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Distributor



JASD series AC  
servo driver  
selection manual



## Preface

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## Chapter 1 JASD Servo Driver









### 1.1 JASD series servo motor driver

1. Excellent Position compensation function to have high precision positioning control.
2. With automatic gain control module, the user can choose according to demand response level.
3. The built-in FIR filter and the multiple sets of notch filter, can automatically recognize and suppress the mechanical vibration.
4. The built-in disturbance torque observer, makes the drive with a strong ability to resist external disturbance.
5. Three control modes. position control, speed control, torque control.
6. Location input pulse frequency up to 4 MHZ, support pulse + direction, orthogonal pulse, double pulse position command a variety of ways.
7. Programmable 8-way input and 5-way output port available, users can define input, output requirements via settings, flexible application.
8. Can be matched with motors which are 20bits, 23bits high precision absolute encoder.
9. Complete protection functions including overvoltage, undervoltage, overspeeding, overloading, Position deviation too large, encoder errors, etc.
10. Rich monitoring items, users can choose wanted items to test running state.
11. Drive communicates with PC via connecting RS232 port to have easy, quick debug servo drive system.

### 1.2 JASD Servo Driver And Motor

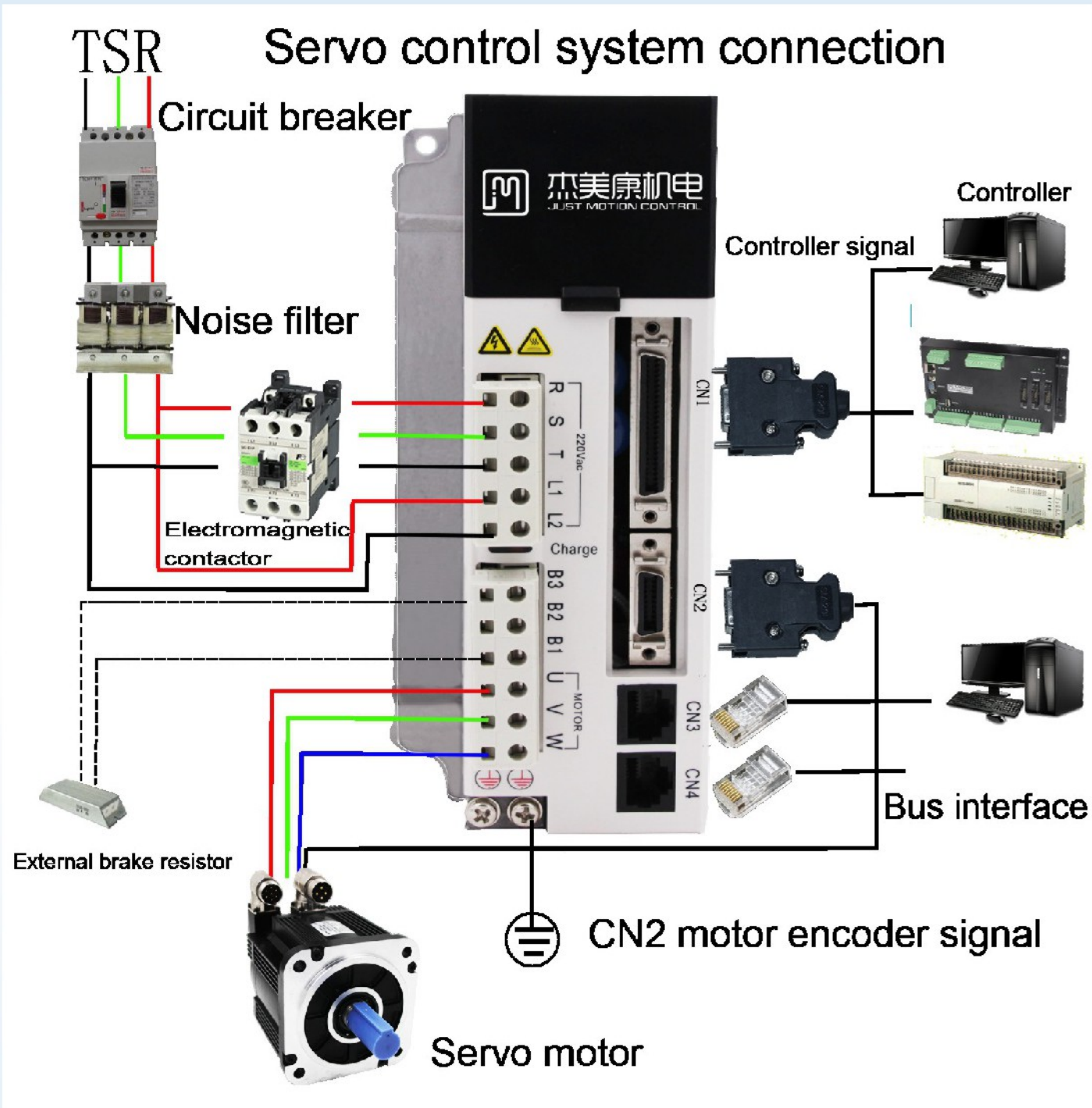
Frame size		40mm	60mm		80mm
JASM Motor	Figure				
	Model	40JASM501230K-20B	60JASM502230K-20B	60JASM504230K-M23B	80JASM507230K-M23B
	Power	100W	200W	400W	750W
JASD Motor	Figure				
	Model	JASD2002-20B	JASD2002-20B	JASD4002-20B	JASD7502-20B
	Power	200W	200W	400W	750W

Frame size	80mm	110mm		130mm
Figure				
Model	80JASM510230K-M23B	110JASM513230K-M23B	110JASM516220K-M23B	130JASM508215K-M23B
Power	1000W	1300W	1600W	850W
Figure				
Model	JASD15002-20B	JASD15002-20B	JASD15002-20B	JASD15002-20B
Power	1500W	1500W	1500W	1500W

Frame size	80mm	110mm		130mm
Figure				
Model	130JASM515220K-M23B 130JASM515215K-M23B	130JASM520230K-M23B	130JASM523215K-M23B	130JASM530220K-M23B
Power	1500W	2000W	2300W	3000W
Figure				
Model	JASD20002-20B	JASD20002-20B	JASD20002-20B	JASD30002-20B
Power	2000W	2000W	2000W	3000W



1.3 Connection



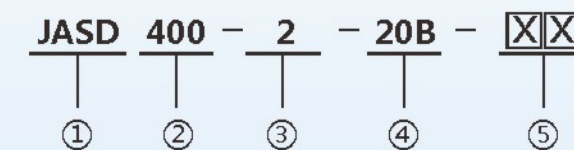
Chapter 2 JASD Servo Driver Introduction



