



杰美康机电
JUST MOTION CONTROL



JASD series AC servo selection manual

Address: Floor2,Building A,Hongwei Industrial Zone No.6,

Liuxian 3rd Road,Shenzhen.China

Tel: 0755-26509689 26502268

Fax: 0755-26509289

E-mail: info@jmc-motion.com

Http: //www.jmc-motion.com

Preface

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Version	Edited By	Proofread By
V1.0	Engineer Dept.	Engineer Dept.

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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 17 bits, 20 bits 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.

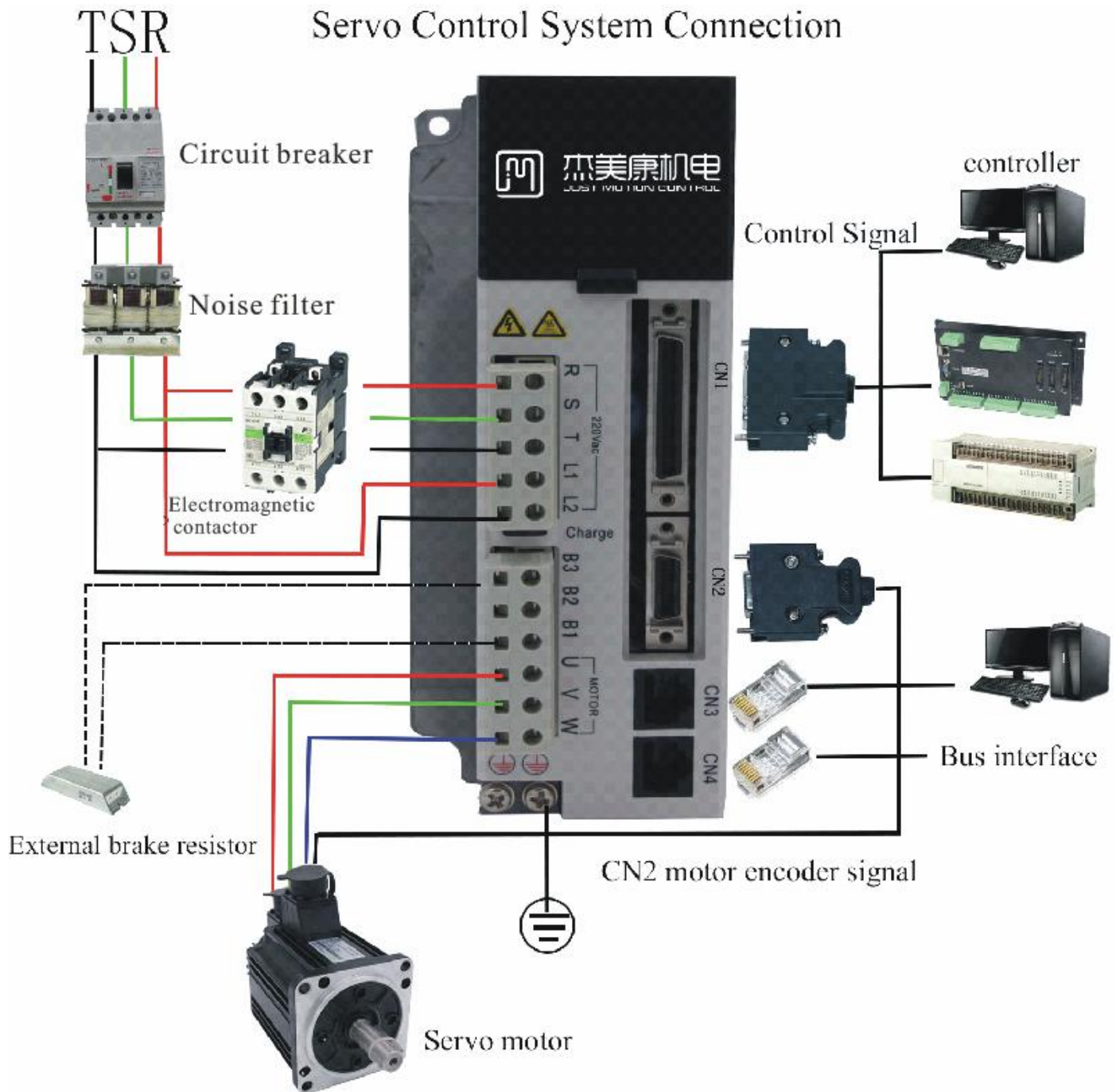
1.2 JASD Servo Driver And Motor

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

80mm	110mm		130mm
			
80JASM510230K-20B	110JASM513230K-20B	110JASM516220K-20B	130JASM508215K-20B
