



JPSG-1224SG Metal working Surface Grinder

JT1-2040 3~400V 50Hz

PARTS LIST



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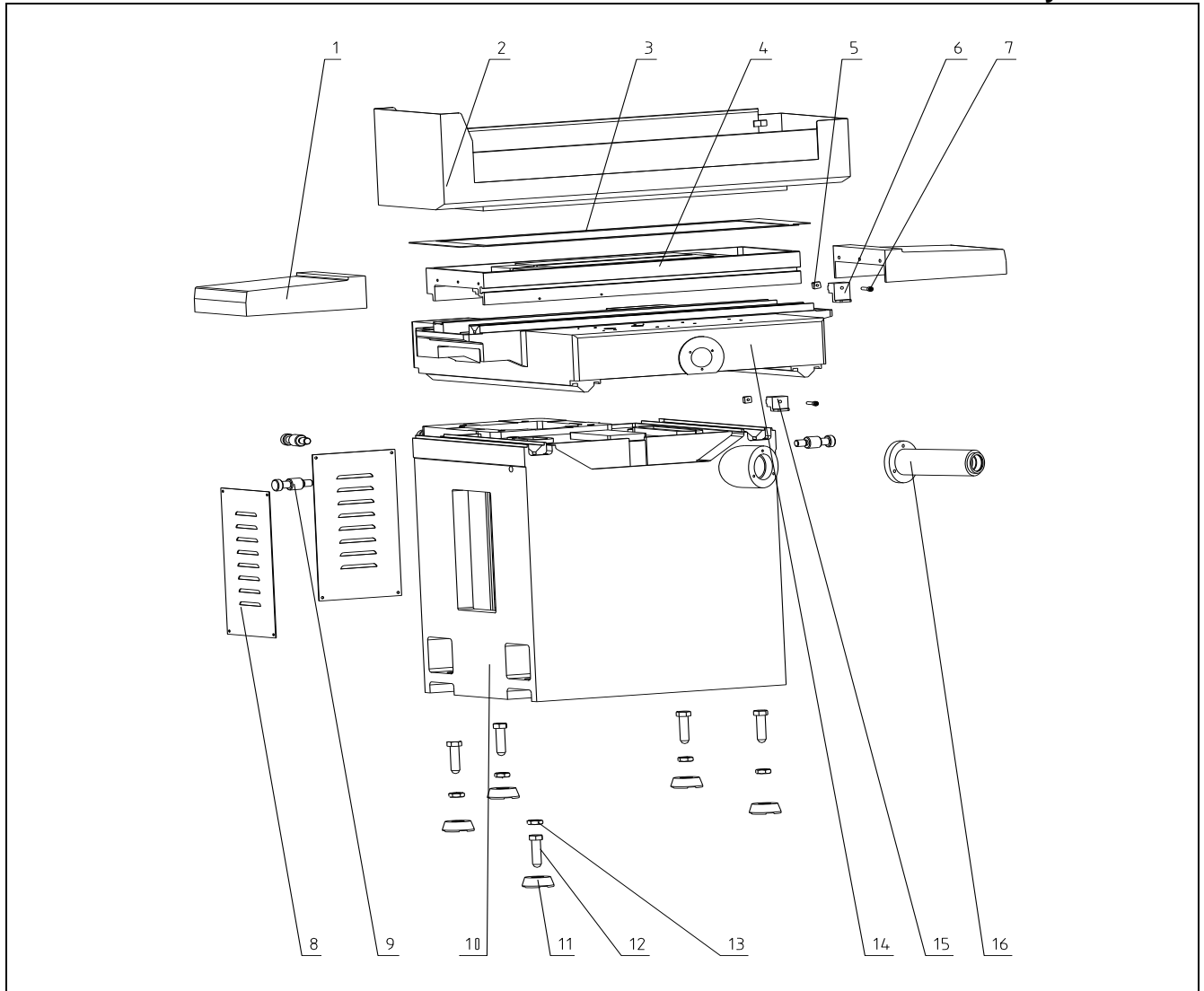
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Made in PRC / Сделано в КНР

P- JT1-2040

2024-11

Exploded View for JPSG-1224SG Metal Working Surface Grinder----A
Table assembly structure

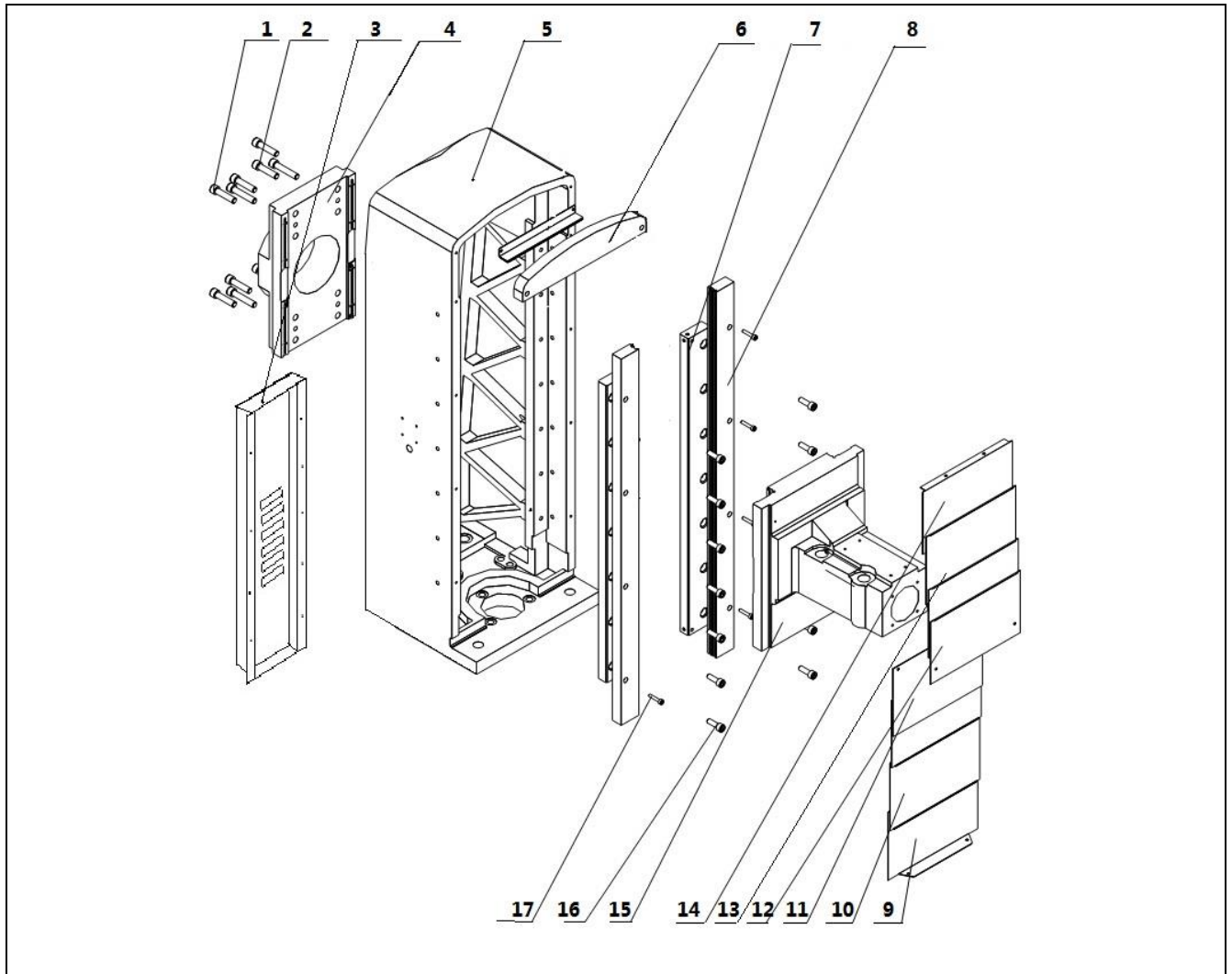


Part List for JPSG-1224SG Metal Working Surface Grinder – A
Table assembly structure

Index No.	Part No.	Description	Size	Qty.
1	JPSG1224SG-A01	Left and Right Guard		2
2	JPSG1224SG-A02	Splashing Guard		1
3	JPSG1224SG-A03	Water-Proof Cushion		1
4	JPSG1224SG-A04	Work Table		1
5	JPSG1224SG-A05	Square Nut		2
6	JPSG1224SG-A06	Right Limit ADJ Block		1
7	TS-1504081	Socket Head Cap Screw	M8x40	2
8	JPSG1224SG-A08	Shutter		2
9	JPSG1224SG-A09	Hoisting Set		4
10	JPSG1224SG-A10	Machine Bed		1
11	JPSG1224SG-A11	Leveling Wedge		5
12	JPSG1224SG-A12	Leveling Screw		5
13	JPSG1224SG-A13	Hex Nut	M22	5
14	JPSG1224SG-A14	Saddle		1
15	JPSG1224SG-A15	Left Limit ADJ Block		1
16	JPSG1224SG-A16	Extension Shaft Bracket		1

Exploded View for JPSG-1224SG Metal Working Surface Grinder----B

Column structure

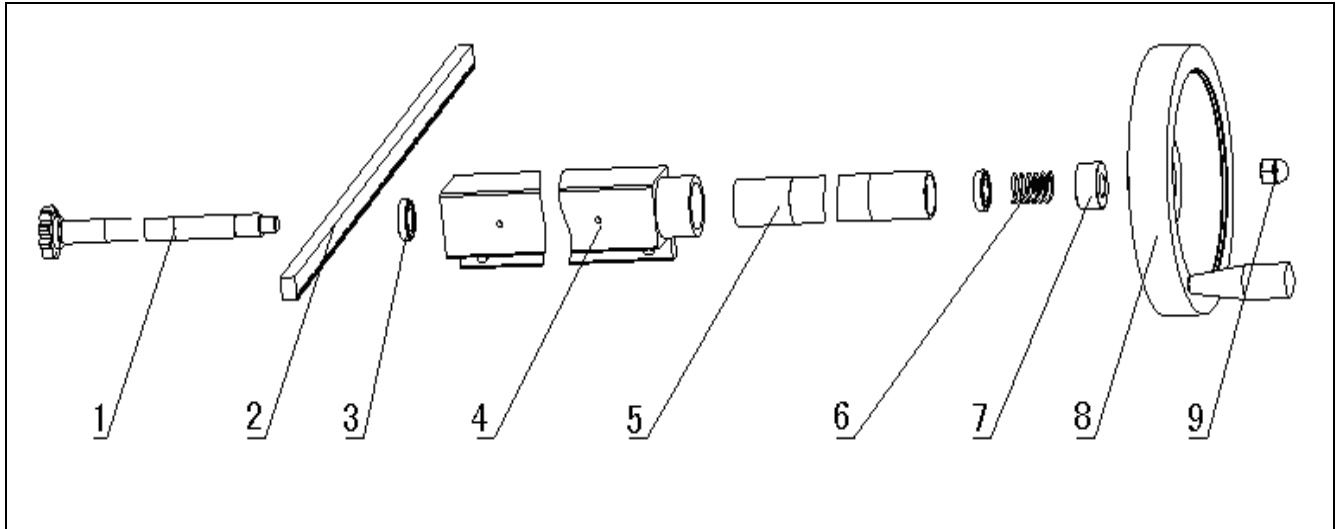


Part List for JPSG-1224SG Metal Working Surface Grinder – B

Column Structure

Index No.	Part No.	Description	Size	Qty.
1	TS-1506071	Socket Head Cap Screw	M12x50	8
2	TS-1506091	Socket Head Cap Screw	M12x60	4
3	JPSG1224SG-B03	Column Rear Guard		1
4	JPSG1224SG-B04	Motor Fixed Plate		1
5	JPSG1224SG-B05	Column		1
6	JPSG1224SG-B06	Upper Clamping Strip		1
7	JPSG1224SG-B07	Steel Guide Way		2
8	JPSG1224SG-B08	Guide Plate		2
9	JPSG1224SG-B09	Dust-Proof Plate		1
10	JPSG1224SG-B10	Dust-Proof Plate		1
11	JPSG1224SG-B11	Dust-Proof Plate		1
12	JPSG1224SG-B12	Dust-Proof Plate		1
13	JPSG1224SG-B13	Dust-Proof Plate		1
14	JPSG1224SG-B14	Dust-Proof Plate		1
15	JPSG1224SG-B15	Spindle House		1
16	TS-1503071	Socket Head Cap Screw	M6x30	10
17	TS-1505041	Socket Head Cap Screw	M10x30	14

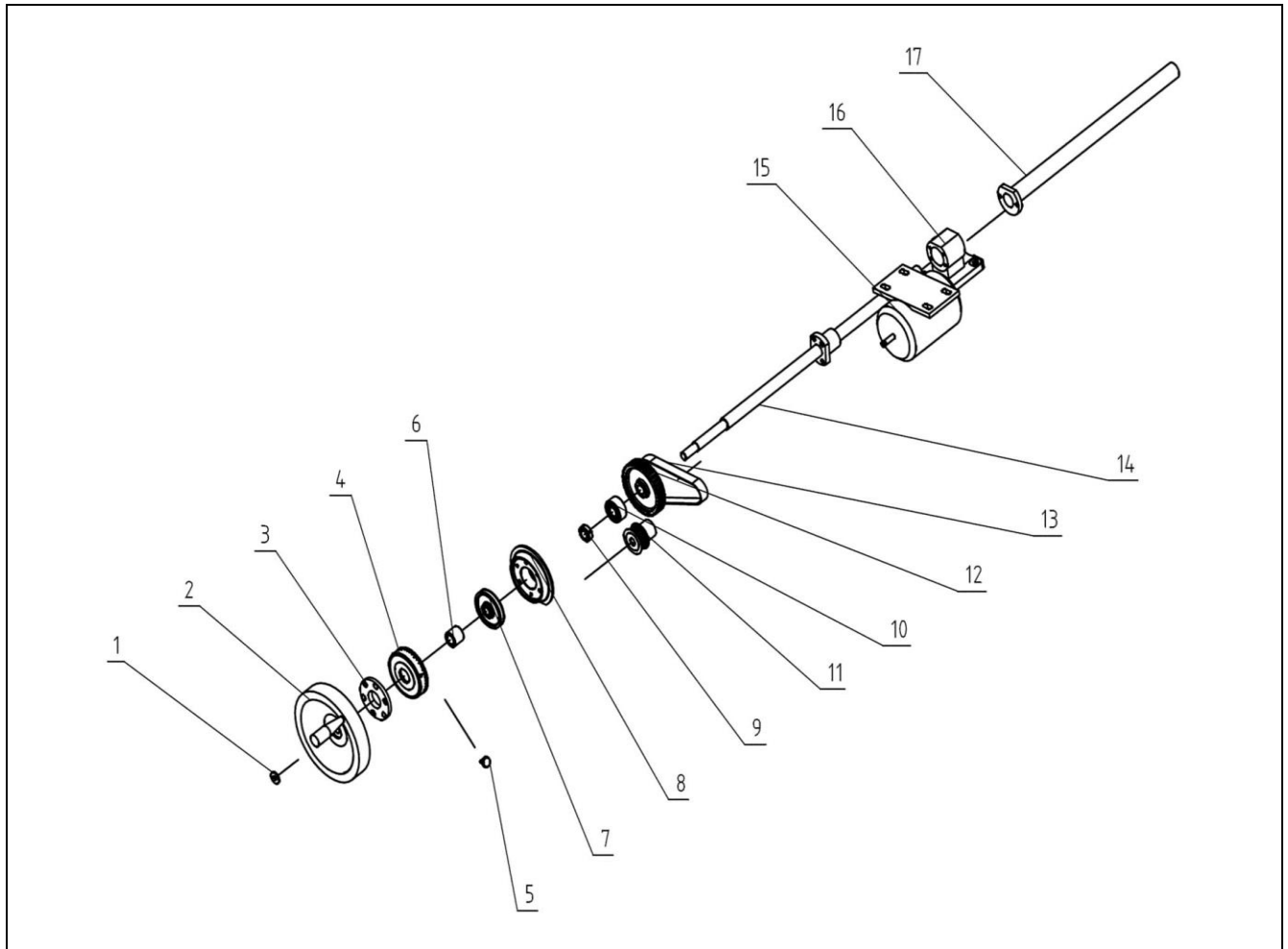
**Exploded View for JPSG-1224SG Metal Working Surface Grinder----C
Table Longitudinal Manual Feed Structure**