JASD Servo Driver Power

200W	400W	750W	1.5KW	2.0KW	3.0KW

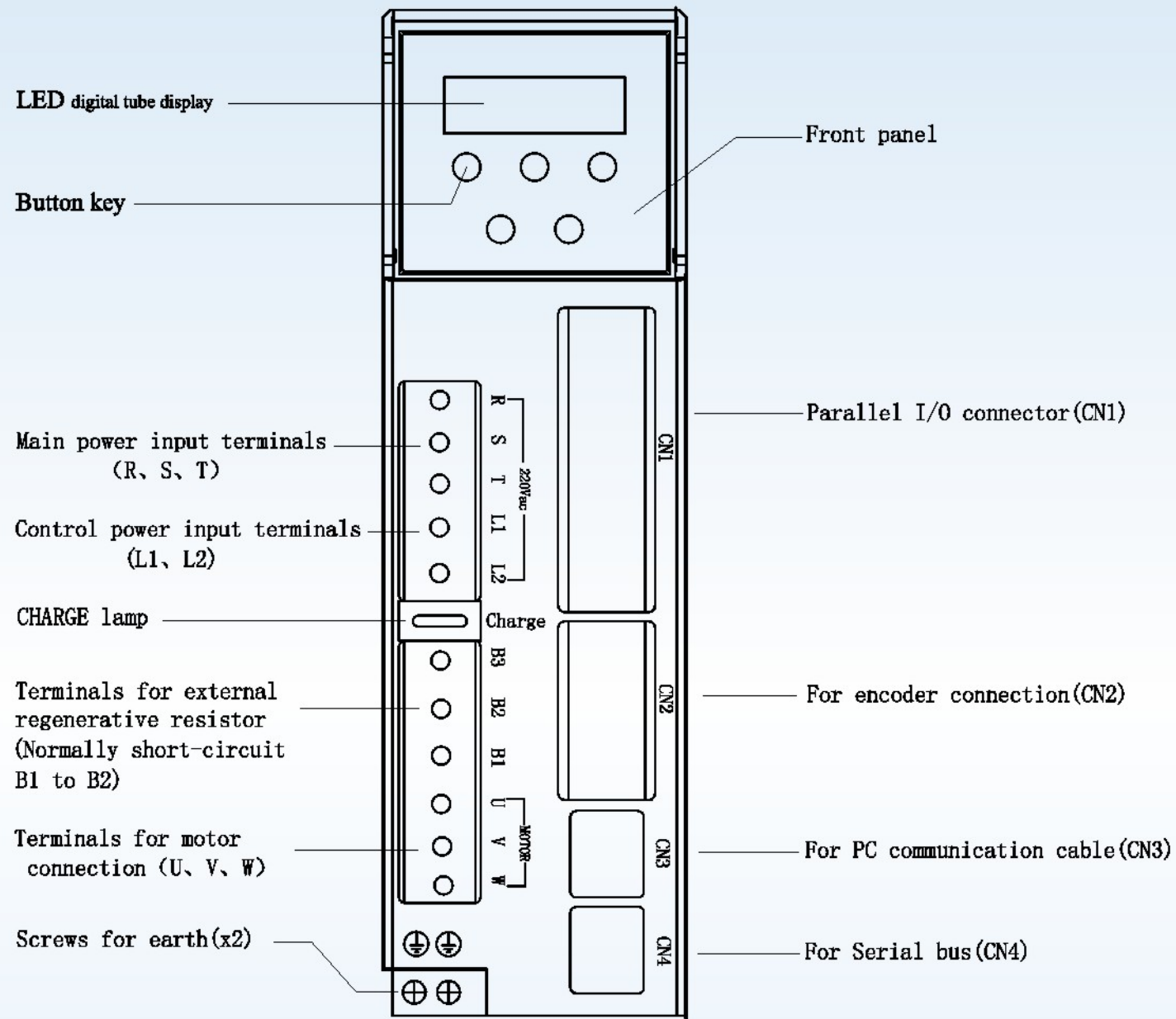
2.1 Servo Driver Model Introduction



No.	Name	Introduction
①	Series	JMC JASD servo driver series
②	Driver Power	100:100W 200:200W 400:400W 750:750W 1000:1000W 1500:1500KW 2000:2000W 2500:2500W 3000:3000W
③	Input power	1:single phase 110V 2:sing phase /three phase 220V
④	Encoder line	1000:1000 line 1250:1250 line 2500:2500 line 17B:17bit 20B:20 bit
⑤	Product design serial number	Product design serial number



## 2.2 Parts Description



## 2.3 Electrical Specifications

### (1) Single/3 phase 220V servo drive

Model JASD***2-20B	200	400	750	1500
Single Phase Continuous Input Current (Arms)	1.9	3.2	6.7	8.8
Continuous Output Current (Arms)	2.1	2.8	5.5	8
Max Output Current(Arms)	5.8	9.6	16.9	19
Main Circuit Power Supply	Single Phase AC180V-240V, 50/60HZ			
Control Circuit Power Supply	Single Phase AC180V-240V, 50/60HZ			
Rengen Resistor	no		Build-in	

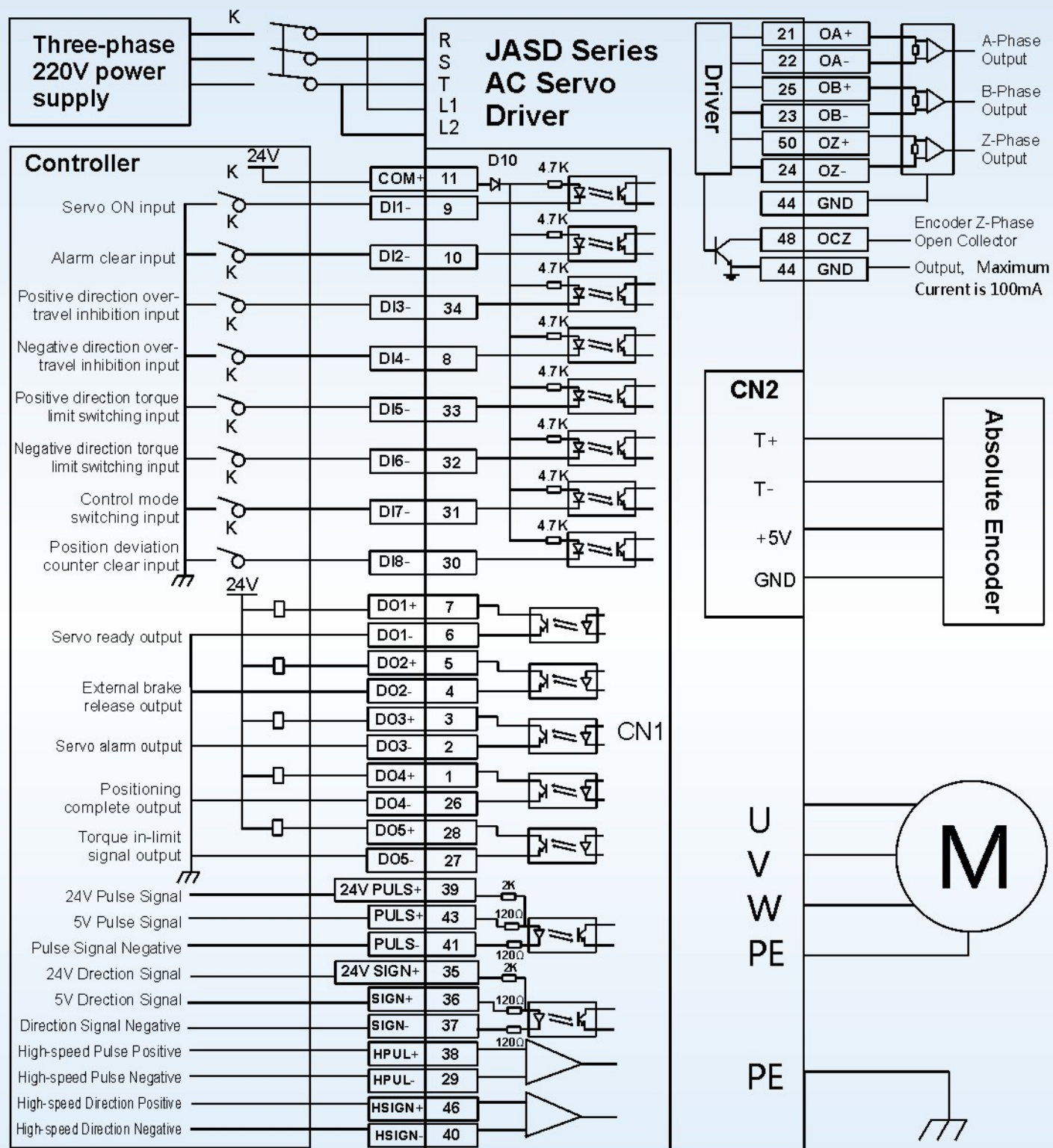
### (2) 3-phase 220V servo drive

Model JASD***2-20B	750	1500	2000	3000
Three Phase Continuous Input Current (Arms)	3.6	4.6	8.7	11
Continuous Output Current (Arms)	5.5	8	14	20
Max Output Current(Arms)	16.9	19	33	50
Main Circuit Power Supply	3-Phase AC180V-240V, 50/60HZ			
Control Circuit Power Supply	Single Phase AC180V-240V, 50/60HZ			
Rengen Resistor	Build-in			