1000W	1300W	1600W	850W
			
JASD15002-20B	JASD15002-20B	JASD15002-20B	JASD15002-20B
1500W	1500W	1500W	1500W

130mm			
			
130JASM515220K-20B 130JASM515215K-20B	130JASM520230K-20B	130JASM523215K-20B	130JASM530220K-20B
1500W	2000W	2300W	3000W
			
JASD20002-20B	JASD20002-20B	JASD20002-20B	JASD30002-20B
2000W	2000W	2000W	3000W

1.3 Connection



Chapter 2 JASD Servo Driver Introduction

JASD Servo Driver Power

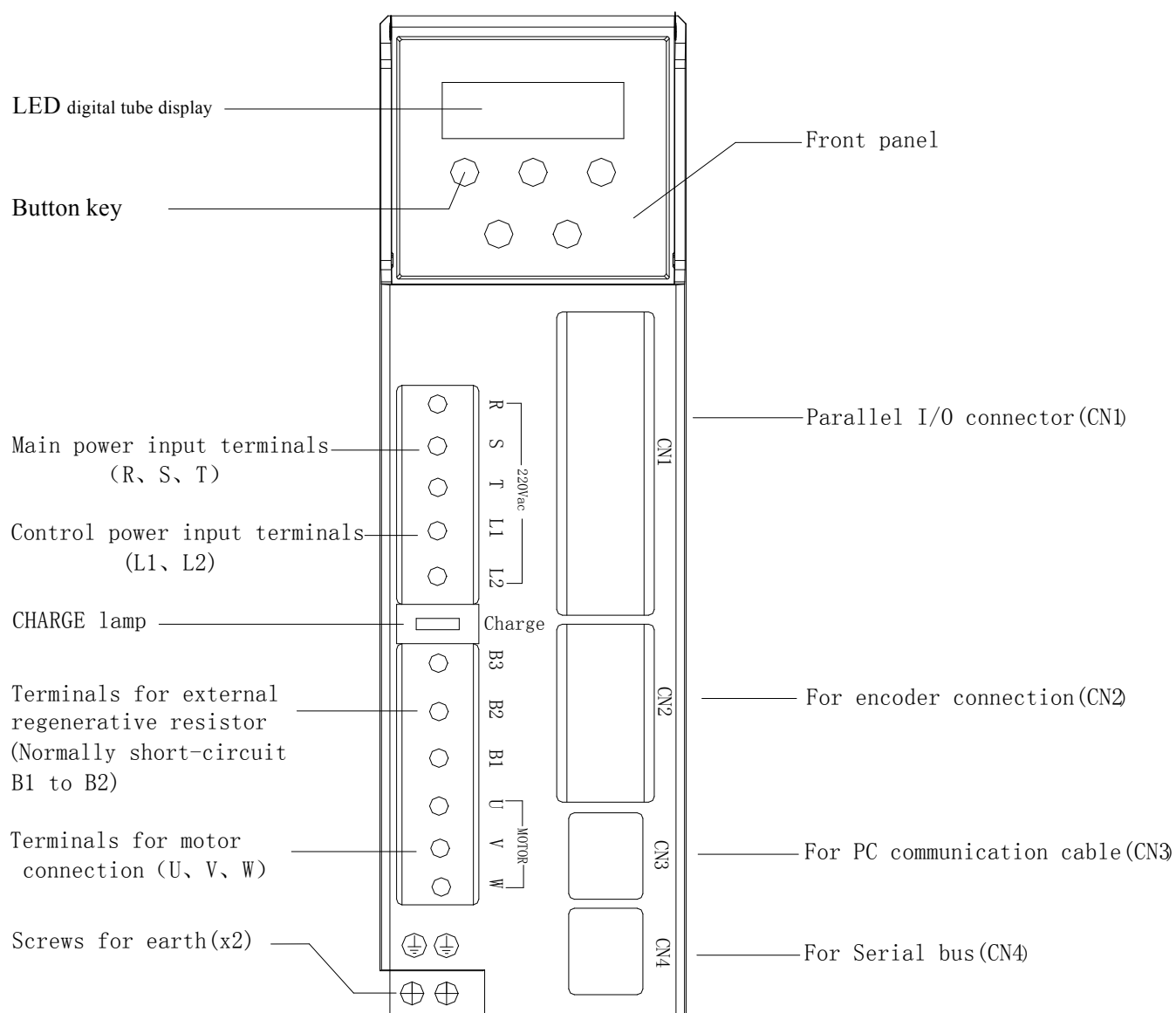
200W	400W	750W	1.5KW	2.0KW	3.0KW
					

2.1 Servo Driver Model Introduction

JASD **400** **2** **-** **20B** **-** **XX**
 ① ② ③ ④ ⑤

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: single phase/three phase 220V
④	Encoder line	1000:1000 line 1250:1250 line 2500:2500 line 17B:17 bit 20B:20 bit
⑤	Product design serial number	Product design serial number

