	Type	80SJT-M024C	80SJT-M024E	80SJT-M032C	80SJT-M032E
Rated power ( kW )		0.5	0.75	0.66	1.0
Pole pairs		4			
Drive unit input voltage(V)		3-phase AC220 ( or single phase )			3-phase AC220
Rated current ( A )		3	4.8	5	6.2
Zero torque(N · m)		2.4	2.4	3.2	3.2
Rated torque(N · m)		2.4	2.4	3.2	3.2
Max. torque ( N · m )		7.2	7.2	9.6	9.6
Rated speed (r/min)		2000	3000	2000	3000
Max. Speed ( r/min )		2500	4000	2500	4000
Moment inertia(kg · m <sup>2</sup> )		0.83 × 10 <sup>-4</sup>	0.83 × 10 <sup>-4</sup>	1.23 × 10 <sup>-4</sup>	1.23 × 10 <sup>-4</sup>
Weight ( kg )		3.1	3.2	3.7	3.8
Insulation degree		F ( GB 755-2008/IEC 60034-1: 2004 )			
Vibration degree		A ( GB 10068-2008/IEC 60034-14: 2007 )			
Protection degree		IP65 ( GB 4208-2008/IEC 60529: 2001, GB/T 4942.1-2006 )			
Installation type		IMB5 ( flange ) ( GB/T 997-2008 / IEC 60034-7:2001 )			
Working mode		S1 ( continuous ) ( GB 755-2008 )			
Imbedded encoder		incremental2500 ( standard configuration )			
Brake		DC24V, 3.2N · m, 11.5W, 0.9kg is added to corresponding motor			



## 110SJ Series Motor Specifications

Item	Type	110SJ-M040D	110SJ-M040E	110SJ-M060D	110SJ-M060E
Rated power ( kW )		1.0	1.2	1.5	1.8
Pole pairs		4			
Drive unit input voltage(V)	3-phase AC220 ( or single phase )	3-phase AC220			
Rated current ( A )		4.5	5	7	8
Zero torque(N · m)		4	4	6	6
Rated torque(N · m)		4	4	6	6
Max. torque ( N · m )		12	10	12	12
Rated speed ( r/min )		2500	3000	2500	3000
Max. Speed ( r/min )		3000	3300	3000	3300
Moment inertia(kg · m <sup>2</sup> )		0.68 × 10 <sup>-3</sup>	0.68 × 10 <sup>-3</sup>	0.95 × 10 <sup>-3</sup>	0.95 × 10 <sup>-3</sup>
Weight ( kg )		6.1	6.1	7.9	7.9
Insulation degree		B ( GB 755-2008/IEC 60034-1; 2004 )			
Vibration degree		A ( GB 10068-2008/IEC 60034-14; 2007 )			
Protection degree		IP65 ( GB 4208-2008/IEC 60529; 2001, GB/T 4942.1-2006 )			
Installation type		IMB5 ( flange ) ( GB/T 997-2008 / IEC 60034-7:2001 )			
Working mode		S1 ( continuous ) ( GB 755-2008 )			
Imbedded encoder		incremental2500 ( standard configuration )			
Brake		DC24V, 4N · m, 20W, 1.6kg is added to corresponding motor			

## 130SJ Series Motor Specifications ( 1 )

Item	Type	130SJ-M040D	130SJ-M050D	130SJ-M060D	130SJ-M060E
Rated power ( kW )		1.0	1.3	1.5	1.88
Pole pairs		4			
Drive unit input voltage(V)		3-phase AC220			
Rated current ( A )		4	5	6	7.8
Zero torque(N · m)		4	5	6	6
Rated torque(N · m)		4	5	6	6
Max. torque ( N · m )		10	12.5	18	18
Rated speed ( r/min )		2500	2500	2500	3000
Max. Speed ( r/min )		3000	3000	3000	3500
Moment inertia(kg · m <sup>2</sup> )		1.1 × 10 <sup>-3</sup>	1.1 × 10 <sup>-3</sup>	1.33 × 10 <sup>-3</sup>	1.33 × 10 <sup>-3</sup>
Weight ( kg )		6.5	6.5	7.2	7.3
Insulation degree		B ( GB 755-2008/IEC 60034-1; 2004 )			
Vibration degree		A ( GB 10068-2008/IEC 60034-14; 2007 )			
Protection degree		IP65 ( GB 4208-2008/IEC 60529; 2001, GB/T 4942.1-2006 )			
Installation type		IMB5 ( flange ) ( GB/T 997-2008 / IEC 60034-7:2001 )			
Working mode		S1 ( continuous ) ( GB 755-2008 )			
Imbedded encoder		incremental2500 ( standard configuration )			
Brake		DC24V, 12N · m, 28W, 2.9kg is added to corresponding motor			