**Part List for JPSG-1224SG Metal Working Surface Grinder – C
Table Longitudinal Manual Feed Structure**

Index No.	Part No.	Description	Size	Qty.
1	JPSG1224SG-C01	Gear Shaft		1
2	JPSG1224SG-C02	Rack		1
3	JPSG1224SG-C03	Deep-Furrow Ball Bearing	61903-2RZ	2
4	JPSG1224SG-C04	Gear Shaft Bracket		1
5	JPSG1224SG-C05	Driven Shaft Sleeve		1
6	JPSG1224SG-C06	Spring		1
7	JPSG1224SG-C07	Copper Sleeve		1
8	JPSG1224SG-C08	Hand Wheel	15*200 HY8313.7	1
9	JPSG1224SG-C09	Acorn Nut	M12	1
10				

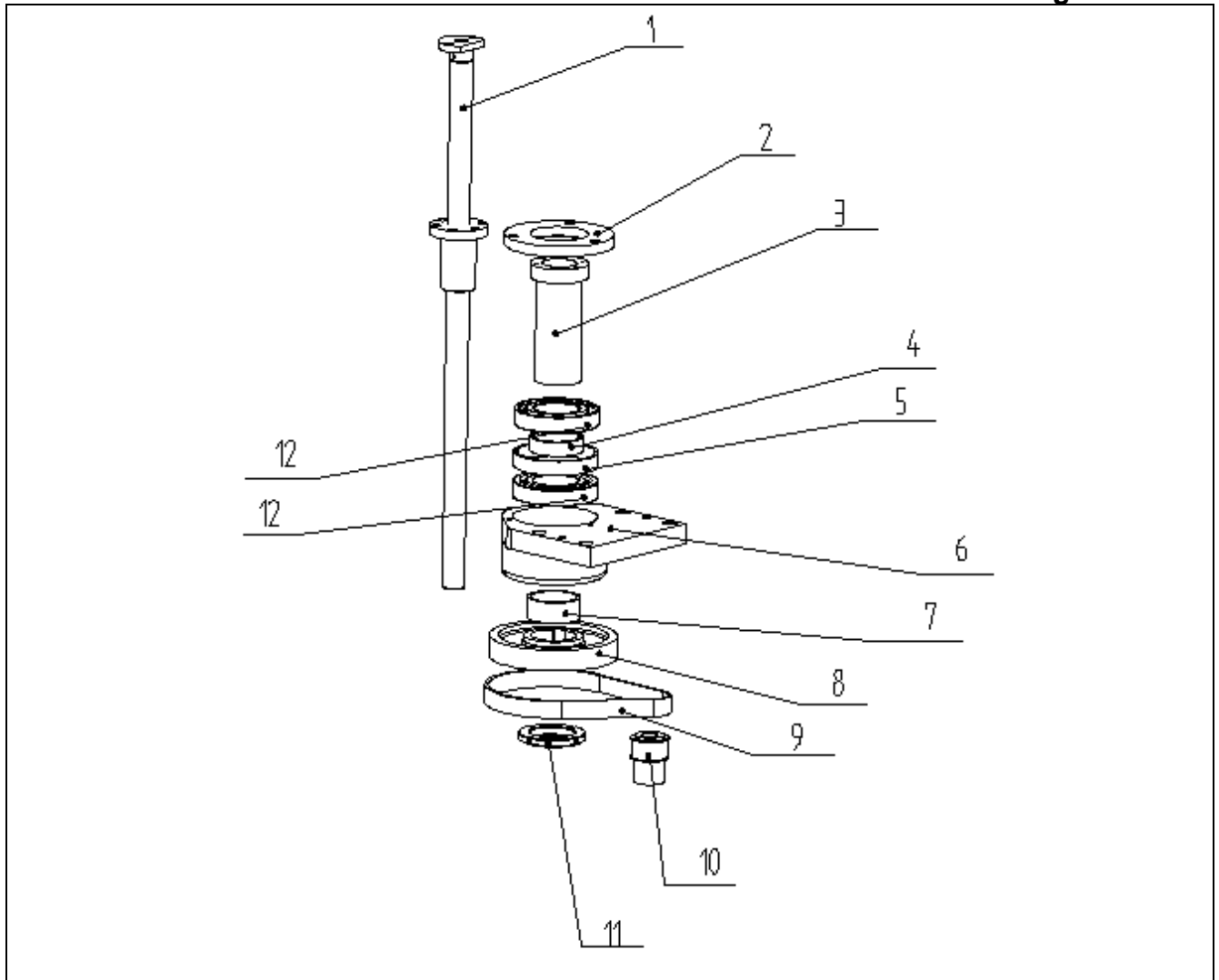
**Exploded View for JPSG-1224SG Metal Working Surface Grinder----D
Cross Feed Structure**



**Part List for JPSG-1224SG Metal Working Surface Grinder – D
Cross Feed Structure**

Index No.	Part No.	Description	Size	Qty.
1	JPSG1224SG-D01	Star Nut	B-M10*40 HY8314.4	1
2	JPSG1224SG-D02	Hand Wheel	17*200 HY8313.7	1
3	JPSG1224SG-D03	Bearing Cover		1
4	JPSG1224SG-D04	Feed Dial		1
5	JPSG1224SG-D05	Knurling Set Screw	M6x16	1
6	JPSG1224SG-D06	Spacer		1
7	JPSG1224SG-D07	Sleeve		1
8	JPSG1224SG-D08	Vernier Dial Plate		1
9	JPSG1224SG-D09	Round Nut	M20×1.5	1
10	JPSG1224SG-D10	Bearing	3204A (47×20×20.6)	1
11	JPSG1224SG-D11	Small Timing Pulley		1
12	JPSG1224SG-D12	Big Time Pulley		1
13	JPSG1224SG-D13	Timing Belt	187L075	1
14	JPSG1224SG-D14	Cross Lead Screw		1
15	JPSG1224SG-DM3	Cross Feed Motor	(KT516)40W S1 900/min	1
16	JPSG1224SG-D16	Feed Nut Bracket		1
17	JPSG1224SG-D17	Cross Lead Screw Safe Shield		1

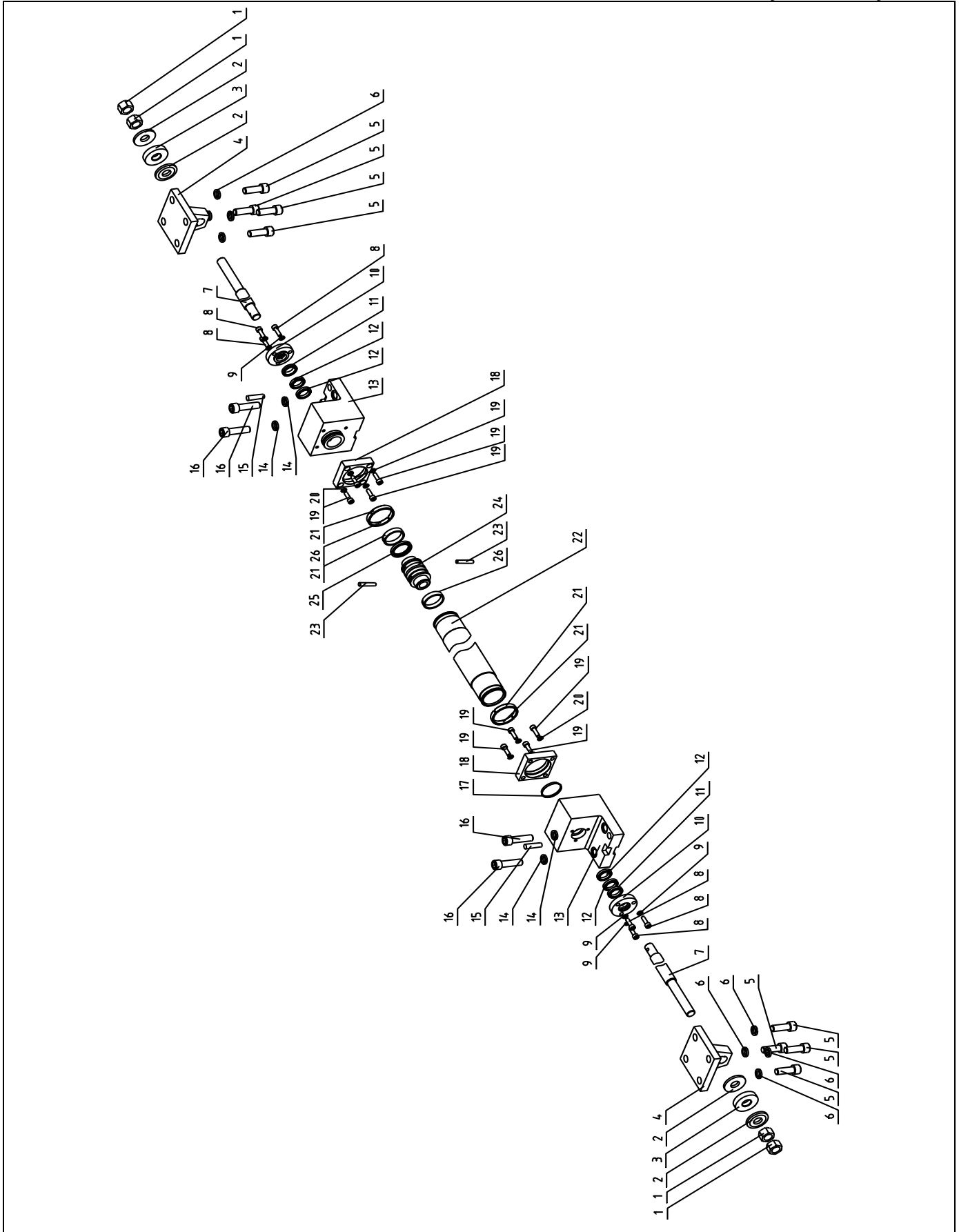
**Exploded View for JPSG-1224SG Metal Working Surface Grinder----E
Elevating Structure**



**Part List for JPSG-1020FM Metal Working Surface Grinder – E
Elevating Structure**

Index No.	Part No.	Description	Size	Qty.
1	JPSG1224SG-E01	Elevating screw		1
2	JPSG1224SG-E02	End cap		1
3	JPSG1224SG-E03	Elevating bearing		1
4	JPSG1224SG-E04	Internal spring ring		1
5	JPSG1224SG-E05	External spring ring		1
6	JPSG1224SG-E06	Transmission connection board		1
7	JPSG1224SG-E07	bush		1
8	JPSG1224SG-E09	Time pulley		1
9	JPSG1224SG-E09	Time belt	270L100/GB11616-89	1
10	JPSG1224SG-E10	Small pulley	M65x2/YSR	1
11	JPSG1224SG-E11	Locking round screw	760213TN1/P4 DB B GB/T 292-94 (65x120x23)	2

Exploded View for JPSG-1020FM Metal Working Surface Grinder----F Hydraulic Cylinder