2.2 Parts Decription



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	

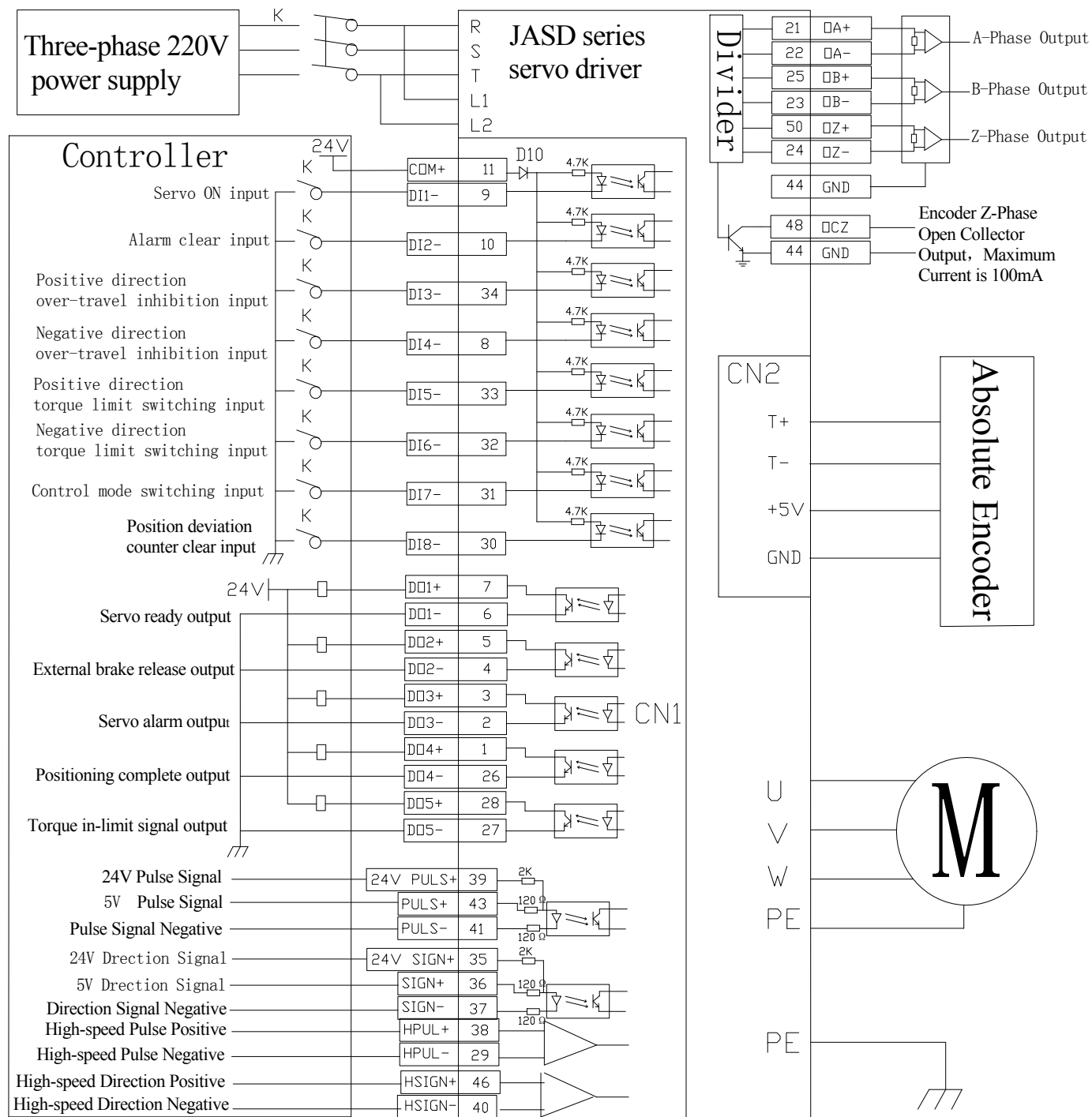
(2) 3-phase 220V servo drive

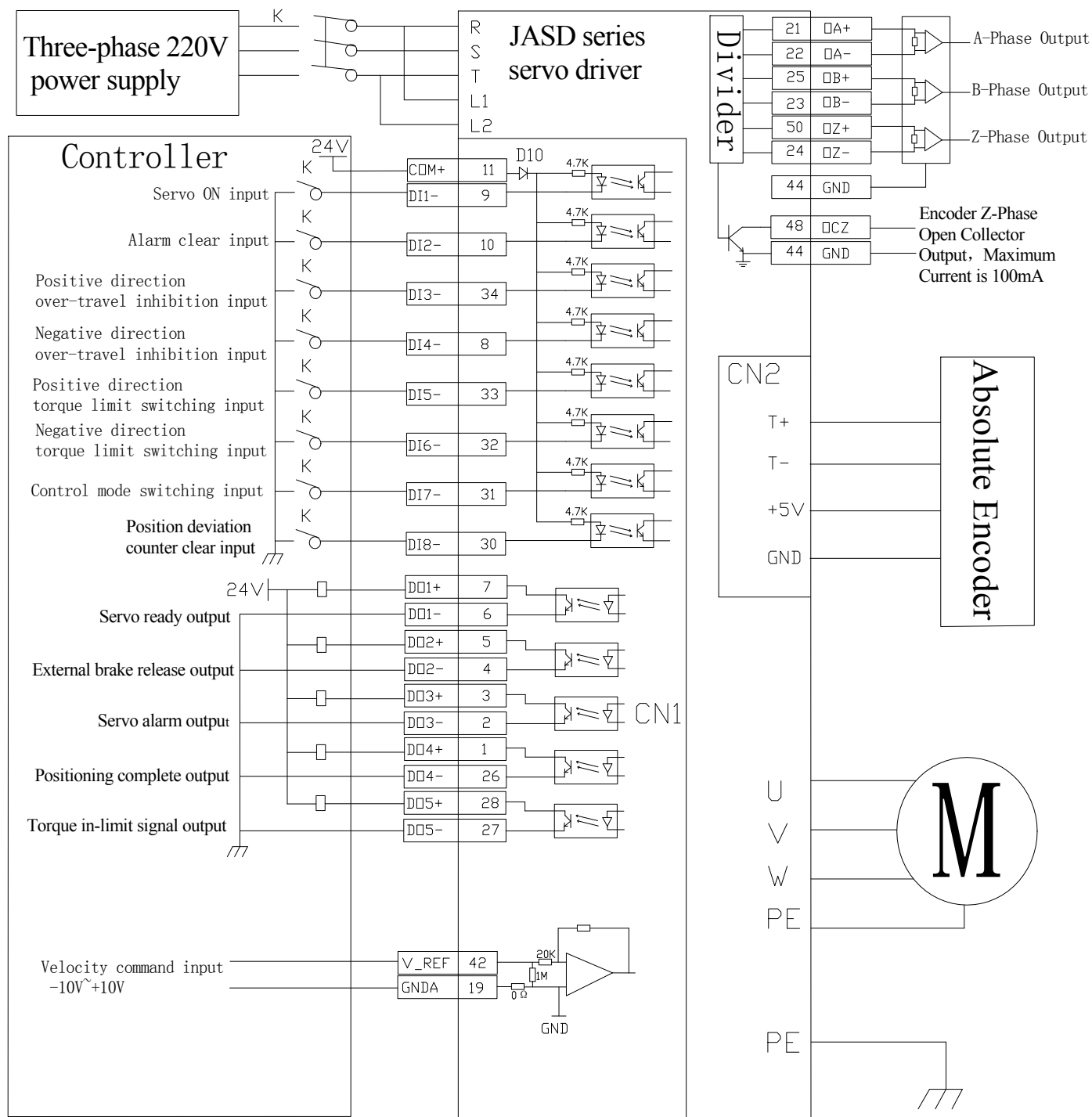
Model JASD***2-20B	750	1500	2000	3000
Three Phase Continuous Input Current (Arms)	3.6	4.6	8.7	11
Continuous Output Current (Arms)	5.5	8	14	20
Max Output Current (Arms)	16.9	19	33	50
Main Circuit Power Supply	3-Phase AC180V-240V, 50/60HZ			
Control Circuit Power Supply	Single Phase AC180V-240V, 50/60HZ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

