

GSD

3B0272C

Automated Dispense Platform

EN

For automated, programmable, precision micro-dispensing. For professional use only.

Not approved for use in explosive atmospheres or hazardous (classified) locations.

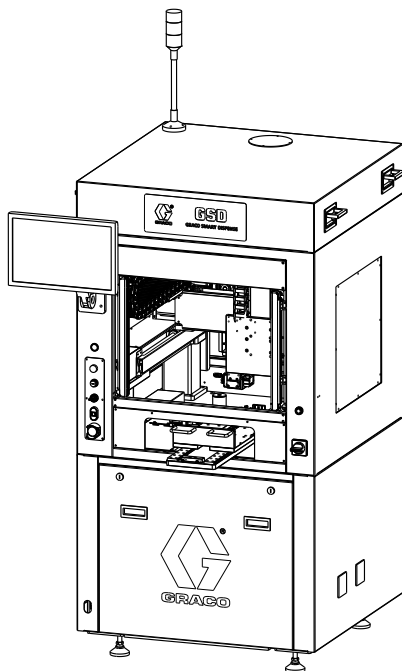
Model 2001644, 2001647, 2004679, 2001646

See page 3 for model information, including air pressure operating range and approvals.

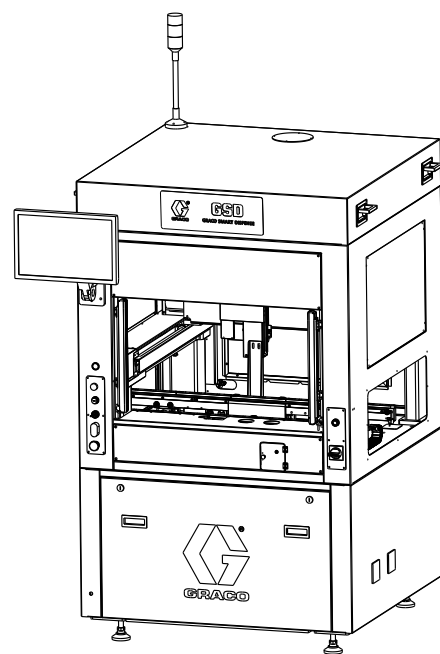


Important Safety Instructions

Read all warnings and instructions in this manual and all related manuals before using the equipment. Save all instructions.



GSD Off-line System



GSD In-line System

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Related Manuals

Find English manuals and any available translations at www.graco.com.

Manual in English	Description
3B0272	GSD Automated Dispense Platform Parts Manual
3B0107	PSM 15 Repair-Parts Manual
3A9277	PSM Repair-Parts Manual
3A9349	PR-Xv Repair-Parts Manual
3B0213	PR-Xv30 Repair-Parts Manual
3A8107	PCP Control Box Instruction Manual

Models

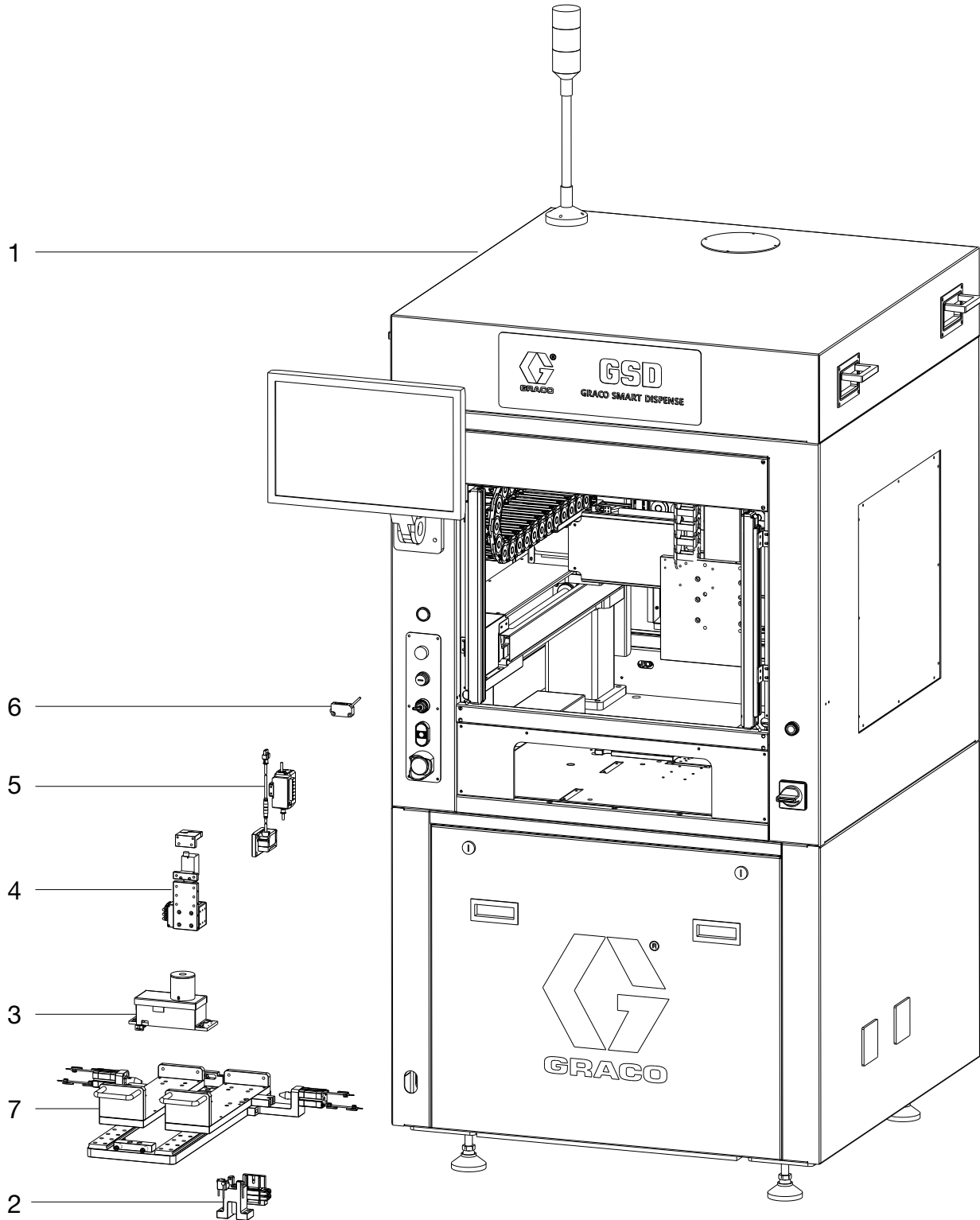
Part	Air Pressure Operating Range	Description	Approvals
2001644	80-100 psi (0.6-0.7 MPa, 5.5-7 bar)	GSD300 System, Off-line, I/O	
2001647		GSD500 System, Off-line, I/O	
2004679		GSD6050 System, Off-line, I/O	
2001646		GSD500 System, In-line, I/O	

NOTE: GSD I/O system can be converted to Profinet or Ethernet IP communication mode. Order kit 2005933 for Profinet communication mode or kit 2005934 for Ethernet IP communication mode. See **Accessories**, page 30.

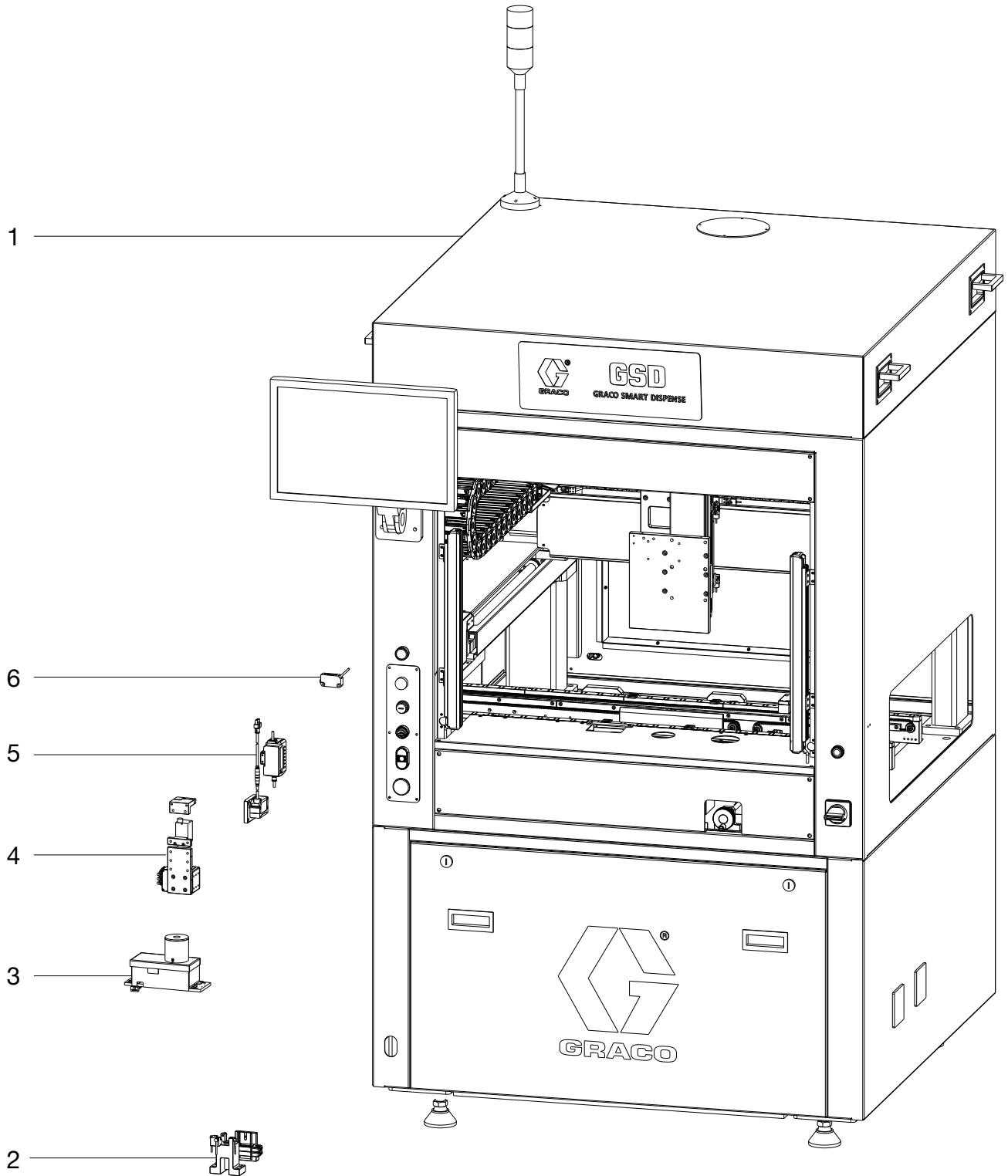
NOTE: If you want to order other customized GSD systems, please contact Graco sales representative for a custom solution. See **Accessories**, page 30.

Parts

GSD Off-line System, 2001644, 2001647 and 2004679



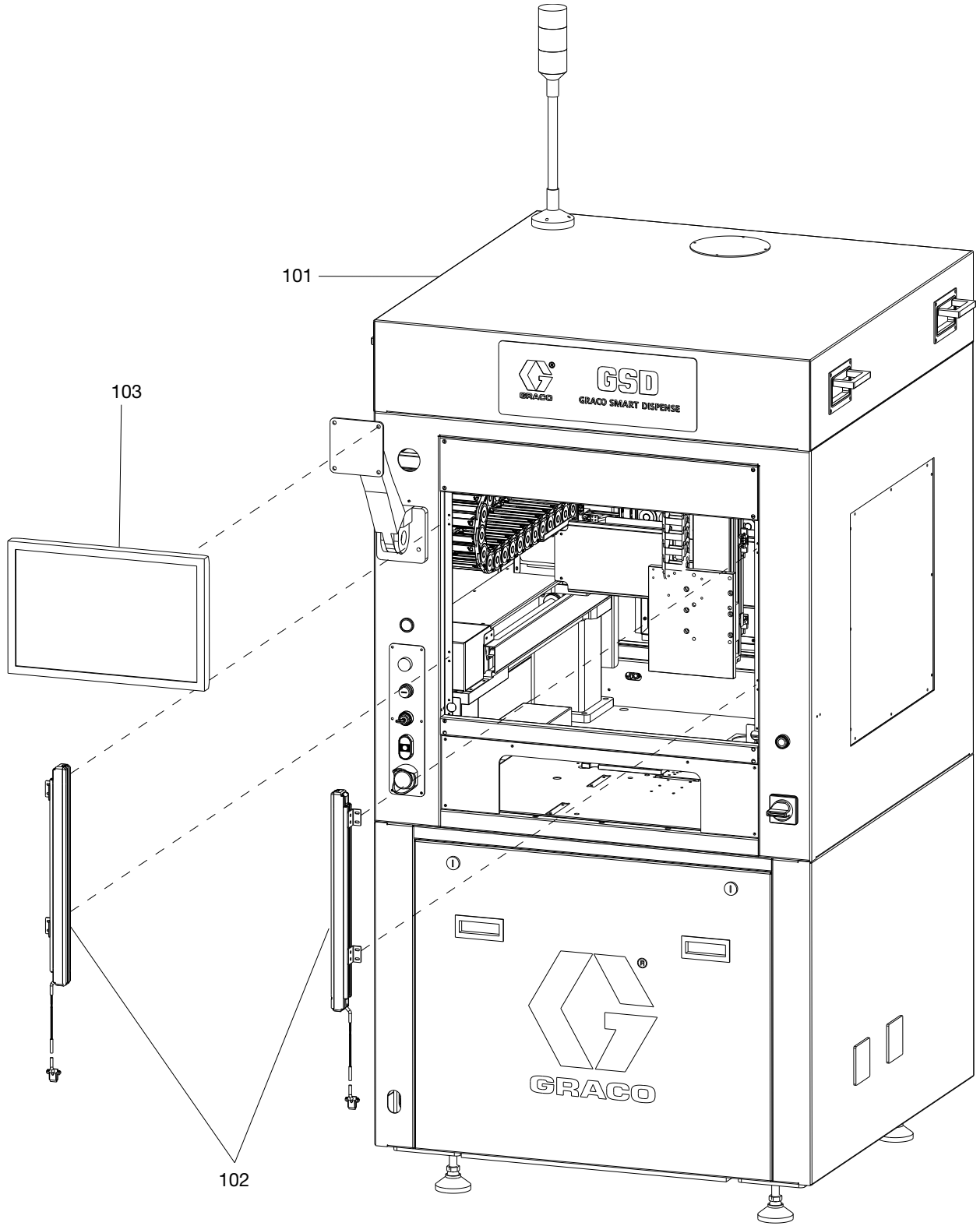
GSD In-line System, 2001646



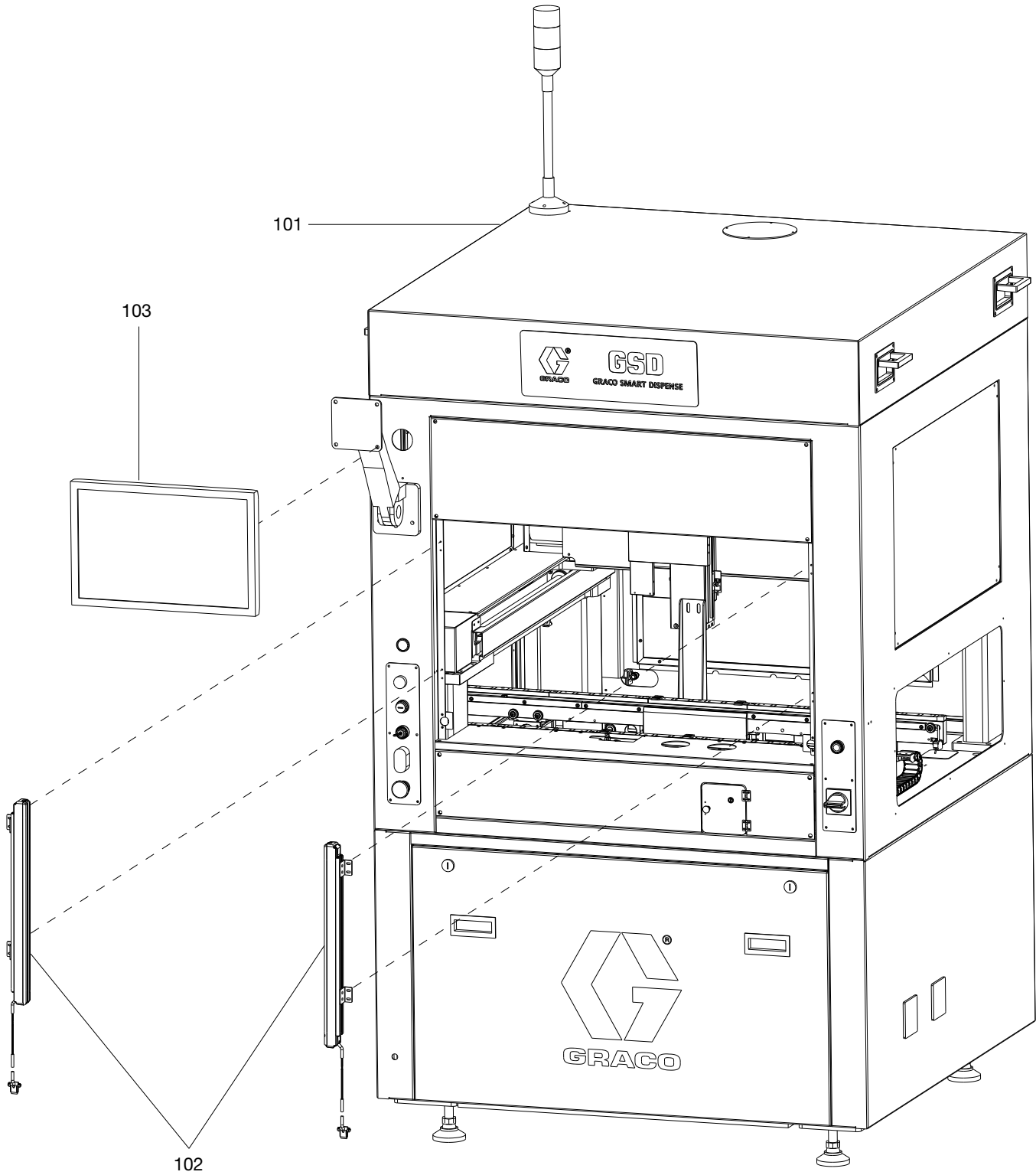
GSD Off-line System, 2001644, 2001647 and 2004679 GSD In-line System, 2001646

Ref.	Part	Description	Qty.			
			Off-line			In-line
			2001644	2001647	2004679	2001646
1	----	BASE UNIT, GSD300, Off-line, see GSD Base Unit, Off-line , page 7	1			
	----	BASE UNIT, GSD500, Off-line, see GSD Base Unit, Off-line , page 7		1		
	----	BASE UNIT, GSD6050, Off-line, see GSD Base Unit, Off-line , page 7			1	
	----	BASE UNIT, GSD500, In-line, see GSD Base Unit, In-line , page 8				1
2	2003993	KIT, needle find, see Solenoid Valve Module , page 14	1	1	1	1
3	2003994	KIT, weight check, see Weight Check Kit, 2003994 , page 26	1	1	1	1
4	2003995	KIT, vision	1	1	1	1
5	2003996	KIT, Z-height check, see Z-height Check Kit, 2003996 , page 27	1	1	1	1
6	2003998	KIT, part in place	1	1	1	1
7	----	KIT, Y-slide, GSD300, double, see Y-Slide Kit , page 28	1			
	----	KIT, Y-slide, GSD500, double, see Y-Slide Kit , page 28		1		
	----	KIT, Y-slide, GSD6050, single, see Y-Slide Kit , page 28			1	