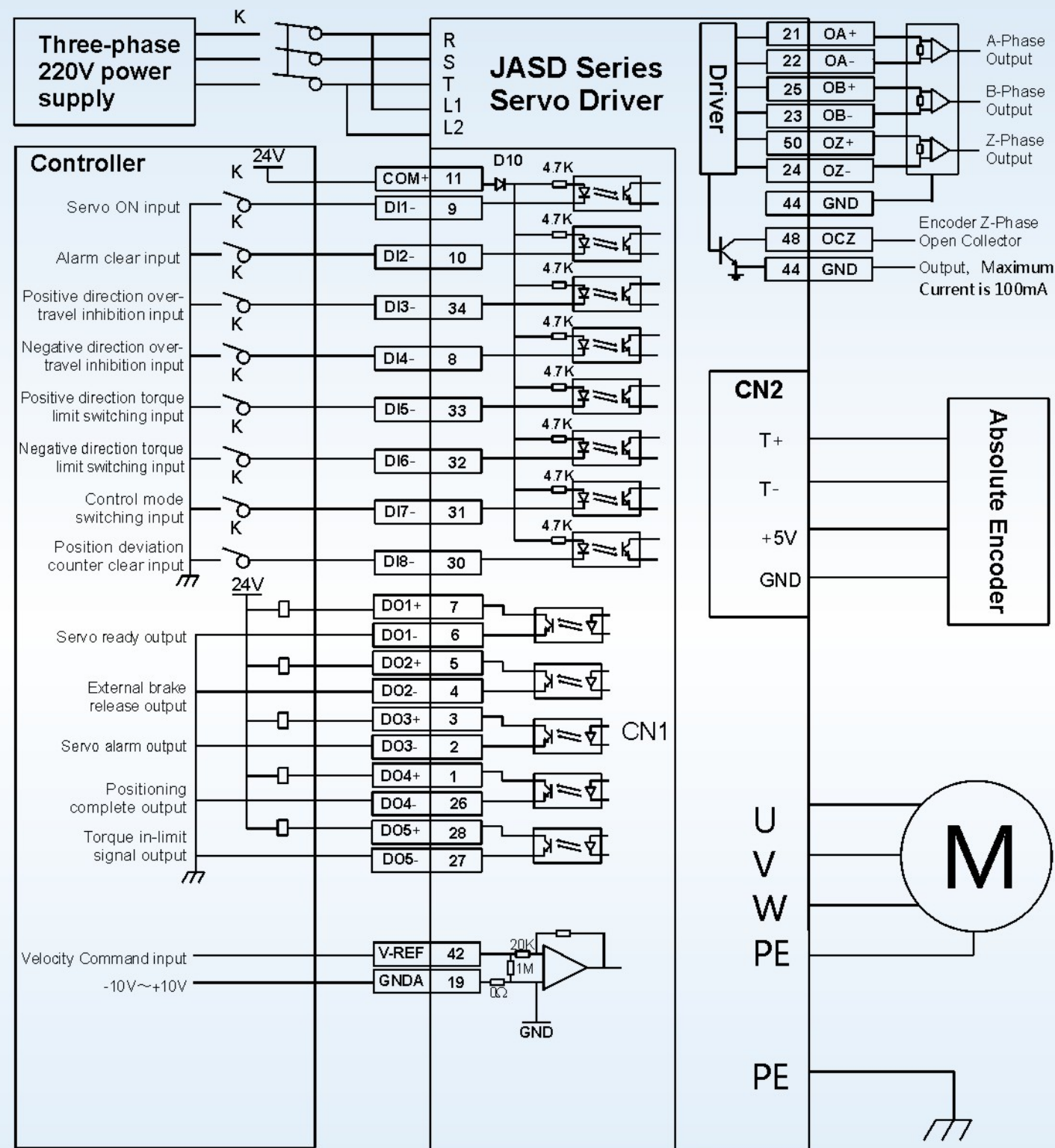
### (3) Specifications

Project	Description	
Control method	IGBT PWM sinusoidal wave drive	
Encoder feedback	Absolute encoder Incremental encoder	
Environment	temperature	Ambient temperature: 0°C~55°C(free from freezing) Storage temperature: -25°C~85°C
	humidity	Both operating and storage: 10%~90%
	Altitude	<1000m, Lower than 1000
function	Speed regulate area	1:5000
	Speed precision	±0.01%: load fluctuation 0~100% ±0.01%: power input change±10% ( 220V ) ±0.1%: temperature±25°C ( 25°C )
	Speed response frequency	1200Hz
Toque control accuracy	± 2%	
Control signal	input	General purpose 8 inputs The function of general-purpose input is selected by parameters
	output	General purpose 5 outputs The function of general-purpose outputs is selected by parameters
Front panel	(1)5 keys (MODE,SET,UP,DOWN,SHIFT) (2)LED(6-digit) (3)power pilot lamp	
Communication function	RS485	communication to a host
	RS232	communication to a host
Regeneration	No built-in regenerative resistor(external resistor only) and built-in Regenerative resistor(external resistor is also enabled)	