## 130SJ Series Motor Specifications ( 2 )

Item	Type	130SJ-M075D	130SJ-M100B	130SJ-M100D	130SJ-M150B	130SJ-M150D
Rated power ( kW )		1.88	1.5	2.5	2.3	3.9
Pole pairs		4				
Drive unit input voltage(V)		3-phase AC220				
Rated current ( A )		7.5	6	10	8.5	14.5
Zero torque(N · m)		7.5	10	10	15	15
Rated torque(N · m)		7.5	10	10	15	15
Max. torque ( N · m )		20	25	25	30	30
Rated speed ( r/min )		2500	1500	2500	1500	2500
Max. Speed ( r/min )		3000	2000	3000	2000	3000
Moment inertia(kg · m <sup>2</sup> )		1.85 × 10 <sup>-3</sup>	2.42 × 10 <sup>-3</sup>	2.42 × 10 <sup>-3</sup>	3.1 × 10 <sup>-3</sup>	3.6 × 10 <sup>-3</sup>
Weight ( kg )		8.1	9.6	9.7	11.9	12.7
Insulation degree		B ( GB 755-2008/IEC 60034-1; 2004 )				
Vibration degree		A ( GB 10068-2008/IEC 60034-14; 2007 )				
Protection degree		IP65 ( GB 4208-2008/IEC 60529; 2001, GB/T 4942.1-2006 )				
Installation type		IMB5 ( flange ) ( GB/T 997-2008 / IEC 60034-7:2001 )				
Working mode		S1 ( continuous ) ( GB 755-2008 )				
Imbedded encoder		incremental2500 ( standard configuration )				
Brake		DC24V, 12N · m, 28W, 2.9kg is added to corresponding motor				

## 175SJ Series Motor Specifications ( 1 )

Item	Type	175SJ-M120E	175SJ-M150B	175SJ-M150D	175SJ-M180B	175SJ-M180D
Rated power ( kW )		3	2.4	3.1	2.8	3.8
Pole pairs		3				
Drive unit input voltage(V)		3-phase AC220				
Rated current ( A )		13	11	14	15	16.5
Zero torque(N · m)		12	15	15	18	18
Rated torque(N · m)		9.6	15	12	18	14.5
Max. torque ( N · m )		19.2	30	24	36	29
Rated speed ( r/min )		3000	1500	2500	1500	2500
Max. Speed ( r/min )		3300	2000	3000	2000	3000
Moment inertia(kg · m <sup>2</sup> )		5.1 × 10 <sup>-3</sup>	5.1 × 10 <sup>-3</sup>	5.1 × 10 <sup>-3</sup>	6.5 × 10 <sup>-3</sup>	6.5 × 10 <sup>-3</sup>
Weight ( kg )		18.9	18.5	19	22.8	22.9
Insulation degree		F ( GB 755-2008/IEC 60034-1; 2004 )				
Vibration degree		A ( GB 10068-2008/IEC 60034-14; 2007 )				
Protection degree		IP65 ( GB 4208-2008/IEC 60529; 2001, GB/T 4942.1-2006 )				
Installation type		IMB5 ( flange ) ( GB/T 997-2008 / IEC 60034-7:2001 )				
Working mode		S1 ( continuous ) ( GB 755-2008 )				
Imbedded encoder		incremental2500 ( standard configuration )				
Brake		DC24V, 23N · m, 30W, 5.6 kg is added to corresponding motor				