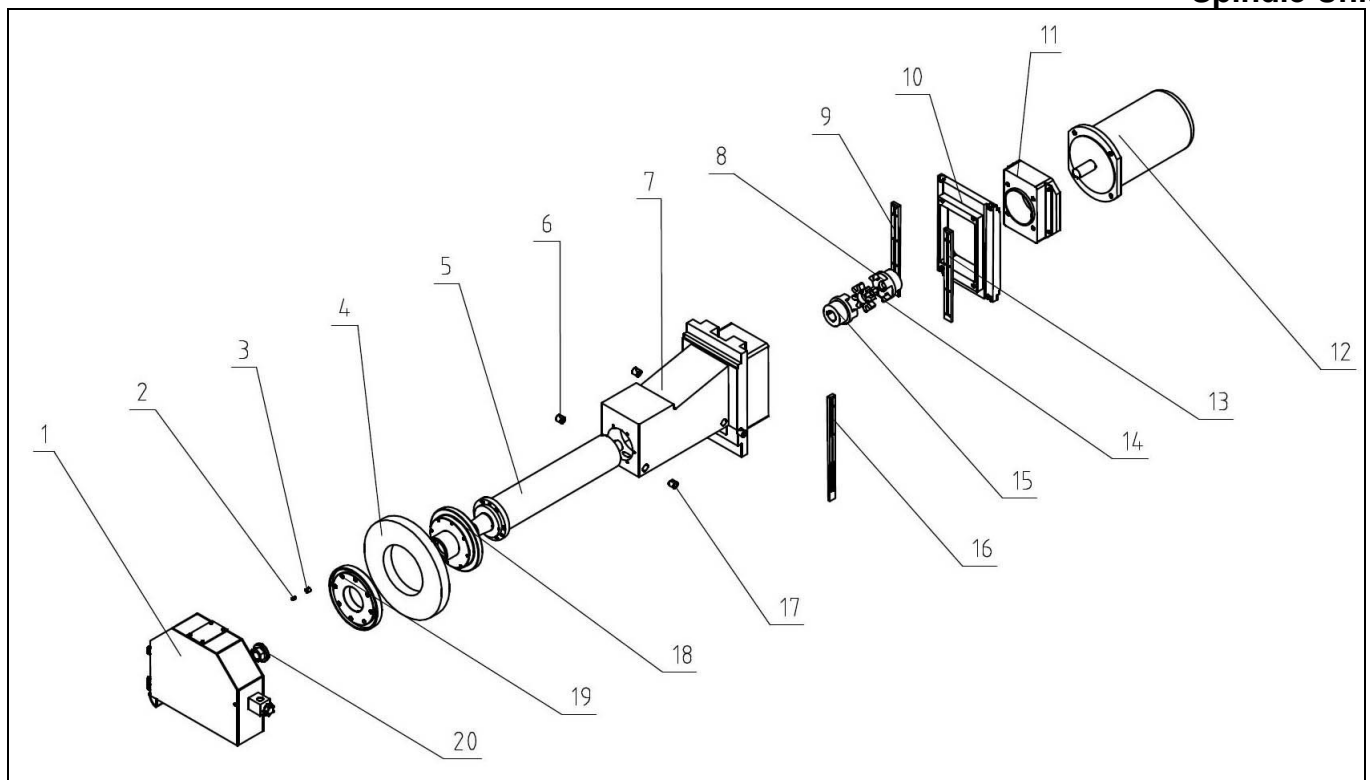
Part List for JPSG-1224SG Metal Working Surface Grinder – F

Hydraulic Cylinder

Index No.	Part No.	Description	Size	Qty.
1	JPSG1224SG-F01	Hexagonal Nut	M16x1.5	4
2	JPSG1224SG-F02	Washer		4
3	JPSG1224SG-F03	Cushion		2
4	JPSG1224SG-F04	Driven Base		2
5	TS-1506051	Socket Head Cap Screw	M12x40	8
6	TS-2361121	Lock Washer	12	8
7	JPSG1224SG-F07	Piston Rod		2
8	TS-1503051	Socket Head Cap Screw	M6x20	6
9	TS-2361061	Lock Washer	6	6
10	JPSG1224SG-F10	End Cap		2
11	JPSG1224SG-F11	Dust-Proof Ring	AD48-20x28x5.3	2
12	JPSG1224SG-F12	Y-Shaped Ring	MA30-20x28x6.3	4
13	JPSG1224SG-F13	Hydraulic Cylinder Bracket		2
14	TS-2361121	Lock Washer	12	4
15	JPSG1224SG-F15	Taper Pin	Φ8x35	2
16	TS-1506051	Socket Head Cap Screw	M12x40	4
17	JPSG1224SG-FR4	O-Shaped Ring	12	2
18	JPSG1224SG-F18	Guard Cover		2
19	TS-1503051	Socket Head Cap Screw	M6x20	8
20	TS-2361061	Lock Washer	6	8
21	JPSG1224SG-F21	Ring		2
22	JPSG1224SG-F22	Hydraulic Cylinder		1
23	JPSG1224SG-F23	Taper Pin	Φ6x30	2
24	JPSG1224SG-F24	Piston		1
25	JPSG1224SG-F25	Hermetic Ring	K30-40A	1
26	JPSG1224SG-F26	Guide Ring	FUR02-8.1x2.5-40-D24	2

Exploded View for JPSG-1020FM Metal Working Surface Grinder----G

Spindle Unit



Part List for JPSG-1224SG Metal Working Surface Grinder – G

Spindle Unit

Index No.	Part No.	Description	Size	Qty.
1	JPSG1224SG-G01	Grinding Wheel Shield		1
2	JPSG1224SG-G02	Lock Screw		3
3	JPSG1224SG-G03	Balancing Block		3
4	JPSG1224SG-G04	Grinding Wheel		1
5	JPSG1224SG-G05	Spindle		1
6	JPSG1224SG-G06	Plug		2
7	JPSG1224SG-G07	Spindle Housing		1
8	JPSG1224SG-G09	Coupling Connect To Motor Shaft		1
9	JPSG1224SG-G09	Gib		1
10	JPSG1224SG-G10	Clamping Plate		1
11	JPSG1224SG-G11	Motor Assembling Flange		1
12	JPSG1224SG-GM1	AC Motor		1
13	JPSG1224SG-G13	Gib		1
14	JPSG1224SG-G14	Plastic Insert		1
15	JPSG1224SG-G15	Coupling Connect To The Spindle		1
16	JPSG1224SG-G16	Gib		1
17	JPSG1224SG-GM4	Plug		1
18	JPSG1224SG-G18	Wheel Flange Base		1
19	JPSG1224SG-G19	Wheel Flange Clamping Cover		1
20	JPSG1224SG-G20	Lock Nut		1

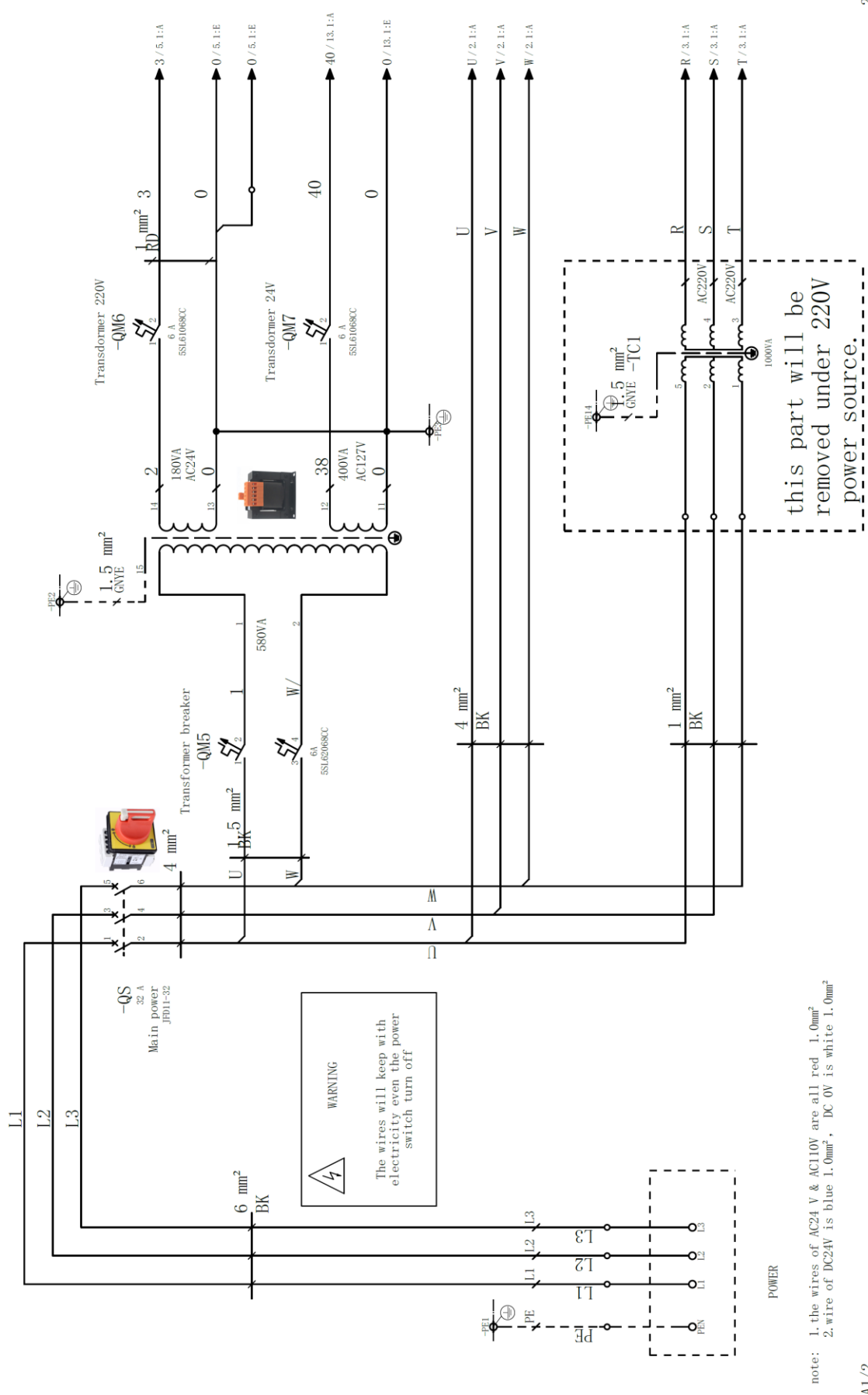
Wiring Diagram for JPSG-1224SG Metal Working Surface Grinder ITASG1224 3~400V 50Hz

Machine model	<p style="margin: 0;">JPSG-1020FR (FSG2050A)</p> <p style="margin: 0;">JPSG-1224SG (FSG3063A)</p> <p style="margin: 0;">JPSG-1640SG (FSG40100A)</p>
Machine type	Surface grinding machine
Control system	S7-200 SMART
Power supply	3~ 400V 50Hz
Control voltage	AC24V DC24V

Catalogue

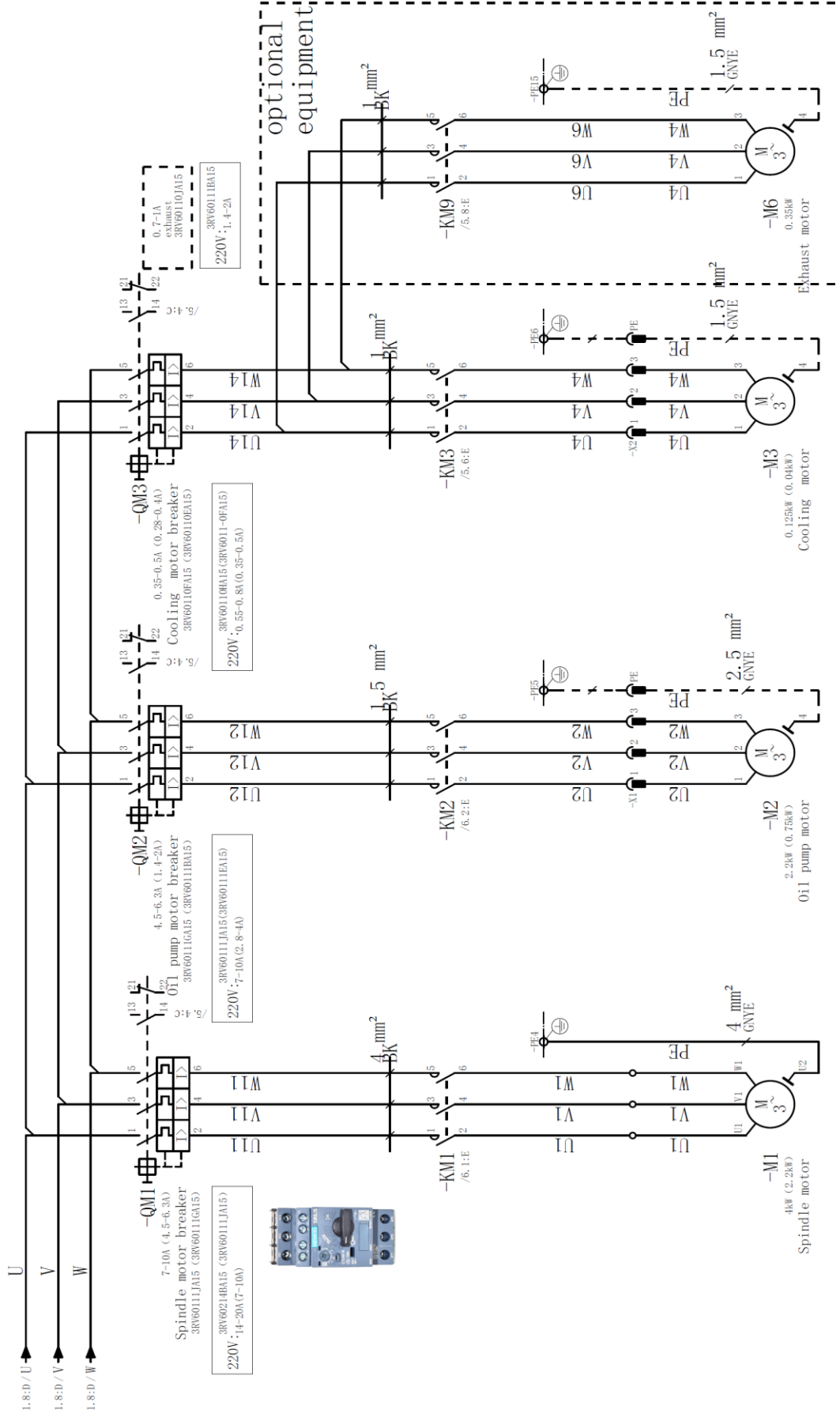
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=CA1/2	Contents	
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=DQT/2	Motor power	
=DQT/3	220V Power	
=DQT/4	Servo	
=DQT/5	AC24V control	
=DQT/6	AC24V control	
=DQT/7	PLC and HMI	
=DQT/8	PLC Input I	
=DQT/9	PLC Input II	
=DQT/10	PLC output I	
=DQT/11	PLC output II	
=DQT/12	MPG	
=DQT/13	Electrical magnetic chuck	
=Appendix/1	Terminal diagram	
=Appendix/2	Control panel connection	
=Appendix/3	PLC input output	
=Appendix/4	Control panel	
=Appendix/5	Switchboard	

Power Main power switch Control transformer Power transformer



note: 1. the wires of AC24 V & AC110V are all red 1.0mm²
 2. wire of DC24V is blue 1.0mm², DC 0V is white 1.0mm²