### 2.4 Position control wiring diagram

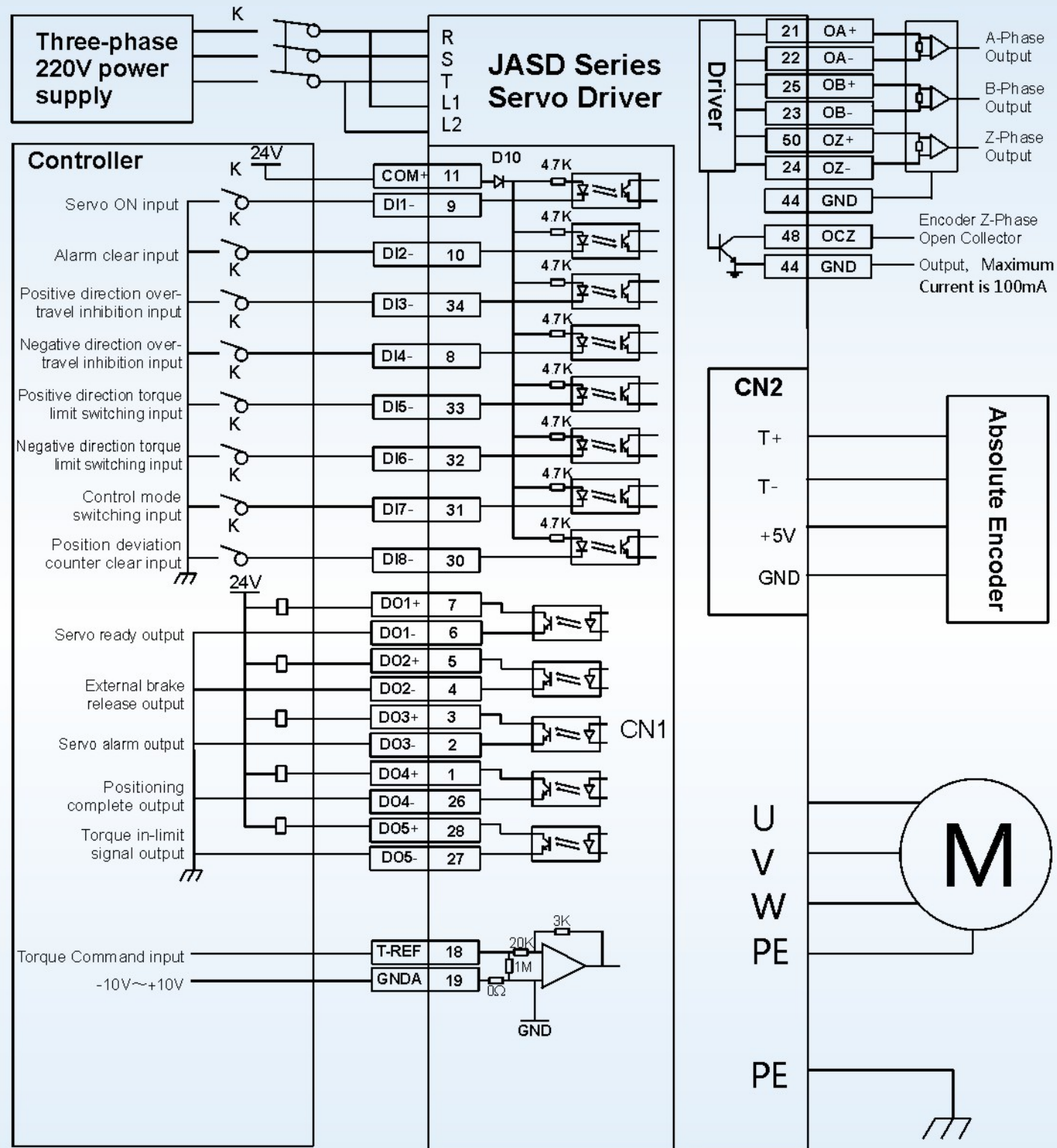


### 2.5 Speed control wiring diagram

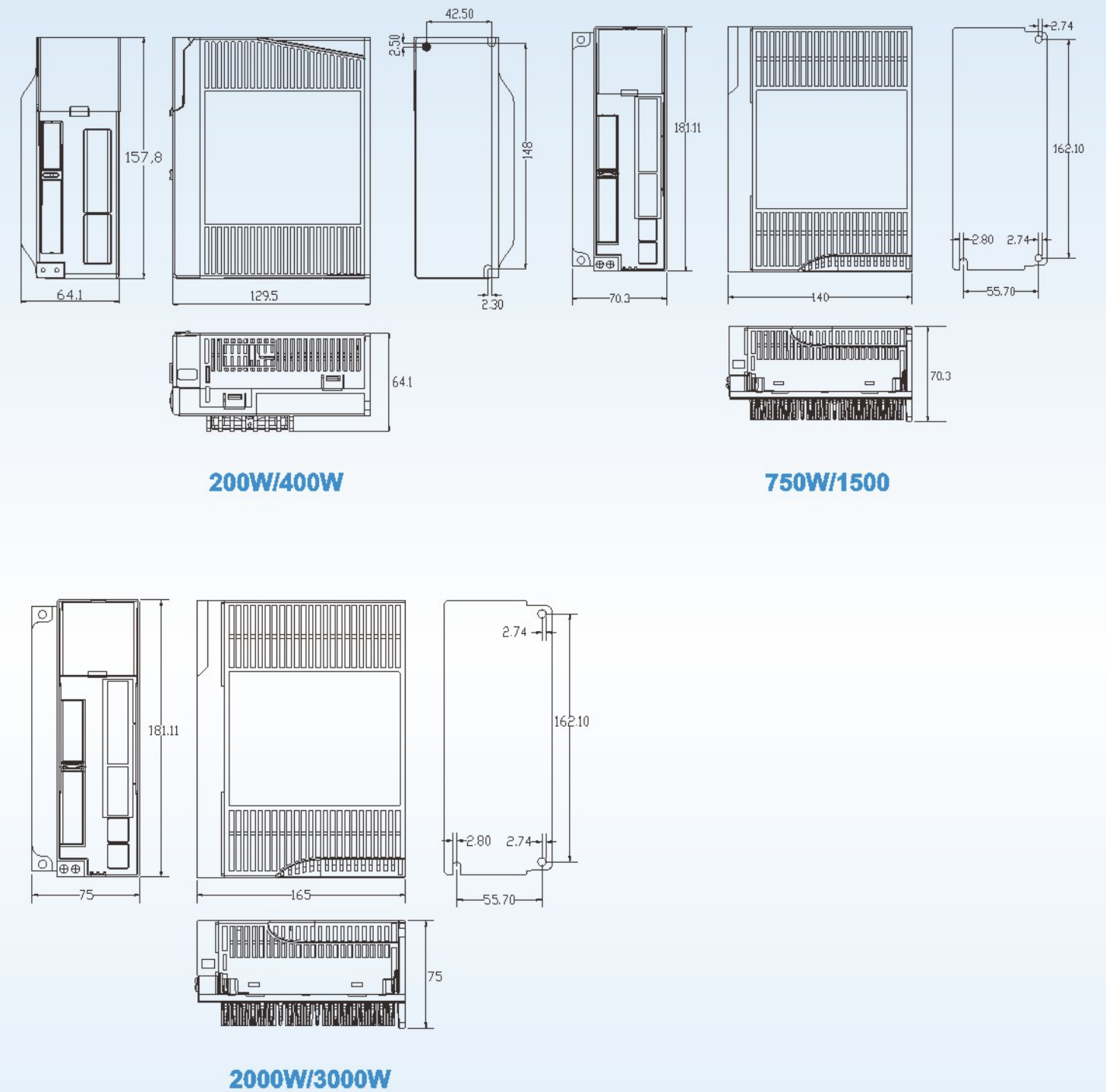




### 2.6 Torque control wiring diagram

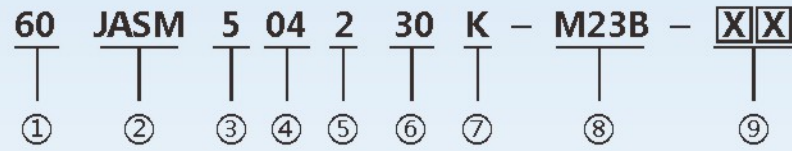


### 2.7 Drive installation dimensions(mm)






## Chapter 3 Servo Motor

### 3.1 Servo Motor Model Introduction



No.	Name	Introduction
①	Frame size	60:60mm 80:80mm 110:110mm 130:130mm
②	Series name	JMC JASM series AC servo motor
③	Motor pole pairs	4:4 pairs(default) 5:5 pairs
④	Rated output power of motor	02:200W 04:400W 07:750W 08:850W 10:1000W 15:1500W 20:2000W 30:3000W
⑤	Power	1:110V 2:220V
⑥	Rated Speed	15:1500 20:2000 30:3000
⑦	Motor output shaft type	K:Key F: Flat axis S:optic axis G:Speed reducer adapter P:Special production
⑧	Encoder line	1000:1000 line 1250:1250 line 2500:2500 line 17B:17 Bit M23B:23 Bit
⑨	Product design serial number	Product design serial number SC:Brake