(3) Specifications

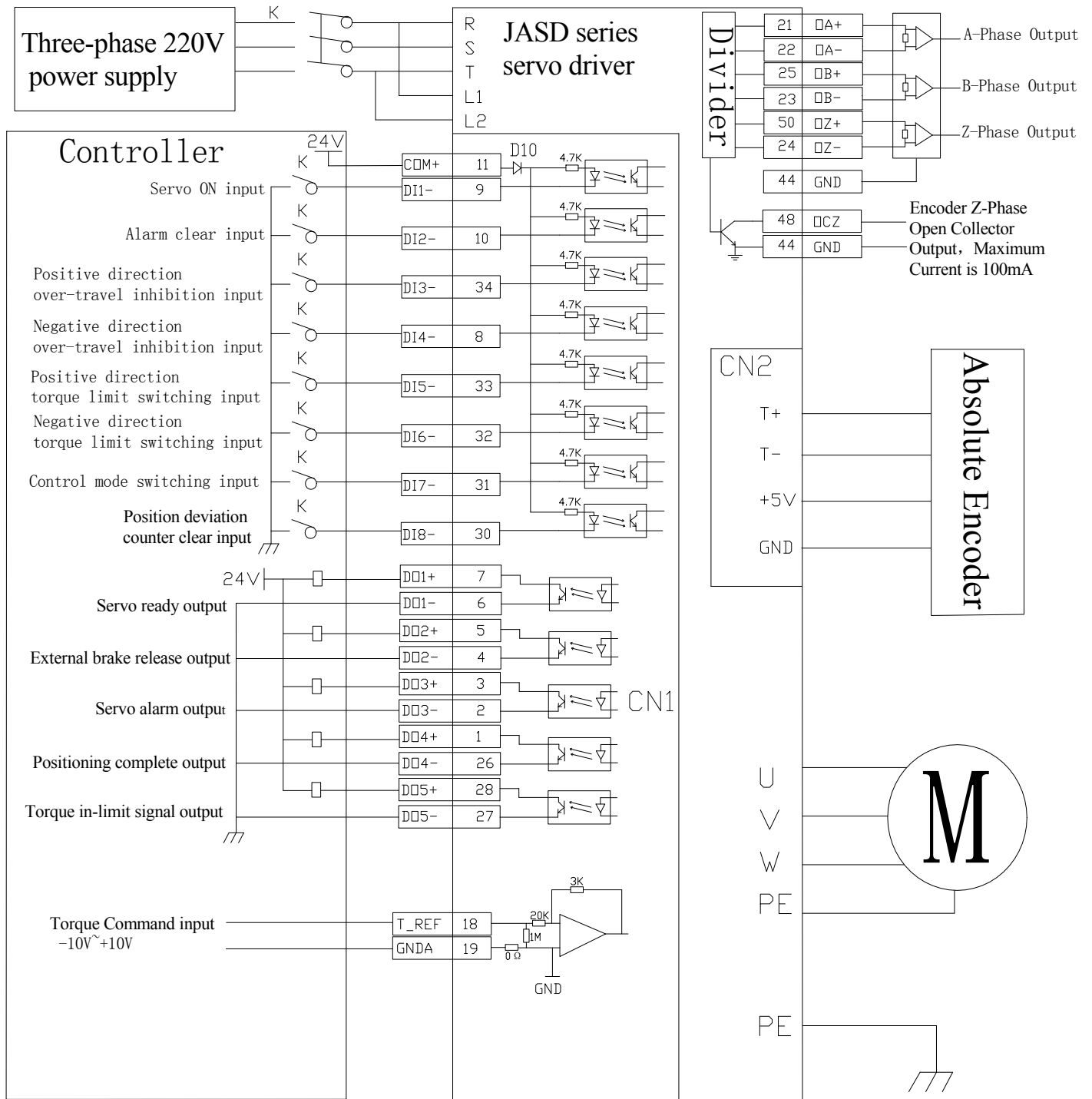
Project		Description
Control method		IGBT PWM sinusoidal wave drive
Encoder feedback		Absolute encoder Incremental encoder
Environment	temperature	Ambient temperature: 0℃to55℃(free from freezing) Storage temperature: -25℃to85℃
	humidity	Both operating and storage: 10%~90%
	Altitude	<1000m, Lower than 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℃ (25℃)
	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

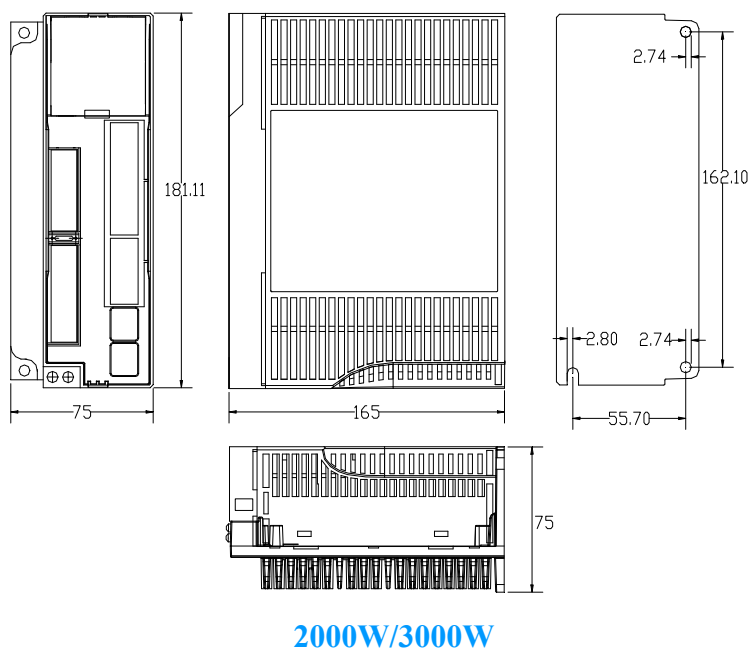
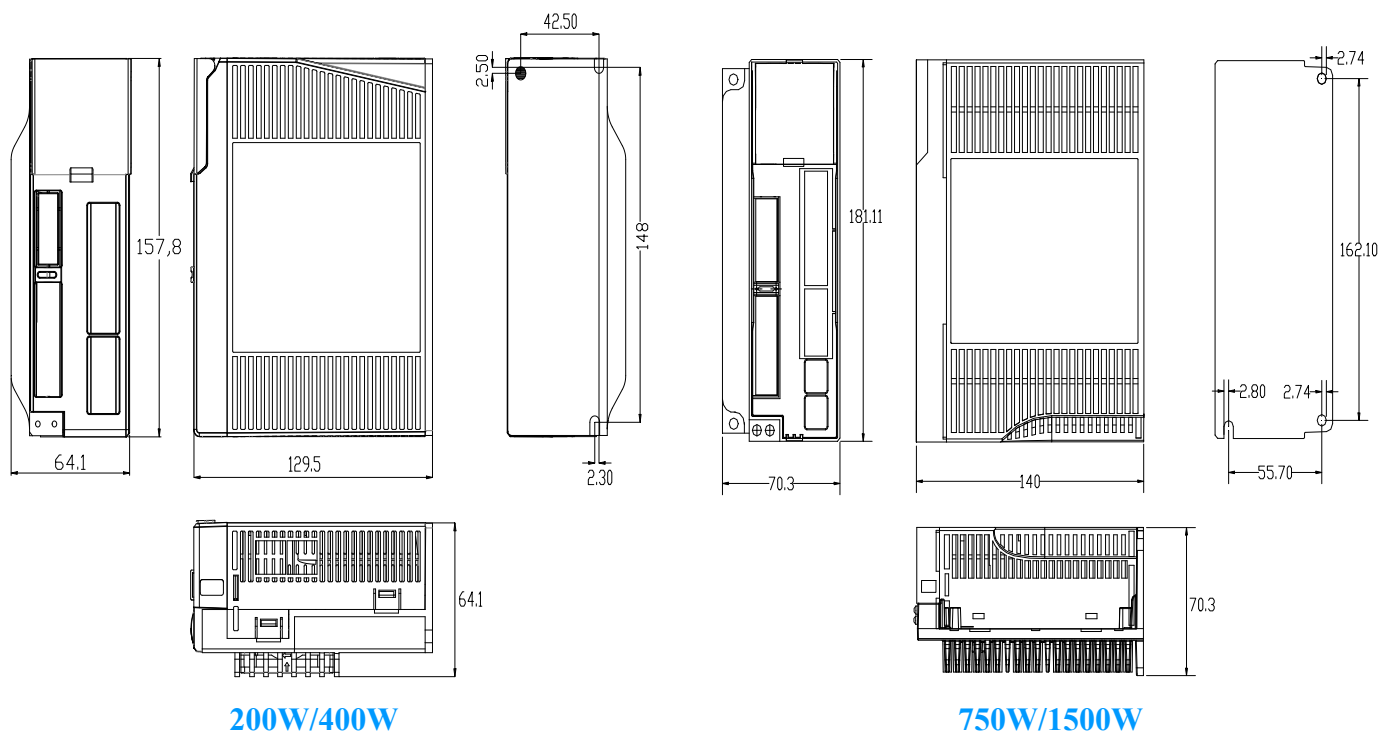