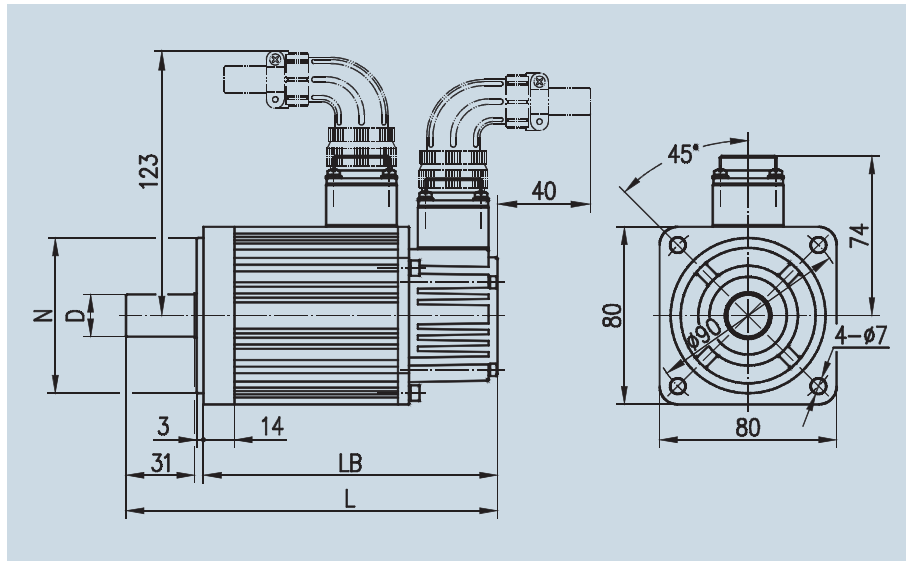


## 175SJT Series Motor Specifications ( 2 )

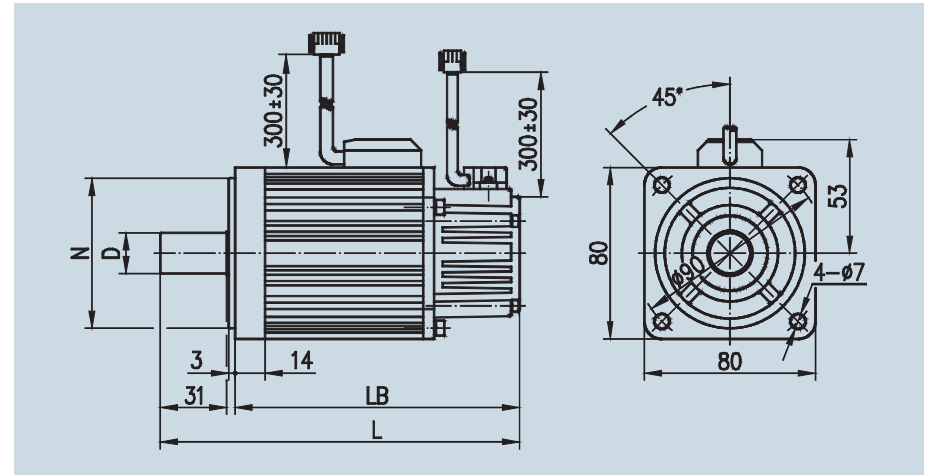
Item	Type	175SJT-M220B	175SJT-M220D	175SJT-M300B	175SJT-M300D	175SJT-M380B
Rated power ( kW )		3.5	4.5	4.7	6	6
Pole pairs		3				
Drive unit input voltage(V)		3-phase AC220				
Rated current ( A )		17.5	19	24	27.5	29
Zero torque(N · m)		22	22	30	30	38
Rated torque(N · m)		22	17.6	30	24	38
Max. torque ( N · m )		44	35.2	60	48	76
Rated speed ( r/min )		1500	2500	1500	2500	1500
Max. Speed ( r/min )		2000	3000	2000	3000	1800
Moment inertia(kg · m <sup>2</sup> )		9.0 × 10 <sup>-3</sup>	9.0 × 10 <sup>-3</sup>	11.2 × 10 <sup>-3</sup>	11.2 × 10 <sup>-3</sup>	14.8 × 10 <sup>-3</sup>
Weight ( kg )		28.9	29.2	34.3	34.4	42.4
Insulation degree		F ( GB 755-2008/IEC 60034-1; 2004 )				
Vibration degree		A ( GB 10068-2008/IEC 60034-14; 2007 )				
Protection degree		IP65 ( GB 4208-2008/IEC 60529; 2001, GB/T 4942.1-2006 )				
Installation type		IMB5 ( flange ) ( GB/T 997-2008 / IEC 60034-7:2001 )				
Working mode		S1 ( continuous ) ( GB 755-2008 )				
Imbedded encoder		incremental2500 ( standard configuration )				
Brake		DC24V, 23N · m, 30W, 5.6 kg is added to corresponding motor		DC24V, 46N · m, 40W, 7.7kg is added to corresponding motor		