### 3.2 JASM Series Servo Motor

Motor	Frame Size	Model	Power (W)	Speed(Rated/Max) rpm	Torque(Rated/Max) N.M
	40mm	40JASM501230k-20B	100	3000/5000	0.32/0.96
	60mm	60JASM502230k-20B	200	3000/5000	0.64/2.3
		60JASM504230k-M23B	400	3000/5000	1.27/4.45
	80mm	80JASM507230k-M23B	750	3000/5000	2.39/6
		80JASM510230k-M23B	1000	3000/5000	3.18/8.2
	110mm	110JASM513230K-M23B	1300	3000/4000	4.2/12.6
		110JASM516220K-M23B	1600	2000/3000	7.5/22.5
	130mm	130JASM520230k-M23B	2000	3000/4000	6.4/19.2
		130JASM515220k-M23B	1500	2000/3000	7.5/22.5
		130JASM530220k-M23B	3000		14.3/42.9
		130JASM508215k-M23B	850	1500/3000	5.4/16.2
		130JASM515215K-M23B	1500		9.6/28.8
		130JASM523215K-M23B	2300		14.6/43.8

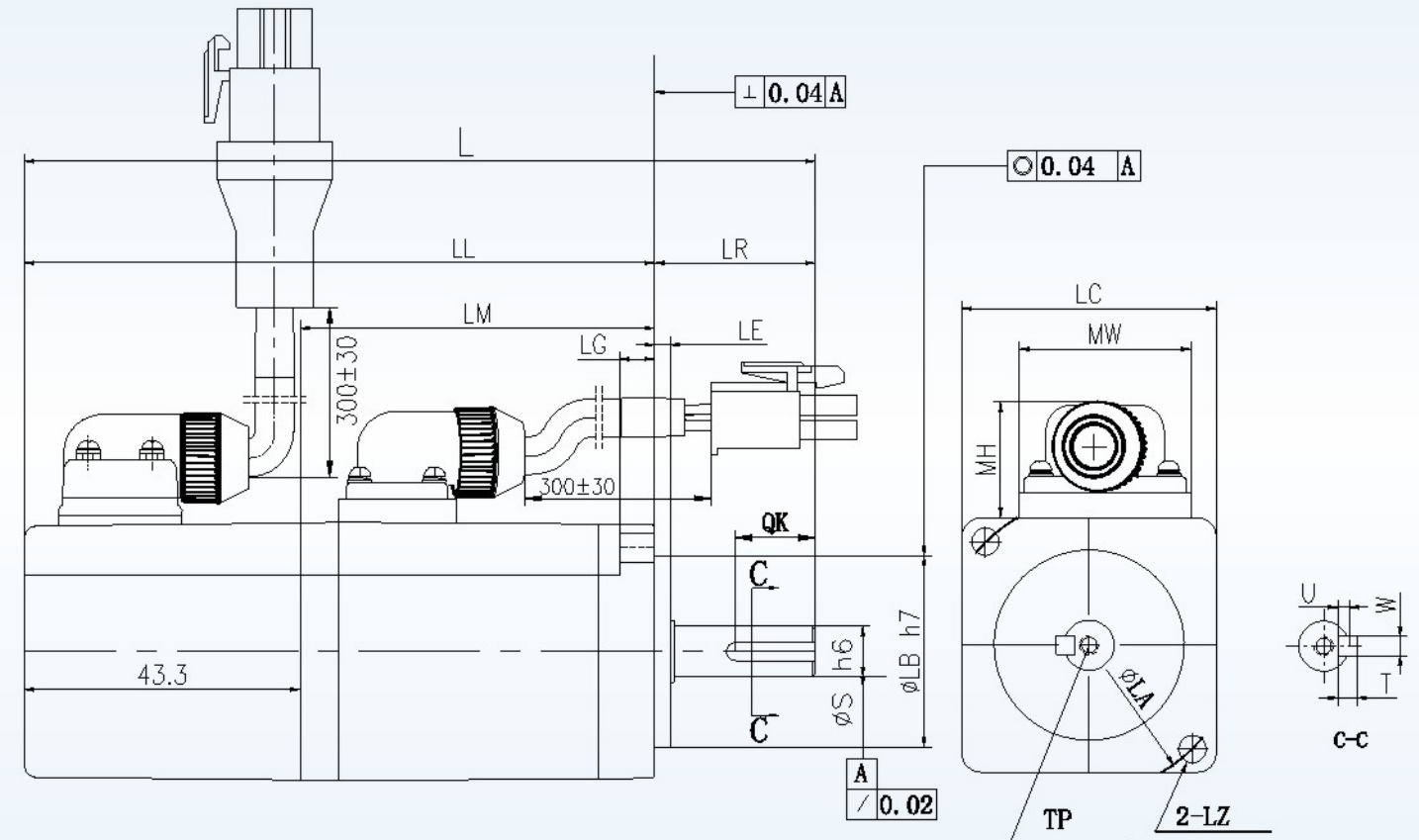
### 3.3 Servo Motor Parameter(40mm/60mm/80mm/110mm/130mm)

#### 3.3.1 40mm

##### 1. Electrical parameters

Model	Supply voltage (V)	Rated power (W)	Rated torque (Nm)	Max torque (Nm)	Rated current (A)	Max current (A)	Rotor inertia (10 <sup>-4</sup> kgm <sup>2</sup> )	Rated speed (r/min)	Max speed (r/min)	Servo model
40JASM501230K-20B	220	100	0.32	0.96	0.9	2.7	0.035	3000	5000	JASD2002-20B

##### 2. Installation dimensions (mm)



Model	L	LL	LM	LR	LE	LG	LC	LA	LB	LZ
40JASM501230K-20B	124	99	55.6	25	2.5	5.5	40	Φ46	Φ30	Φ4.4

Model	S	TP	QK	U	W	T	MW	MH	Weight(kg)
40JASM501230K-20B	Φ8	M3 Depth 6	12.5	1.8	3	3	27	18.2	0.56