GSD Base Unit, Off-line



GSD Base Unit, In-line

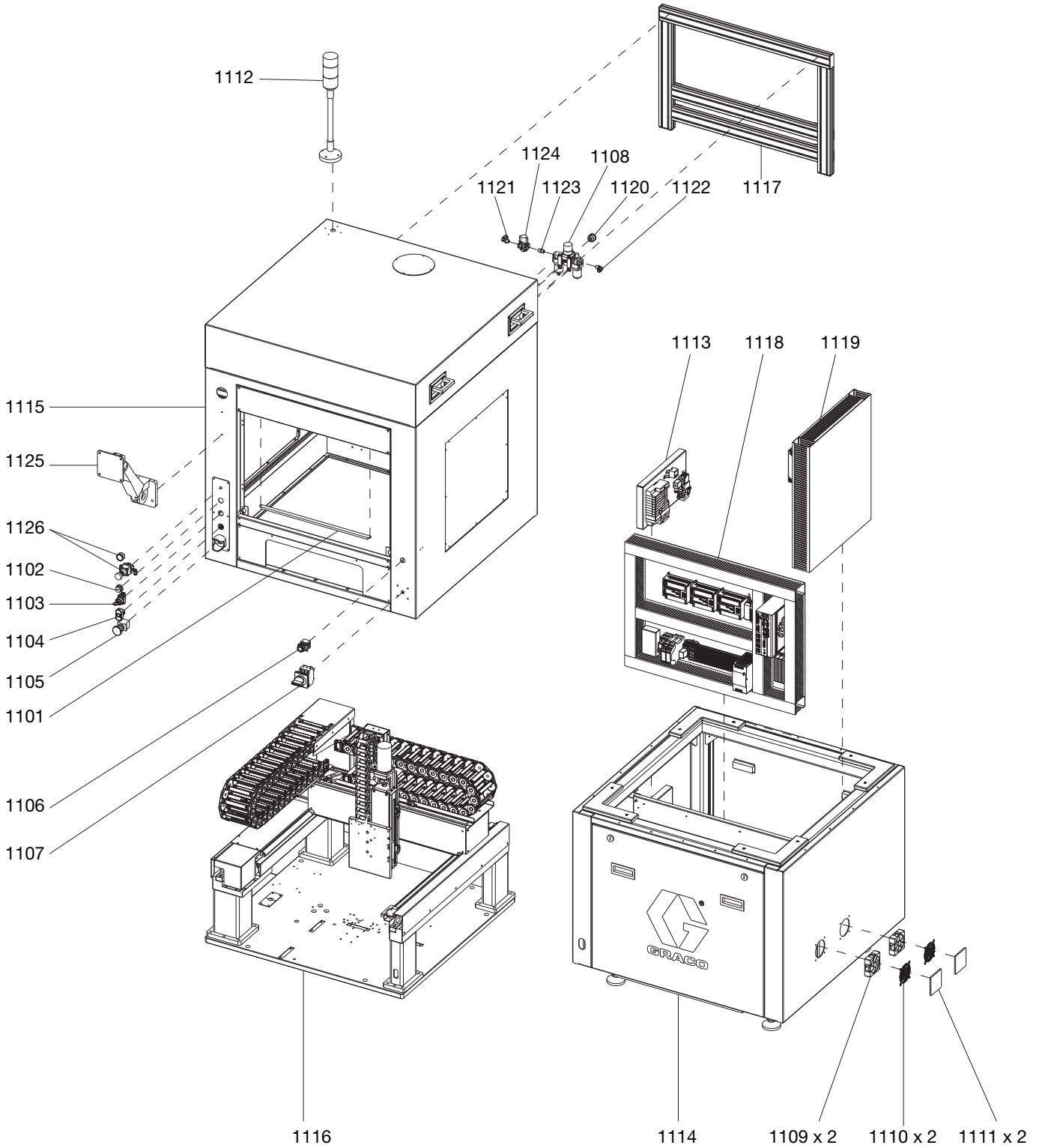


GSD Base Unit, Off-line

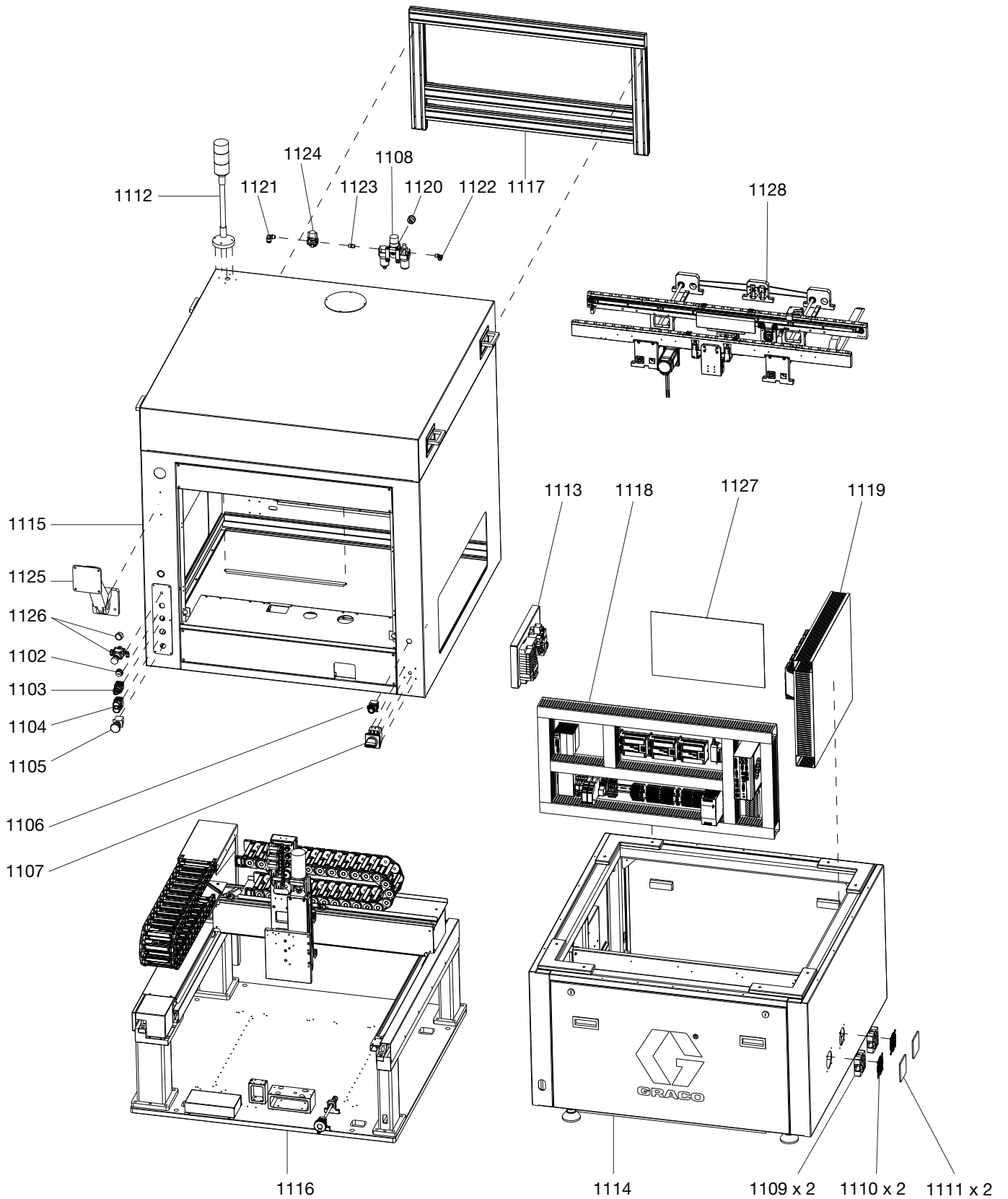
GSD Base Unit, In-line

Ref.	Part	Description	Qty.			
			Off-line			In-line
			GSD300	GSD500	GSD6050	GSD500
101	----	BASE, GSD300, Off-line, see GSD Base, Off-line , page 10	1			
	----	BASE, GSD500, Off-line, see GSD Base, Off-line , page 10		1		
	----	BASE, GSD6050, Off-line, see GSD Base, Off-line , page 10			1	
	----	BASE, GSD500, Off-line, see GSD Base, In-line , page 11				1
102	CU7739	LIGHT CURTAIN	1	1	1	1
103	CU0526	SCREEN, touchscreen, color, 21.5 in	1	1	1	1

GSD Base, Off-line



GSD Base, In-line

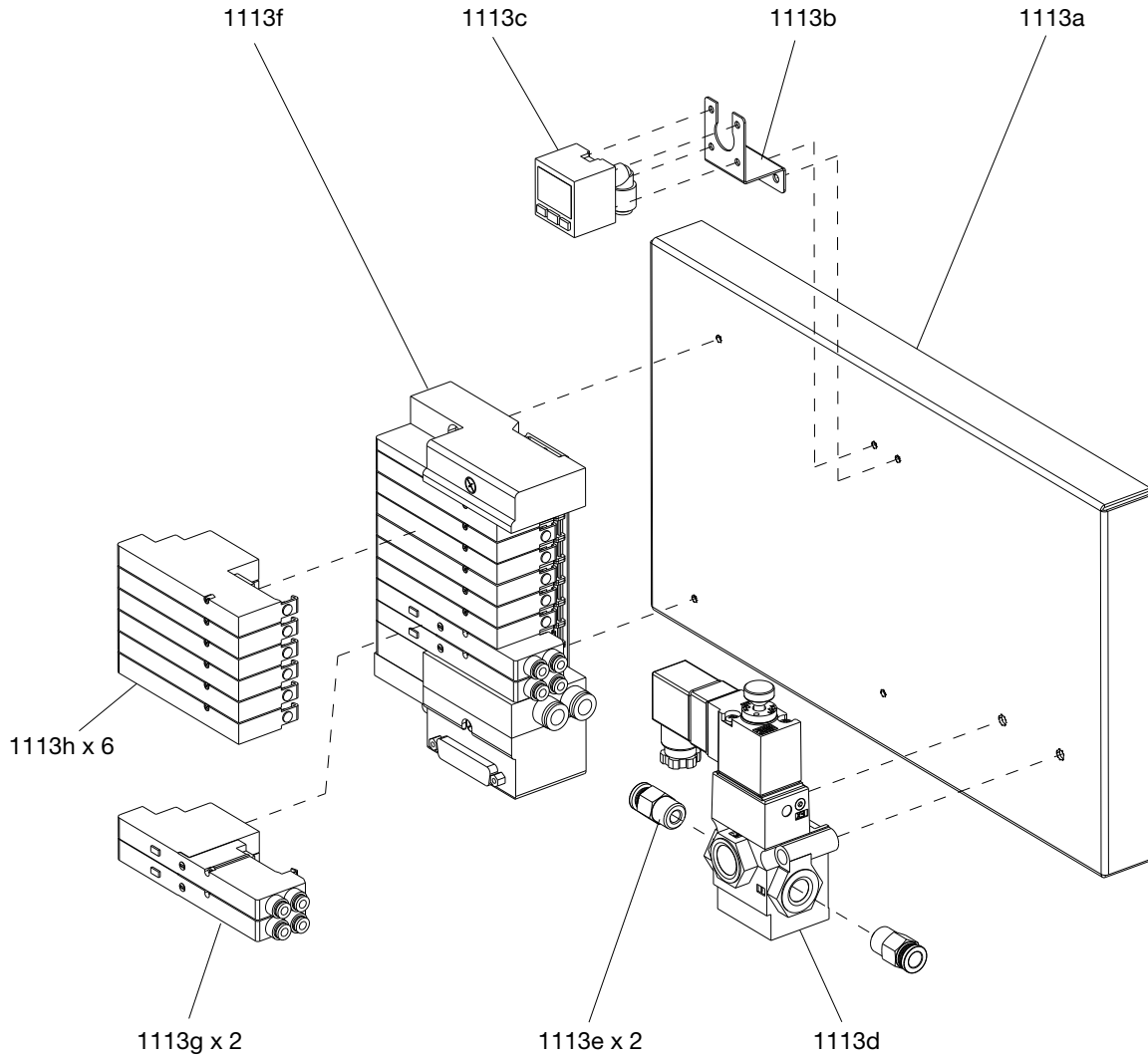


GSD Base, Off-line
GSD Base, In-line

Ref.	Part	Description	Qty.			
			Off-line			In-line
			GSD300	GSD500	GSD6050	GSD500
1101	CU0515	LAMP, LED	1	1	1	1
1102	CU0516	SOCKET, USB	1	1	1	1
1103	CU0517	SWITCH, maintenance	1	1	1	1
1104	CU0518	BUTTON, motion power	1	1	1	1
1105	CU0519	BUTTON, emergency stop	1	1	1	1
1106	CU0520	BUTTON, auto start	1	1	1	1
1107	CU0521	SWITCH, main power	1	1	1	1
1108	CU0720	KIT, air source	1	1	1	1
1109	CU0529	KIT, radiator fan	2	2	2	2
1110	CU0530	KIT, radiator fan protection	2	2	2	2
1111	CU0531	KIT, radiator fan, dustproof	2	2	2	2
1112	CU0935	LIGHT, tower	1	1	1	1
1113	----	MODULE, solenoid valve, see Solenoid Valve Module , page 14	1	1	1	1
1114	----	FRAME, lower, XYZ, GSD300	1			
	----	FRAME, lower, XYZ, GSD500		1		
	----	FRAME, lower, XYZ, GSD6050			1	
	----	FRAME, lower, XYZ, GSD500, in-line				1
1115	----	GUARD, upper, XYZ, GSD300	1			
	----	GUARD, upper, XYZ, GSD500		1		
	----	GUARD, upper, XYZ, GSD6050			1	
	----	GUARD, upper, XYZ, GSD500, in-line				1
1116	----	MODULE, work platform, GSD300, see Work Platform Module , page 15	1			
	----	MODULE, work platform, GSD500, see Work Platform Module , page 15		1		
	----	MODULE, work platform, GSD6050, see Work Platform Module , page 15			1	
	----	MODULE, work platform, GSD500, in-line, see Work Platform Module , page 15				1
1117	----	MODULE, aluminum profile, GSD300	1			
	----	MODULE, aluminum profile, GSD500		1	1	1
1118	----	MODULE, panel, elec, XYZ, GSD300, 1, see Electrical Panel Module 1, Off-line , page 17	1	1	1	
	----	MODULE, panel, elec, XYZ, GSD500, 1, see Electrical Panel Module 1, In-line , page 18				1
1119	----	MODULE, panel, elec, XYZ, GSD300, 2, see Electrical Panel Module 2 , page 20	1			
	----	MODULE, panel, elec, XYZ, GSD500, 2, see Electrical Panel Module 2 , page 20		1	1	1
1120	CU0728	KIT, pressure, instrument	1	1	1	1
1121	----	FITTING, air inlet, 1/4-10	1	1	1	1
1122	----	FITTING, air inlet, 1/4-8	1	1	1	1
1123	----	FITTING, PT1/4	1	1	1	1

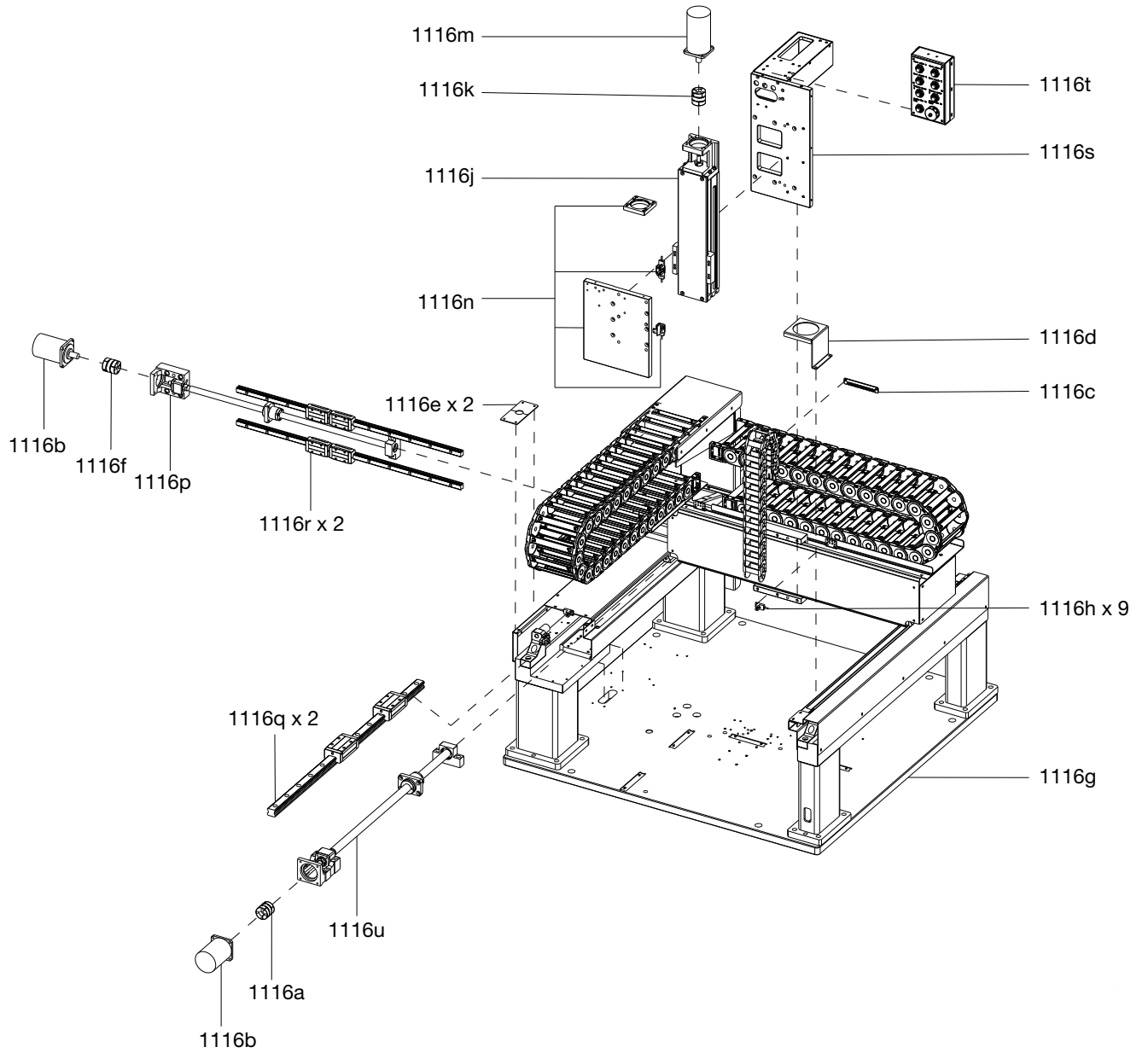
Ref.	Part	Description	Qty.			
			Off-line			In-line
			GSD300	GSD500	GSD6050	GSD500
1124	CU0949	VALVE, hand spool, air source-VHS20-02A	1	1	1	1
1125	----	BRACKET, suspension, display	1	1	1	1
1126	----	MODULE, control, pressure gauge, see Pressure Gauge Control Module , page 22	1	1	1	1
1127	----	MODULE, panel, elec, XYZ, GSD500, 3, see Electrical Panel Module 3 , page 23				1
1128	----	Conveyor, GSD500, see GSD500 Conveyor , page 24				1

Solenoid Valve Module



Ref.	Part	Description	Qty.
1113a	----	BRACKET, solenoid valve	1
1113b	----	BRACKET, gauge, pressure, air	1
1113c	CU0569	GAUGE, pressure, air	1
1113d	CU0570	VALVE, solenoid, MAC	1
1113e	----	FITTING, connector	2
1113f	CU0572	TERMINAL, solenoid valve	1
1113g	CU0973	VALVE, solenoid, plug-in	2
1113h	----	COVER, blanking plate, plug-in	6