2.6 Torque control wiring diagram



2.7 Drive installation dimensions (mm)



Chapter 3 Servo Motor

3.1 Servo Motor Model Introduction

60 **JASM** **5** **04** **2** **30** **K** - **20B** - **XX**

 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

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 20B: 20 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 40JASM501230K-2500 40JASM01230K-2500	100	3000/5000	0.32/0.96
	60mm	60JASM502230K-20B 60JASM502230K-2500 60JASM02230K-2500	200	3000/5000	0.64/2.3
		60JASM504230K-20B 60JASM504230K-2500 60JASM04230K-2500	400	3000/5000	1.27/4.45
	80mm	80JASM507230K-20B 80JASM507230K-2500 80JASM07230K-2500	750	3000/5000	2.39/6
		80JASM510230K-20B 80JASM510230K-2500 80JASM10230K-2500	1000	3000/5000	3.18/8.2
	110mm	110JASM513230K-20B	1300	3000/4000	4.2/12.6
		110JASM516220K-20B	1600	2000/3000	7.5/22.5
	130mm	130JASM520230K-20B	2000	3000/4000	6.4/19.2
		130JASM515220K-20B	1500	2000/3000	7.5/22.5
		130JASM530220K-20B	3000		14.3/42.9
		130JASM508215K-20B	850	1500/3000	5.4/16.2
		130JASM515215K-20B	1500		9.6/28.8
		130JASM523215K-20B	2300		14.6/43.8

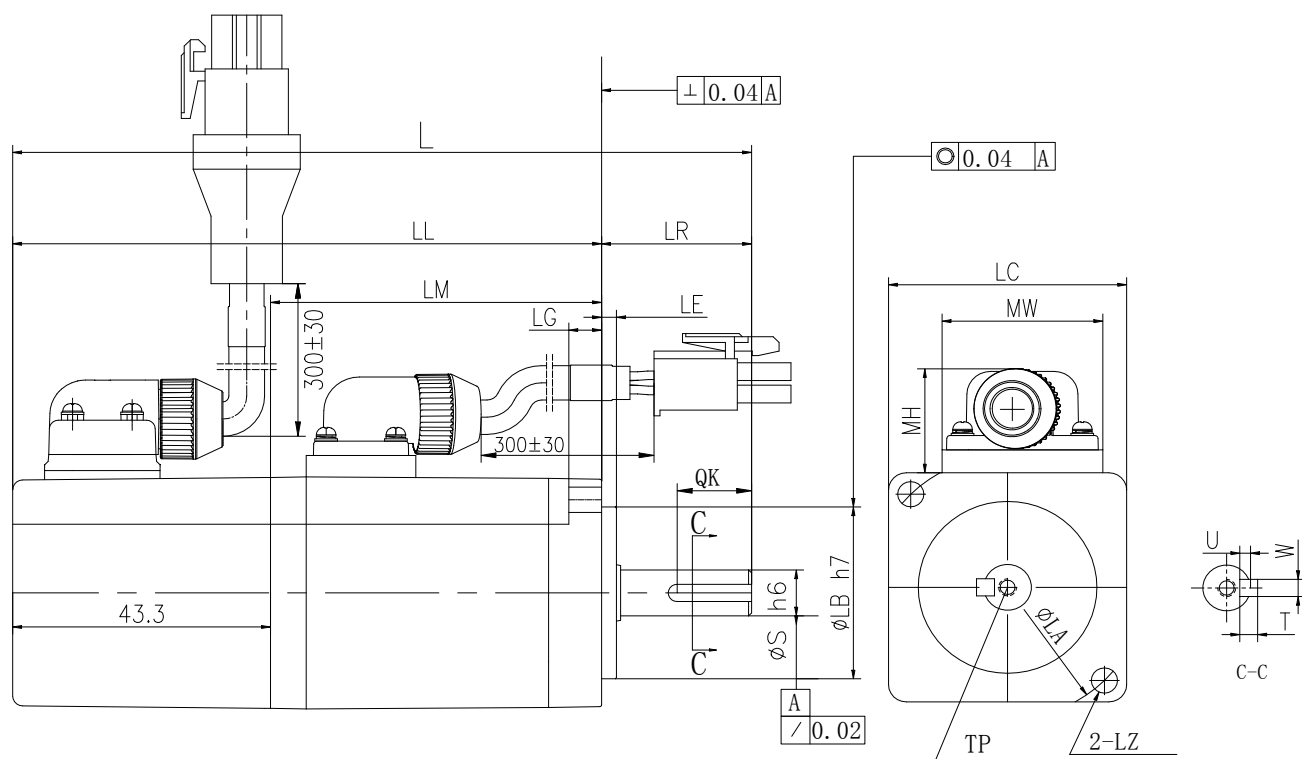
3.3 Servo Motor Parameter (40mm/60mm/80mm/110mm/130mm)

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^{-4} kg m^2)	Rated speed (r/min)	Max speed (r/min)	Servo model
40JASM501230K-20B	220V	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	$\Phi 46$	$\Phi 30$	$\Phi 4.4$