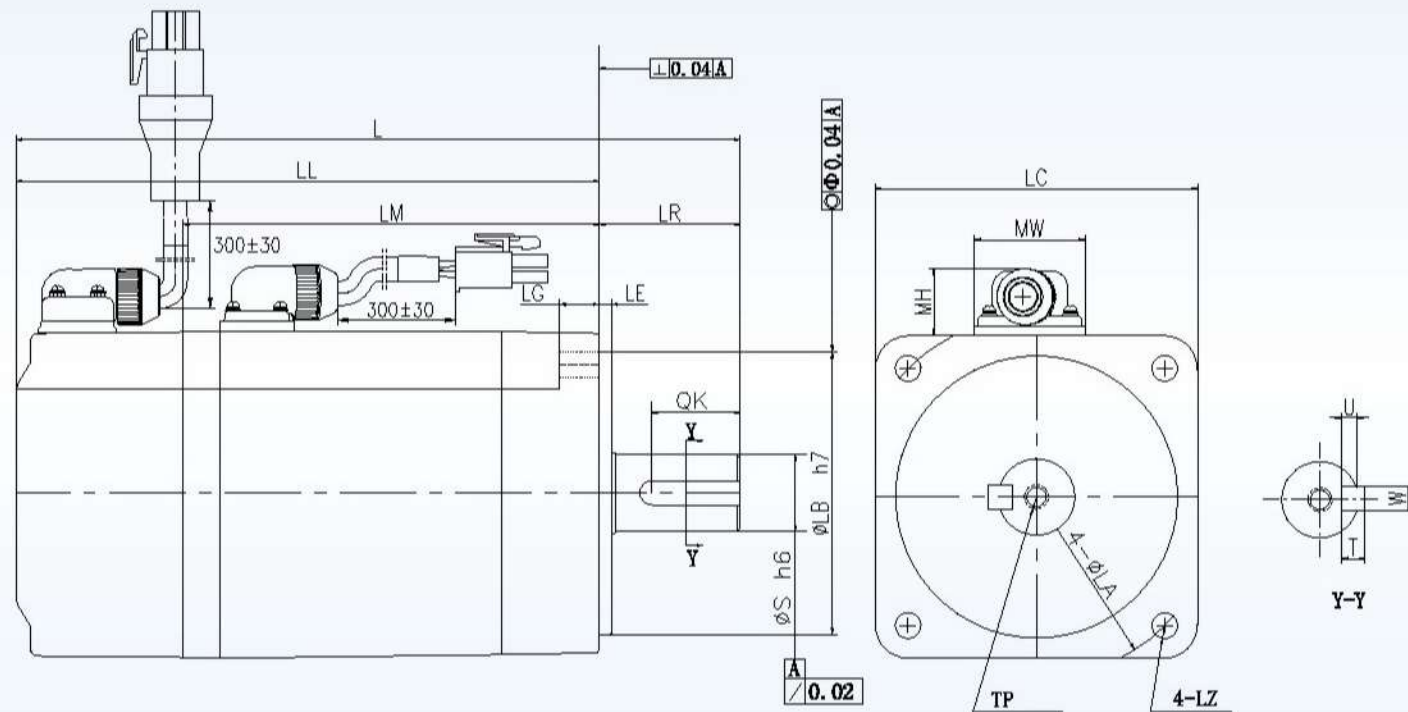


3.3.2 60mm

1. Electrical parameters

Model	Supply voltage (V)	Rated power (W)	Rated torque (Nm)	Max torque (Nm)	Rated current (A)	Max current (A)	Rotor inertia (10 <sup>-4</sup> kgm <sup>2</sup> )	Rated speed (r/min)	Max speed (r/min)	Servo model
60JASM502230K	220	200	0.64	2.3	1.38	4.14	0.264	3000	5000	JASD2002-20B
60JASM504230K	220	400	1.27	4.45	2.8	8.4	0.407	3000	5000	JASD4002-20B

2. Installation dimensions (mm)



Model	L	LL	LM	LR	LE	LG	LC	LA	LB	LZ
60JASM502230K-20B	142	112	73.6	30	3	8	60	Φ70	Φ50	Φ5.5
60JASM504230K-M23B	170	140	101.6	30	3	8	60	Φ70	Φ50	Φ5.5
60JASM502230K-17BC	108.5	78.5	73.6	30	3	8	60	Φ70	Φ50	Φ5.5
60JASM504230K-17BC	128.5	98.5	101.6	30	3	8	60	Φ70	Φ50	Φ5.5

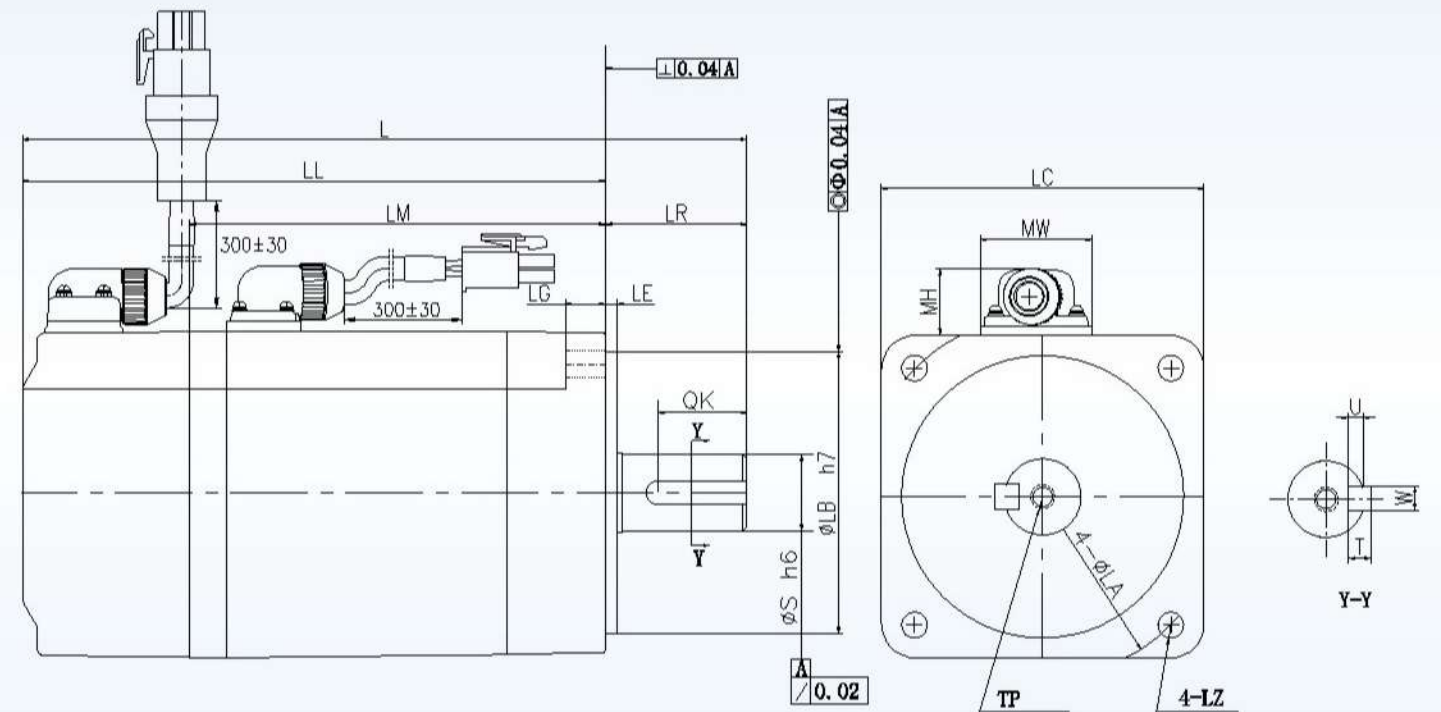
Model	S	TP	QK	U	W	T	MW	MH	Weight(kg)
60JASM502230K-20B	Φ14	M5 Depth 10	17.5	3	5	5	27.6	16.5	1.7
60JASM504230K-M23B	Φ14	M5 Depth 10	17.5	3	5	5	27.6	16.5	2.2
60JASM502230K-17BC	Φ14	M5 Depth 8	16.5	3	5	5	27.6	12	1.7
60JASM504230K-17BC	Φ14	M5 Depth 8	15.5	3	5	5	27.6	12	2.2

3.3.3 80mm

1. Electrical parameters

Model	Supply voltage (V)	Rated power (W)	Rated torque (Nm)	Max torque (Nm)	Rated current (A)	Max current (A)	Rotor inertia (10 <sup>-4</sup> kgm <sup>2</sup> )	Rated speed (r/min)	Max speed (r/min)	Servo model
80JASM507230K	220	750	2.39	6	3.9	11.7	0.924	3000	5000	JASD7502-20B
80JASM510230K	220	1000	3.18	8.2	5.15	15.45	1.207	3000	5000	JASD15002-20B

2. Installation dimensions (mm)



Model	L	LL	LM	LR	LE	LG	LC	LA	LB	LZ
80JASM507230K-M23B	180	145	103	35	3	10	80	Φ90	Φ70	Φ6.5
80JASM510230K-M23B	198	163	121	35	3	10	80	Φ90	Φ70	Φ6.5
80JASM507230K-17BC	148.6	113.6	103	35	3	10	80	Φ90	Φ70	Φ6.9
80JASM510230K-17BC	161	126	121	35	3	10	80	Φ90	Φ70	Φ7

Model	S	TP	QK	U	W	T	MW	MH	Weight(kg)
80JASM507230K-M23B	Φ19	M6 Depth 12	22	3.5	6	6	27.6	16.5	3.7
80JASM510230K-M23B	Φ19	M6 Depth 12	22	3.5	6	6	27.6	16.5	4.3
80JASM507230K-17BC	Φ19	M6 Depth 12	22	3.5	6	6	27.6	16.5	3.7
80JASM510230K-17BC	Φ19	M6 Depth 12	25	3.5	6	6	27.6	16.5	4.3