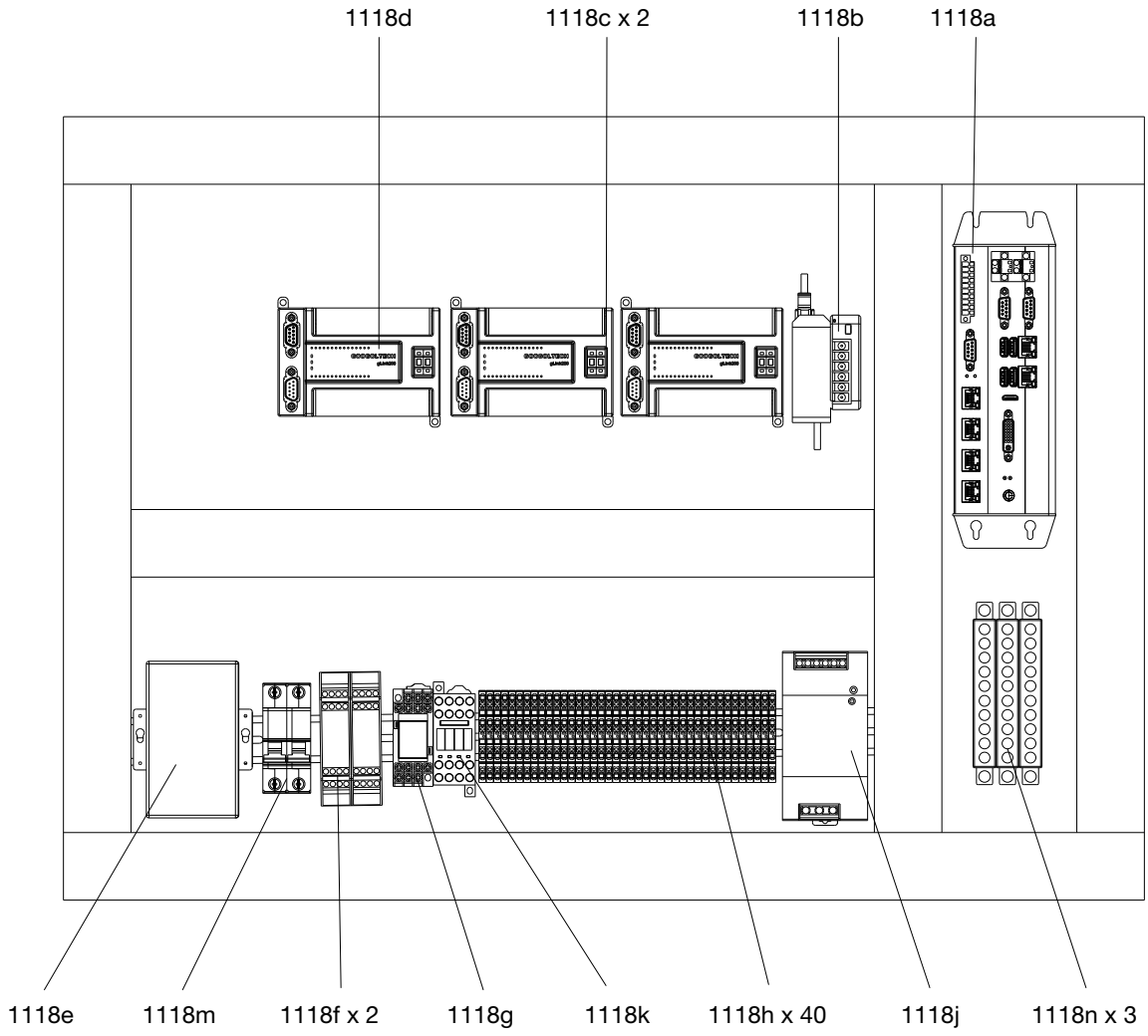
Work Platform Module



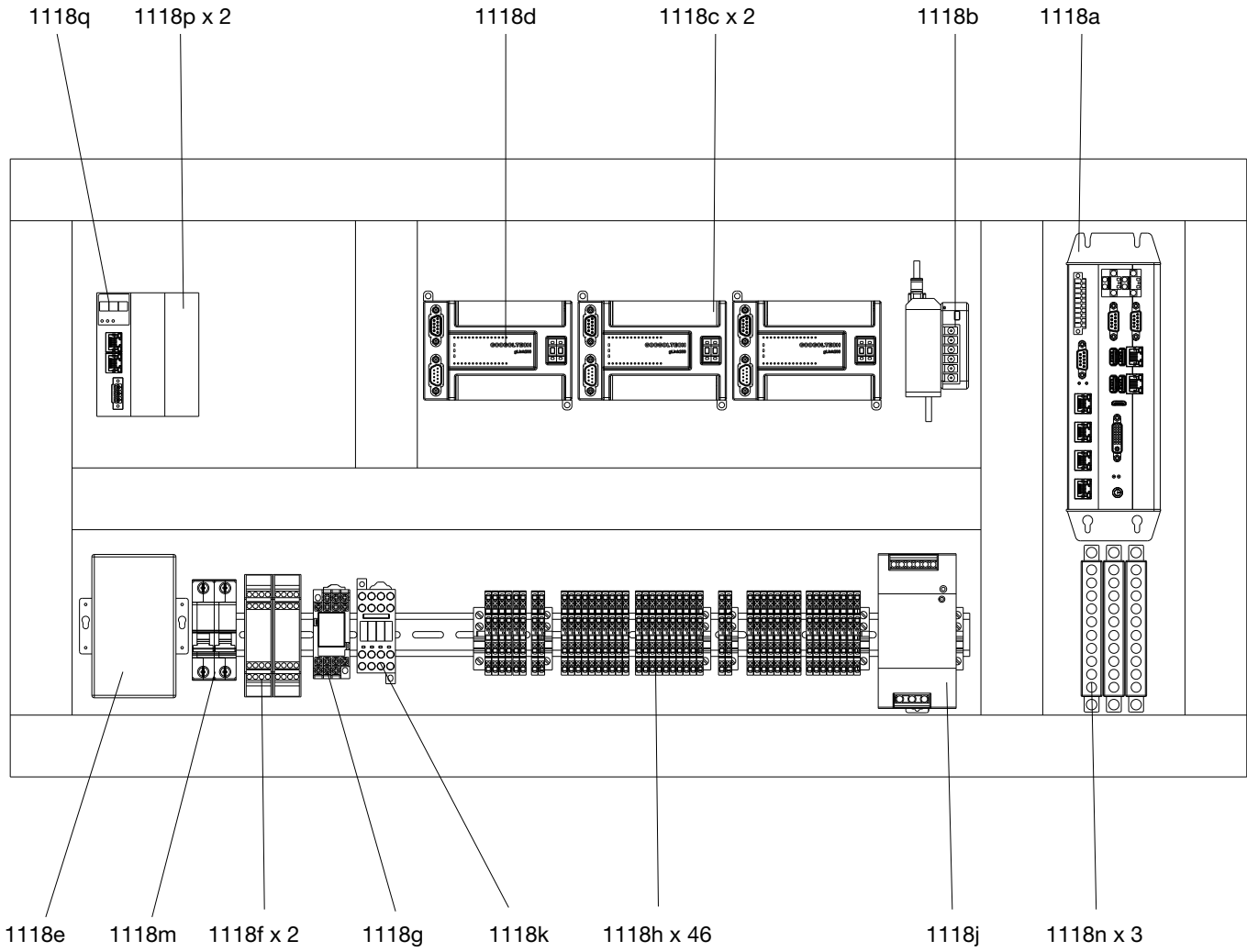
Work Platform Module

Ref.	Part	Description	Qty.			
			Off-line			In-line
			GSD300	GSD500	GSD6050	GSD500
1116a	CU0544	COUPLING, motor, Y axis	1	1	1	1
1116b	CU0545	MOTOR, motion control, XY	2	2	2	2
1116c	----	KIT, Chain, arrange harness	1	1	1	1
1116d	----	BRACKET, waste, cup	1	1	1	1
1116e	----	PLATE, wire protector snap-in	2	2	2	2
1116f	CU0708	COUPLING, motor, X axis	1	1	1	1
1116g	----	GANTRY, work table, GSD300	1			
	----	GANTRY, work table, GSD500		1		
	----	GANTRY, work table, GSD6050			1	
	----	GANTRY, work table, GSD500, in-line				1
1116h	CU0678	SENSOR, limit, XY	9	9	9	9
1116j	CU0671	MODULE, electric slide platform, Z axis	1	1	1	1
1116k	CU0658	COUPLING, motor, Z axis	1	1	1	1
1116m	CU0660	KIT, motor, servo, Z axis	1	1	1	1
1116n	----	MODULE, glue valve, Z axis drive, GSD300	1			
	----	MODULE, glue valve, Z axis drive, GSD500		1	1	1
1116p	CU0928	MODULE, ball screw, X axis, GSD300	1			
	CU0645	MODULE, ball screw, X axis, GSD500		1		1
	CU1089	MODULE, ball screw, X axis, GSD6050			1	
1116q	CU0919	MODULE, guide rail, Y axis, GSD300	2			
	CU0597	MODULE, guide rail, Y axis, GSD500		2	2	2
1116r	CU0929	MODULE, guide rail, X axis, GSD300	2			
	CU0646	MODULE, guide rail, X axis, GSD500		2		2
	CU1090	MODULE, guide rail, X axis, GSD6050			2	
1116s	----	MODULE, base plate, socket and pressure gauge, Z axis	1	1	1	1
1116t	CU6478	MODULE, socket, WIRE, integration	1	1	1	1
1116u	CU6545	MODULE, ball screw, Y axis, GSD300	1			
	CU6546	MODULE, ball screw, Y axis, GSD500		1	1	1

Electrical Panel Module 1, Off-line



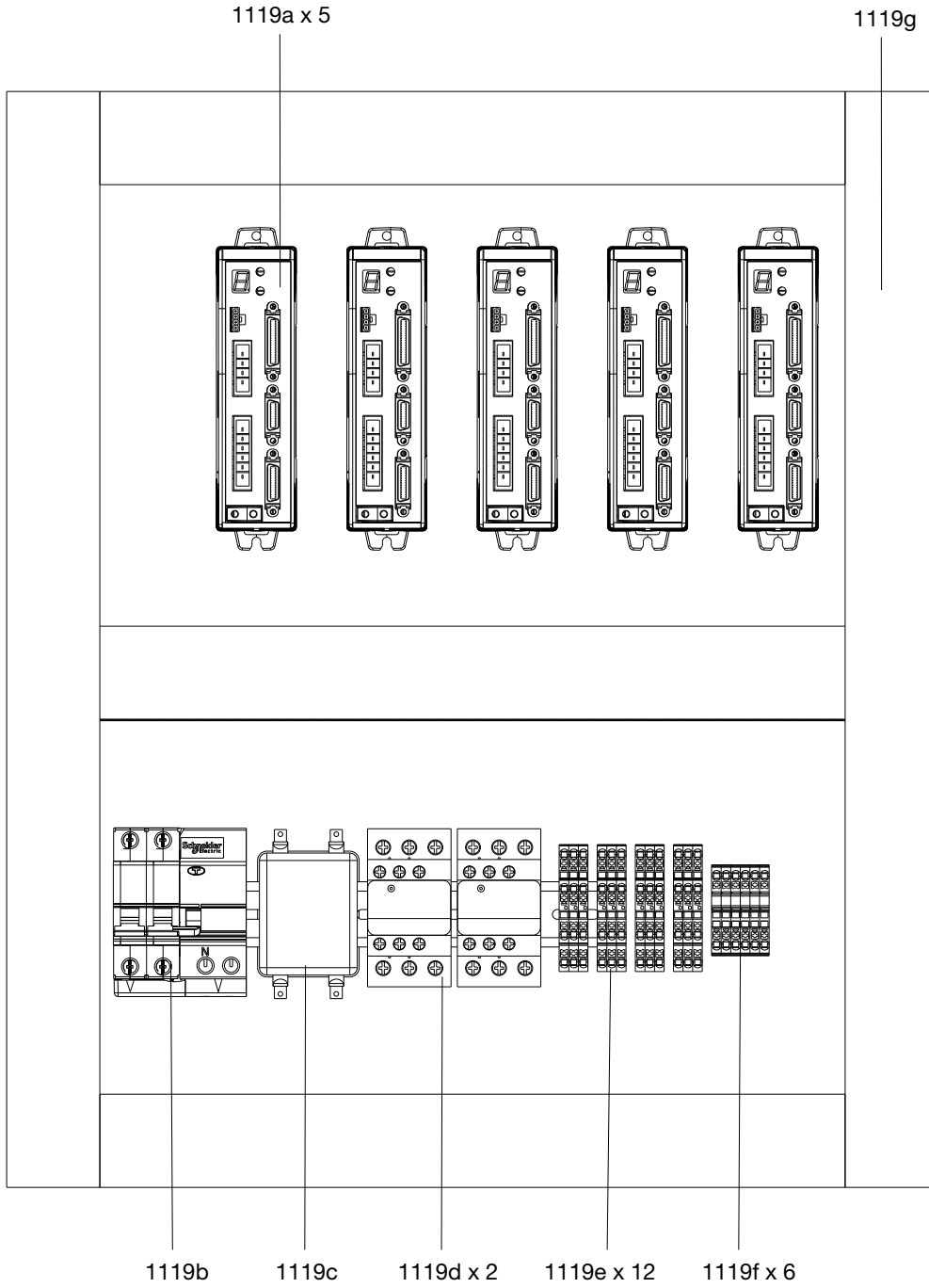
Electrical Panel Module 1, In-line



Electrical Panel Module 1, Off-line
Electrical Panel Module 1, In-line

Ref.	Part	Description	Qty.			
			Off-line			In-line
			GSD300	GSD500	GSD6050	GSD500
1118a	CU0580	CONTROLLER, GNC	1	1	1	1
1118b	CU7735	KIT, z-height check	1	1	1	1
1118c	CU0578	MODULE, I/O, 16 in - 16 out	2	2	2	2
1118d	CU0952	MODULE, I/O, 6 in - 4 out	1	1	1	1
1118e	CU0574	KIT, light source, control	1	1	1	1
1118f	CU1084	RELAY, safety	2	2	2	2
1118g	CU0585	RELAY, z axis brake	1	1	1	1
1118h	CU0586	CONNECTOR, dual, 12-26awg	40	40	40	46
1118j	CU0587	POWER, supply, SDR-240	1	1	1	1
1118k	CU1085	RELAY, light curtain	1	1	1	1
1118m	CU1086	SWITCH, breaker, power	1	1	1	1
1118n	CU0582	TERMINAL, ground	3	3	3	3
1118p	CU0774	DRIVER, stepper motor				2
1118q	CU0773	MODULE, communication, stepper motor				1

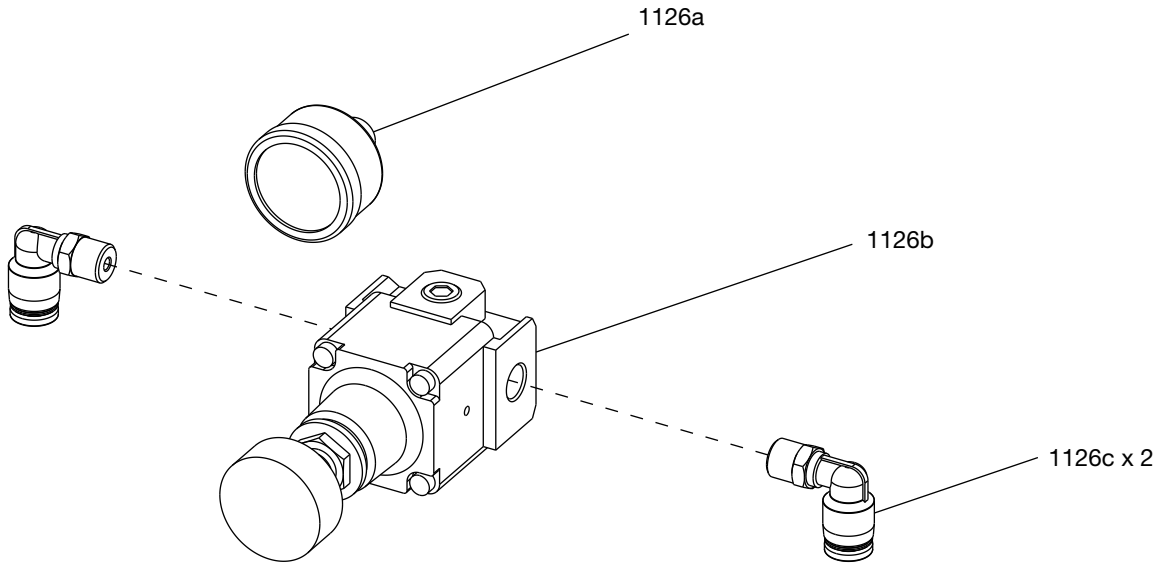
Electrical Panel Module 2



Electrical Panel Module 2

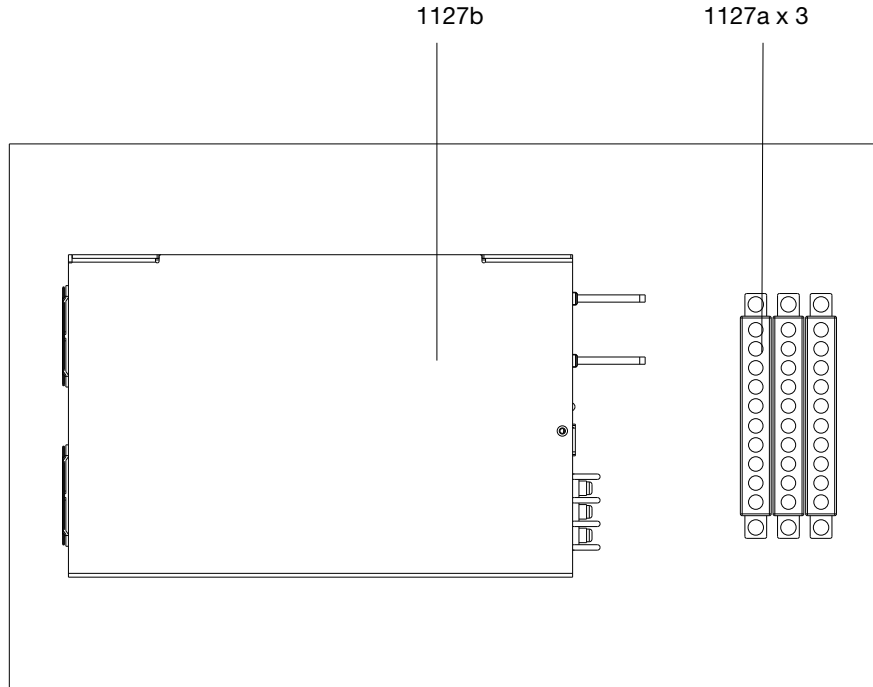
Ref.	Part	Description	Qty.			
			Off-line			In-line
			GSD300	GSD500	GSD6050	GSD500
1119a	CU0579	DRIVER, servo, motion control	5	5	5	5
1119b	CU0583	SWITCH, circuit breaker	1	1	1	1
1119c	CU0581	FILTER, wave	1	1	1	1
1119d	CU0584	SWITCH, contactor, LC1D25-38-DC	2	2	2	2
1119e	CU0586	CONNECTOR, dual, 12-26 awg	12	12	12	12
1119f	CU0934	SWITCH, ground, 12-26 awg	6	6	6	6
1119g	----	PLATE, 500 x 588	1			
	----	PLATE, 588 x 588		1	1	1

Pressure Gauge Control Module



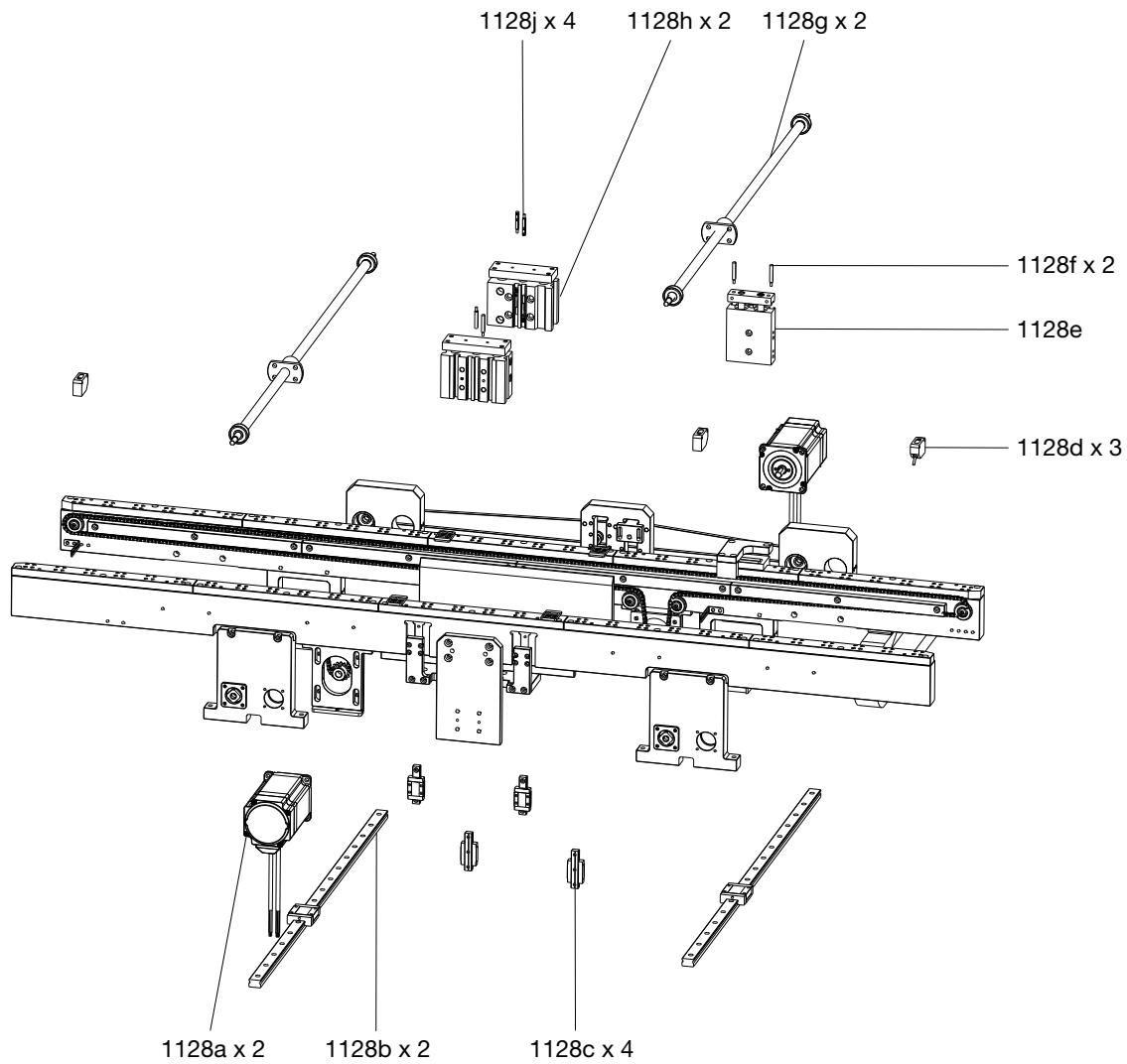
Ref.	Part	Description	Qty.
1126a	CU0547	GAUGE, air pressure	1
1126b	CU0655	KIT, control, valve	1
1126c	----	FITTING, connector	2

Electrical Panel Module 3



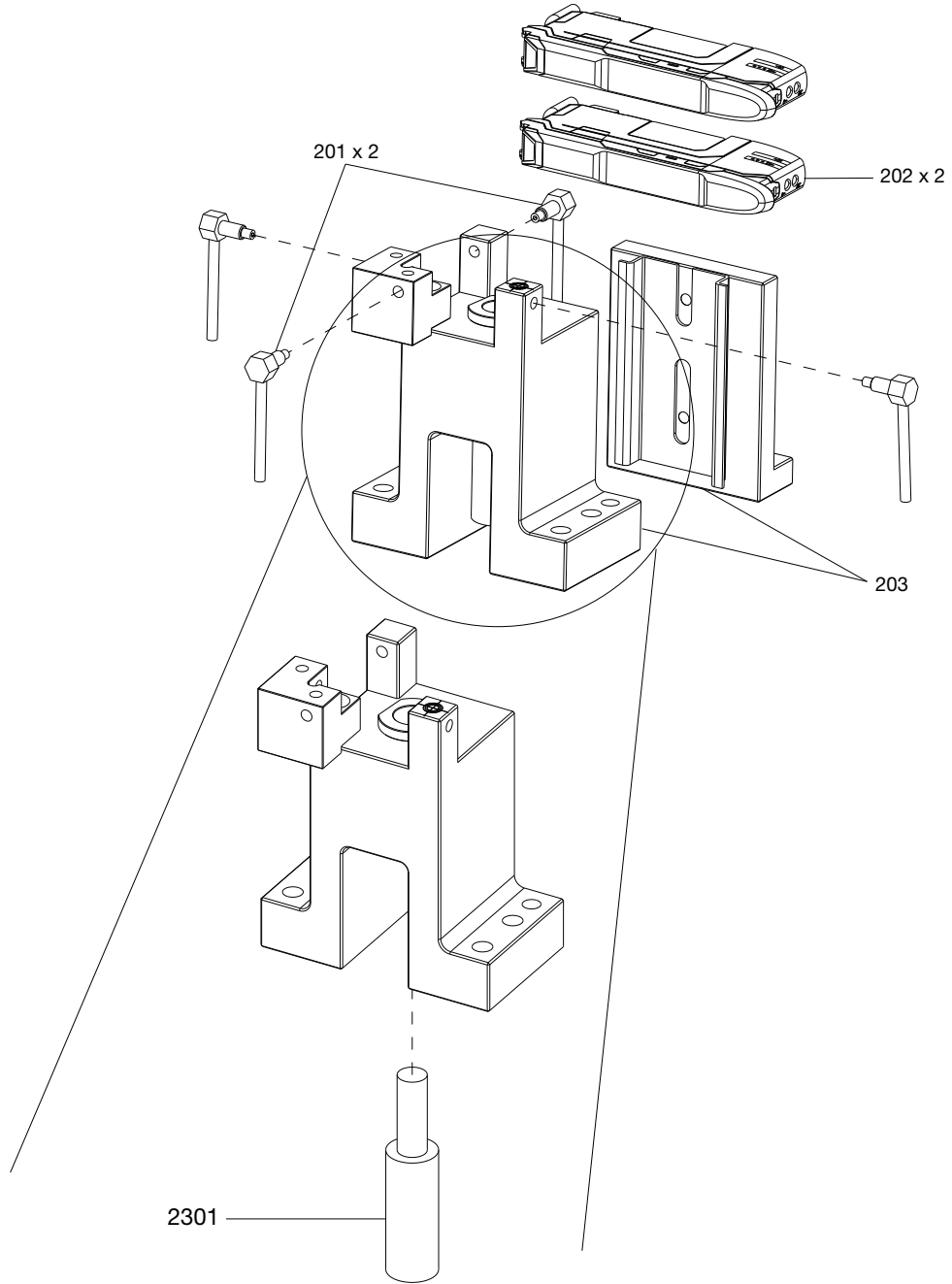
Ref.	Part	Description	Qty.
1127a	CU0582	TERMINAL, ground	3
1127b	CU0776	KIT, switch power	1