Spindle motor Oil pump motor Cooling motor Exhaust motor



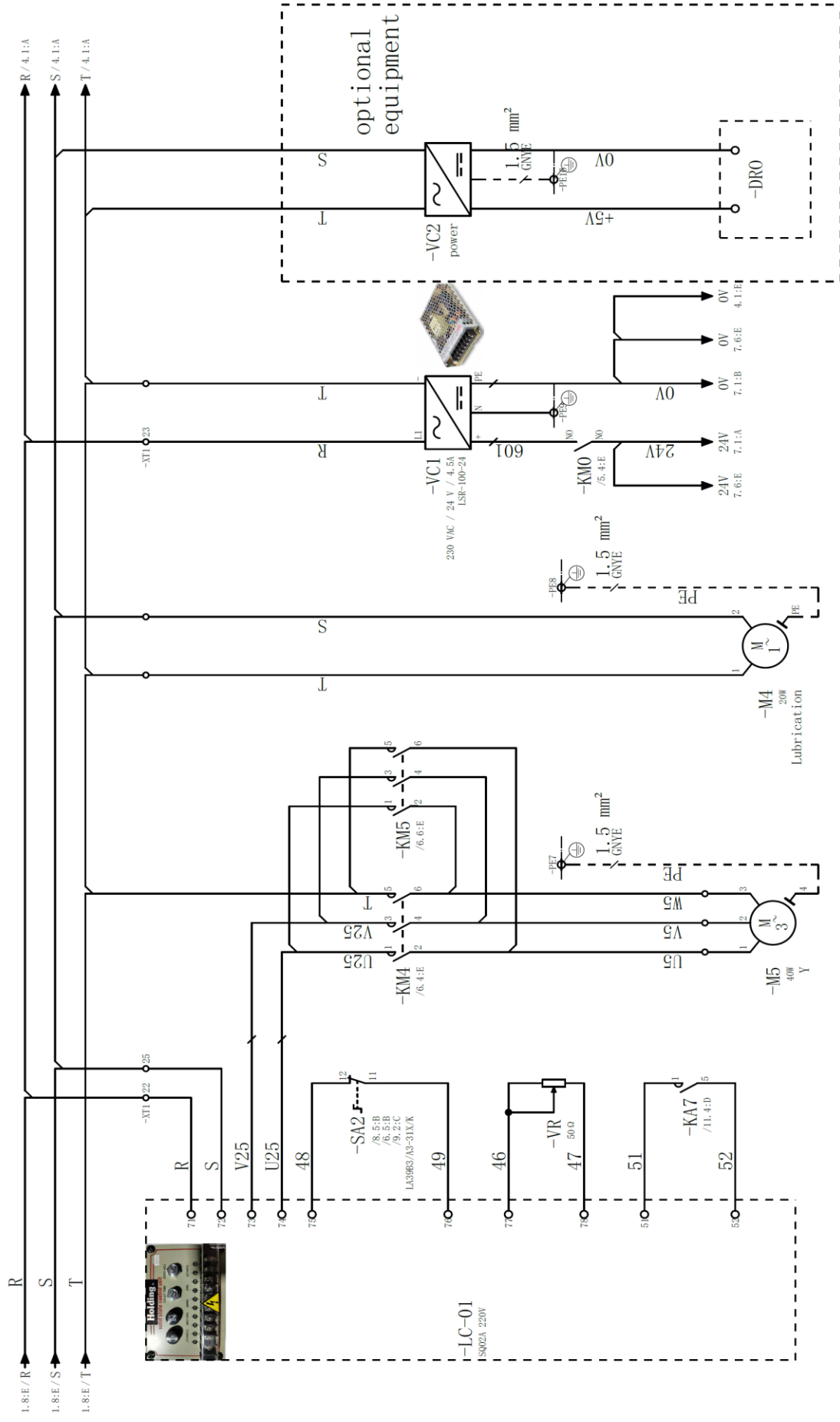
Cross feed motor controller

cross feed motor

Lubrication pump

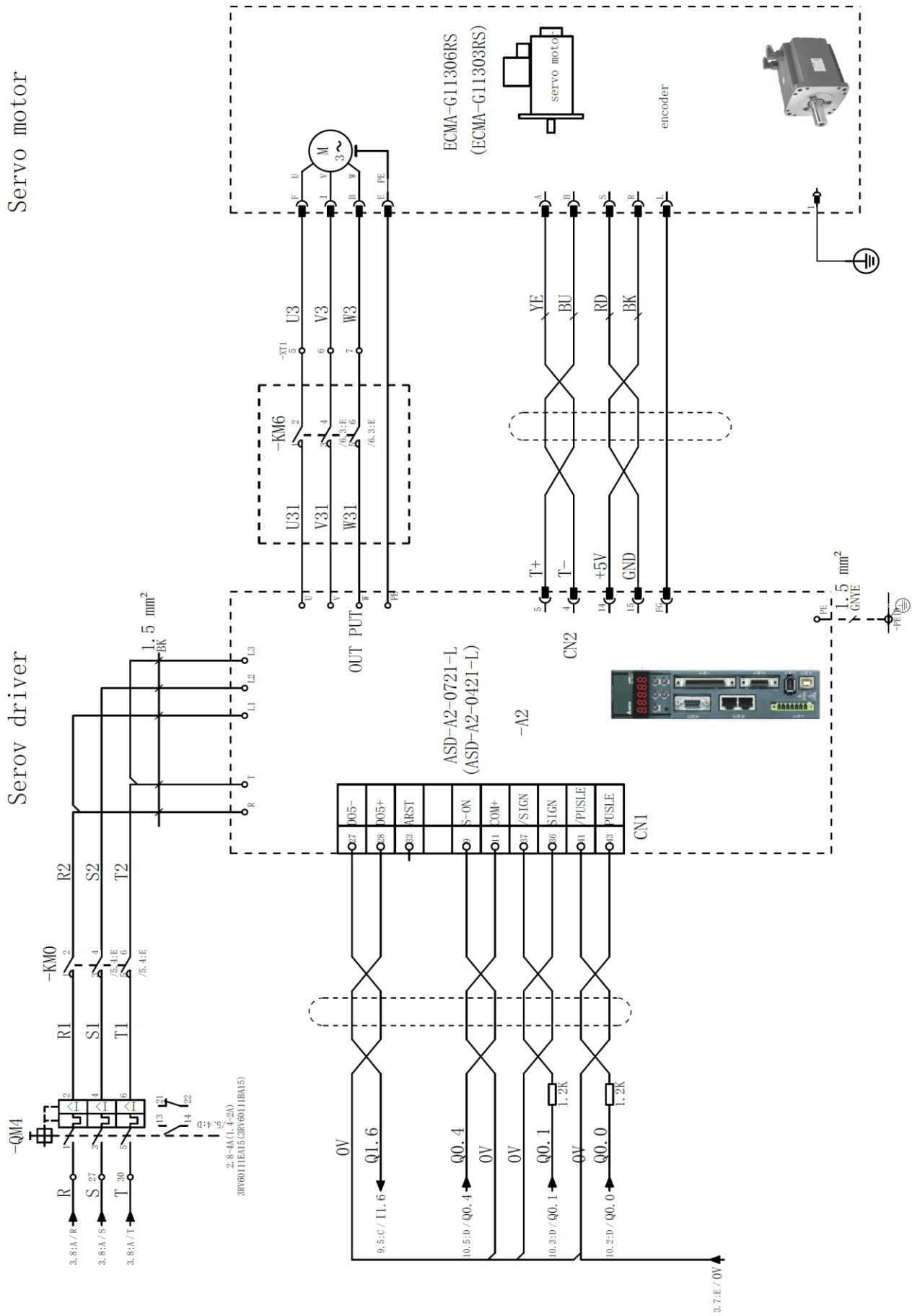
Switching power supply

DRO

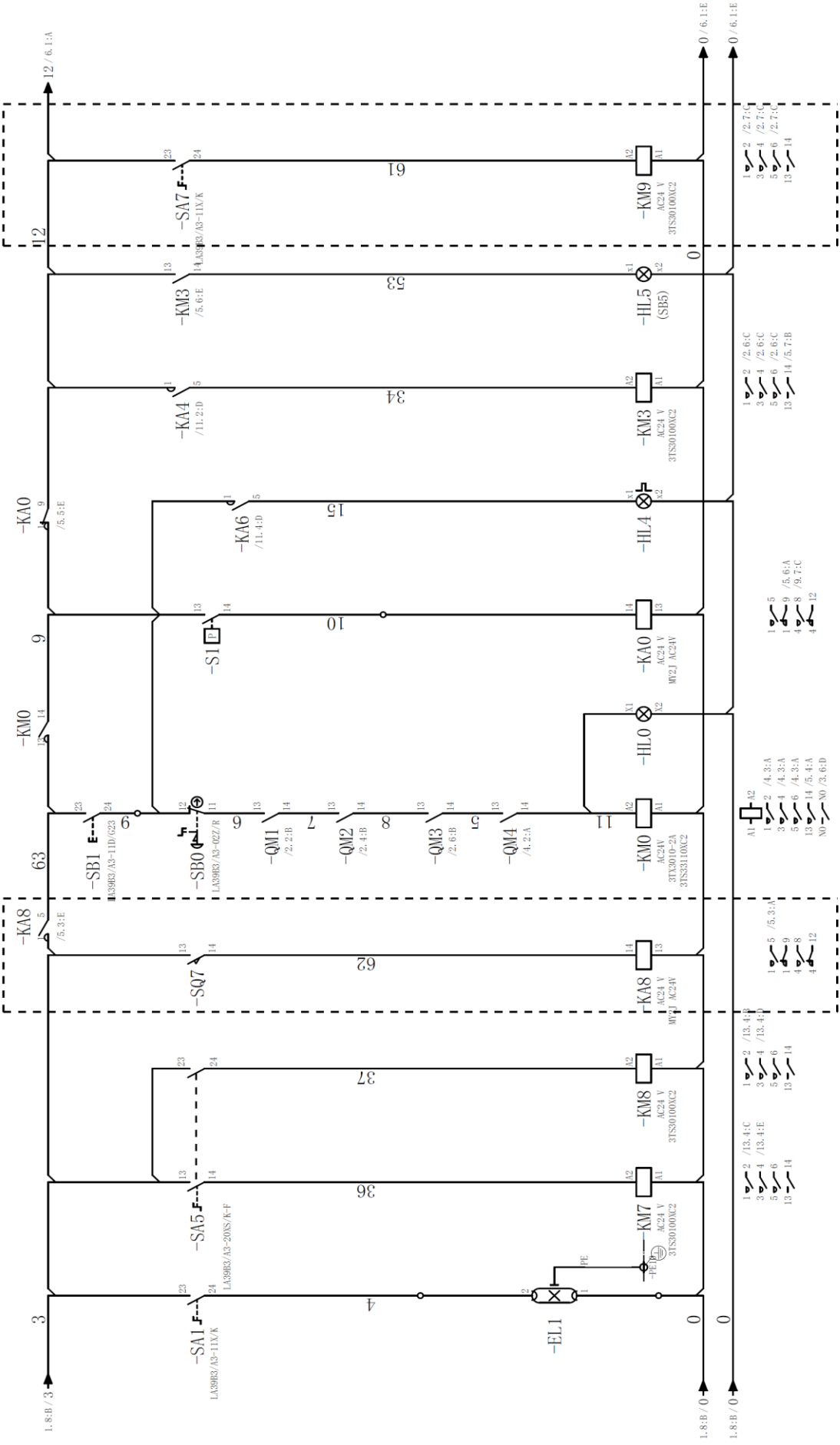


Serov driver

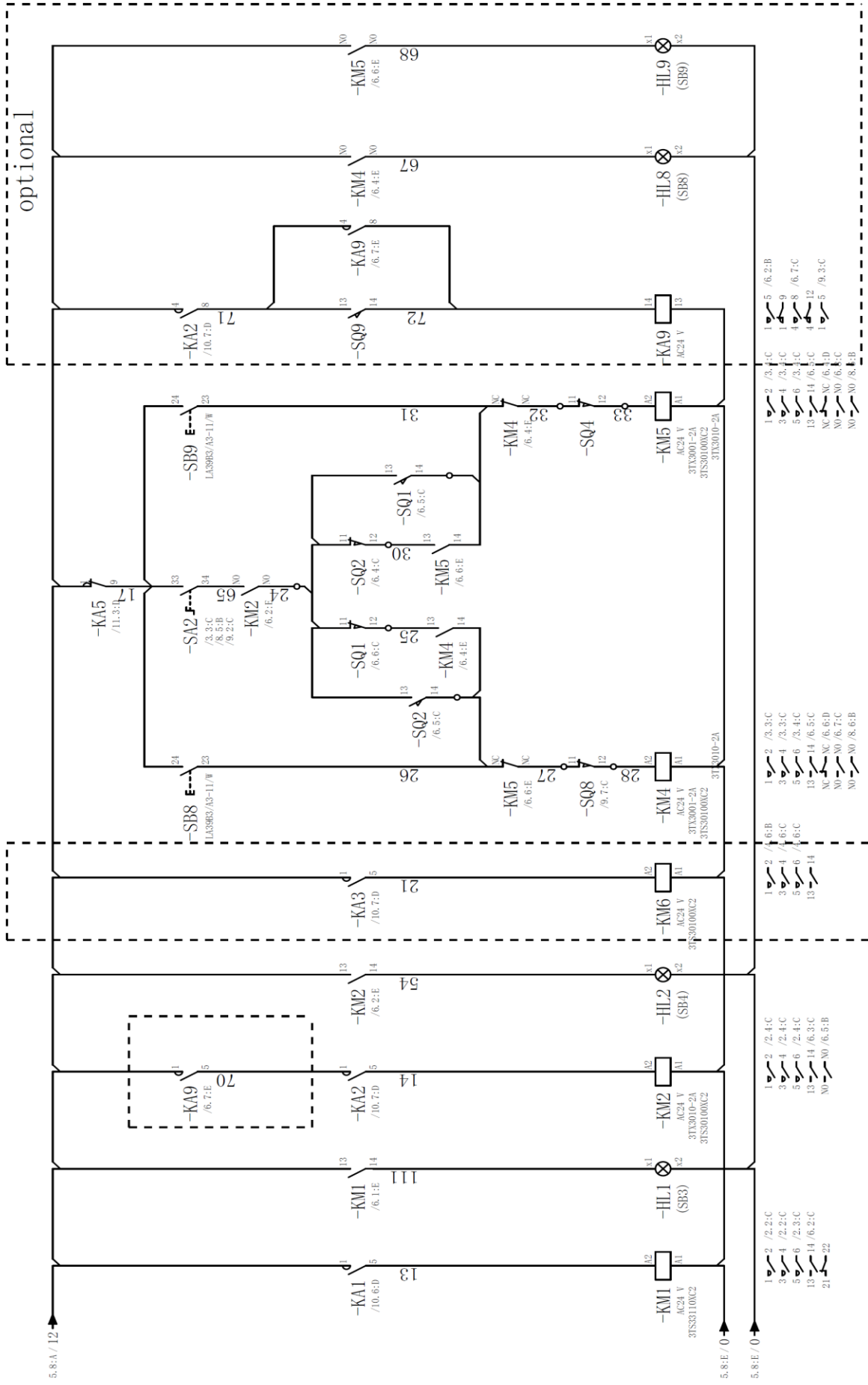
Servo motor

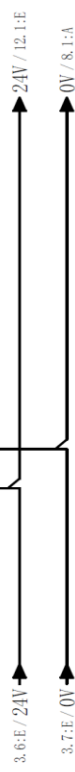
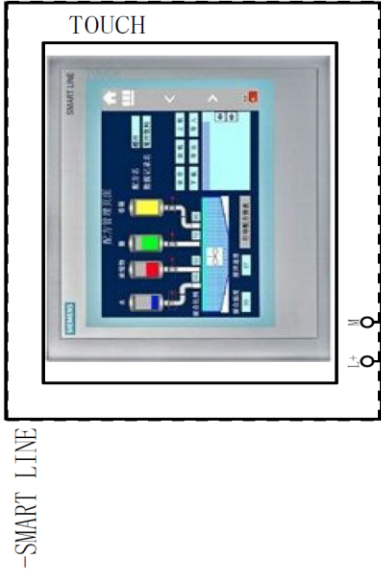
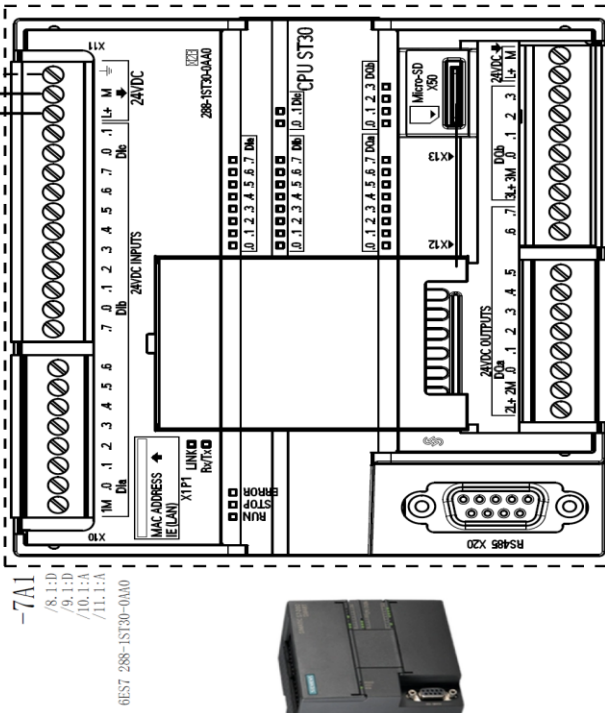