## 80SJT Series Motor

- Aviation socket



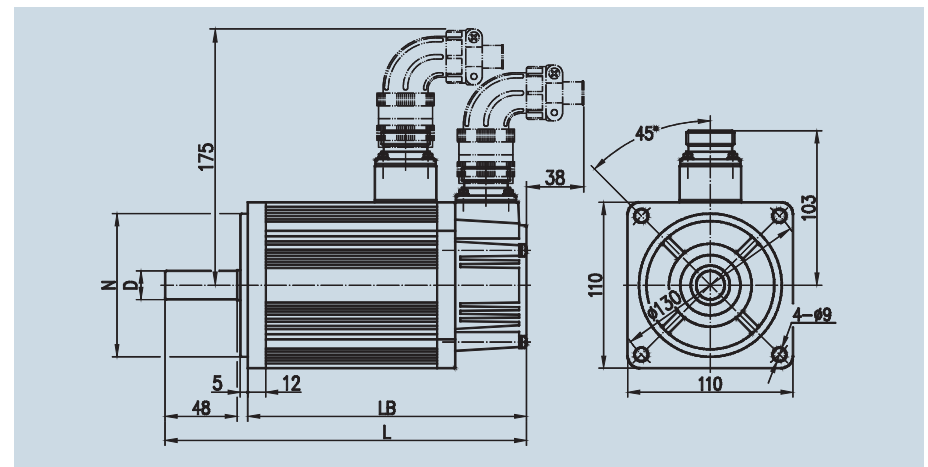
- Cable socket



Type	D(mm)	N(mm)	LB(mm)	L(mm)
80SJT-M024C	φ 19 <sup>0</sup> <sub>-0.013</sub>	φ 70 <sup>0</sup> <sub>-0.03</sub>	171	206
80SJT-M024E	φ 19 <sup>0</sup> <sub>-0.013</sub>	φ 70 <sup>0</sup> <sub>-0.03</sub>	171	206
80SJT-M032C	φ 19 <sup>0</sup> <sub>-0.013</sub>	φ 70 <sup>0</sup> <sub>-0.03</sub>	189	224
80SJT-M032E	φ 19 <sup>0</sup> <sub>-0.013</sub>	φ 70 <sup>0</sup> <sub>-0.03</sub>	189	224

Remark: LB and L values of motor with brake are included in the brackets.

## 110SJT Series Motor Overall Installation Dimension:

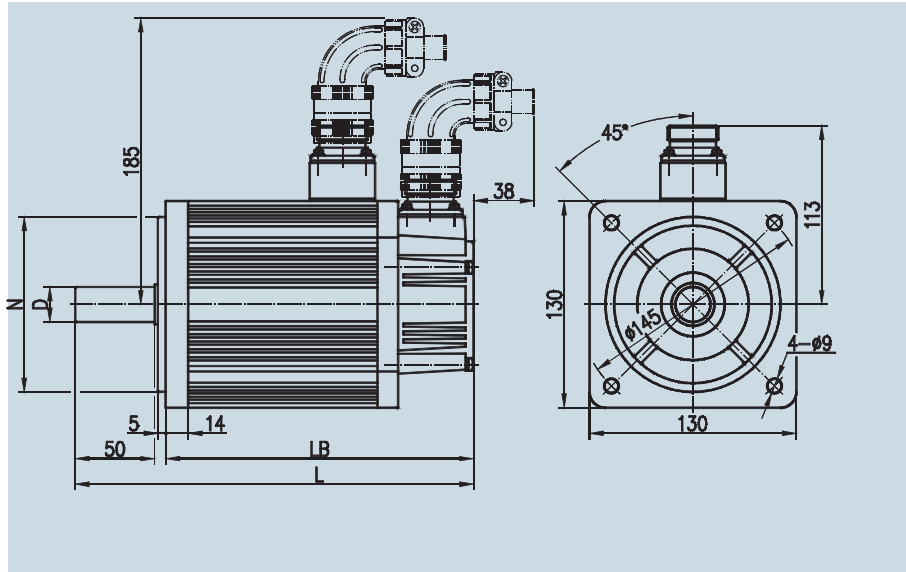




Type	D(mm)	N(mm)	LB(mm)	L(mm)
110SJT-M040D	$\phi 19^{\circ}_{-0.013}$	$\phi 95^{\circ}_{-0.035}$	186 (237)	241 (292)
110SJT-M040E	$\phi 19^{\circ}_{-0.013}$	$\phi 95^{\circ}_{-0.035}$	186 (237)	241 (292)
110SJT-M060D	$\phi 19^{\circ}_{-0.013}$	$\phi 95^{\circ}_{-0.035}$	212 (263)	267 (318)
110SJT-M060E	$\phi 19^{\circ}_{-0.013}$	$\phi 95^{\circ}_{-0.035}$	212 (263)	267 (318)

Remark: LB and L values of motor with brake are included in the brackets.