GSD500 Conveyor



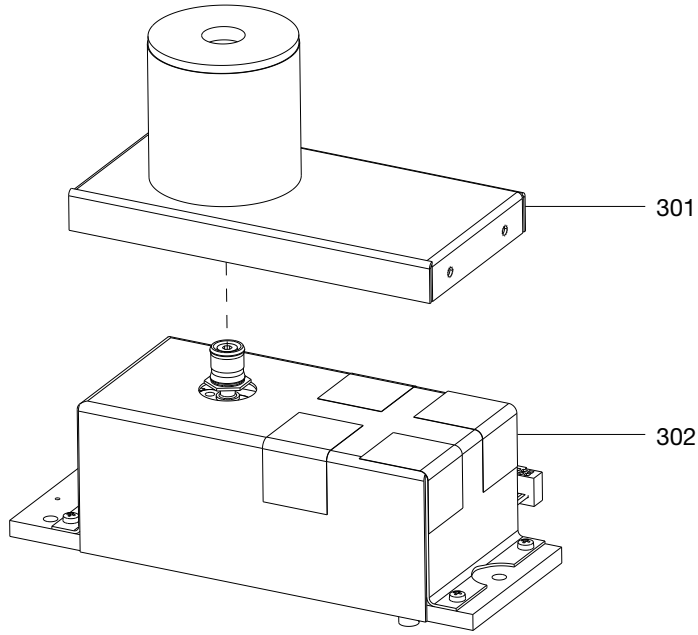
Ref.	Part	Description	Qty.
1128a	CU0788	MOTOR, stepper, conveyor	2
1128b	CU0811	MODULE, linear guide rail, width adjust	2
1128c	CU0799	MODULE, linear guide rail, location	4
1128d	CU0792	SENSOR, check pallet	3
1128e	CU0815	CYLINDER, stop	1
1128f	CU1087	SENSOR, cylinder stop	2
1128g	CU1088	KIT, ball screw and bearing	2
1128h	CU0821	CYLINDER, location	2
1128j	CU0825	SENSOR, cylinder location	4

Needle Find Kit, 2003993



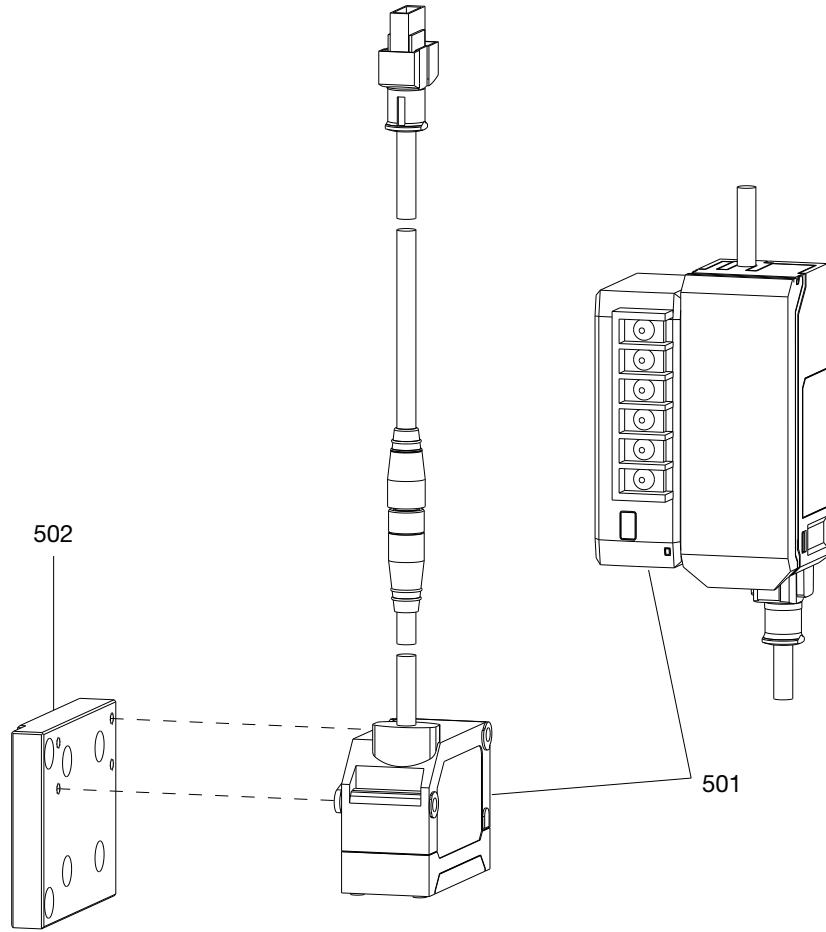
Ref.	Part	Description	Qty.
201	CU0635	SENSOR, calibration, needle, XY	2
202	CU0637	AMPLIFIER, calibration, needle, XY	2
203	----	MODULE, needle find	1
2301	CU0634	SENSOR, calibration, needle, Z	1

Weight Check Kit, 2003994



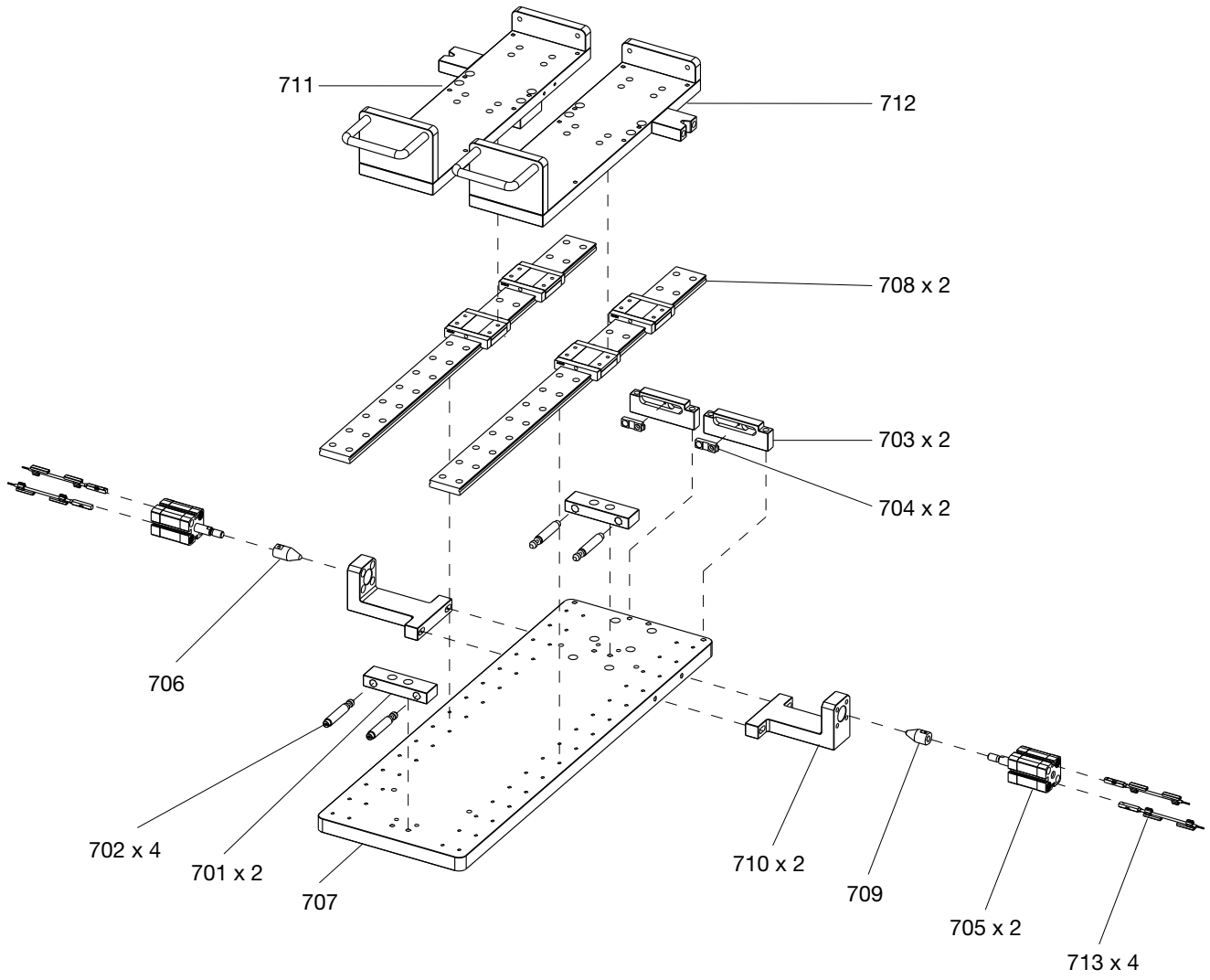
Ref.	Part	Description	Qty.
301	CU0680	KIT, weight check, electronic scale	1
302	CU0719	BRACKET, weight check	1

Z-height Check Kit, 2003996



Ref.	Part	Description	Qty.
501	CU7735	KIT, Z-height check	1
502	----	PLATE, Z-height sensor	1

Y-Slide Kit



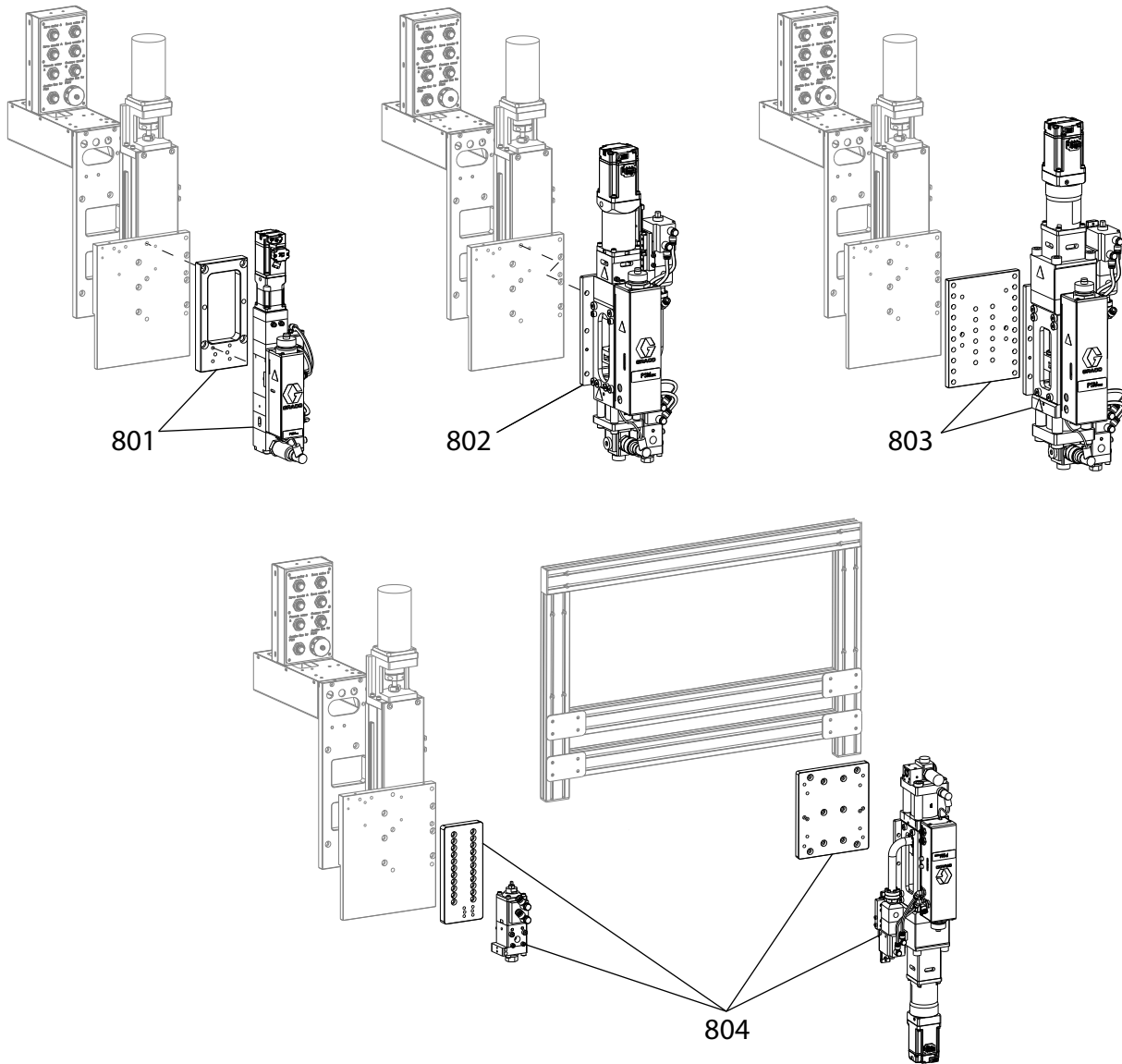
Y-Slide Kits

Ref.	Part	Description	Qty.	
			2004001	2004003
701	----	BRACKET, buffer	2	2
702	CU0694	PART, buffer, Y-slide tray	4	4
703	----	BRACKET, Y sensor	2	2
704	CU0696	SENSOR, Y-slide position	2	2
705	CU0699	CYLINDER, Y-slide lock	2	2
706	CU0700	PIN, cylinder, left	1	1
707	----	BASE, sliding, GSD300	1	
	----	BASE, sliding, GSD500		1
708	CU0937	RAIL, guide, GSD300	2	
	CU0697	RAIL, guide, GSD500		2
709	CU0938	PIN, cylinder, right	1	
710	----	BRACKET, cylinder, GSD300	2	
	----	BRACKET, cylinder, GSD500		2
711	----	TRAY, left, GSD300	1	
	----	TRAY, left, GSD500		1
712	----	TRAY, right, GSD300	1	
	----	TRAY, right, GSD500		1
713	CU0978	SENSOR, cylinder, Y-slid	4	4

Accessories

Valves

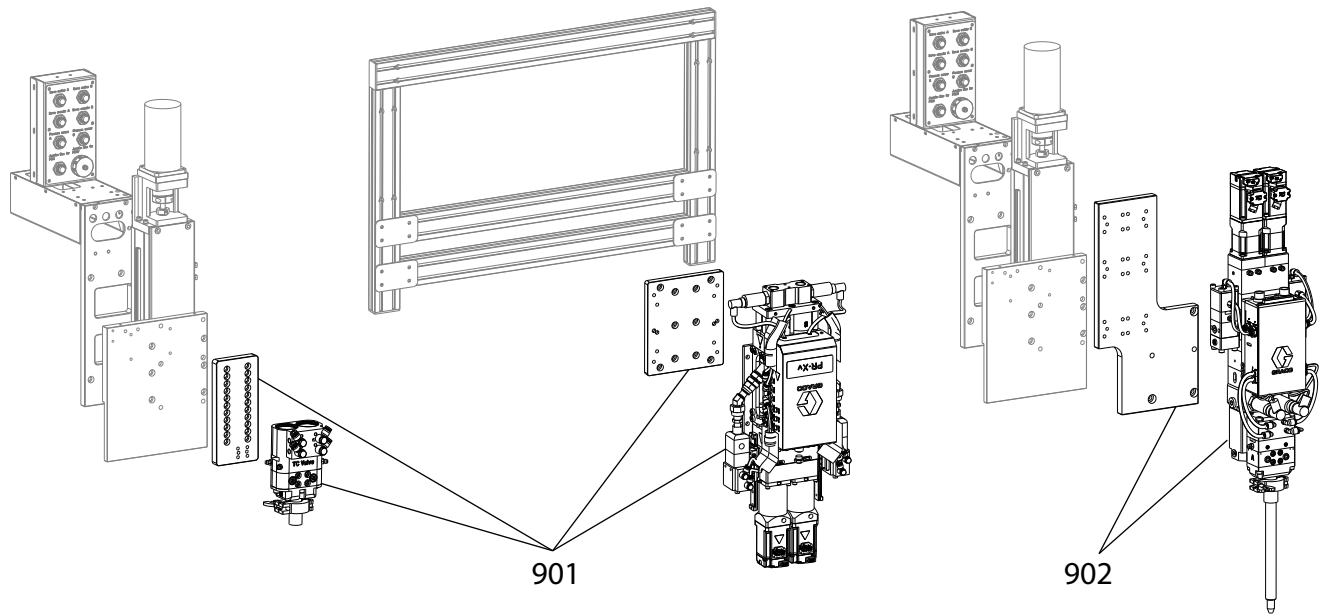
PSM15, PSM25, PSM50 and PSM100



Ref.	Part	Description
801	2005066	KIT, PSM15, SST, GSD
	2005067	KIT, PSM15, CER, GSD
802	2004005	KIT, PSM25, SST, GSD
	2004006	KIT, PSM25, CER, GSD

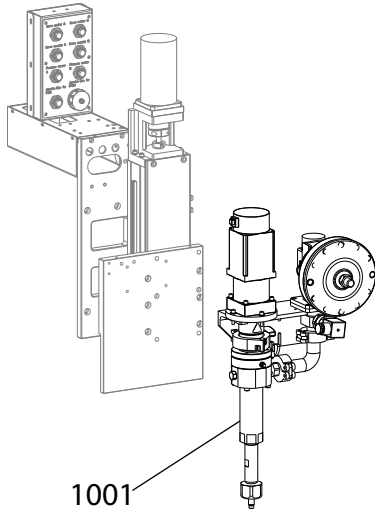
Ref.	Part	Description
803	2004007	KIT, PSM50, SST, GSD, remote
804	2004008	KIT, PSM100, SST, GSD, remote

PR-Xv and PR-Xv30



Ref.	Part	Description
901	2007536	KIT, PR-Xv, 1:1, SST, GSD, remote
	2007537	KIT, PR-Xv, 1:1, CER, GSD, remote
	2007538	KIT, PR-Xv, 2:1, SST, GSD, remote
	2007539	KIT, PR-Xv, 2:1, CER, GSD, remote
902	2007540	KIT, PR-Xv30, SST, GSD
	2007541	KIT, PR-Xv30, CER, GSD

PCP



Ref.	Part	Description
1001	2004013	KIT, PCP, 1.45 cc, pump feed, GSD
	2004014	KIT, PCP, 1.00 cc, pump feed, GSD
	2004015	KIT, PCP, 0.30 cc, pump feed, GSD

Optional Components

Part	Description
2004680	MODULE, weight check, 220G
2003997	MODULE, barcode scanner, manual
2005932	MODULE, barcode scanner, auto
2003999	SENSOR, lower level

Communication Module

Part	Description
2005933	MODULE, Profinet, GSD
2005934	MODULE, Ethernet IP, GSD

Appendix: Electrical Schematics

Overview

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Camera control and weight control	71	Camera control and weight control	113
Operating panel	72	48V switch power supply	114
GSD In-line System	73	Step driver	115
Device list == - ==-B22	73	Operating panel	116
Device list ==-B23 - ==-G1	74		

GSD Off-line System

Device list =+ - =+-B20

F03_001

Device tag Part number Type number	Function text Article designation	X-Ref	Symbol
-B9	Z home	/24.8	
-B10	Air pressure alarm	/27.1	
-B13	Part present	/27.4	
-B14	Y-axis needle calibration	/23.8	
-B15	X-axis needle calibration	/22.8	
-B17	Left nest	/28.8	
-B18	Right nest	/28.7	
-B19	Tool setting gauge	/24.8	
-B20	A home	/25.8	

Device tag Part number Type number	Function text Article designation	X-Ref	Symbol
-B1	Y positive limits	/10.4	
-B2	Y negative limits	/23.8	
-B3	Y home	/23.8	
-B4	X positive limits	/22.8	
-B5	X negative limits	/22.8	
-B6	X home	/22.8	
-B7	Z positive limits	/24.8	
-B8	Z negative limits	/24.8	

Device list =+-B21 - +=-GSHD3

F03_001




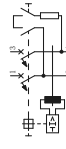








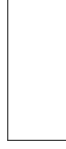
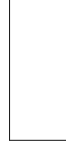




Device tag Part number Type number	Function text Article designation	X-Ref	Symbol
-B21	A negative limits	/25.8	
-B22	A positive limits	/25.8	
-B23	A home	/26.8	
-B24	A negative limits	/26.8	
-B25	A positive limits	/26.8	
-B26	SupplyPump# empty	/31.1	
-B27	SupplyPump# empty	/31.2	
-G1	battery	/10.4	
-G2	=	/11.4	
-G3	=	/12.4	
-G4	=	/13.4	
-G5	=	/14.4	
-GNC	controller	/5.0	
-GSHD1		/10.3	
-GSHD1-L1	L1	/10.2	
-GSHD1-U	U	/10.3	
-GSHD2		/11.3	
-GSHD3		/12.3	

Device list ==-GSHD4 - ==-M5

F03_001










Device tag Part number Type number	Function text Article designation	X-Ref	Symbol
-GSHD4		/13.3	
-GSHD5		/14.3	
-H1	Motion power indicator	/18.2	
-H2	Light	/18.0	
-KA1	Z-axis brake relay	/24.5	
-KA2	Light curtain	/15.6	
-KA3	=	/15.7	
-KA4	Curtain bypass	/30.3	
-KA5	=	/30.4	
-KA21	safety relay	/17.4	
-KA22	=	/16.6	
-KM1	Motion power contactor	/7.2	
-KM2	=	/7.2	
-M1	Cooling fan 1	/20.2	
-M2	Cooling fan 2	/20.5	
-M3	X-axis servo motor	/10.9	
-M4	Y-axis servo motor	/11.9	
-M5	Z-axis servo motor	/12.9	