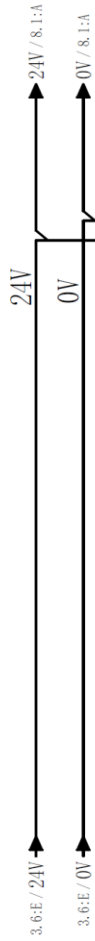


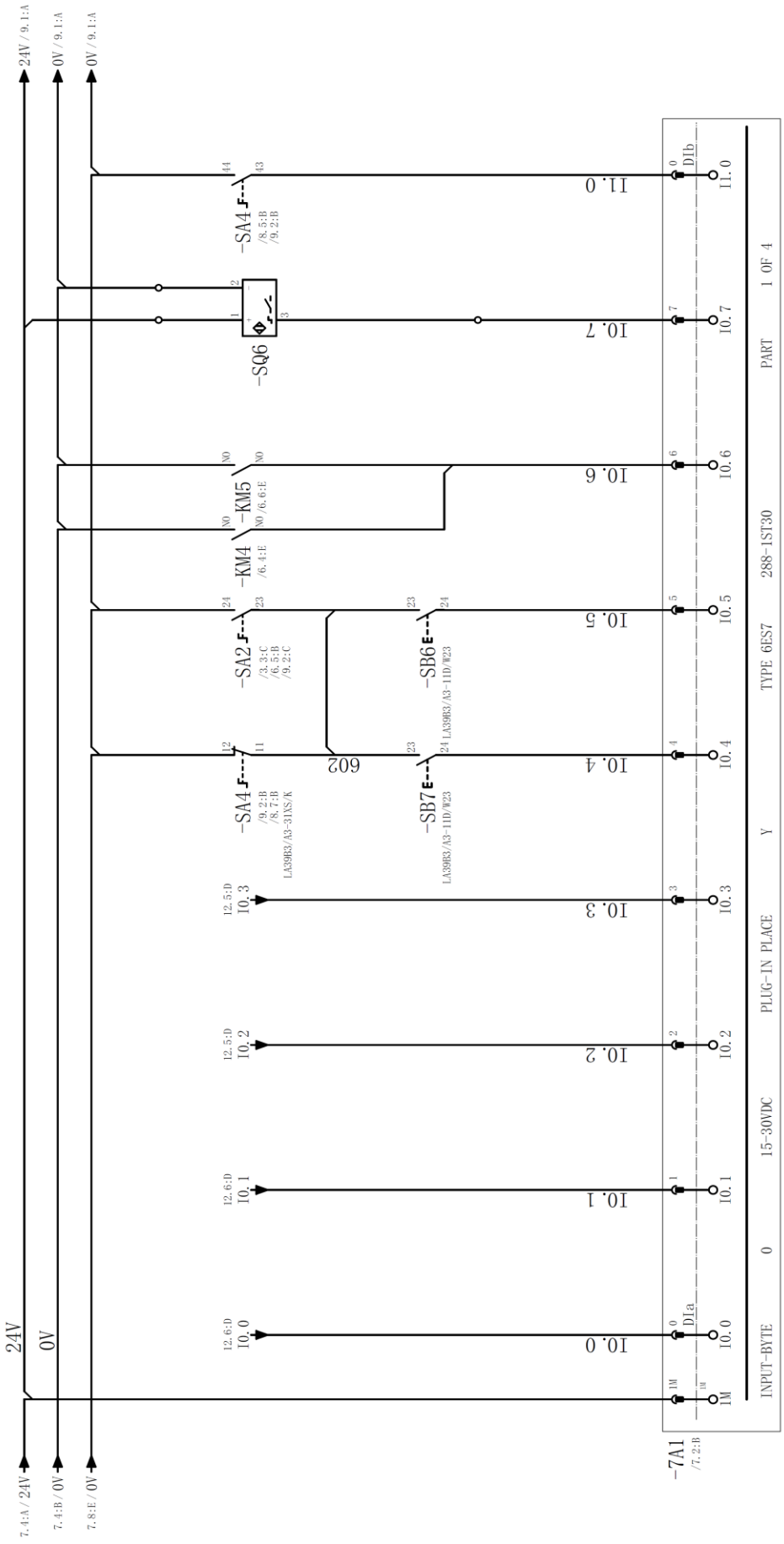
working lamp magnetic chuck table guard protection indicate power on lubricant alarm cooling pump exhausting motor
 lamp control protection indicate power on shortage lamp power on



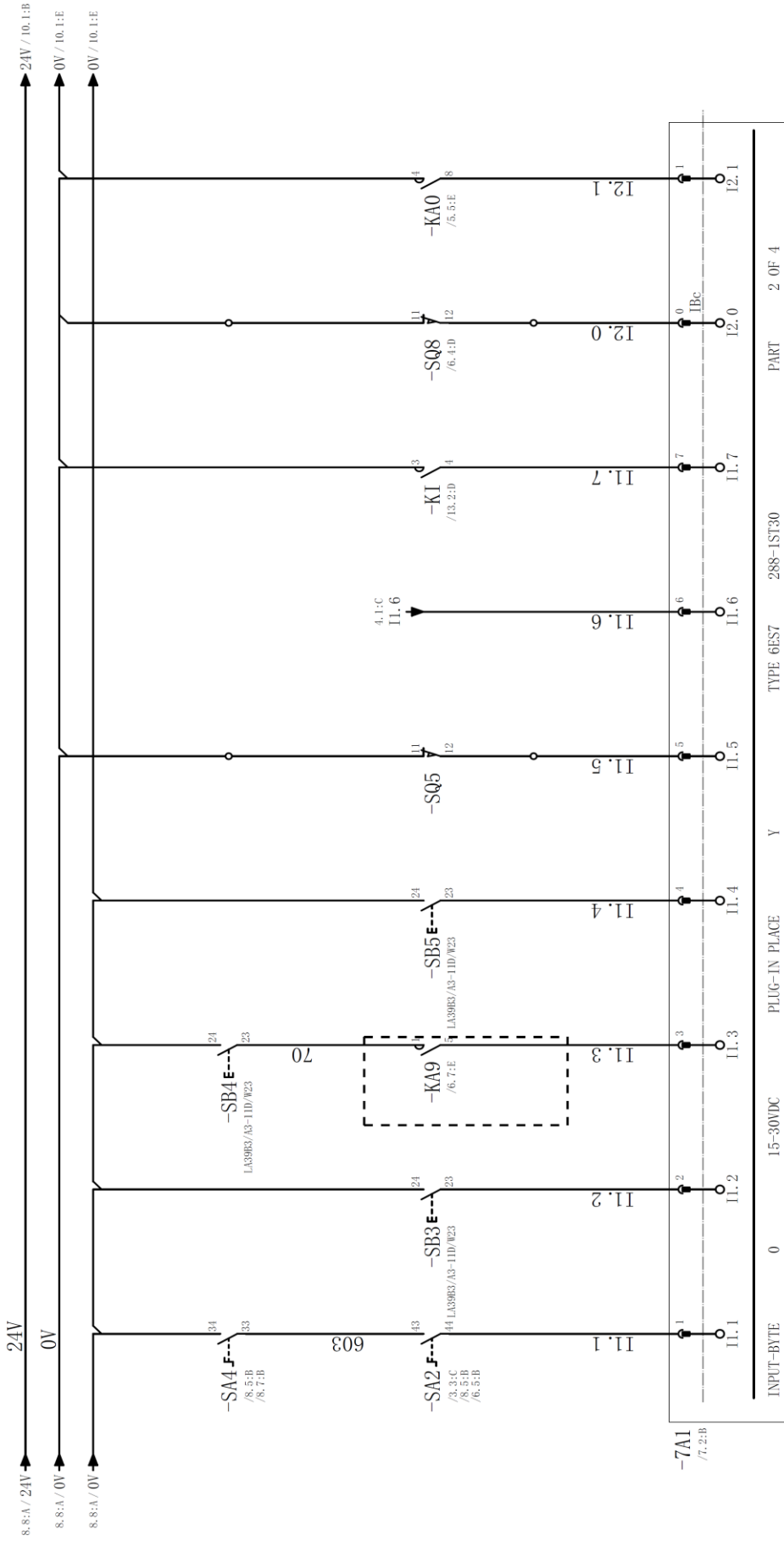
Spindle power on Oil pump power on Servo on (optional) Table move backward Table move forward Table speed protection Table move indicator