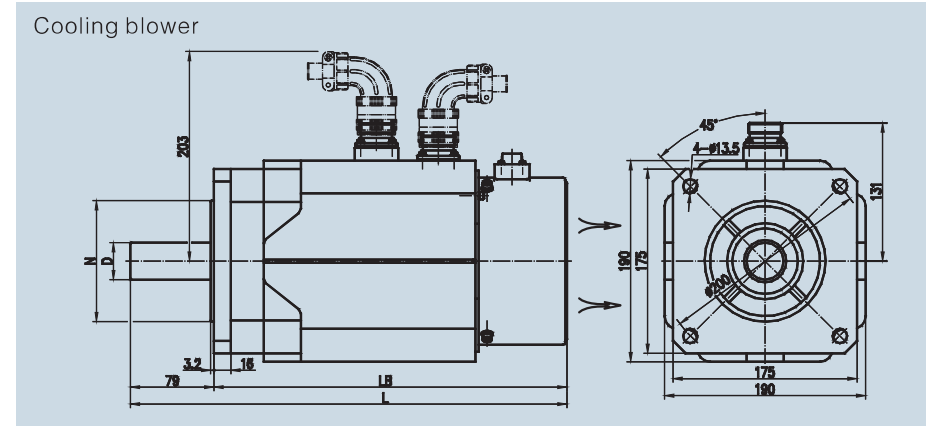
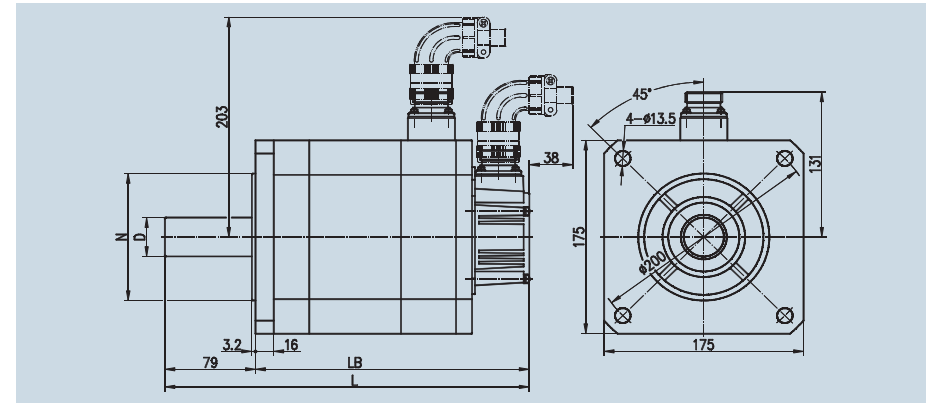
■ 130SJT Series Motor Overall Installation Dimension:



Type	D(mm)	N(mm)	LB(mm)	L(mm)
130SJT-M040D	$\phi 22^{\circ}_{-0.013}$	$\phi 110^{\circ}_{-0.035}$	168 (227)	225 (284)
130SJT-M050D	$\phi 22^{\circ}_{-0.013}$	$\phi 110^{\circ}_{-0.035}$	168 (227)	225 (284)
130SJT-M060D	$\phi 22^{\circ}_{-0.013}$	$\phi 110^{\circ}_{-0.035}$	176 (235)	233 (292)
130SJT-M075D	$\phi 22^{\circ}_{-0.013}$	$\phi 110^{\circ}_{-0.035}$	188 (247)	245 (304)
130SJT-M100B	$\phi 22^{\circ}_{-0.013}$	$\phi 110^{\circ}_{-0.035}$	208 (267)	265 (324)
130SJT-M100D	$\phi 22^{\circ}_{-0.013}$	$\phi 110^{\circ}_{-0.035}$	208 (267)	265 (324)
130SJT-M150B	$\phi 22^{\circ}_{-0.013}$	$\phi 110^{\circ}_{-0.035}$	238 (297)	295 (354)
130SJT-M150D	$\phi 22^{\circ}_{-0.013}$	$\phi 110^{\circ}_{-0.035}$	248 (307)	305 (364)

Remark: LB and L values of motor with brake are included in the brackets.