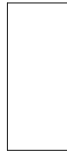





Device list =+-M6 - =+-U6-H3

Device tag list		F03_001	
Device tag Part number Type number	Function text Article designation	X-Ref	Symbol
-M6	A-axis servo motor	/13.9	
-M7	B-axis servo motor	/14.9	
-M17	Front electrical panel	/41.0	
-QF1	Leakage protector	/6.2	
-QF2	Circuit breaker	/6.1	
-QS1	Knob switch	/6.1	
-R1	Light curtain receiver	/15.5	
-S1	Contact 1	/17.2	
-S2	Motion power on button	/17.4	
-S3	Contact 1	/17.2	
-S5	Start auto-work	/27.7	
-T1	Light curtain emitter	/15.1	
-U2	Display	/5.7	
-U3	Digital module	/5.4	
-U4	=	/5.6	
-U5	Analog module	/5.8	
-U6	Tricolor light	/29.3	
-U6-H3	Red Light	/29.4	

Device list =+-U6-H4 - =+-X21

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Device tag Part number Type number	Function text Article designation	X-Ref	Symbol
-U6-H4	Yellow light	/29.5	
-U6-H5	Green light	/29.6	
-U6-H6	Buzzer	/29.7	
-U7	IL-1000-RL-MS1A	/33.1	
-U8	Sensor probe	/33.6	
-U10	Weight controller	/34.3	
-U11	Weight sensor	/34.7	
-U12	Camera controller	/34.3	
-U13	Camera	/34.7	



Device tag Part number Type number	Function text Article designation	X-Ref	Symbol
-U14	=	/5.0	
-USB	Serial connector DB9	/33.6	
-USB-S	Scanning gun	/9	
-V1	Power filter	/6.4	
-V2	Switch power supply	/8.0	
-W3	Motor Power	/10.6	
LEE.111005 (4G1.5) SUPERLEX-N-PIR	PIR control line, 4G1.5	/13.6	
-W9	=	/13.6	
LEE.111005 (4G1.5) SUPERLEX-N-PIR	PIR control line, 4G1.5	/14.6	
-W11	=	/14.6	
LEE.111005 (4G1.5) SUPERLEX-N-PIR	PIR control line, 4G1.5	/31.1	
-X21	relay	/31.1	

Device list ==-XS1 - ==-Y12

F03_001

Device tag Part number Type number	Function text Article designation	X-Ref	Symbol
-XS1	Power plug	/19.0	
-XT1	terminal	/6.2	
-XT1.1	=	/6.4	
-XT2	=	/6.6	
-XT3	=	/6.8	
-XT4	=	/7.2	
-XT5	=	/7.7	
-XT6	Valve power IP20W terminal block	/18.8	
-XT8	re lay	/8.1	
-XT9	=	/8.5	
-XT10 Up layer	=	/23.4	
-XT10 down layer	=	/22.4	
-XT11 down layer	=	/24.4	
-XT12 Up layer	=	/26.4	
-XT12 down layer	=	/25.4	
-Y5	Intake valve	/18.3	
-Y11	SupplyA valve	/21.1	
-Y12	SupplyB valve	/21.2	

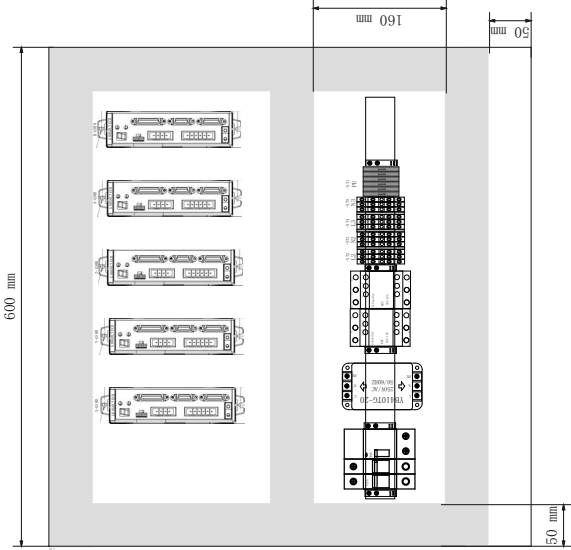
Device list ==-Y13 - ==-Y14

Device tag Part number Type number	Function text Article designation	X-Ref	Symbol
-Y13	Dispensed valve	/21.3	
-Y14	Dispensed valve	/21.4	