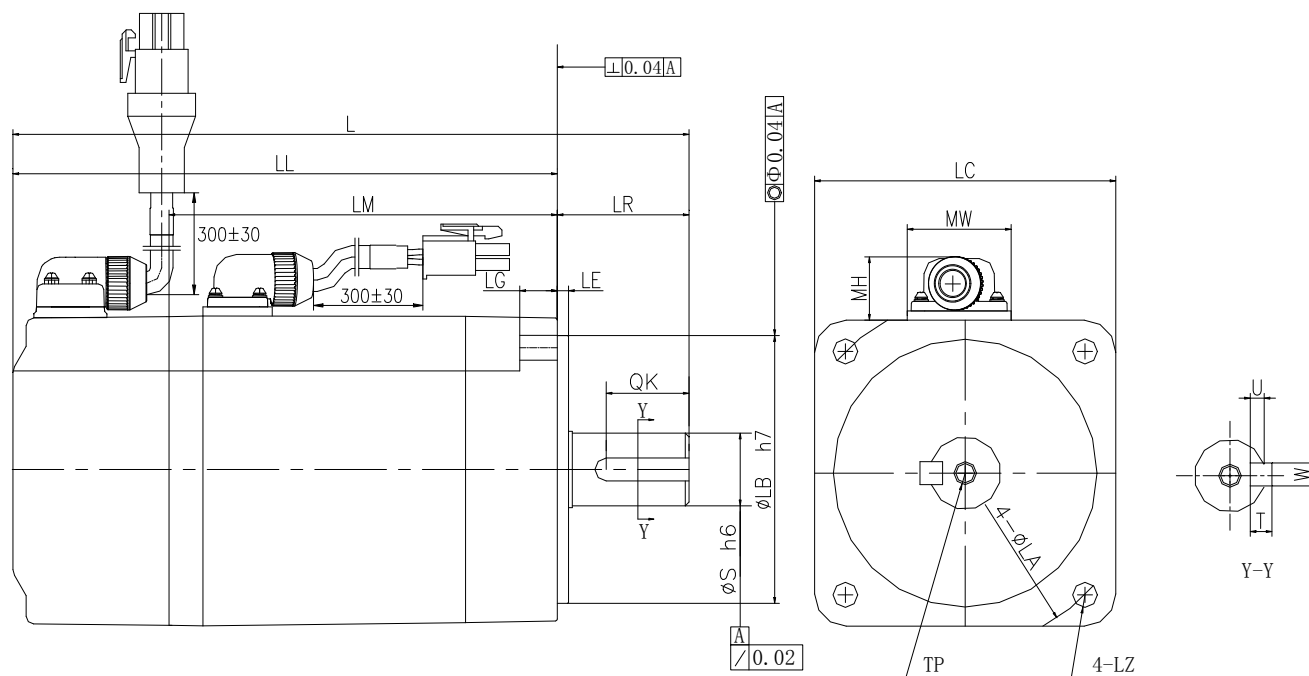
Model	S	TP	QK	U	W	T	MW	MH	Weight (kg)
40JASM501230K-20B	$\Phi 8$	M3 Depth 6	12.5	1.8	3	3	27	18.2	0.56

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^{-4} kg m^2)	Rated speed (r/min)	Max speed (r/min)	Servo model
60JASM502230K-20B	220V	200	0.64	2.3	1.38	4.14	0.264	3000	5000	JASD2002-20B
60JASM504230K-20B	220V	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
60JASM5022K-20B	142	112	73.6	30	3	8	60	$\Phi 70$	$\Phi 50$	$\Phi 5.5$
60JASM5042K-20B	170	140	101.6	30	3	8	60	$\Phi 70$	$\Phi 50$	$\Phi 5.5$

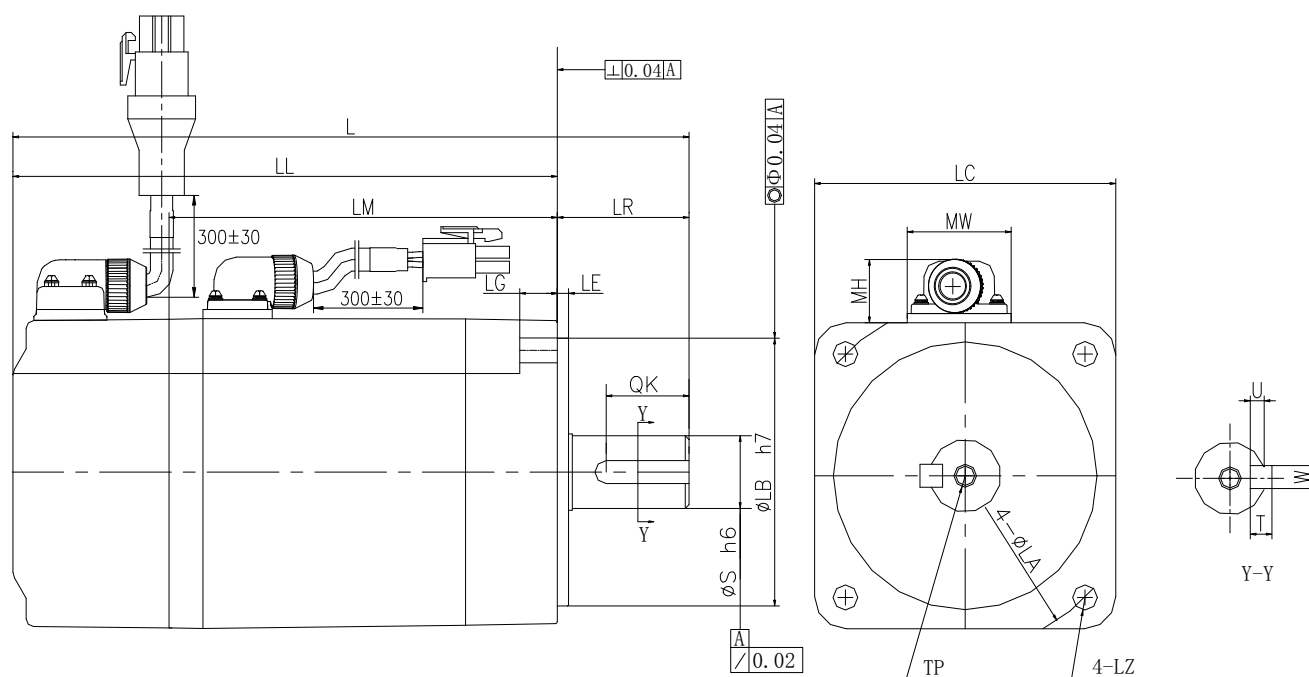
Model	S	TP	QK	U	W	T	MW	MH	Weight (kg)
60JASM502230K-20B	$\Phi 14$	M5 Depth 10	17.5	3	5	5	27.6	16.5	1.7
60JASM504230K-20B	$\Phi 14$	M5 Depth 10	17.5	3	5	5	27.6	16.5	2.2

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^{-3} kg m^2)	Rated speed (r/min)	Max speed (r/min)	Servo model
80JASM507230K-20B	220V	750	2.39	6	3.9	11.7	0.924	3000	5000	JASD7502-20B
80JASM510230K-20B	220V	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-20B	180	145	103	35	3	10	80	Φ90	Φ70	Φ6.5
80JASM510230K-20B	198	163	121	35	3	10	80	Φ90	Φ70	Φ6.5