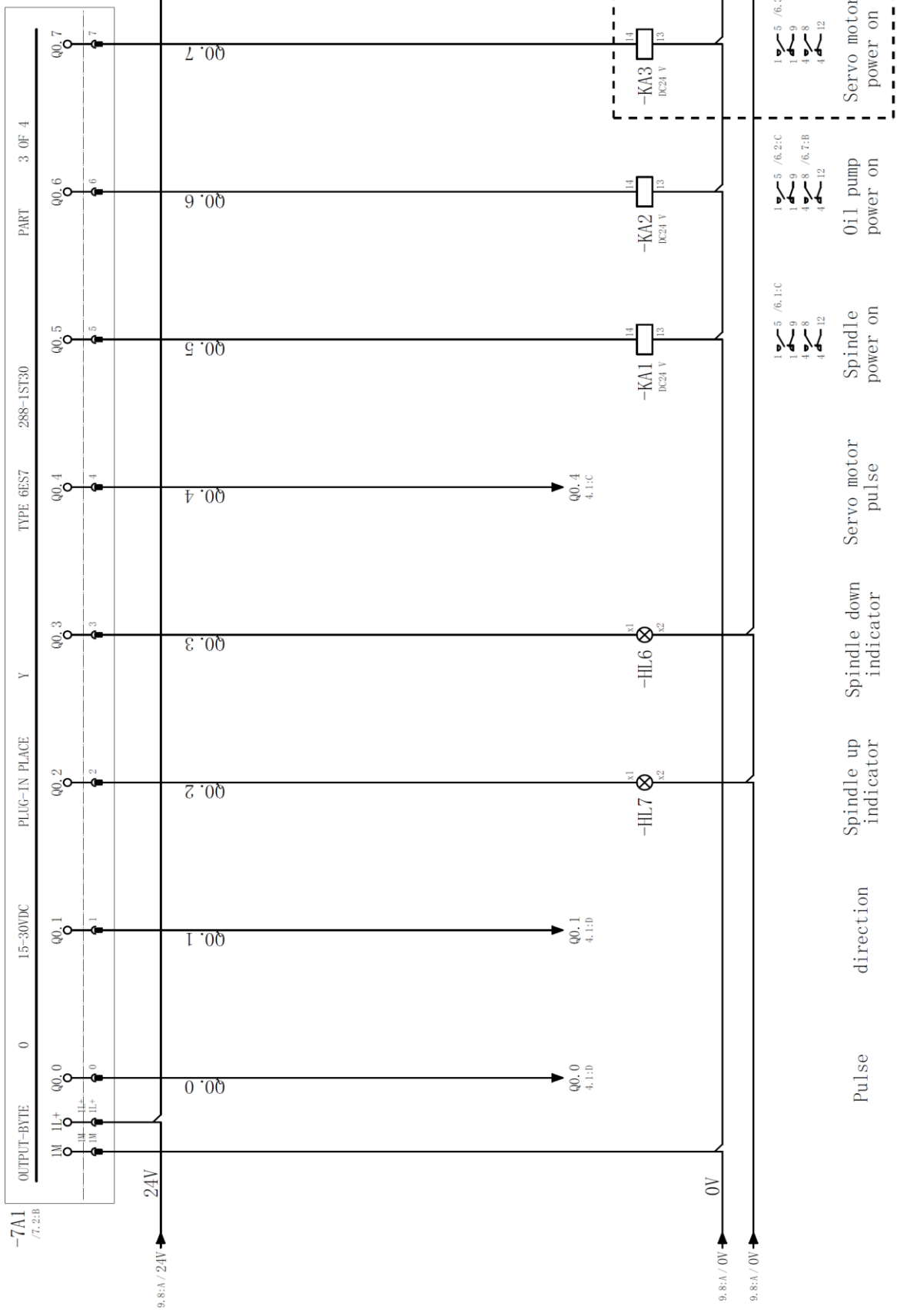


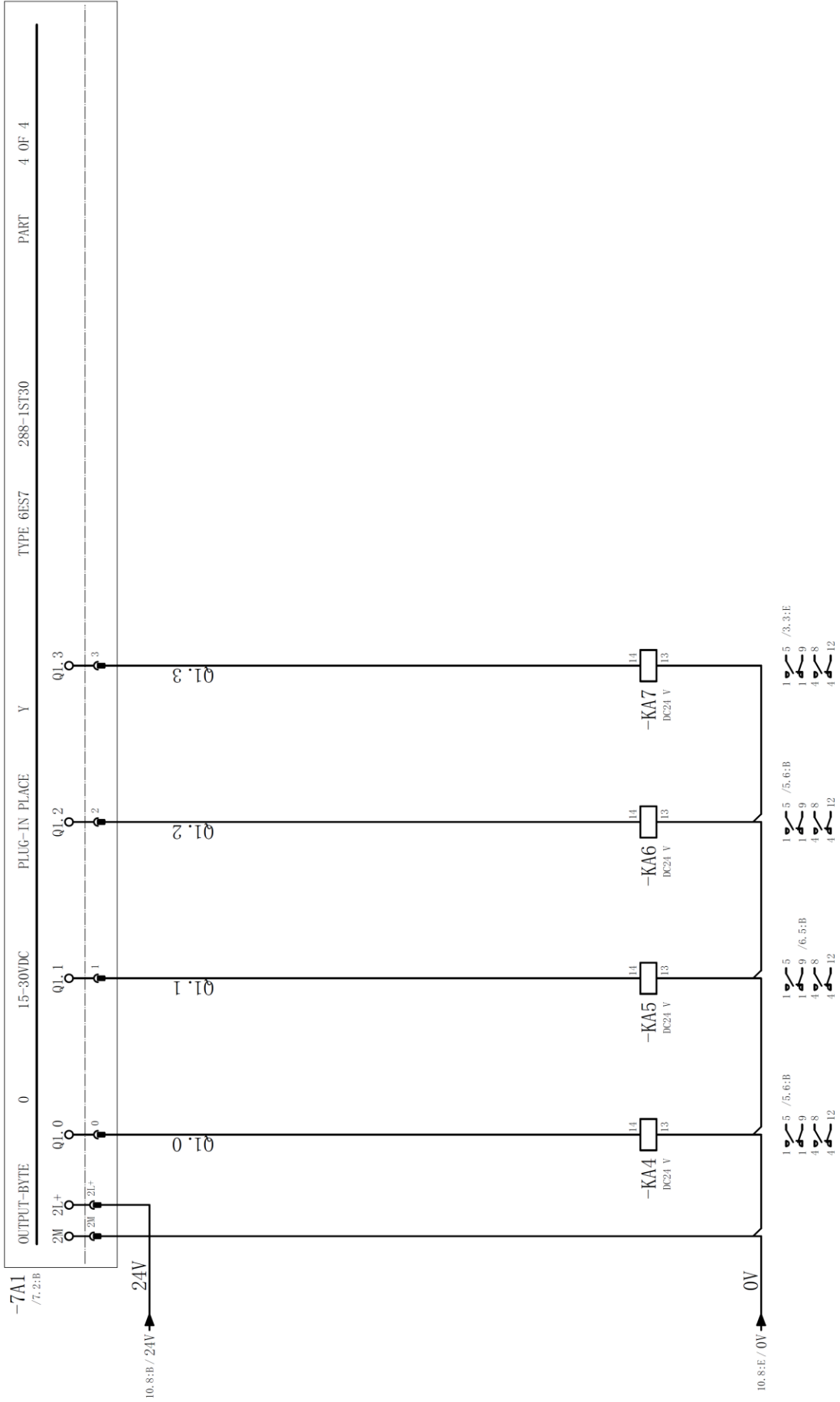


MPG A MPG B ratio*1 ratio*10 Spindle up Spindle down Surface grind Slot grind mode select

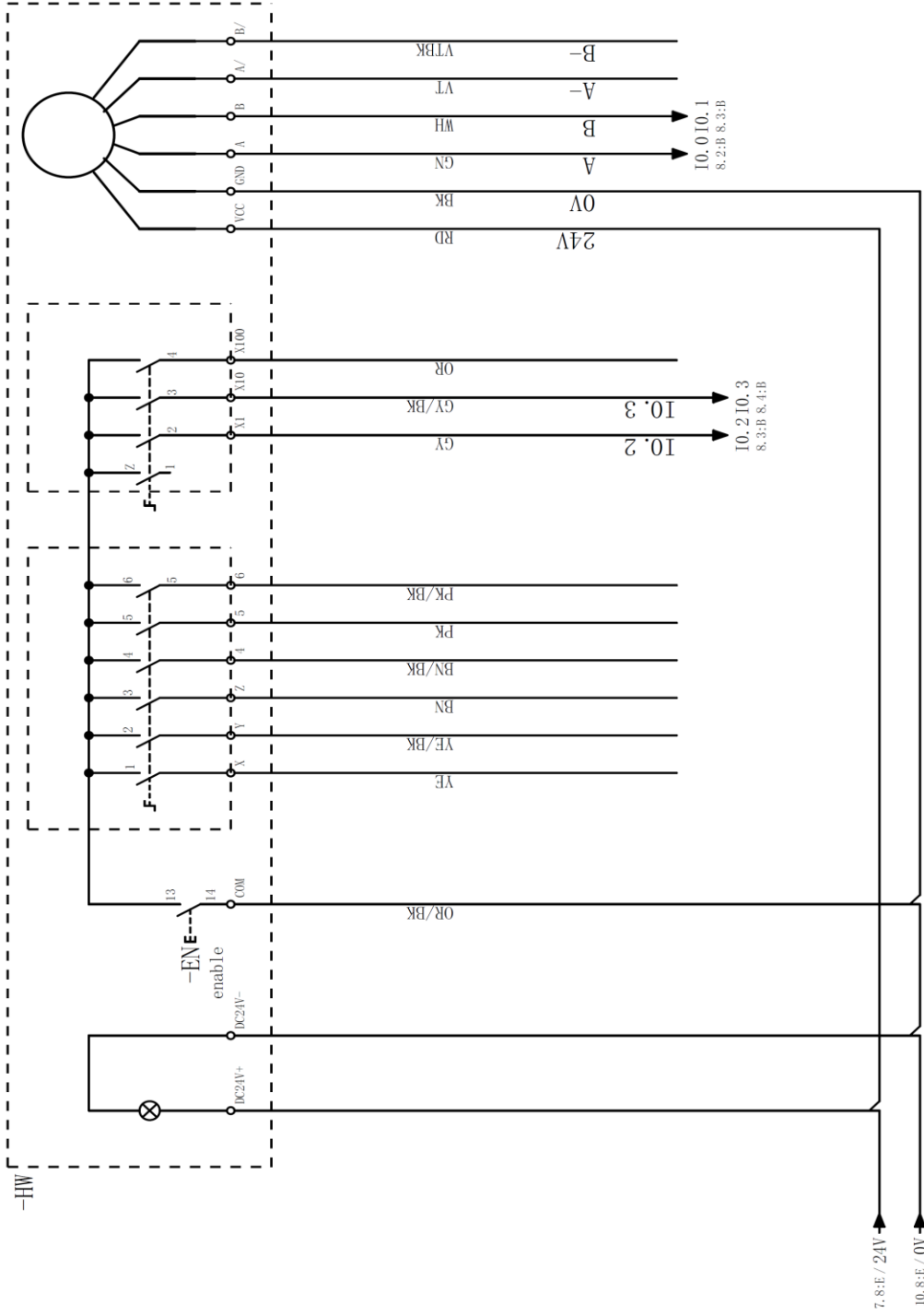
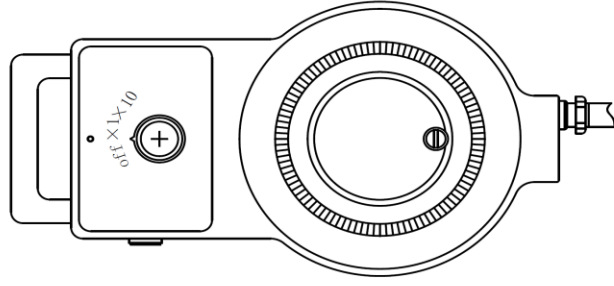


mode select Spindle power on/off Oil pump power on/off Coolant power on/off Spindle up limit switch Servo motor alarm Mag. chuck undercurrent protect Wheel guard open protect Lubricant shortage protect



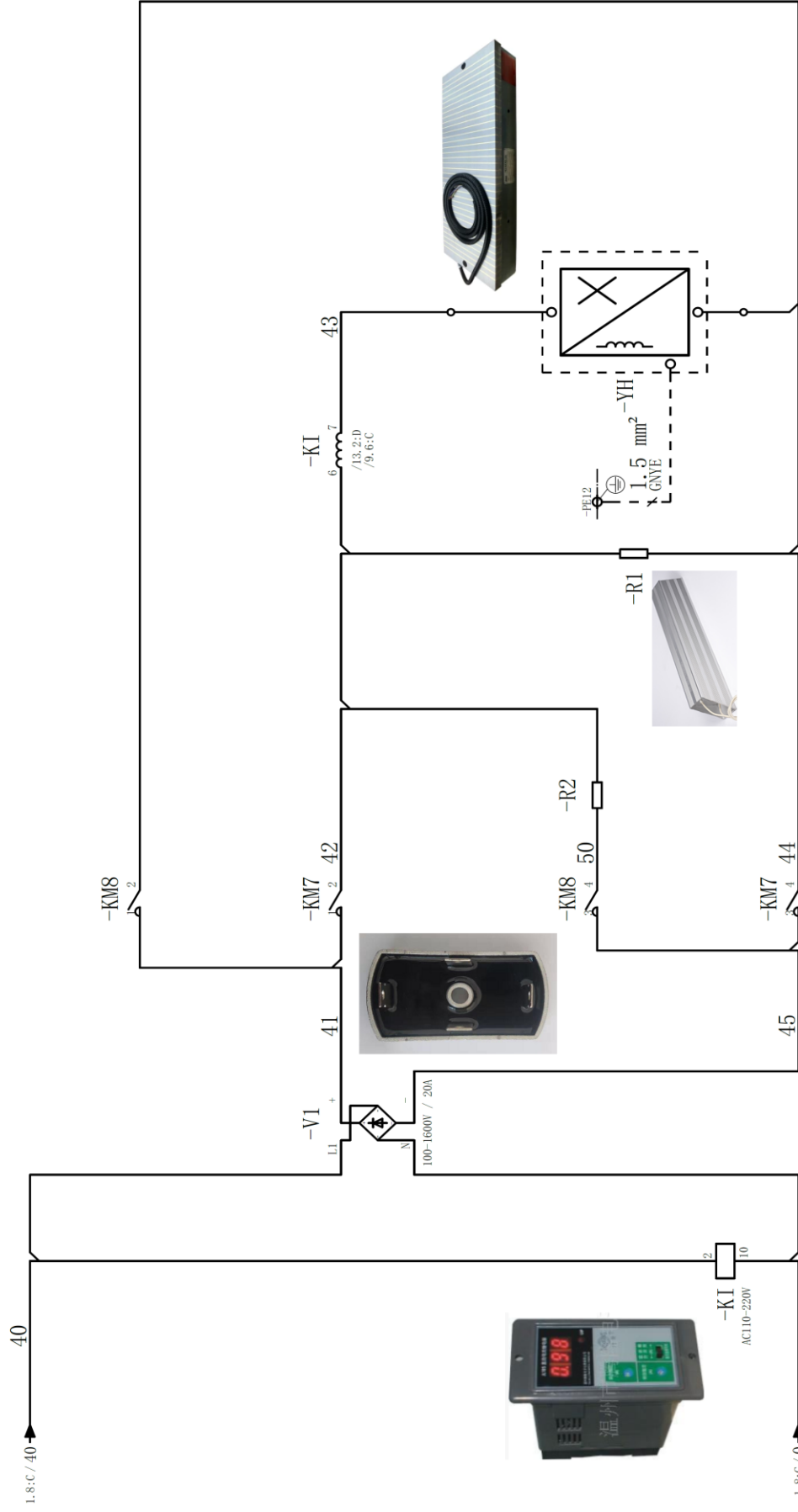


Coolant pump power on Slot grinding protect Alarm indicator Table L/R reverse signal