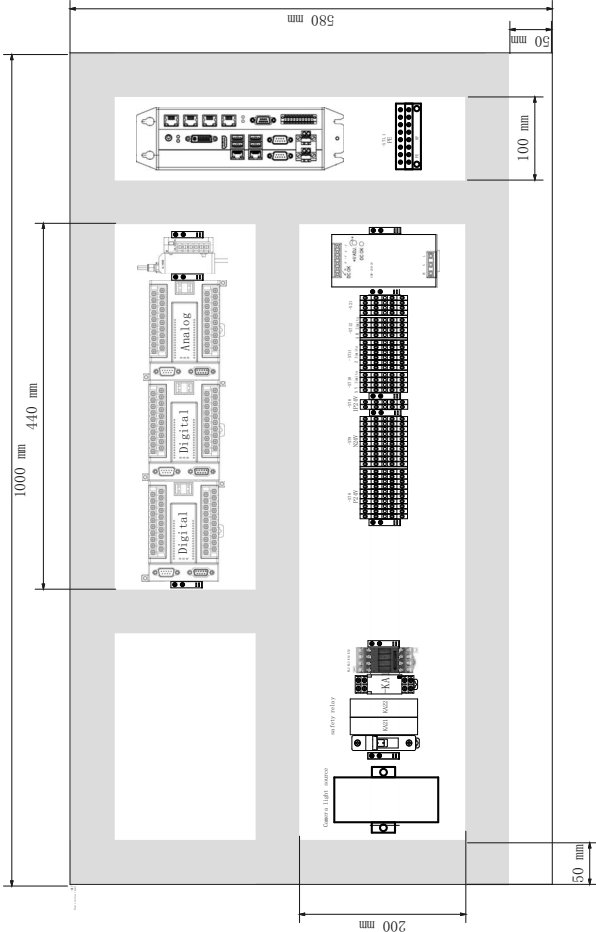
F03_001

Layout drawing

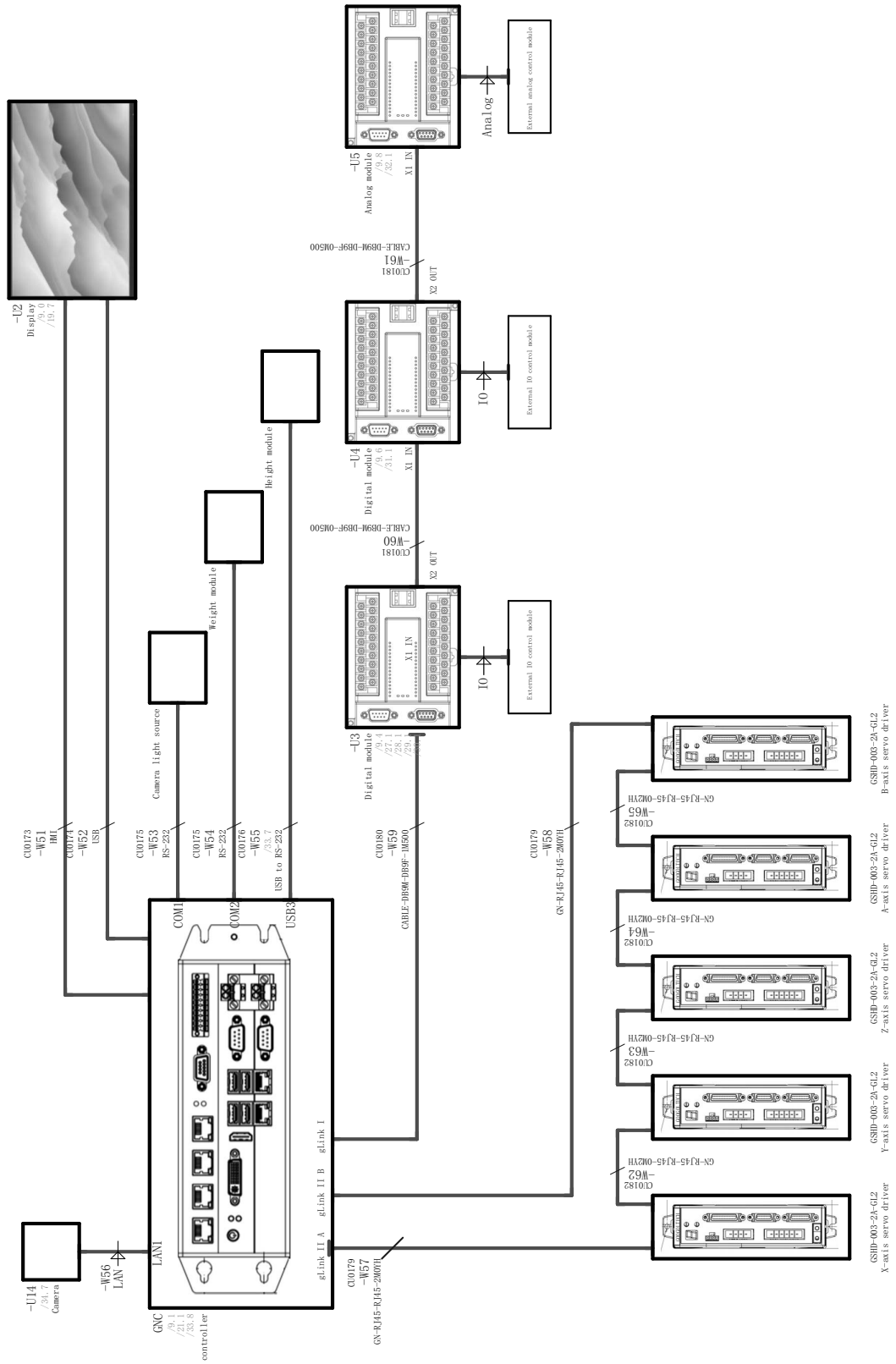
Behind electrical panel



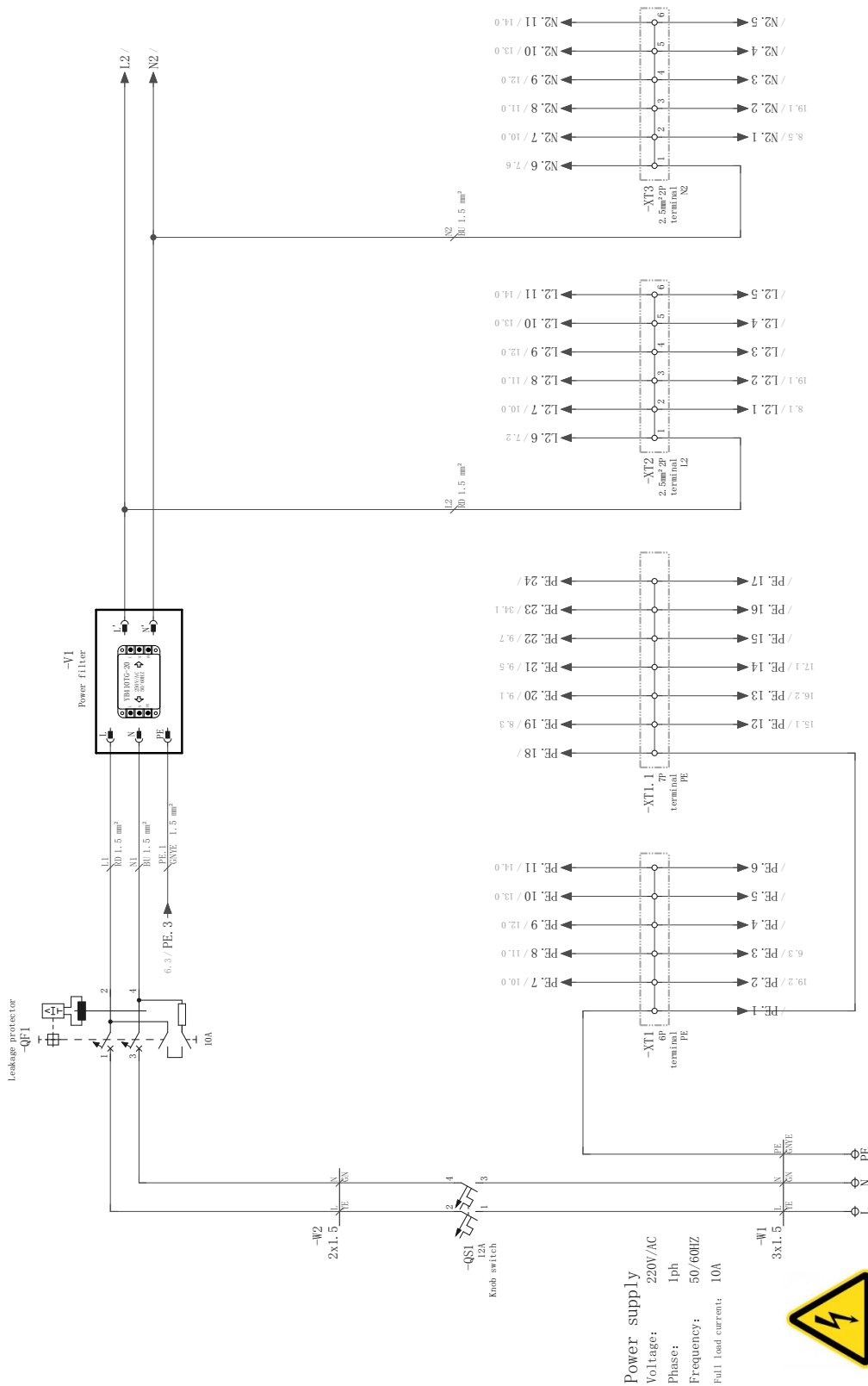
Front electrical panel



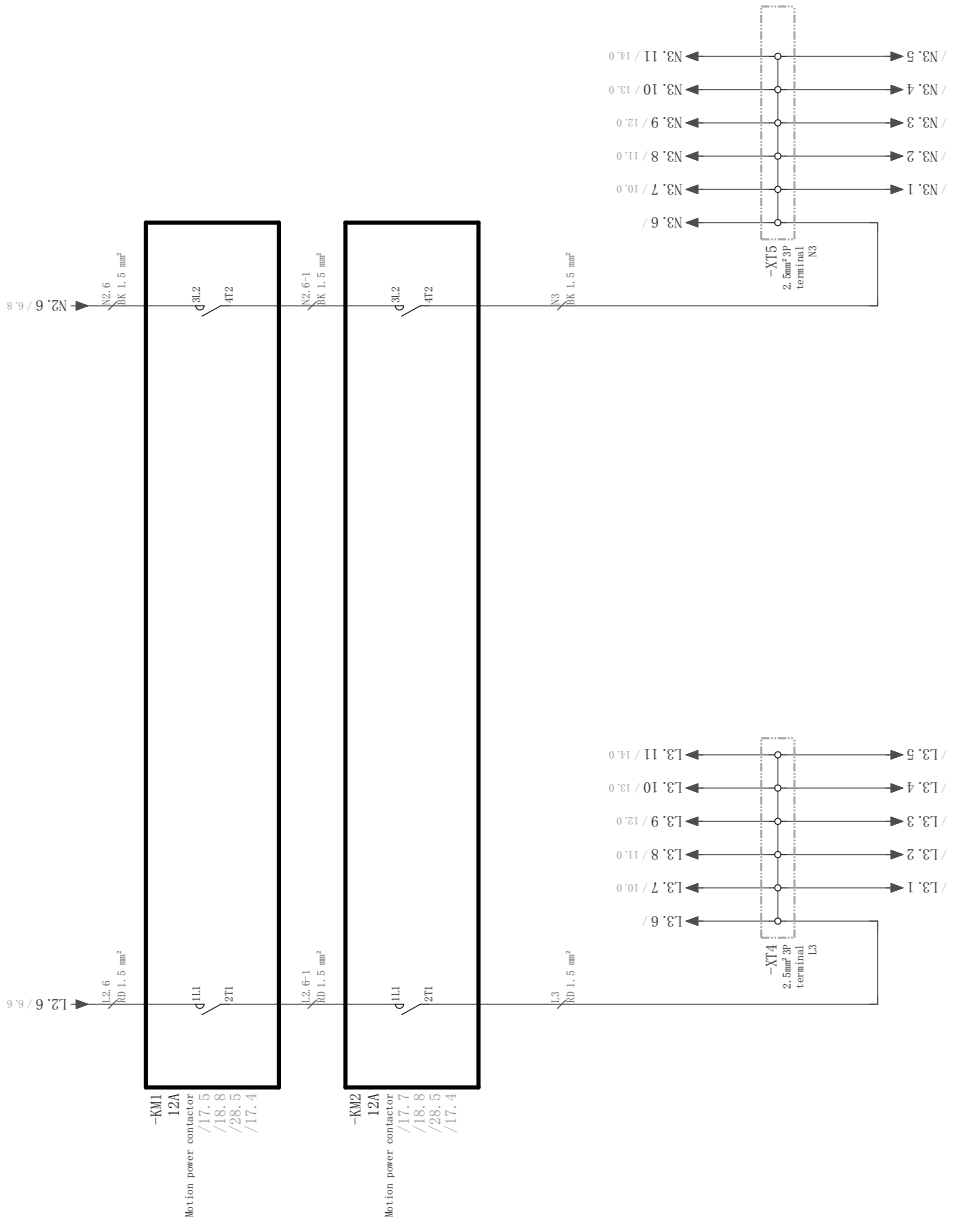
Control block diagram



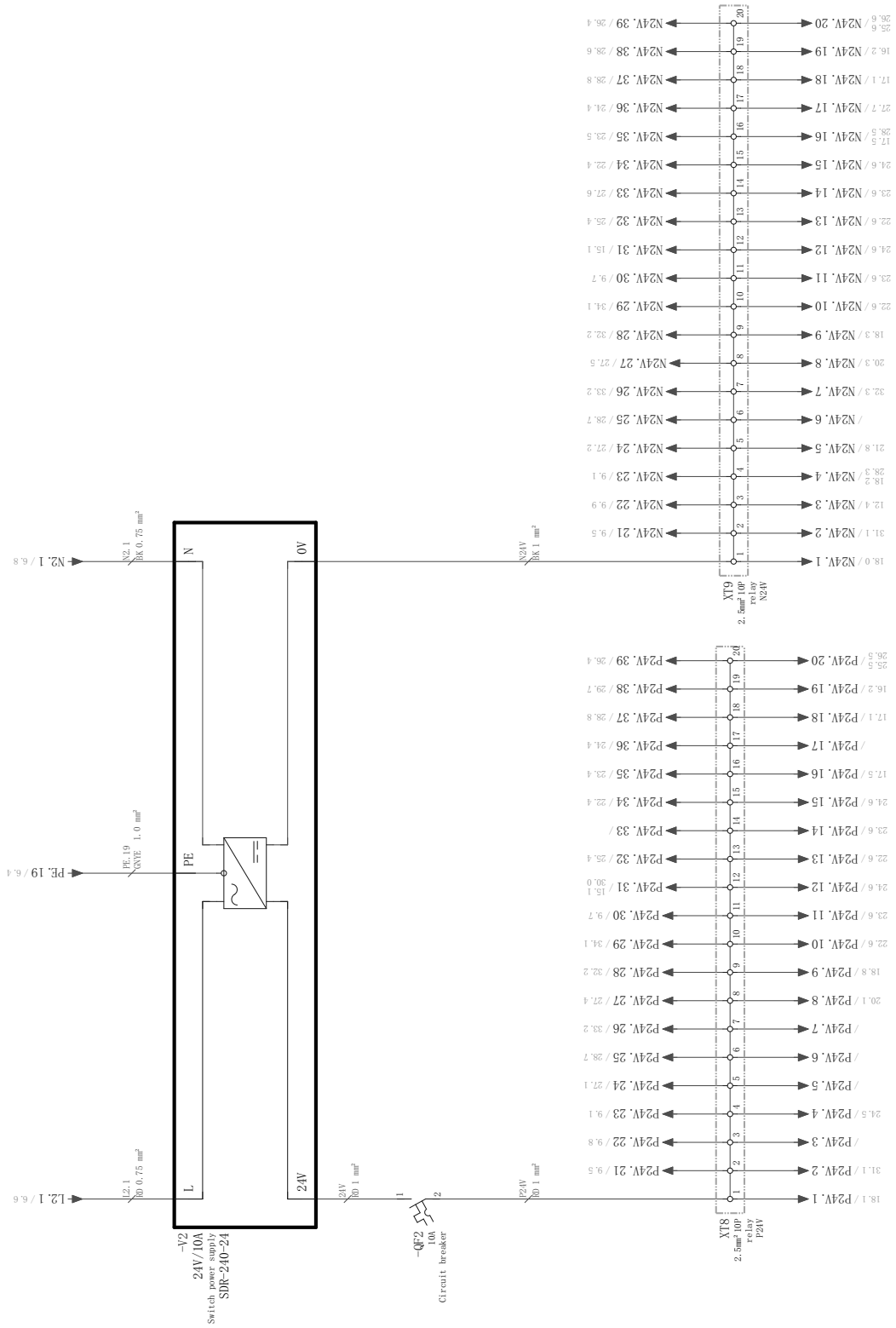
Power supply line



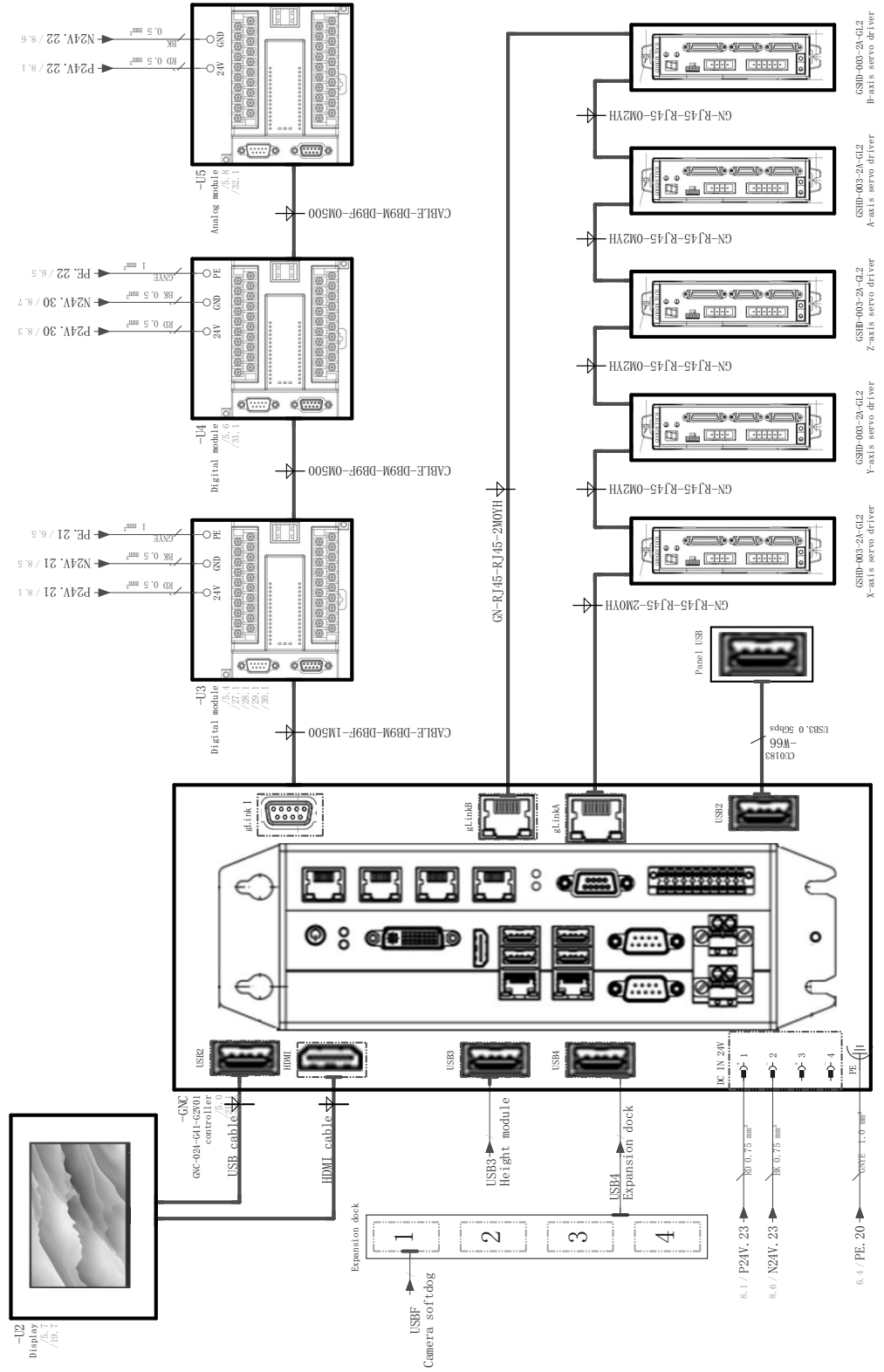
Servo power supply



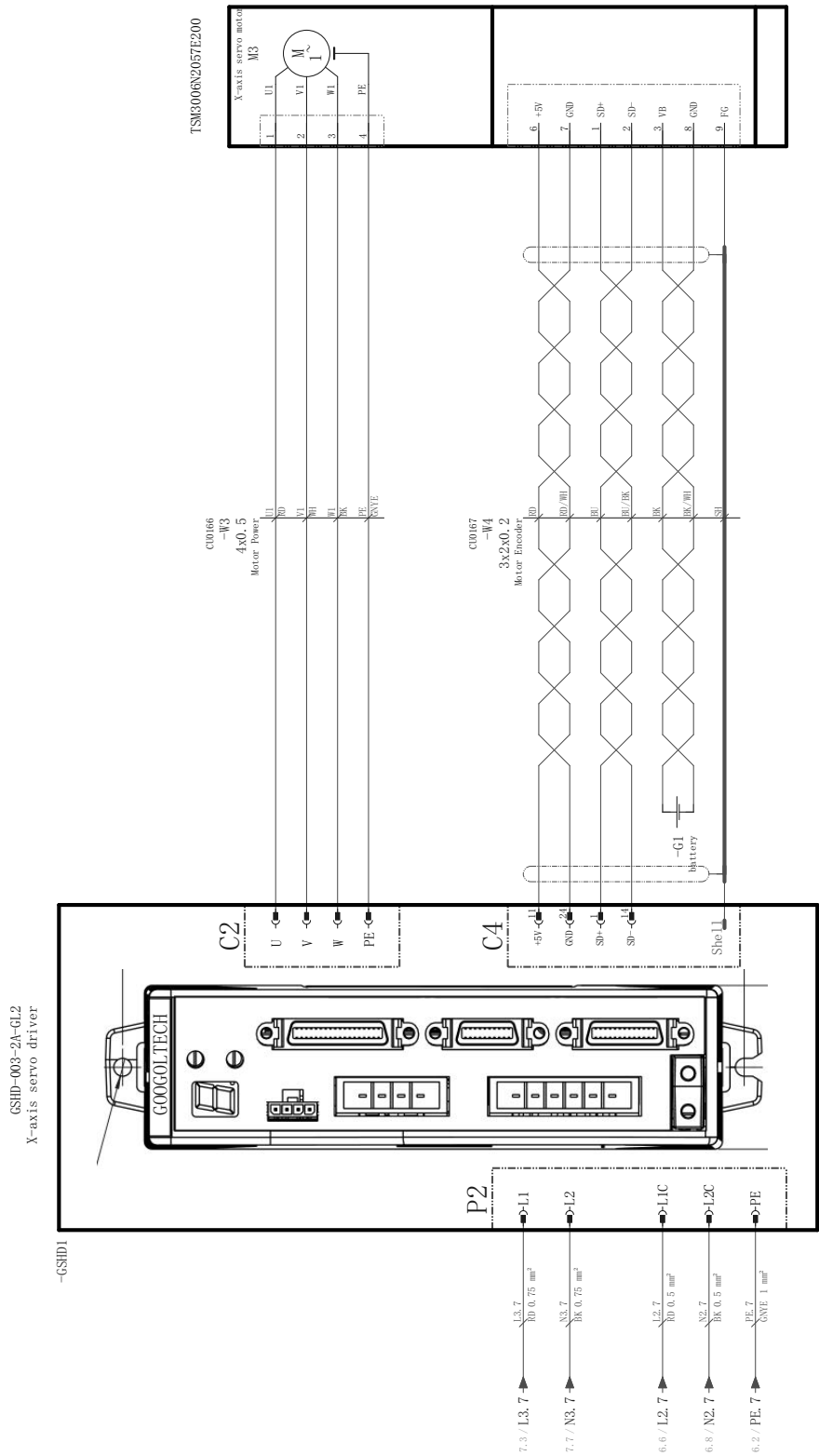
Control 24V switch power supply