■ 175SJT Series Motor Overall Installation Dimension:



Type	D(mm)	N(mm)	LB(mm)	L(mm)
175SJT-M120E	$\phi 35^{+0.01}$	$\phi 114.3^{\circ}_{-0.025}$	224 (291)	303 (370)
175SJT-M150B	$\phi 35^{+0.01}$	$\phi 114.3^{\circ}_{-0.025}$	224 (291)	303 (370)
175SJT-M150D	$\phi 35^{+0.01}$	$\phi 114.3^{\circ}_{-0.025}$	224 (291)	303 (370)
175SJT-M180B	$\phi 35^{+0.01}$	$\phi 114.3^{\circ}_{-0.025}$	244 (311)	323 (390)
175SJT-M180D	$\phi 35^{+0.01}$	$\phi 114.3^{\circ}_{-0.025}$	244 (311)	323 (390)
175SJT-M220B	$\phi 35^{+0.01}$	$\phi 114.3^{\circ}_{-0.025}$	279 (346)	358 (425)
175SJT-M220D	$\phi 35^{+0.01}$	$\phi 114.3^{\circ}_{-0.025}$	279 (346)	358 (425)
175SJT-M300B	$\phi 35^{+0.01}$	$\phi 114.3^{\circ}_{-0.025}$	309 (382)	388 (461)
175SJT-M300D	$\phi 35^{+0.01}$	$\phi 114.3^{\circ}_{-0.025}$	309 (382)	388 (461)

Remark: LB and L values of motor with brake are included in the brackets.





## GS3000Y SERIES AC SPINDLE SERVO DRIVER

### Product introduction

Depended on proven spindle servo technology, inducted with industrial design idea, employed three-dimensional digital simulation and thermal emulation techniques, GSK researched and designed GS3000Y series servo drive unit, and the performances have greatly improved on drive capacity, heat emission, product design and manufacturability, etc. GS3000Y series spindle servo drive unit is divided into 5 structures based on different output powers. It can be adaptive to 1.5kW~18.5 kW asynchronous spindle servo motor; it is not only satisfied with the constant power speed adjustment, but also the spindle position and Cs axis position control, which is completely satisfied with requirements of CNC machine and automatic equipments.



GS3000Y-C SERIES;

GS3000Y-N SERIES

Design patent NO: 201030232117.5 200930077667.1 200930077666.7 200930077665.2

### Characteristics

- New industrial level IPM module, ultra strong overload drive capacity
- High power brake tube is built in, connect external brake resistor, adaptive to motor's frequent on-off
- Air cooling is adopted, large thermal capacity and large surface area, the radiator has strong heat emission capacity
- Support shift between speed/position control, realize real time shift between spindle speed control/ axis Cs position control
- Have 2nd feedback interface, can realize closed-loop position control
- Obtained appearance patent with brand new structure and appearance design, and good manufacturability
- GS3000Y-N adopts D-SUB interface, adapted to 1024 incremental encoder
- GS3000Y-C adopts MDR interface, supports GSK-CAN bus, adapted to 1024ppr incremental or absolute encoders of many types.