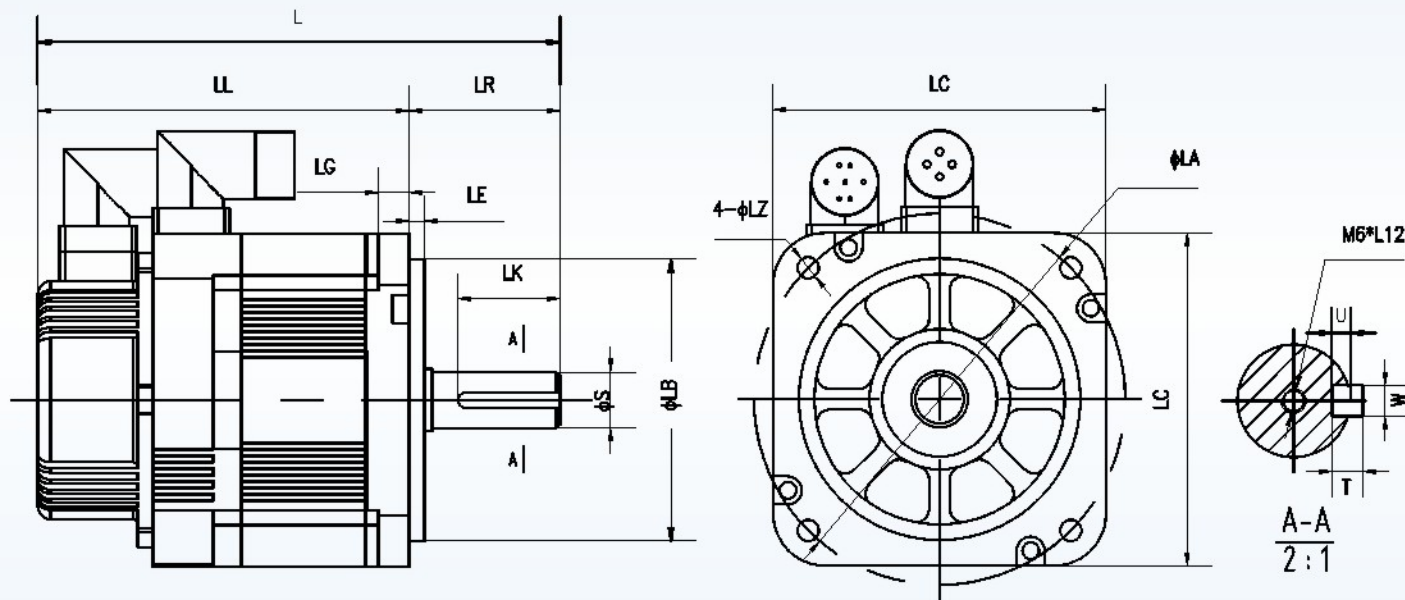


3.3.4 110mm

1. Electrical parameters

Model	Supply voltage (V)	Rated power (W)	Rated torque (Nm)	Max torque (Nm)	Rated current (A)	Max current (A)	Rotor inertia (10 <sup>-4</sup> kgm <sup>2</sup> )	Rated speed (r/min)	Max speed (r/min)	Servo model
110JASM513230K-M23B	220	1300	4.2	12.6	6.5	19.5	7.9	3000	4000	JASD15002-20B
110JASM516220K-M23B	220	1600	7.5	22.5	8	25	12.4	2000	3000	JASD15002-20B

2. Installation dimensions (mm)



Model	L	LL	LR	LE	LG	LC	LA	LB	LZ
110JASM513230K-M23B	209	153	56	5	12	110	Φ130	Φ95	Φ9
110JASM516220K-M23B	240	184	56	5	12	110	Φ130	Φ95	Φ9

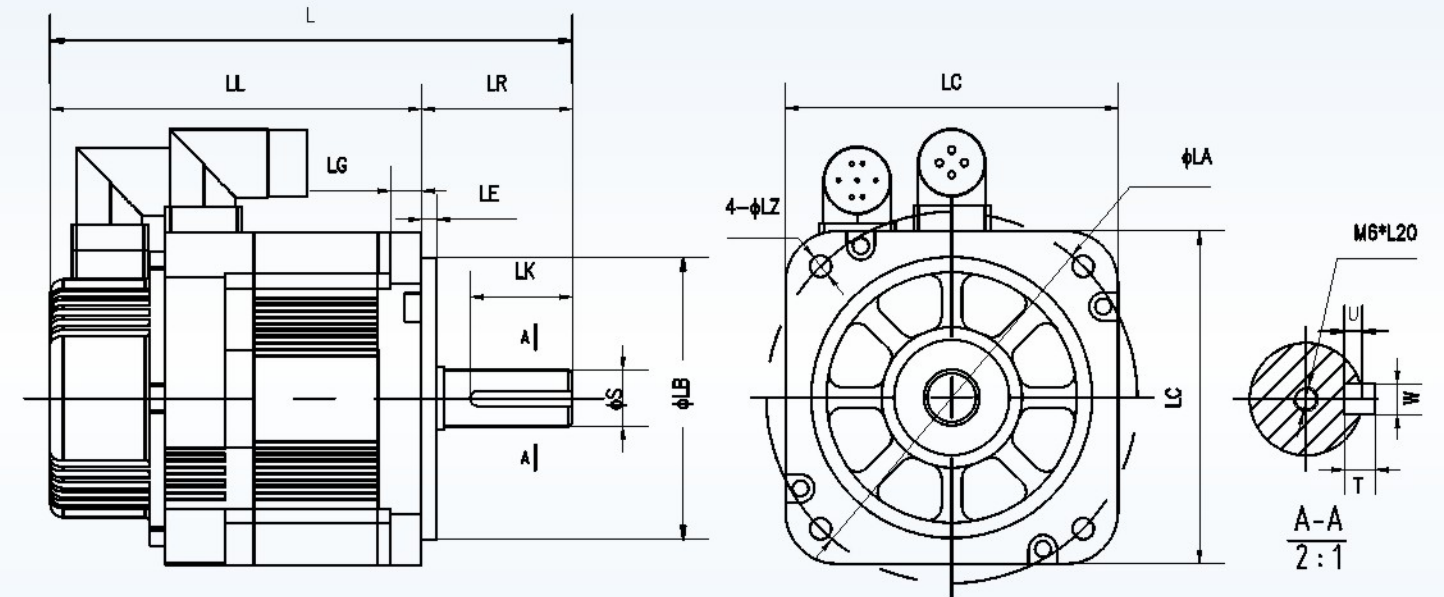
Model	S	TP	QK	W	T	U	Weight(kg)
110JASM513230K-M23B	Φ19	M6 Depth 12	40	6	6	3.5	5.8
110JASM516220K-M23B	Φ19	M6 Depth 12	40	6	6	3.5	3.5

3.3.5 130mm

1. Electrical parameters

Model	Supply voltage (V)	Rated power (W)	Rated torque (Nm)	Max torque (Nm)	Rated current (A)	Max current (A)	Rotor inertia (10 <sup>-4</sup> kgm <sup>2</sup> )	Rated speed (r/min)	Max speed (r/min)	Servo model
130JASM508215K-M23B	220	850	5.4	16.2	6.5	20.5	13.9	1500	3000	JASD15002-20B
130JASM515220K-M23B	220	1500	7.5	22.5	9.0	28.4	18.6	2000	3000	JASD15002-20B
130JASM515215K-M23B	220	1500	9.6	28.8	10.0	31.5	23.7	1500	3000	JASD20002-20B
130JASM520230K-M23B	220	2000	6.4	19.2	11.5	35.0	16.0	3000	4000	JASD20002-20B
130JASM523215K-M23B	220	2300	14.6	43.8	11.0	34.7	42.4	1500	2000	JASD20002-20B
130JASM530220K-M23B	220	3000	14.3	42.9	17.0	51.0	29.1	2000	3000	JASD30002-20B