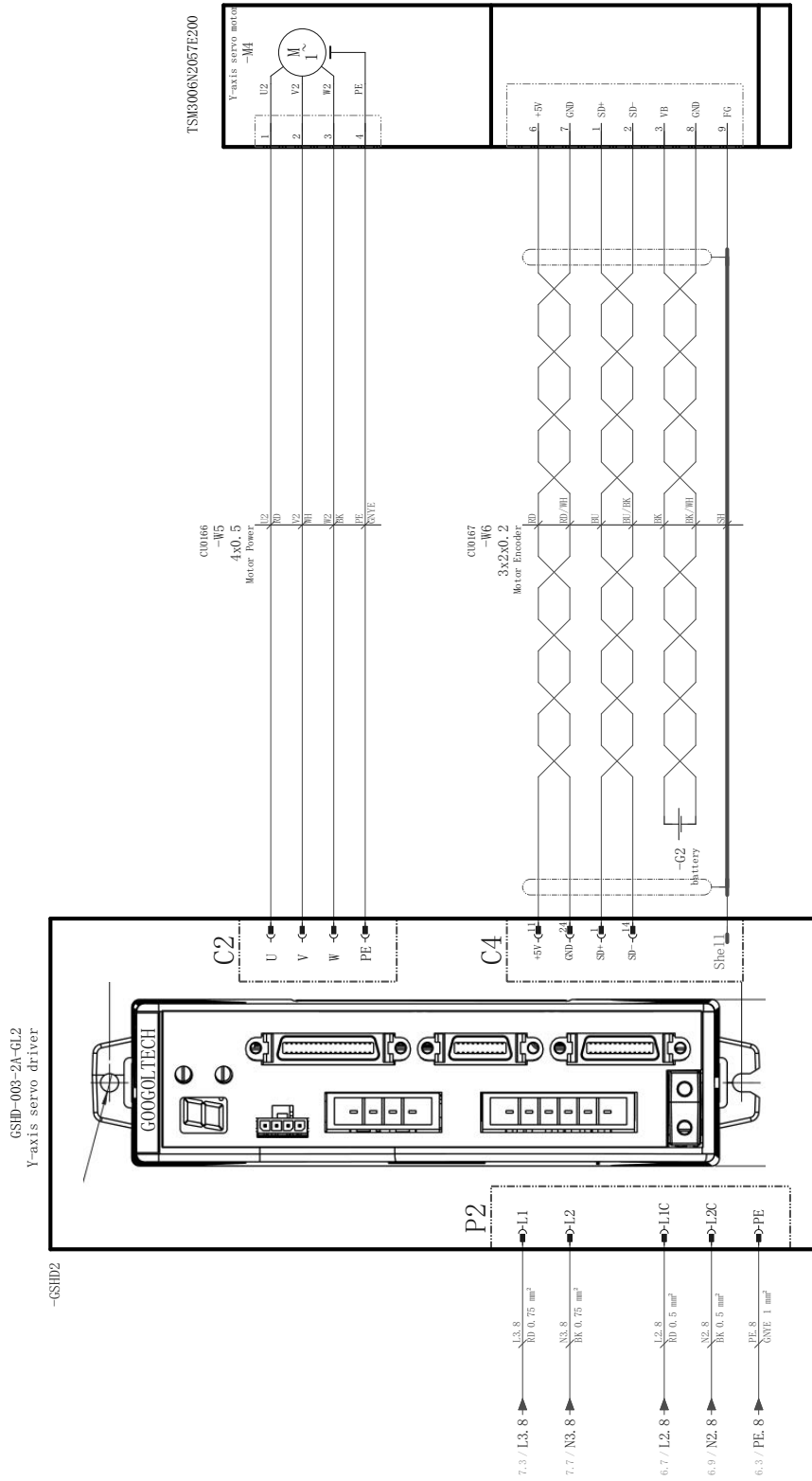
Controller power supply



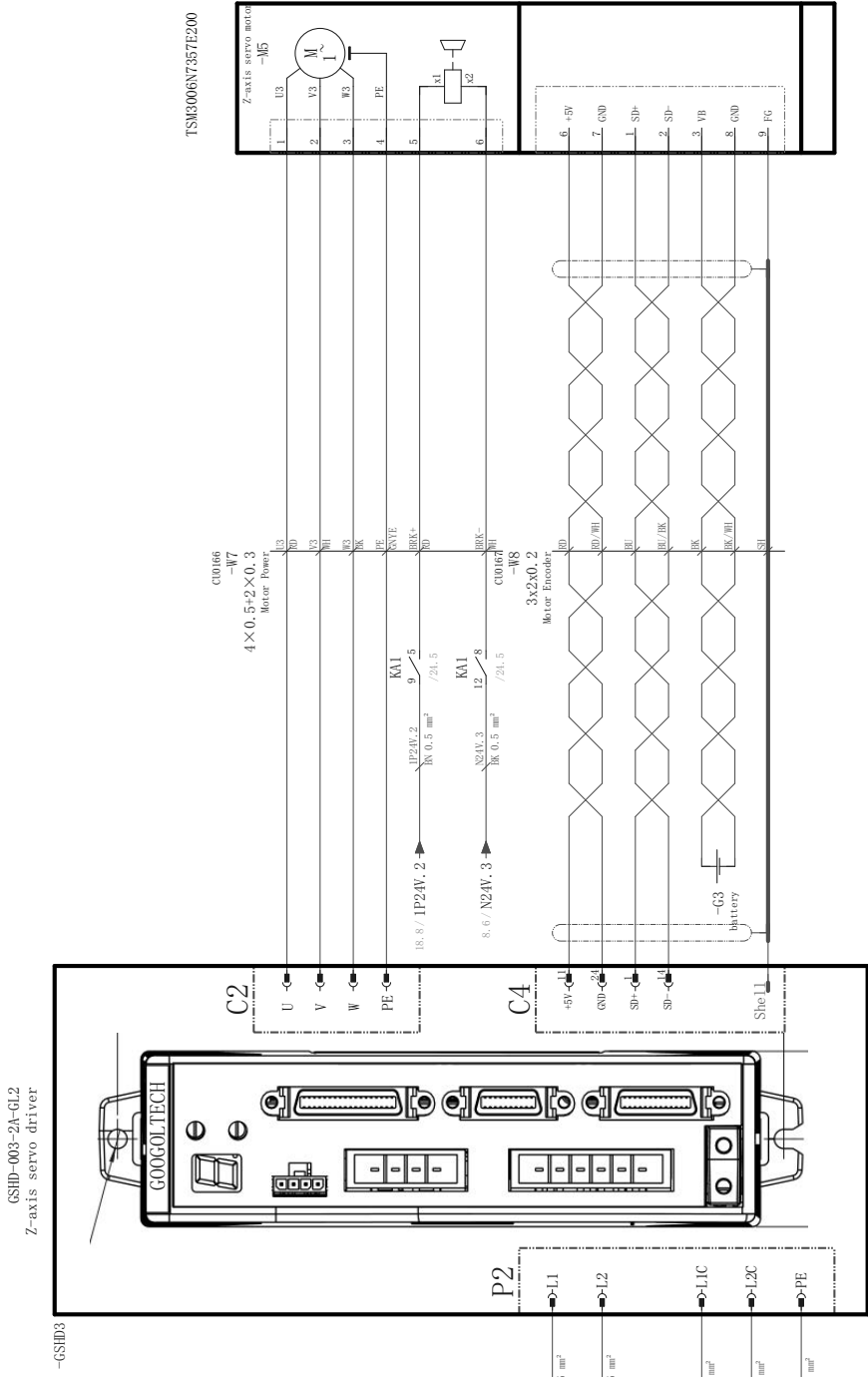
X axis servo system



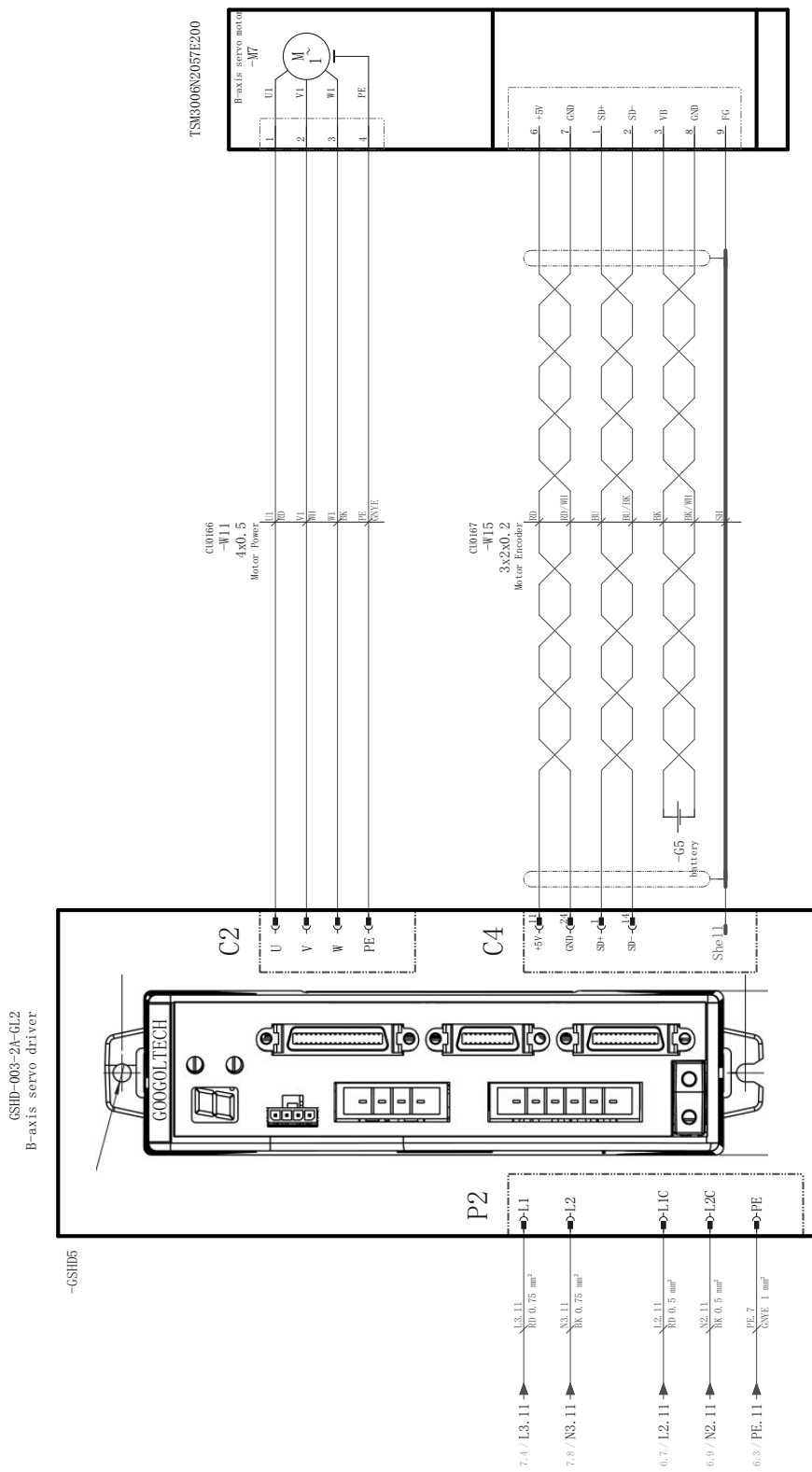
Y axis servo system



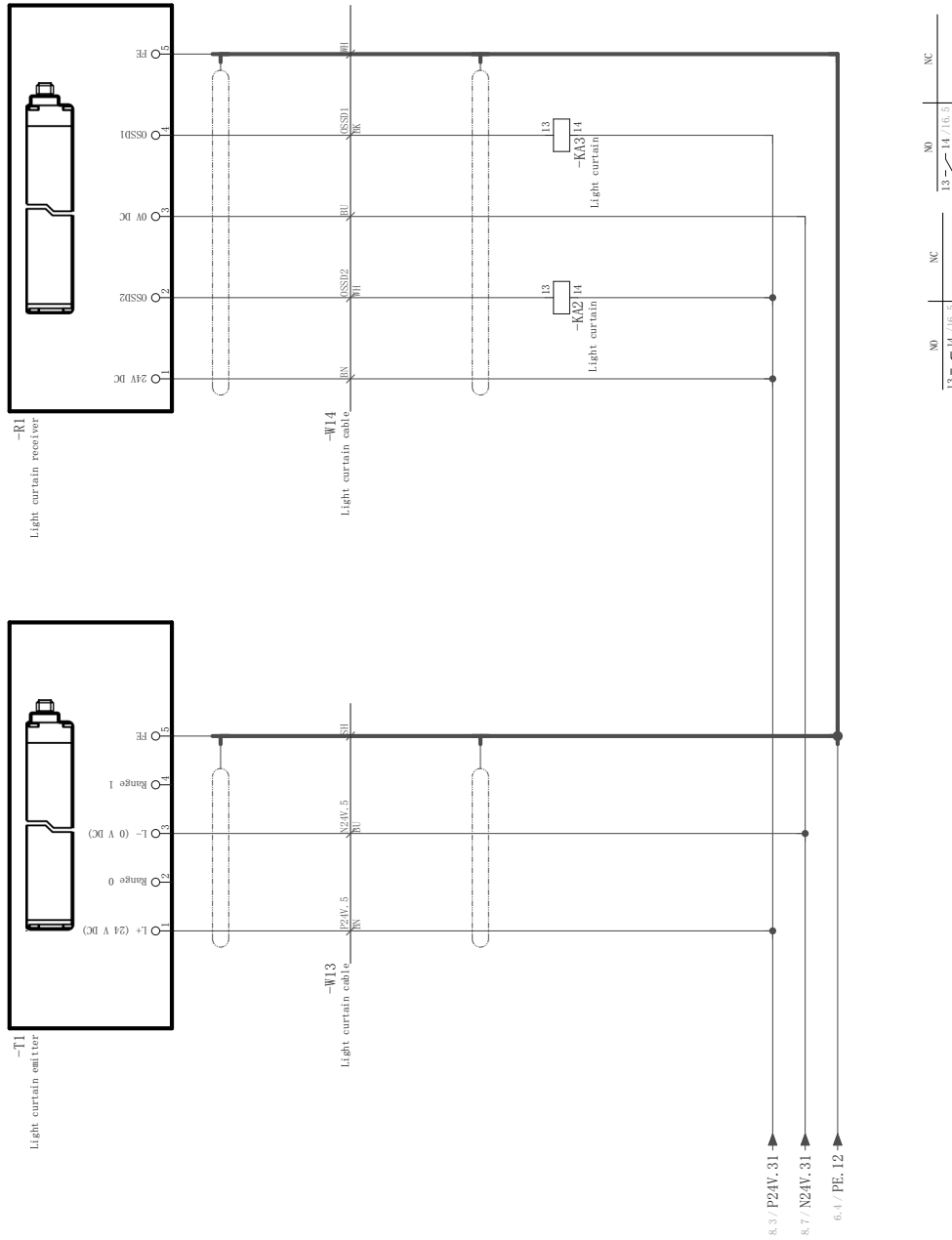
Z axis servo system



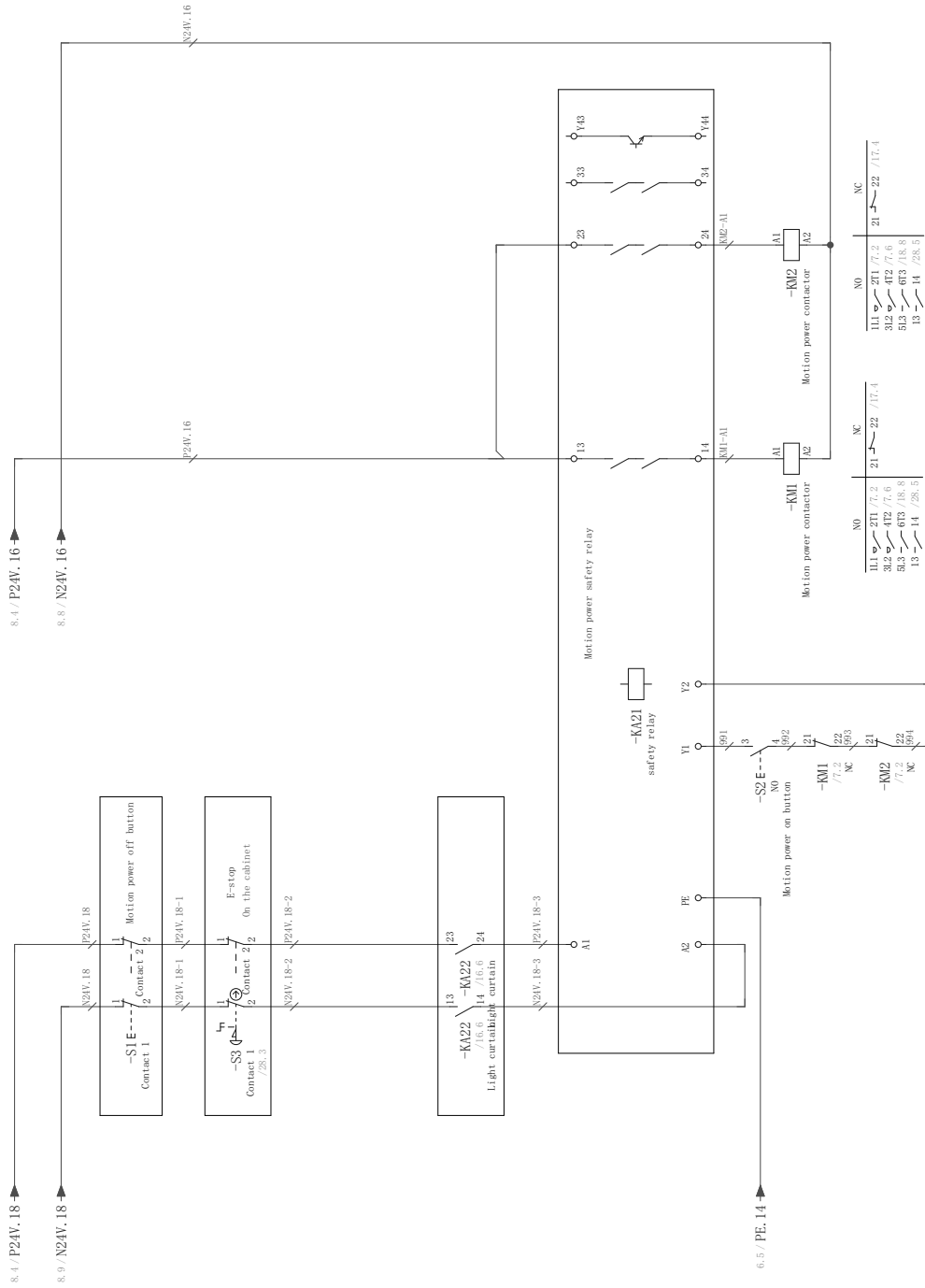
B axis servo system



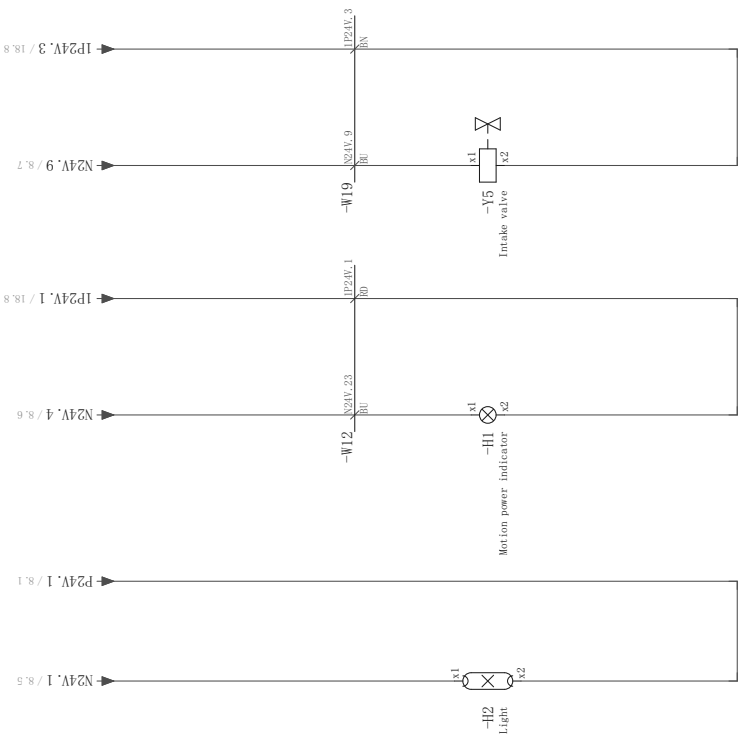
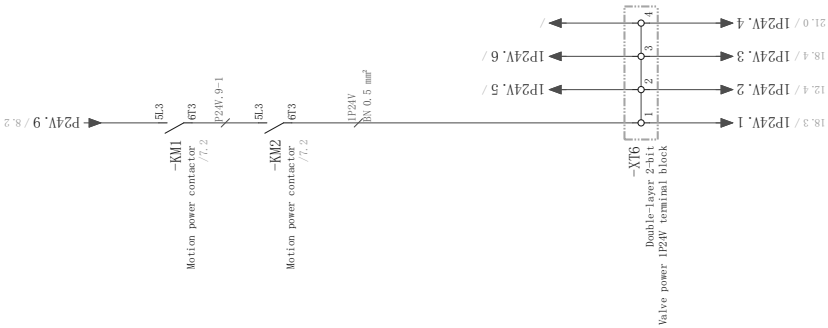
Light curtain control loop