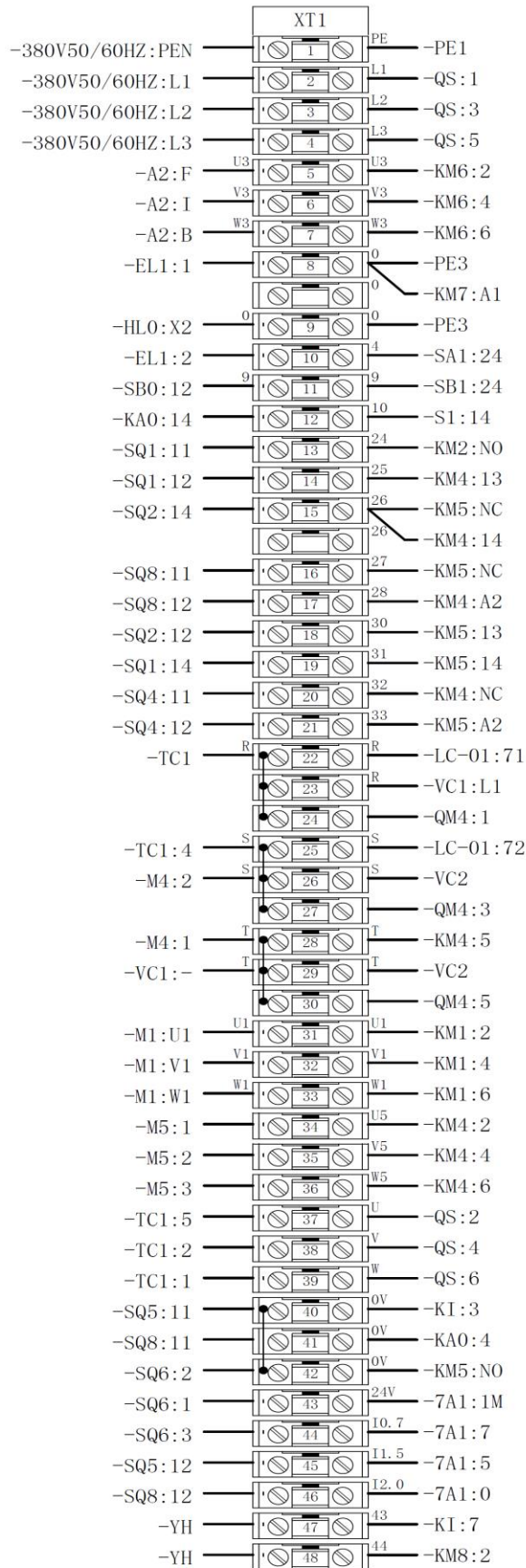


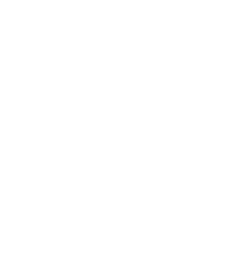
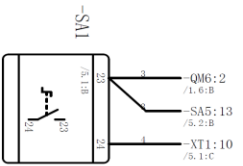
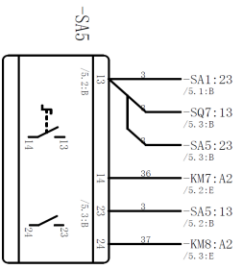
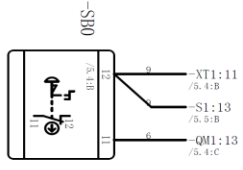
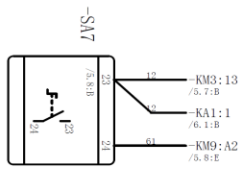
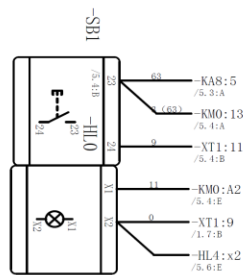
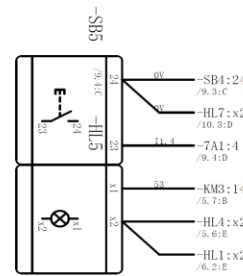
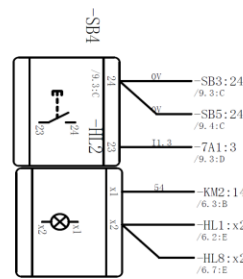
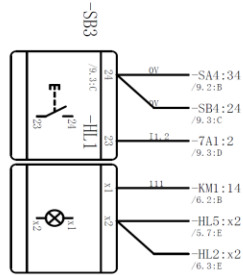
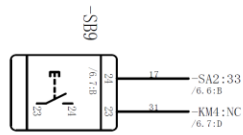
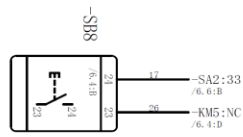
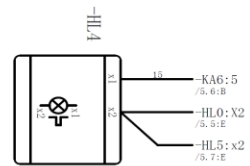
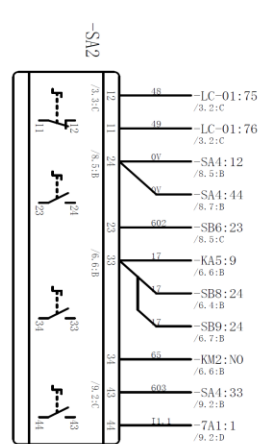
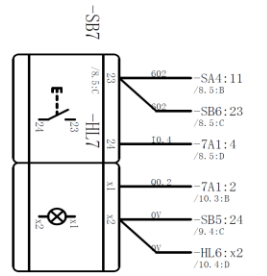
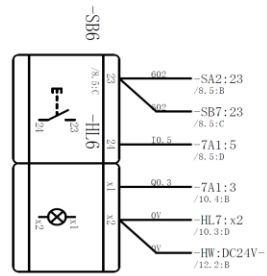
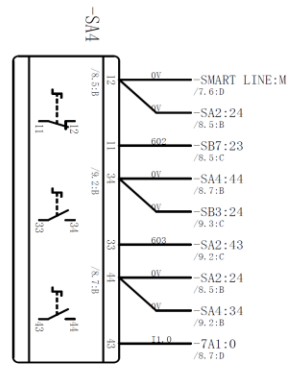
Rectification bridge
(supply mag.chuck DC power)