2. Installation dimensions (mm)



Model	L	LL	LR	LE	LG	LC	LA	LB	LZ
130JASM508215K-M23B	204	145	59	6	12	130	Φ145	Φ110	Φ8.5
130JASM515230K-M23B	198	139	59	6	12	130	Φ145	Φ110	Φ8.5
130JASM515215K-M23B	232	173	59	6	12	130	Φ145	Φ110	Φ8.5
130JASM520230K-M23B	211	152	59	6	12	130	Φ145	Φ110	Φ8.5
130JASM523215K-M23B	283	224	59	6	12	130	Φ145	Φ110	Φ8.5
130JASM530220K-M23B	325	267	58	6	12	130	Φ145	Φ110	Φ9

Model	S	TP	QK	W	T	U	Weight(kg)
130JASM508215K-M23B	Φ19	M6 Depth 20	40	5	6	3.5	6.3
130JASM515230K-M23B	Φ22	M6 Depth 20	40	6	6	3.5	6.3
130JASM515215K-M23B	Φ22	M6 Depth 20	40	6	6	3.5	6.3
130JASM520230K-M23B	Φ22	M6 Depth 20	40	6	6	3.5	6.3
130JASM523215K-M23B	Φ22	M6 Depth 20	40	6	6	3.5	6.3
130JASM530220K-M23B	Φ22	M6 Depth 20	40	6	6	3.5	6.3



## Chapter 4 JASD Accessories

### 4.1 Accessories

Use cable offered by JMC

CN1 I/O Connector	R, S, T, L1, L2 Connector	U, V, W, Connector	Motor Cable		Encoder Cable	
In Driver Package			Below 80mm	110mm 130mm	Below 80mm	110mm 130mm
			Length 3m(Standard) and optional		Length 3m(Standard) and optional	

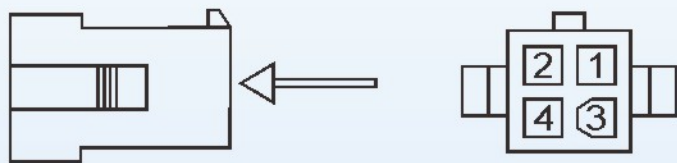
Do not use cable offered by JMC

CN1 I/O Connector	Power Connector	U, V, W, Connector	Motor Cable		Encoder Cable	
In Driver Package			Below 80mm	110mm 130mm	Below 80mm	110mm 130mm
						In Motor Package

### 4.2 JASD Accessories Definition

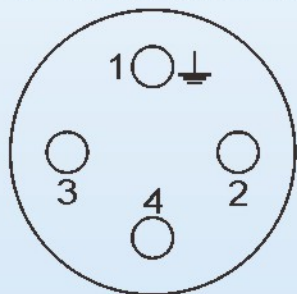
#### 1、Motor Cable

(1) (For Frame Size 80mm And Below )



Pin	Name
1	U
2	V
3	W
4	PE

(2) (For Frame Size 110mm And 130mm )

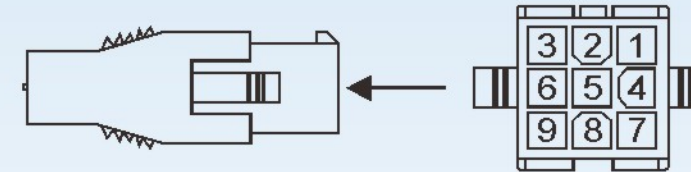


Pin	Name
1	PE
2	U
3	V
4	W

#### 2、Encoder Cable

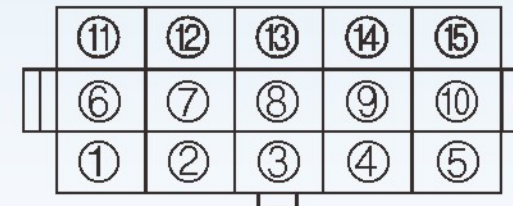
(1) (For Frame Size 80mm And Below )

① Absolute Encoder



Pin	Name	Pin	Name
1	T+	6	/
2	/	7	+5V
3	/	8	GND
4	T-	9	Shield
5	/		

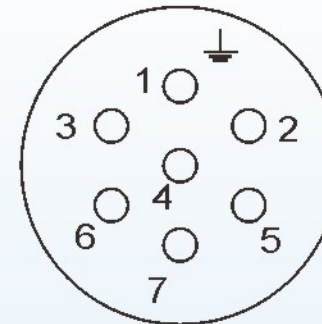
② Incremental Encoder



Pin	Name	Pin	Name
1	Shield	9	EA+
2	+5V	10	EV+
3	GND	11	EW+
4	EB+	12	EV-
5	EZ-	13	EA-
6	EU+	14	EB-
7	EZ+	15	EW-
8	EU-		

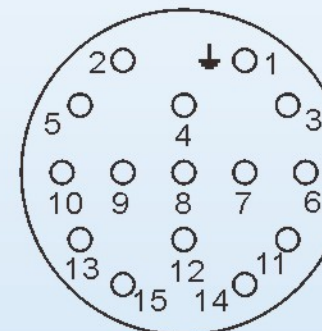
(2)(For Frame Size 110mm And 130mm )

① Absolute Encoder



Pin	Name
1	Shield
2	/
3	/
4	T-
5	GND
6	T+
7	+5V

② Incremental Encoder







Pin	Name	Pin	Name
1	Shield	9	EZ-
2	+5V	10	EU+
3	GND	11	EV+
4	EA+	12	EW+
5	EB+	13	EU-
6	EZ+	14	EV-
7	EA-	15	EW-
8	EB-		







## Chapter 5 Servo Motor and Driver selection





## 100W

Driver Model	JASD2002-20B	
Motor Model	40JASM501230K-20B	
Encoder Cable	C-EC4-I-EL9-3M0(3M)	
Power Cable	C-M4*0.5-EL4-3M0(3M)	





## 200W

Driver Model	JASD2002-20B	
Motor Model	60JASM502230K-20B	
Encoder Cable	C-EC4-I-EL9-3M0(3M)	
Power Cable	C-M4*0.5-EL4-3M0(3M)	








## 400W

Driver Model	JASD4002-20B	
Motor Model	60JASM504230K-M23B	
Encoder Cable	C-EC4-I-EL9-3M0(3M)	
Power Cable	C-M4*0.5-EL4-3M0(3M)	





## 750W

Driver Model	JASD7502-20B	
Motor Model	80JASM507230K-M23B	
Encoder Cable	C-EC4-I-EL9-3M0(3M)	
Power Cable	C-M4*0.75-EL4-3M0(3M)	




## 1500W

Driver Model	JASD15002-20B	
Motor Model	80JASM510230K-M23B	
	110JASM513230K-M23B 110JASM516220K-M23B 130JASM508215K-M23B 130JASM515220K-M23B	
	C-EC4-S-EL9-3M0(3M)	
	C-EC4-S-H-3M0(3M)	
Power Cable	C-M4*1.5-EL4-3M0(3M)	
	C-M4*1.5-H-3M0(3M)	

## 2000W

Driver Model	JASD20002-20B	
Motor Model	130JASM515215K-M23B 130JASM520230K-M23B 130JASM523215K-M23B	
Encoder Cable	C-EC4-S-H-3M0(3M)	
Power Cable	C-M4*1.5-H-3M0(3M)	

## 3000W

Driver Model	JASD30002-20B	
Motor Model	130JASM530220K-M23B	
Encoder Cable	C-EC4-S-H-3M0(3M)	
Power Cable	C-M4*1.5-H-3M0(3M)	