### Technical Specification

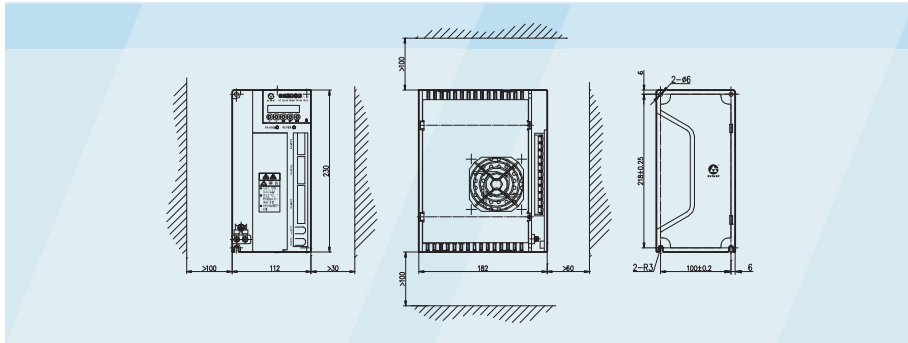
Type	GS3048Y	GS3050Y	GS3075Y	GS3100Y	GS3148Y	GS3150Y
The rated power of the matched servo motor (kw)	1.5~2.2	3.7~5.5	5.5~7.5	7.5~11	11~15	15~18.5
Input power	3 phase AC 380V (85%~110%) 50/60Hz ± 1Hz					
Contour dimension (mm)(W*H*D)	112 × 230 × 182	120 × 270 × 218	130 × 305 × 248.5	160 × 305 × 273.5	160 × 418 × 273.5	
Speed range (rpm)	1~10000					
Speed fluctuation ratio	< rated speed × 0.1%					
Control mode	manual, JOG, speed, position, speed/position					
Speed control	Internal	3 level of running speed can be set by input signal				
	External	external analog voltage speed command (-10V~+10V or 0V~+10V), set by parameters, run at specified speed				
	Electronic gear	Ratio: 1/100~100				
Position Precision	4 positioning points set by input signal and 4 angles set by parameters					
Position control	Position command	pulse/direction, CCW pulse/ CW pulse; A/B 2 phases quadrature pulse, Max. pulse frequency: 1MHz				
	Electronic gear	ratio: 1/32767~32767				
Motor feedback input	GS3000Y-N: support incremental encoder GS3000Y-C: support absolute encoder or incremental encoder					
2nd feedback input	GS3000Y-N: support incremental encoder GS3000Y-C: support absolute encoder or incremental encoder					
Position feedback output	GS3000Y-N: motor feedback input or 2nd feedback input signal 1:1 output GS3000Y-C: motor feedback input or 2nd feedback input signal frequency demultiplication, electronic gear setting, ratio: 1/32767~32767					
Communication Bus	GS3000Y-N: free of communication bus GS3000Y-C: support GSK-CAN bus					
Input signal	The eleven input points include servo enable; CCW/CW start; position/speed switch; position start; 2nd speed gain option; spindle clamping interlock signal; zero speed clamp; alarm reset; speed/position switch, etc.					
Output signal	The seven points include servo ready, zero speed output; speed/position arrival; orientation complete; alarm output; speed/position status; encoder zero					
Protection function	The functions include overvoltage, undervoltage, drive unit overcurrent, servo motor thermal overload, drive unit overheat, overspeed, position excess error, brake abnormality and encoder abnormality and motor overheat, etc.					
Operation and display	5 buttons, manual, JOG, parameters rewriting, setting, write-in and backup, etc. 6-bit LED displays revolving speed, current position, command pulse accumulation, position offset, motor torque, motor current, rotor absolute position and states of input/output signals, etc.					
External brake specification	for milling machine	500W/35 Ω	800W/30 Ω	1200W/30 Ω	(800W/30 Ω)//2	(1200W/30 Ω)//2
	for turning machine	800W/35 Ω	1200W/30 Ω	1500W/30 Ω	(1200W/30 Ω)//2	(1500W/25 Ω)//2

#### Remark:

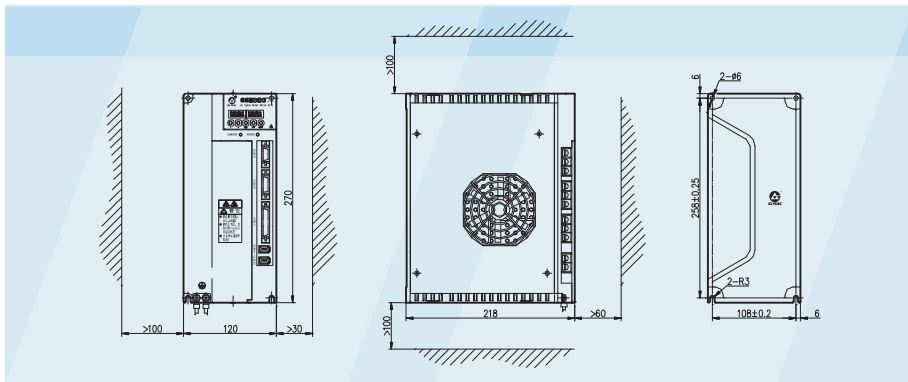
- GS3000Y series are free of internal brake resistor; "//2" means two brake resistors are connected in parallel.