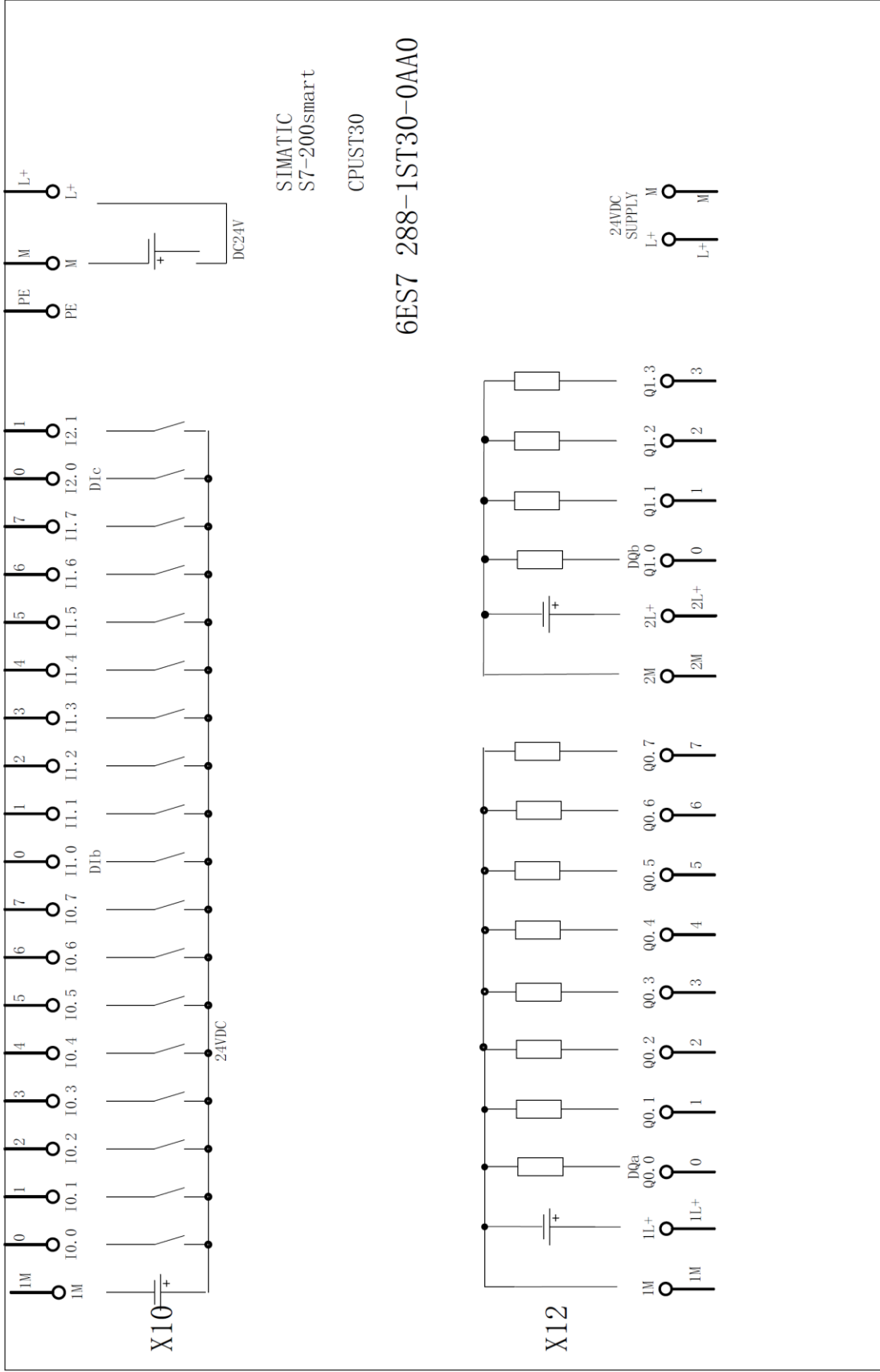
Electrical magnetic chuck

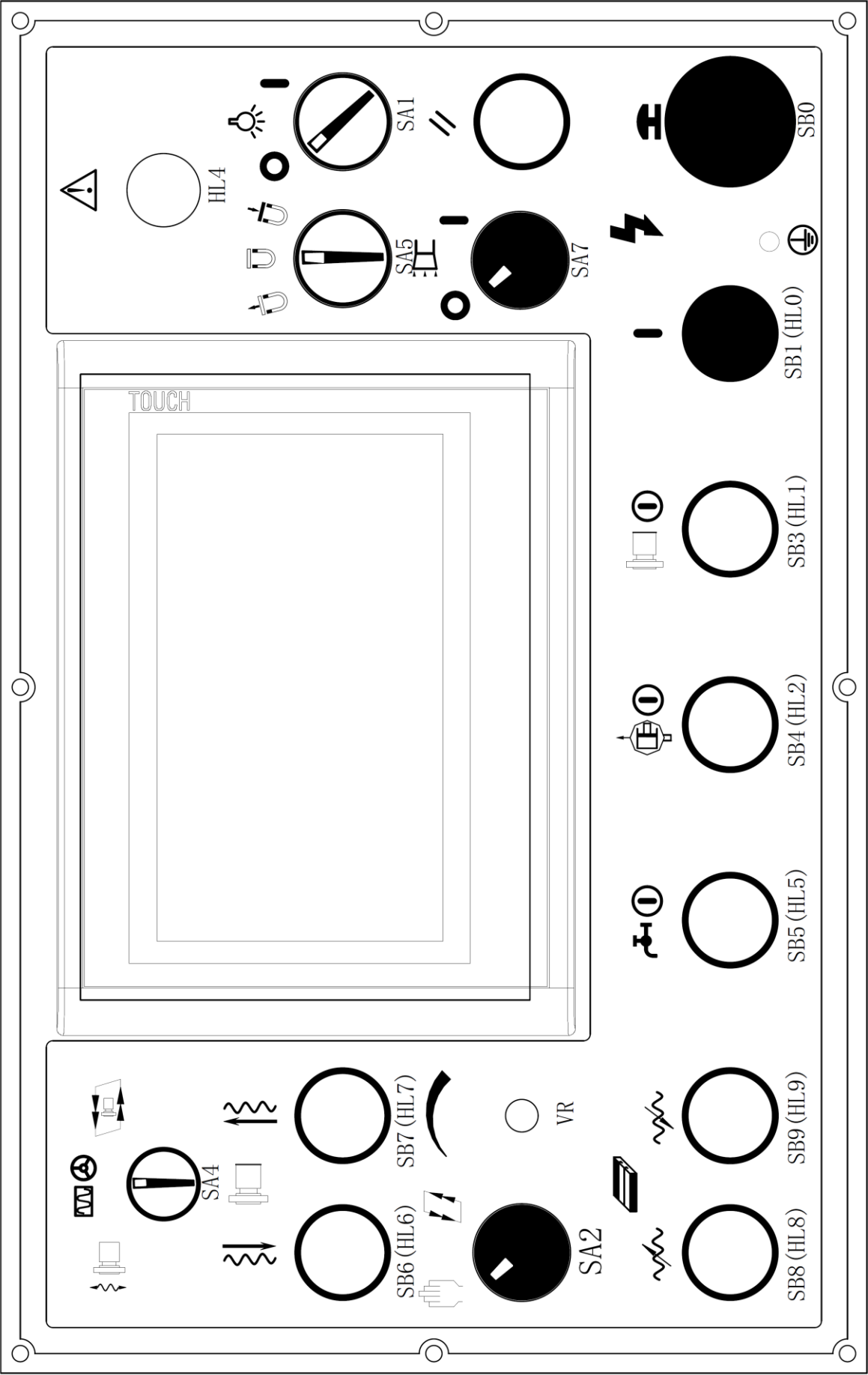


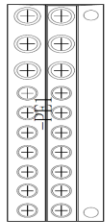
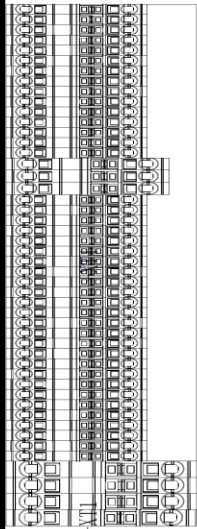
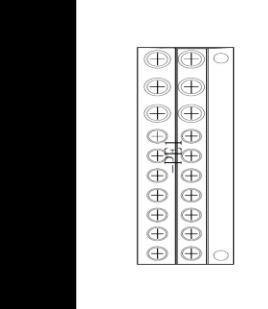
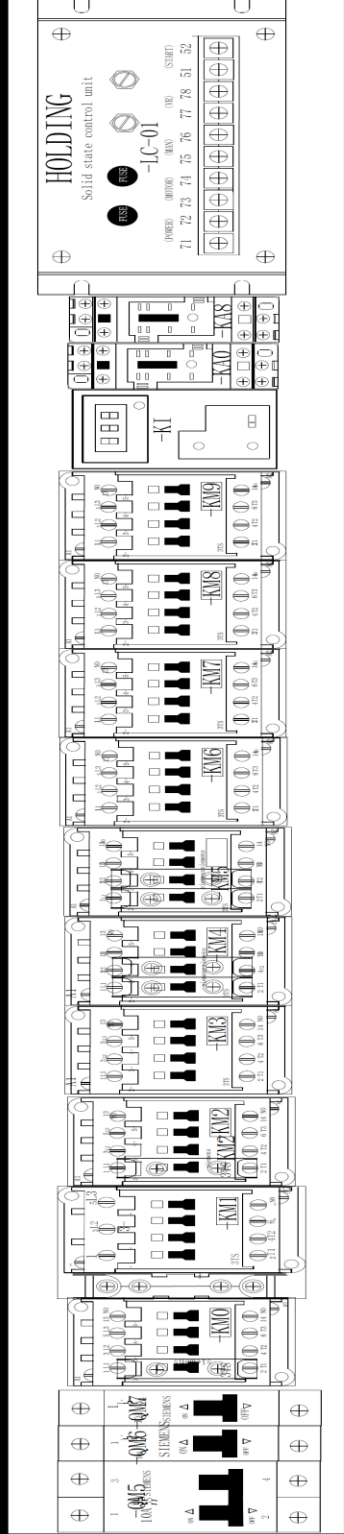
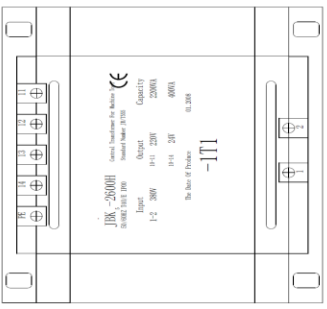
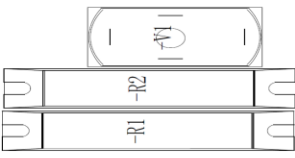
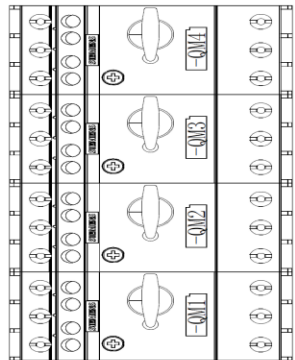
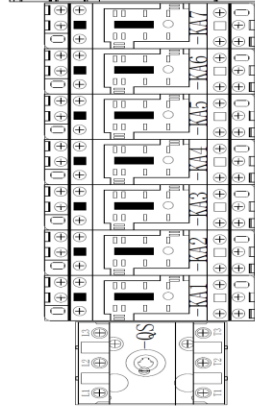
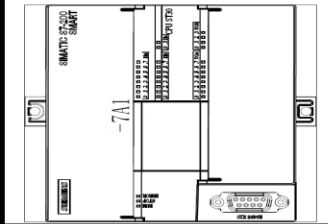
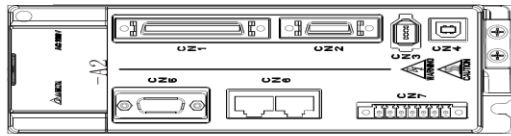
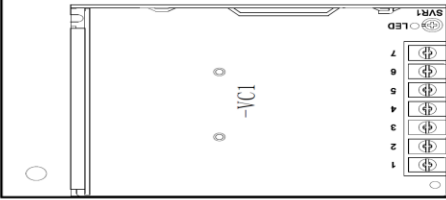
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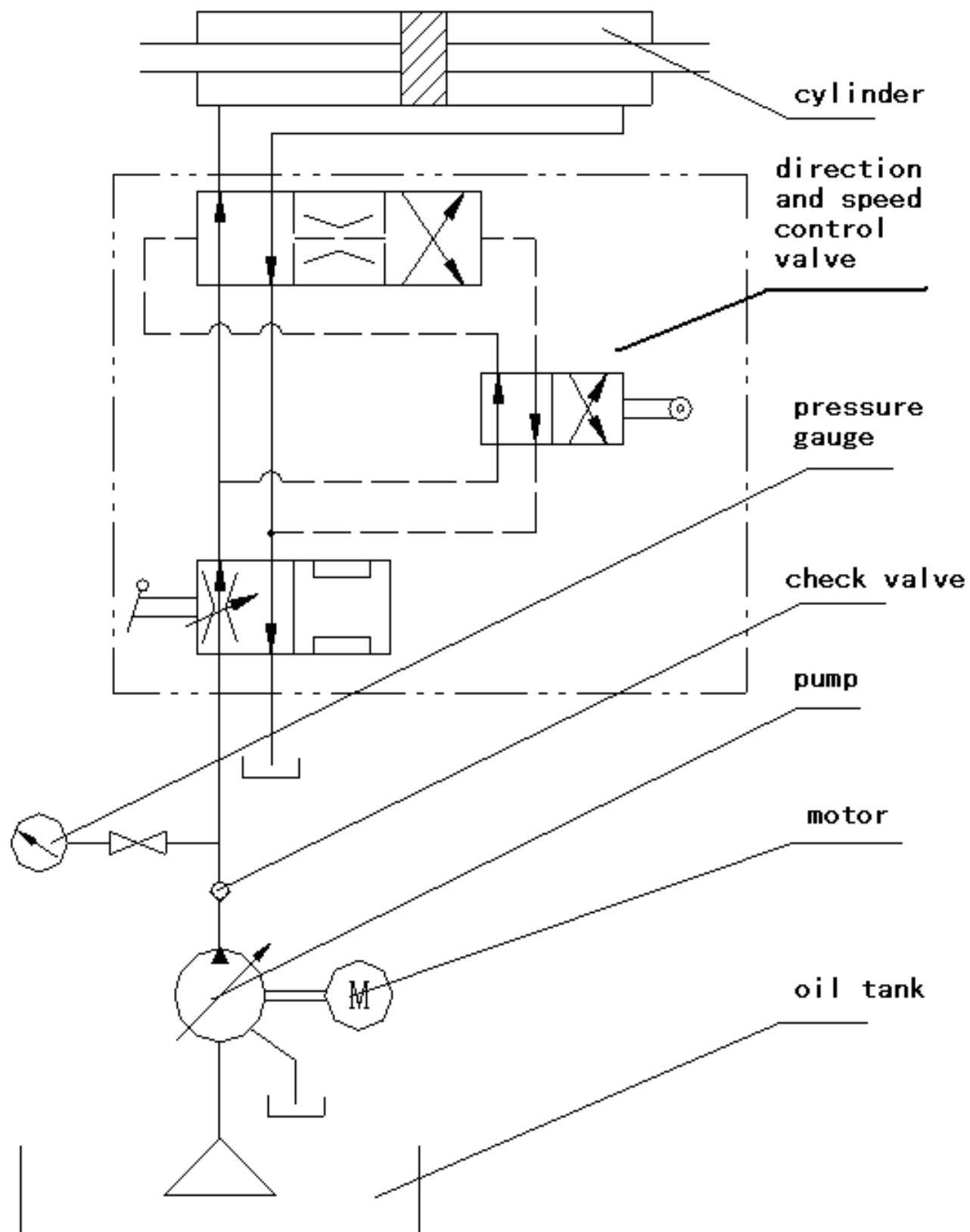












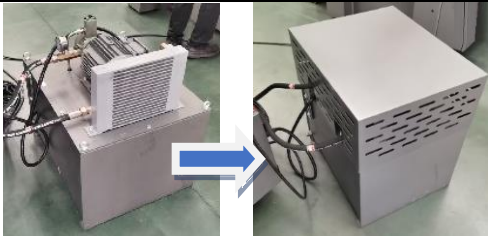
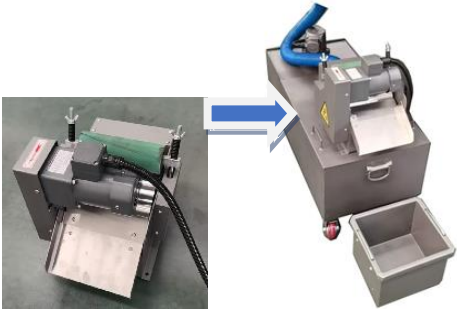
Hydraulic system principle diagra

Parts list of JPSG-1224SG Metal Working Surface Grinder Electrical Circuit

Index No.	Code	Description	Spec.	Q/ty	Remark
1	QM1	Breaker	3UV1340-1MN00(14-20A)	1	
2	QM2	Breaker	3UV1340-1NL00(8-13A)	1	
3	QM3	Breaker	3UV1340-1MF00(0.6-1A)	1	
4	QM4	Breaker	3UV1340-1MJ00(2.4-4A)	1	
5	QM5	Breaker	DZ47-63/2P D6	1	
6	QM6-7	Breaker	DZ47-63/1P D6	2	
7	QM8	Breaker	DZ47-63/1P C1	1	
8	KM1	Contacto	3TB4322-OXB0	1	
9	KM0-8	Contacto	3TB4022-OXB0	9	
10	KA0 KA4	Middle rely	MY2NJ-AC24V	2	
11	KA1-8	Middle rely	MY2NJ-DC24V	5	
12		AC motor controller	SQ-02A	1	
13	EL1	Working lamp	J150B	1	
14	PLC	Siemens	6ES7214-1AD23-0XB8	1	
15	TD400	HMI	6AV6 6640-OAA00-OAX0	1	
16		Power switch	S-100-24	1	
17	SQ1-2	Travel switch	TZ-6004	2	
18	SQ3-4	Travel switch	JLXK1-411	2	
19	SQ5	Travel switch	YBLX-19/001	1	
20	SQ7	Travel switch	TZ-3101	1	
21	SB0	Emergency switch	LA38-11MXS/203	1	
22	SB1/6/7	Button with lamp	LA38-11D/203 绿	3	
23	SB7-8	Button	LA38-11/203--Green	2	
24	SA2	Knob	LA38-31X2/203	2	
25	SA4	Knob	LA38-21X3/203	1	
26	SA5	Knob(auto reset)	LA38-20XL3/203	1	
27	SA6	Waveband switch	DPN01N-30°	1	
28	HL1-3	Indicator lamp	AD11-16/21-6GZ(Green)	4	
29	HL4	Indicator lamp	AD11-16/21-6GZ(Red)	1	
30	SQ6	Approach switch	Bi2-M12-AZ31X (AC20-250V3-100MA. DC10-300V63-100MA)	1	
31		Servo diver	ASD-A0421-AB	1	
32		Servo motor	ECMA-E31305ES	1	

33	QS	Switch	JFD11-32/300030	1	
34	VR	Potentiometer	WTH118-47K Ω 2W	1	
35	KI	Undercurrent rely	JL18S-2.5A	1	
36	VC	Rectifier	QL20A-500V	1	
37	R1 R2	Resistance	ZG11-50-T1000 Ω	2	
38	TC1	Transformer	JBK5-630VA/220V380V/127V(400VA)、110V(50VA)、24V(180VA)	1	
39	TM2	Transformer	JSG-1KVA/220V, 380V/220V	1	

Packing List --Main Machine, Accessories and Tools


Index No.	Description	Q'ty.	Remark
1	 <p>Oil tank</p>	1pc	In the tool box
2	 <p>Coolant tank</p>	1pc	In the tool box





Accessories

Index No.	Description	Spec.	Q/ty.	Remark
1	Balance Arbor	JPSG-1224SG 	1pc	In the tool box
2	Wheel Dresser Base (not include diamond pen)		1pc	In the tool box

3	Wheel Flange & Grind Wheel	 P350x40x127, WA46L5V35	1 set	In the carton
4	Leveling Wedge		1set / 5pcs	In the tool box
5	Tool Box		1pc	In the tool box
6	Wheel Extractor	Extract nut	1pc	In the tool box
		Wrench 		
8	Screw Drive	150 	1set / 2pcs	In the tool box
9	Wrench For Hexagonsocket Head Screw 	4/S91-7	1pc	In the tool box
10		5/S91-7	1pc	In the tool box
11		6/S91-7	1pc	In the tool box
12		8/S91-7	1pc	In the tool box
13		10/S91-7 	1pc	In the tool box
15	Electro Magnetic Chuck	300*600mm 	1pc	On the worktable
		 Auto. lubrication x 1 unit	1pc	On the machine

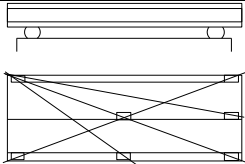
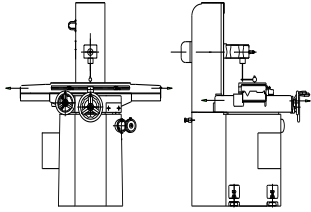
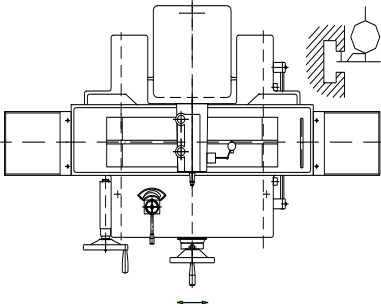
Optional Accessories

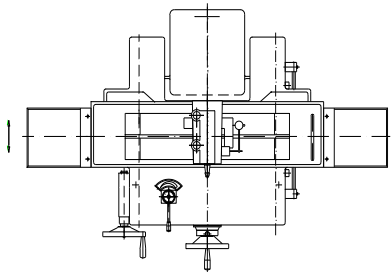
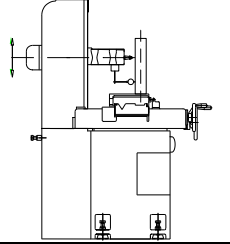
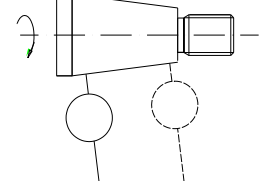
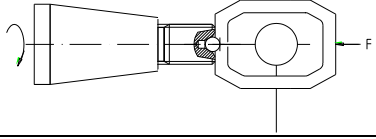
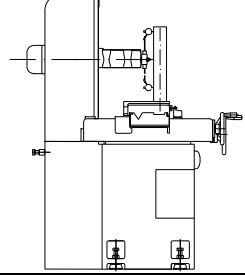
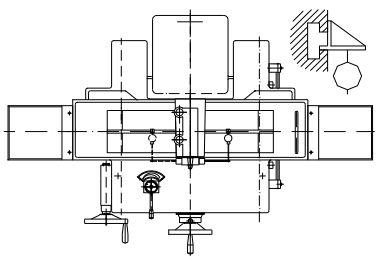
Index No.	Description	Spec.	Q/ty	Remark
1	Wheel Balancing Stand		1pc	In the tool box

2	Diamond Pen		1pc	In the carton
3	1set More Wheel Flange And Wheel	 P350x40x127, WA46L5V35	1 set	In the carton
4	Digital Readout	 	1set	On Machine

Precision Inspection Register

Geometrical precision

Index No.	Items	Diagram	Permissible deviation	Actual deviation
1	Flatness of the table surface		Full length: 0.01 Local: 0.005/300	
2	a. Parallelism of the table surface to its longitudinal movement b. Parallelism of the table surface to its transverse movement		a. Full length: 0.015 Local: 0.008/300 b. Full length: 0.01	
3	Parallelism of the median slot to the longitudinal movement of table		Full length: 0.015 Local: 0.008/300	

4	Verticality of the table transverse movement to the longitudinal movement		0.03/300	
5	Verticality and straightness of the wheel head up and down to the table surface		0.03/300	
6	Radial run out of the wheel spindle nose		0.004	
7	Axial run out of the wheel spindle		0.004	
8	Parallelism of the spindle center line to the table surface		0.025/300	
9	Verticality of the spindle center line to the medina slot		0.015/300	

Machining precision

Index No.	Inspection items	Permissible deviation	Actual deviation	Remark
P1	Grinding five columned test blocks	Tolerance in thickness: 0.005/300		Test pieces are 45# steel Ø50
P2	Grinding completed test block	Tolerance in thickness: 0.005/300		The material test piece is iron HT200, the length is half of table, width is three times of wheel width, the thickness is 60mm