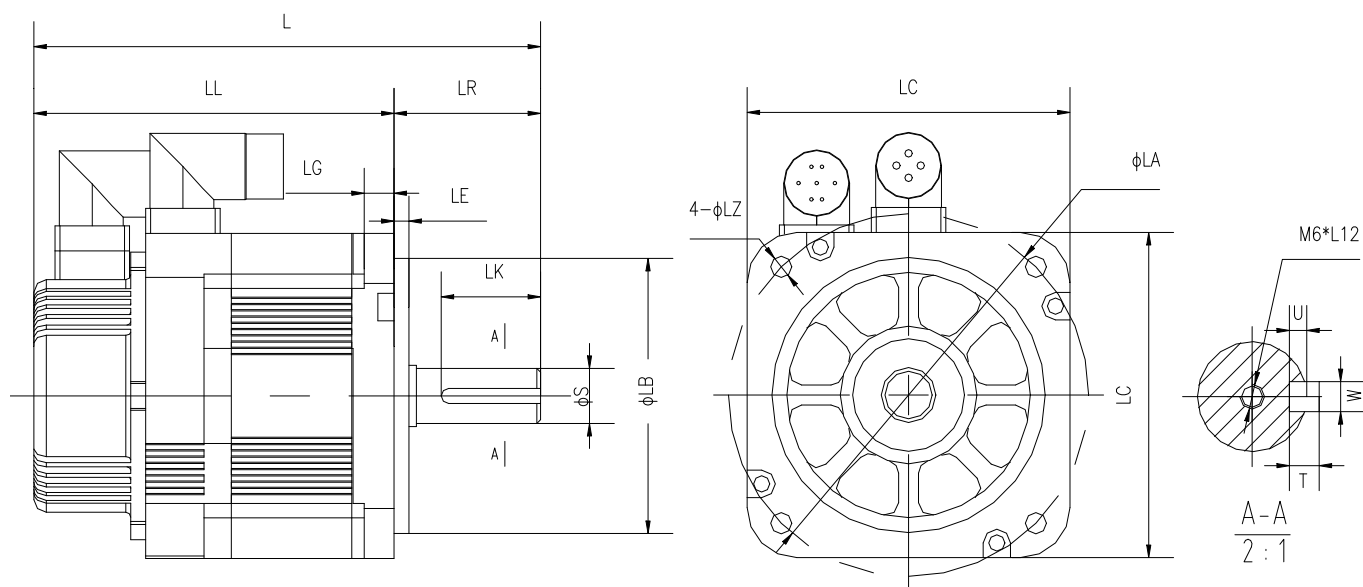
Model	S	TP	QK	U	W	T	MW	MH	Weight (kg)
80JASM507230K-20B	Φ19	M6 Depth 12	22	3.5	6	6	27.6	16.5	3.7
80JASM510230K-20B	Φ19	M6 Depth 12	22	3.5	6	6	27.6	16.5	4.3

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^{-4} kg m^2)	Rated speed (r/min)	Max speed (r/min)	Servo model
110JASM513230K-20B	220	1300	4.2	12.6	6.5	19.5	7.9	3000	4000	JASD15002-20B
110JASM516220K-20B	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-20B	209	153	56	5	12	110	Φ130	Φ95	Φ9
110JASM516220K-20B	240	184	56	5	12	110	Φ130	Φ95	Φ9

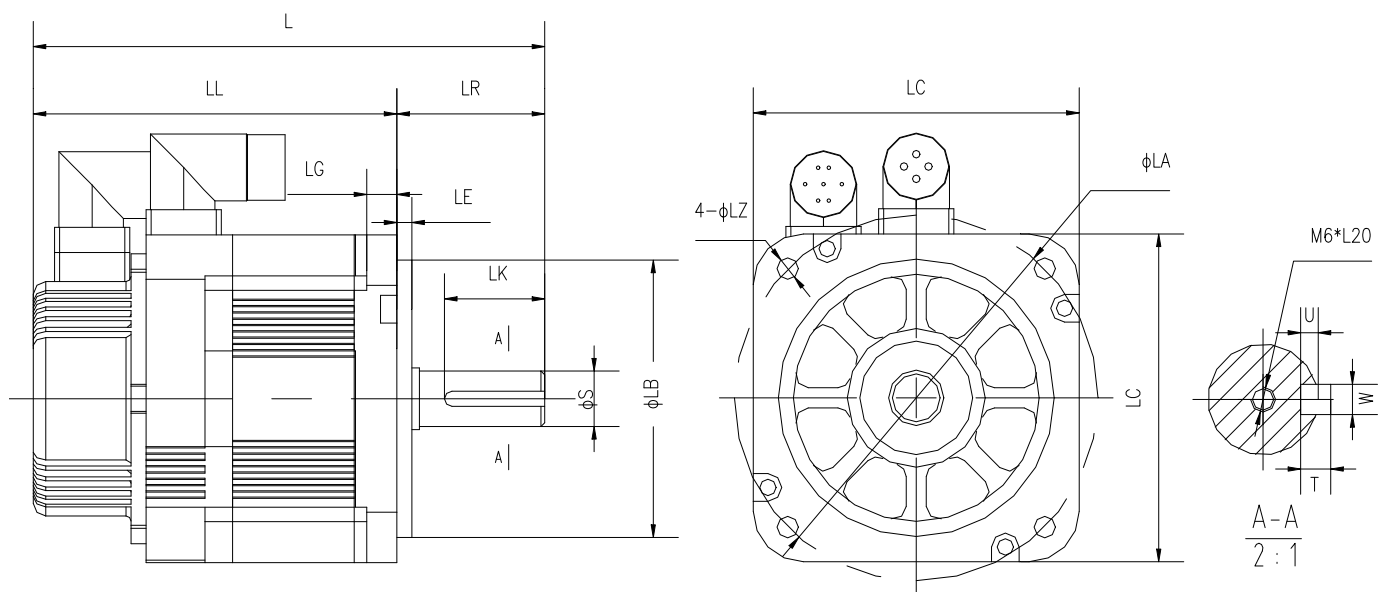
Model	S	TP	QK	W	T	U	Weight (kg)
110JASM513230K-20B	Φ19	M6 Depth 12	40	6	6	3.5	5.8
110JASM516220K-20B	Φ19	M6 Depth 12	40	6	6	3.5	3.5

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^{-4} kg m^2)	Rated speed (r/min)	Max speed (r/min)	Servo model
130JASM508215K-20B	220	850	5.4	16.2	6.5	20.5	13.9	1500	3000	JASD15002-20B
130JASM515220K-20B	220	1500	7.5	22.5	9.0	28.4	18.6	2000	3000	JASD15002-20B
130JASM515215K-20B	220	1500	9.6	28.8	10.0	31.5	23.7	1500	3000	JASD20002-20B
130JASM520230K-20B	220	2000	6.4	19.2	11.5	35.0	16.0	3000	4000	JASD20002-20B
130JASM523215K-20B	220	2300	14.6	43.8	11.0	34.7	42.4	1500	2000	JASD20002-20B
130JASM530220K-20B	220	3000	14.3	42.9	17.0	51.0	29.1	2000	3000	JASD30002-20B