## Overall Installation Dimensions

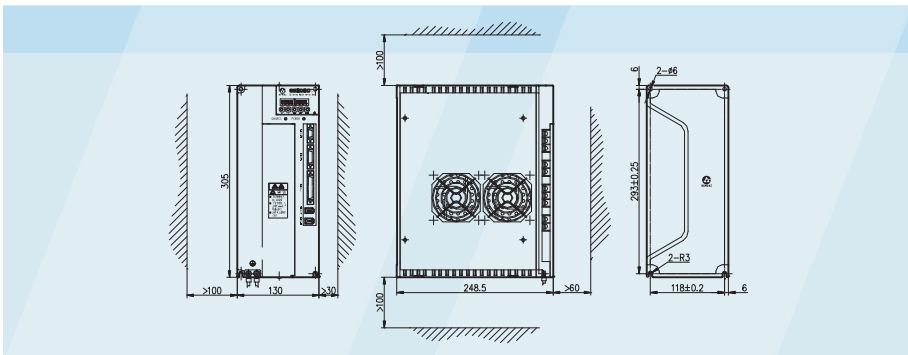
### ●GS3048Y installation dimension figure (unit:mm)



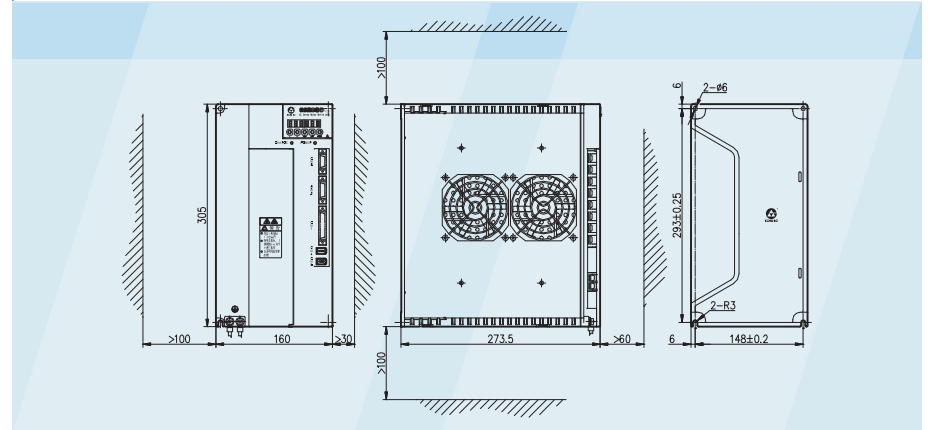
### ●GS3050Y installation dimension figure (unit:mm)



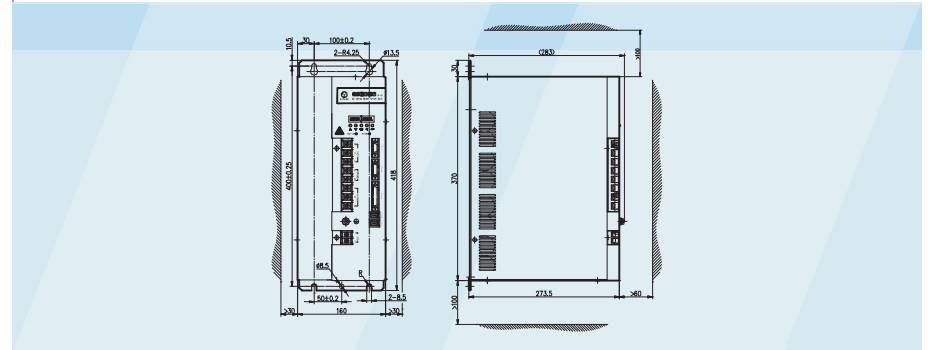
### ●GS3075Y installation dimension figure (unit:mm)



### ●GS3100Y and GS3148Y installation dimension figure (unit:mm)



### ● GS3150Y installation dimension figure



### ●Aluminum cabinet brake resistor installation dimension

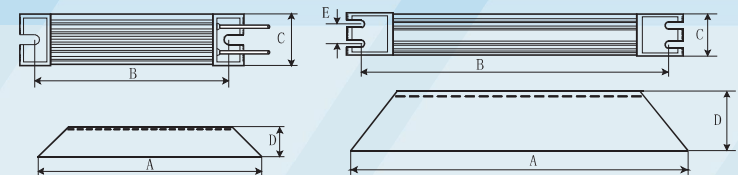


Fig. 1 Installation bore diameter 5.5mm

Fig. 2 Installation bore diameter 5.5mm

Power(W)	Overall drawing	Dimension (mm)					Wiring (mm <sup>2</sup> )	Lead length (mm)	Terminal
		A	B	C	D	E			
500	Fig. 1	335	323	60	30	/	2.5	1000	M5
800		400	388	61	59	/	2.5	1000	M5
1200		450	438	50	107	30	2.5	1000	M5
1500	Fig.2	485	473	50	107	30	2.5	1000	M5