2. Installation dimensions (mm)



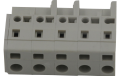
Model	L	LL	LR	LE	LG	LC	LA	LB	LZ
130JASM508215K-20B	204	145	59	6	12	130	$\Phi 145$	$\Phi 110$	$\Phi 8.5$
130JASM515230K-20B	198	139	59	6	12	130	$\Phi 145$	$\Phi 110$	$\Phi 8.5$
130JASM515215K-20B	232	173	59	6	12	130	$\Phi 145$	$\Phi 110$	$\Phi 8.5$
130JASM520230K-20B	211	152	59	6	12	130	$\Phi 145$	$\Phi 110$	$\Phi 8.5$
130JASM523215K-20B	283	224	59	6	12	130	$\Phi 145$	$\Phi 110$	$\Phi 8.5$
130JASM530220K-20B	325	267	58	6	12	130	$\Phi 145$	$\Phi 110$	$\Phi 9$

Model	S	TP	QK	W	T	U
130JASM508215K-20B	Φ 19	M6 Depth 20	40	5	6	3.5
130JASM515230K-20B	Φ 22	M6 Depth 20	40	6	6	3.5
130JASM515215K-20B	Φ 22	M6 Depth 20	40	6	6	3.5
130JASM520230K-20B	Φ 22	M6 Depth 20	40	6	6	3.5
130JASM523215K-20B	Φ 22	M6 Depth 20	40	6	6	3.5
130JASM530220K-20B	Φ 22	M6 Depth 20	40	6	6	3.5

Chapter 4 JASD Accessories

4.1 Accessories

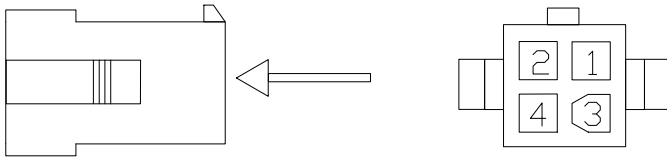
Use cable offered by JMC						
CN1 I/O Connector	R、S、T、L1、L2 Connector	U、V、W、Connector	Motor Cable		Encoder Cable	
						
In Driver Package			Below 80mm	110mm 130mm	Below 80mm	110mm 130mm
			Length 3m(Standard) and optional		Length 3m(Standard) and optional	

Do not use cable offered by JMC							
CN1 I/O Connector	Power Connector	U、V、W、Connector	Motor Connector		Encoder Connector		
							
In Driver Package			Below 80mm	110mm 130mm	Below 80mm	110mm 130mm	In Motor Package

4.2 JASD Accessories Definition

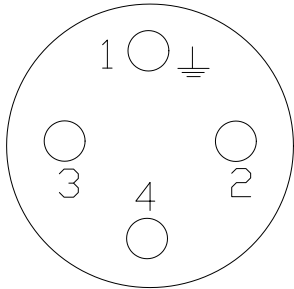
1、Motor Cable

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



Pin	Name
1	U
2	V
3	W
4	PE

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

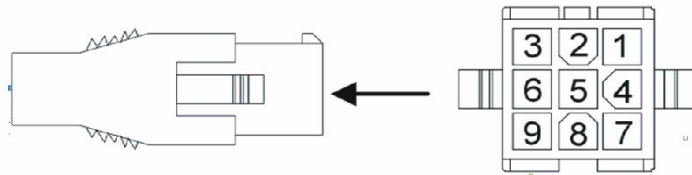


Pin	Name
1	PE
2	U
3	V
4	W

2、Encoder Cable

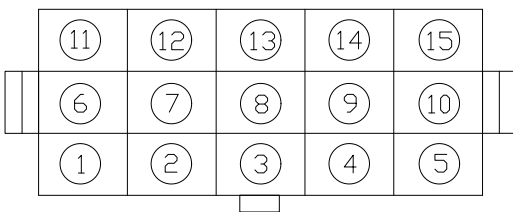
(1) (For Frame Size 80mm And Below)

①Absolute Encoder



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

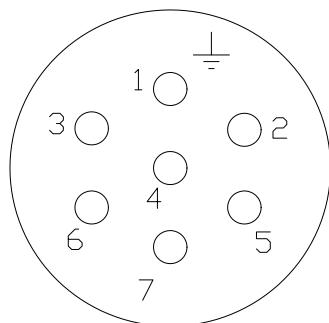
② Incremental Encoder



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-		

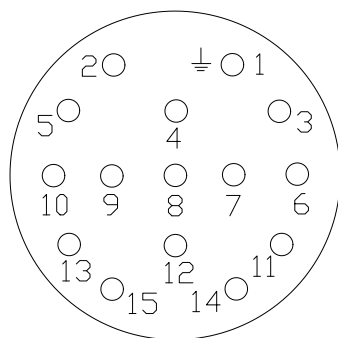
(2)(For Frame Size 110mm And 130mm)

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-EC6-S-EL9-3M0 (3M)	
Power Cable	C-M4*0.75-EL4-3M0 (3M)	

200W

Driver Model	JASD2002-20B	
Motor Model	60JASM502230K-20B	
Encoder Cable	C-EC6-S-EL9-3M0 (3M)	
Power Cable	C-M4*0.75-EL4-3M0 (3M)	

400W

Driver Model	JASD4002-20B	
Motor Model	60JASM504230K-20B	
Encoder Cable	C-EC6-S-EL9-3M0 (3M)	
Power Cable	C-M4*0.75-EL4-3M0 (3M)	

750W

Driver Model	JASD7502-20B	
Motor Model	80JASM507230K-20B	
Encoder Cable	C-EC6-S-EL9-3M0 (3M)	
Power Cable	C-M4*0.75-EL4-3M0 (3M)	

1500W

Driver Model	JASD15002-20B	
Motor Model	80JASM510230K-20B	
	110JASM513230K-20B	
	110JASM516220K-20B	
	130JASM508215K-20B	
	130JASM515220K-20B	
Encoder Cable	C-EC6-S-EL9-3M0 (3M)	
	C-EC6-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-20B 130JASM520230K-20B 130JASM523215K-20B	
Encoder Cable	C-EC6-S-H-3M0 (3M)	
Power Cable	C-M4*1.5-H-3M0 (3M)	

3000W

Driver Model	JASD30002-20B	
Motor Model	130JASM530220K-20B	
Encoder Cable	C-EC6-S-H-3M0 (3M)	
Power Cable	C-M4*1.5-H-3M0 (3M)	