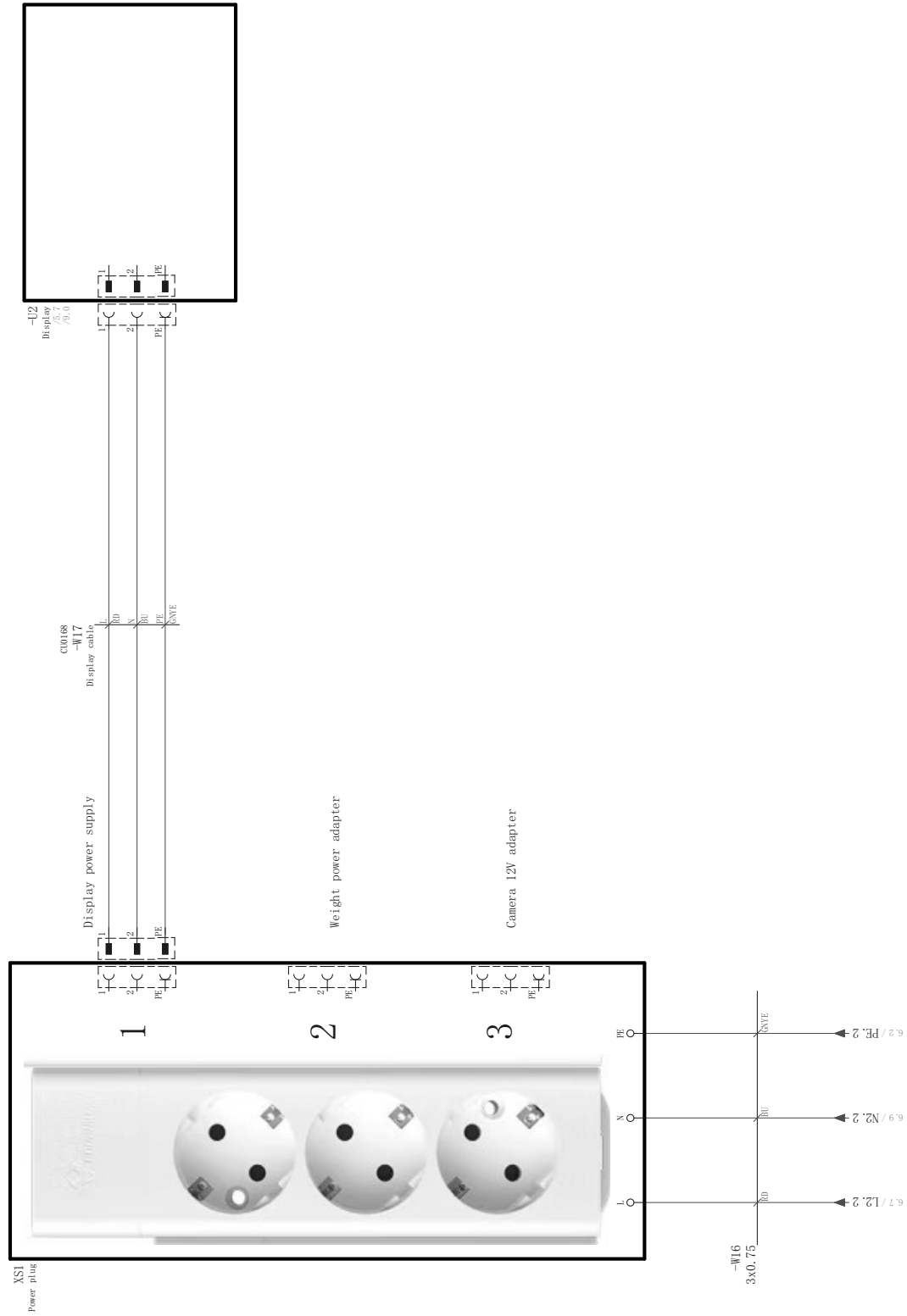
Motion power safety relay



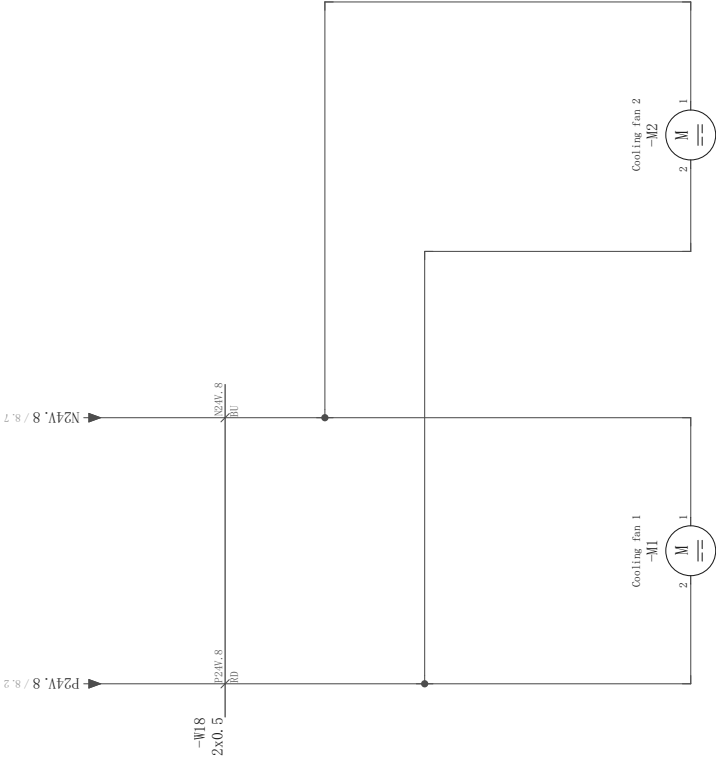
Valve output power



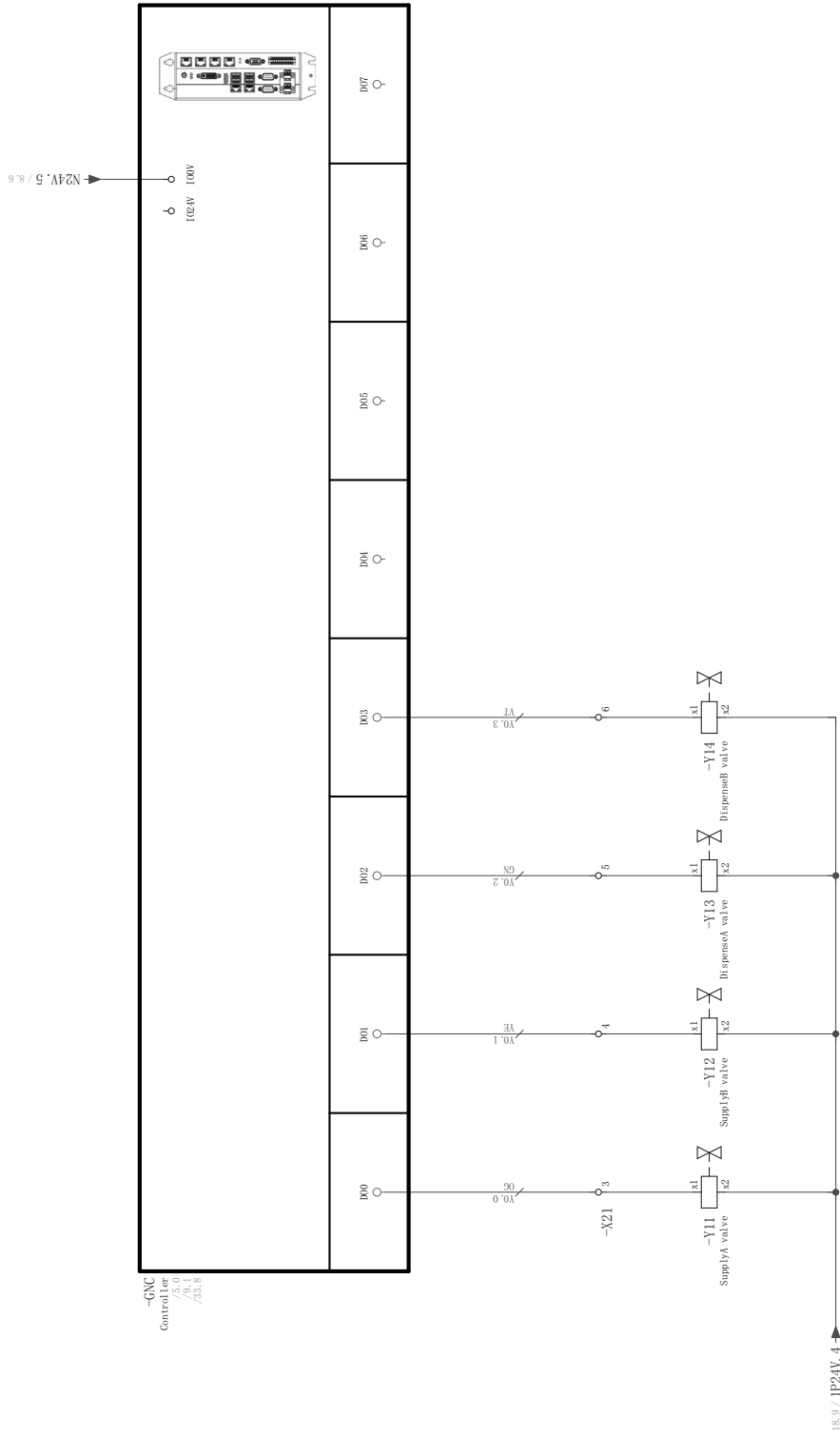
Plug power supply



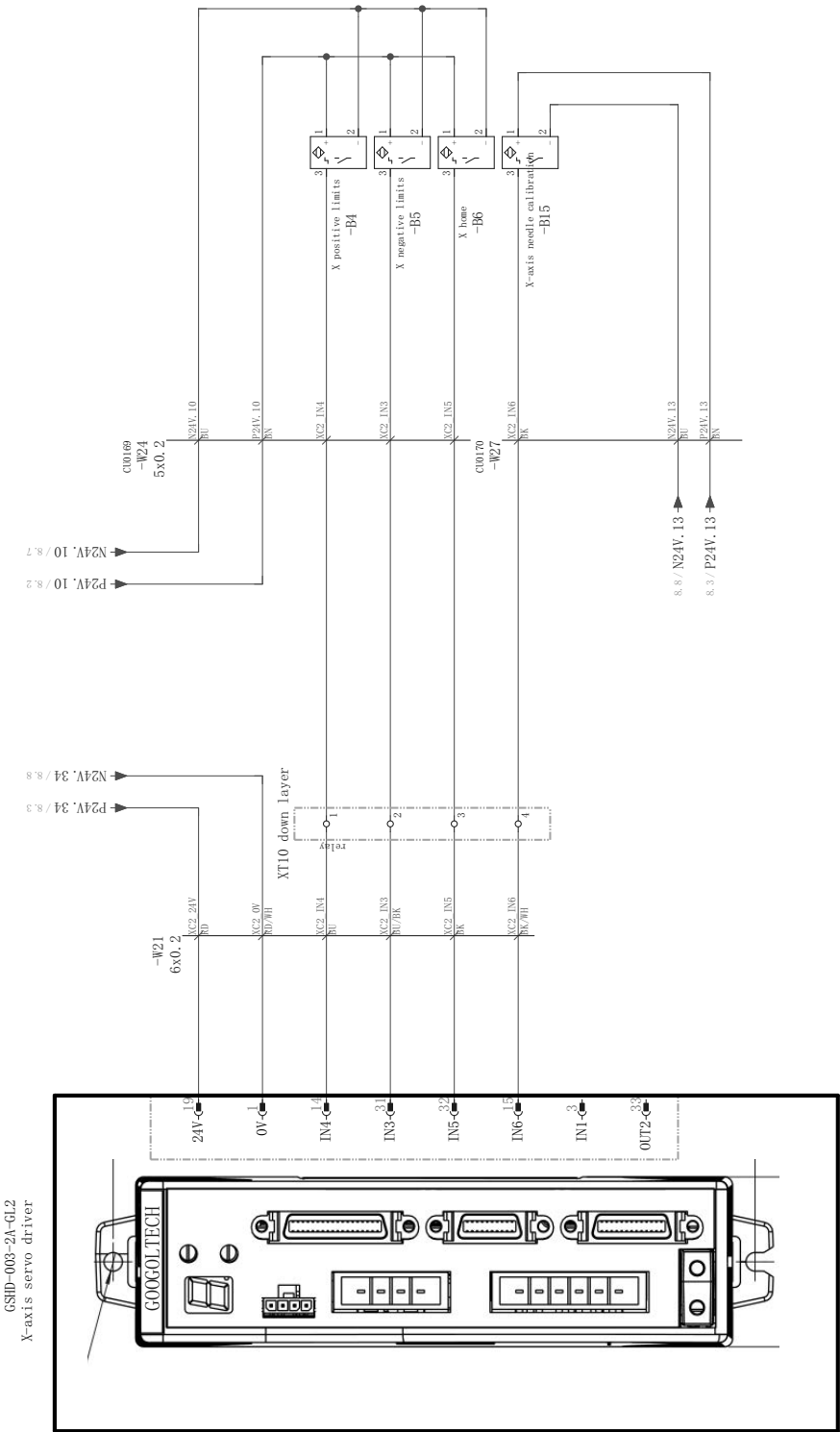
Cooling fan



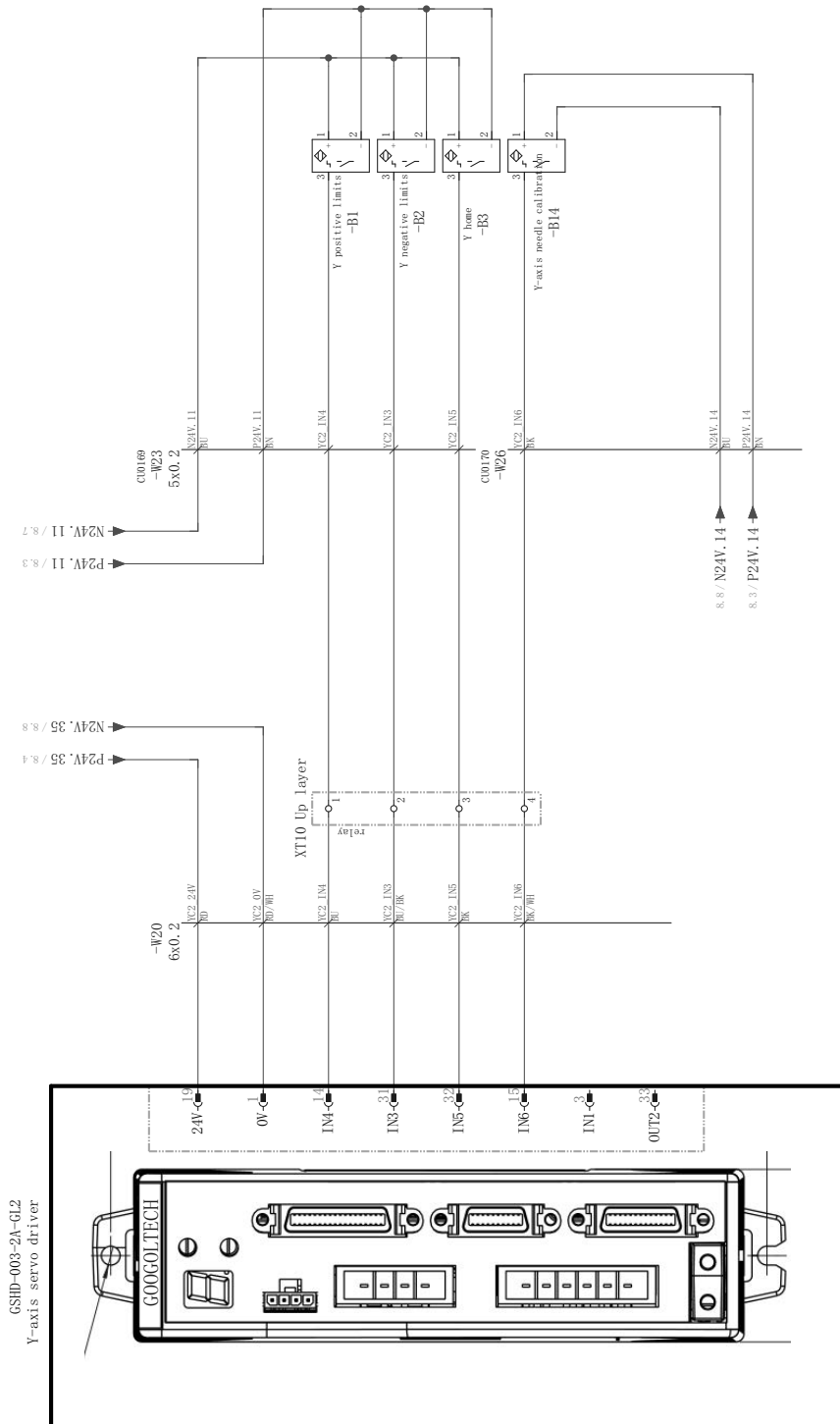
GNC-io



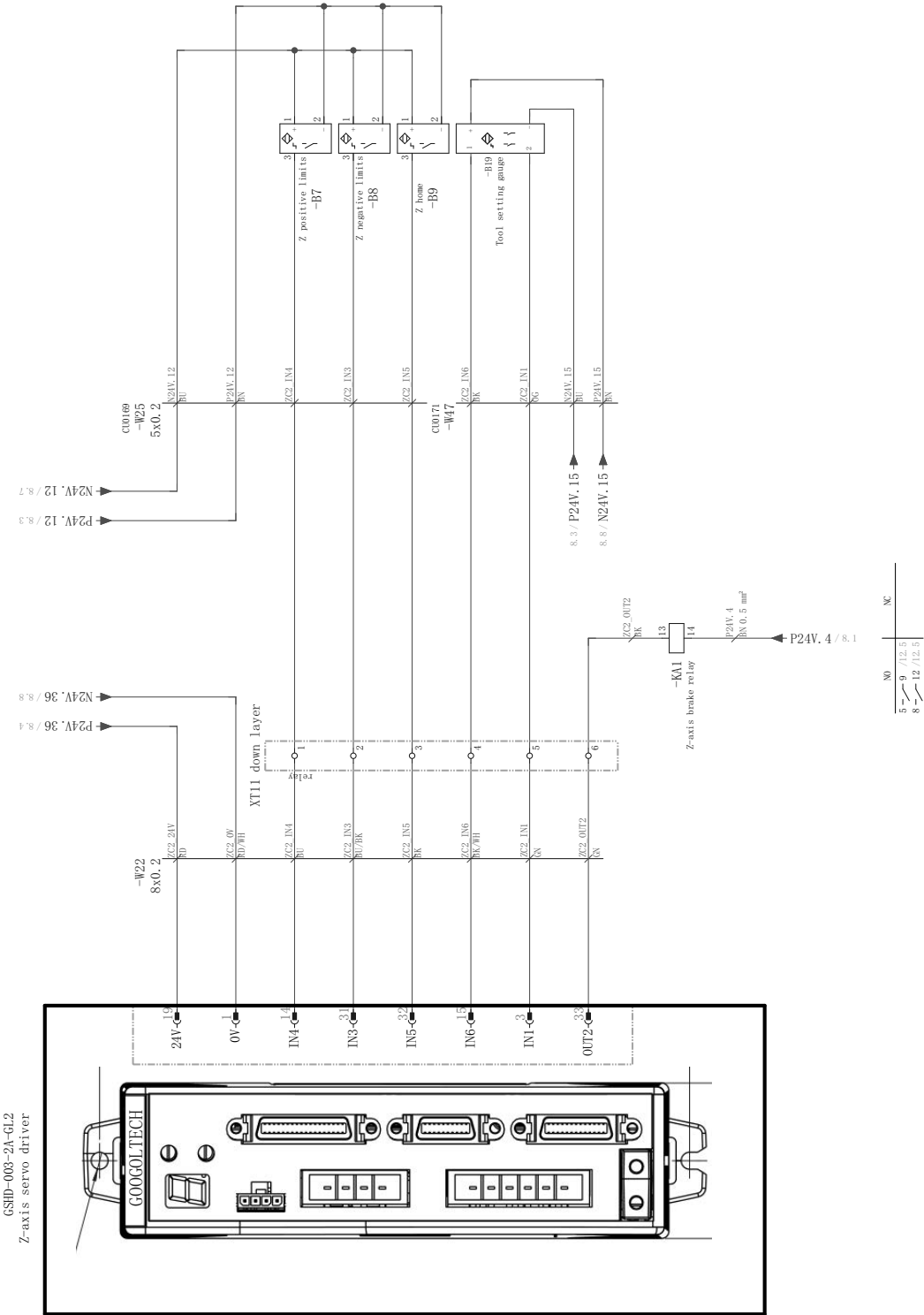
X axis servo system axis limit signal



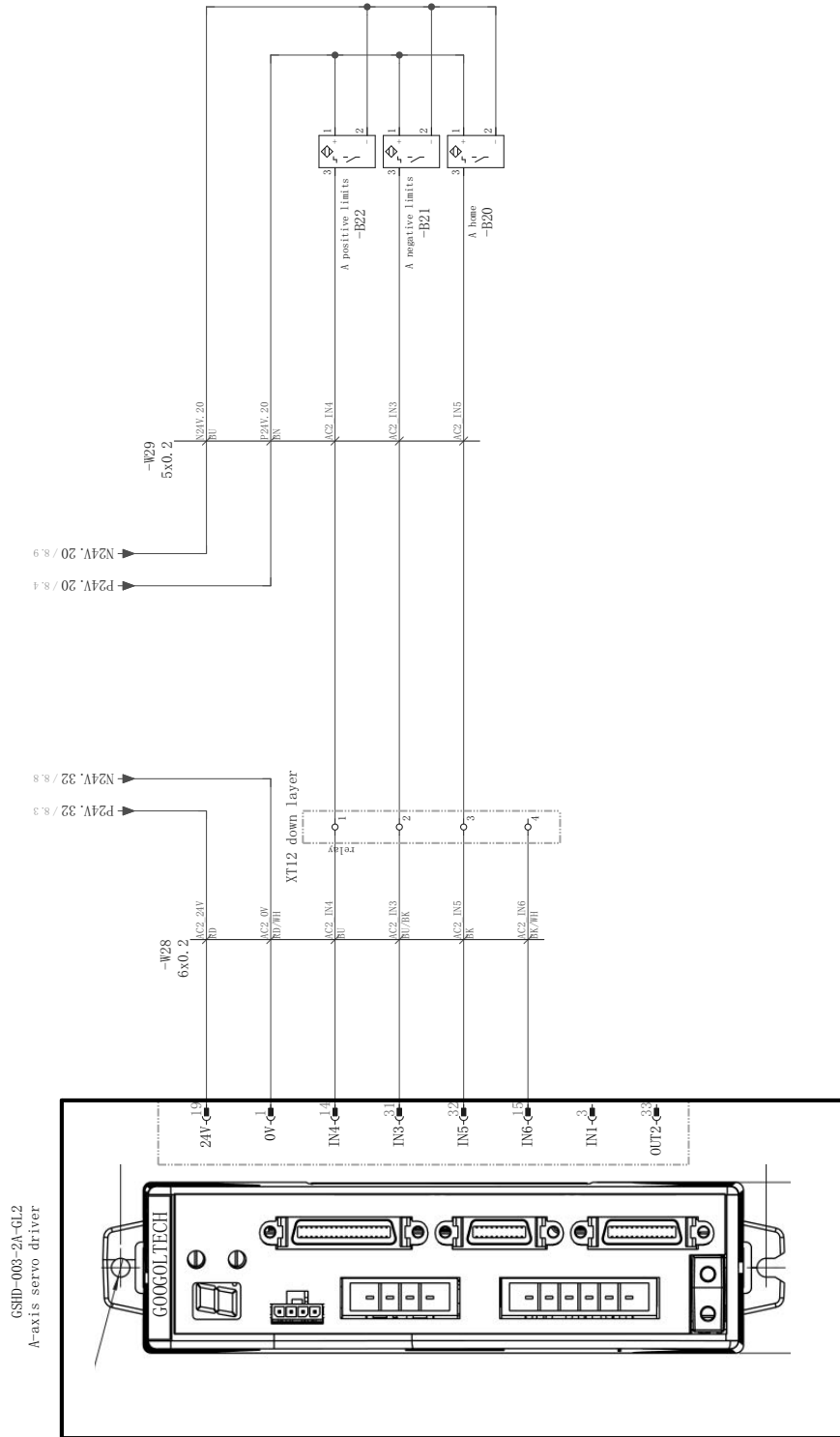
Y axis servo system axis limit signal



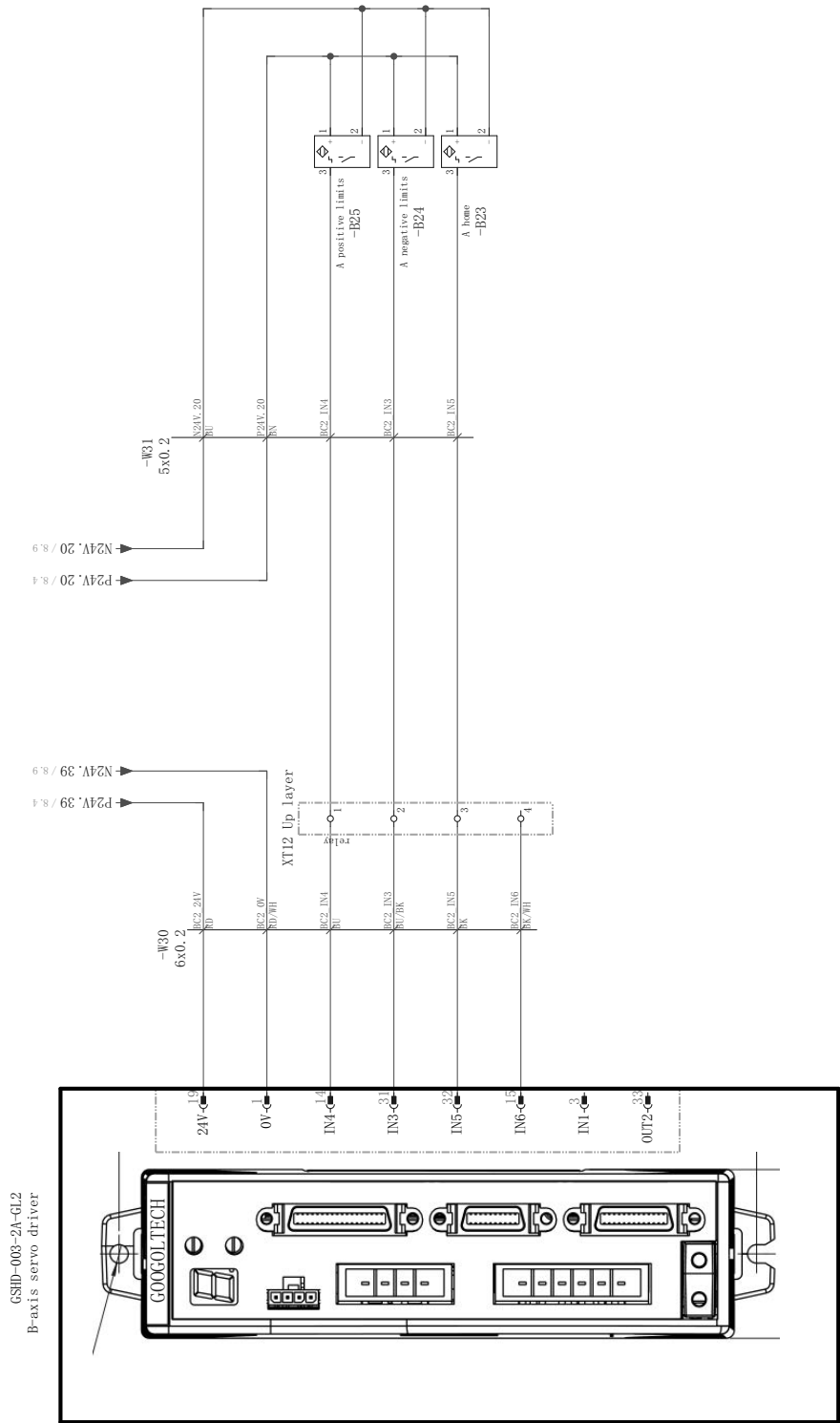
Z axis servo system axis limit signal



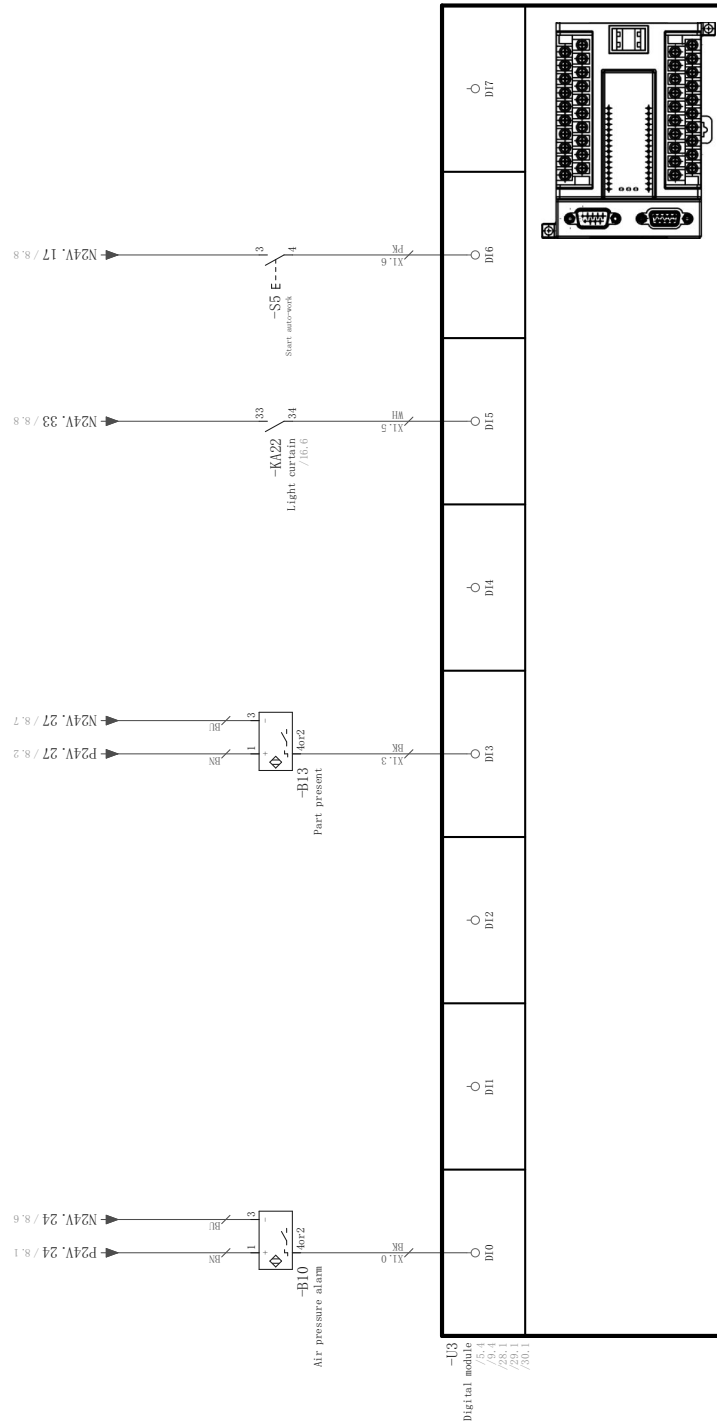
A axis servo system axis limit signal



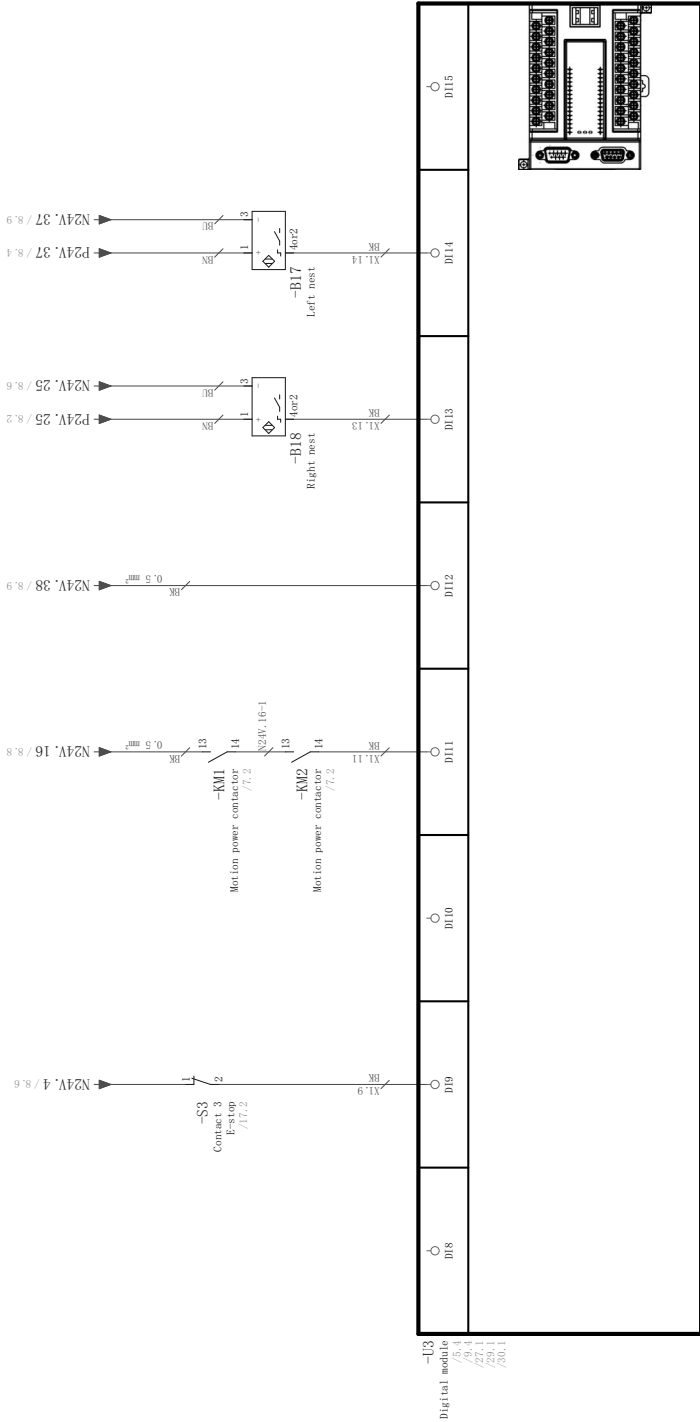
B axis servo system axis limit signal



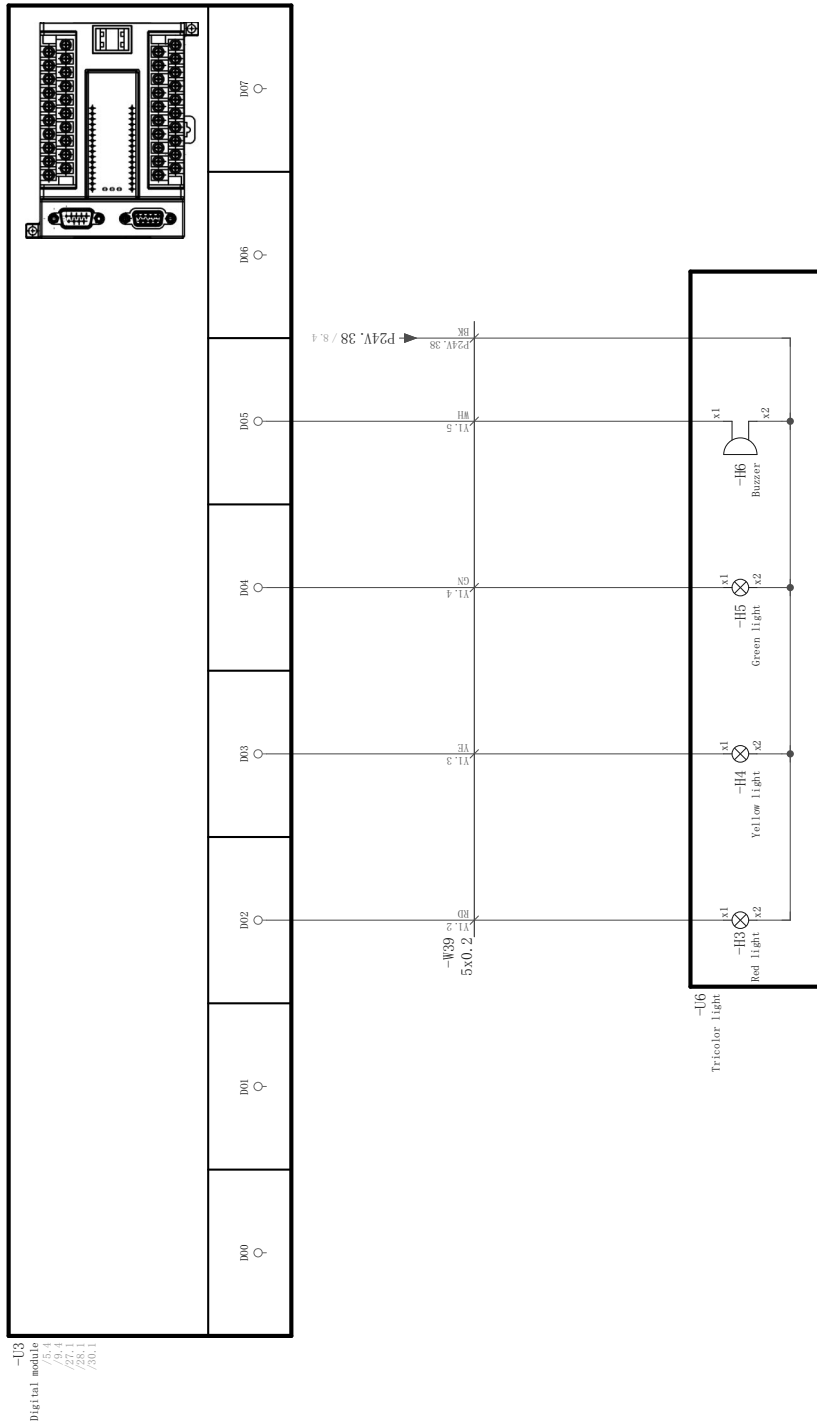
System digital 1 input signal 1



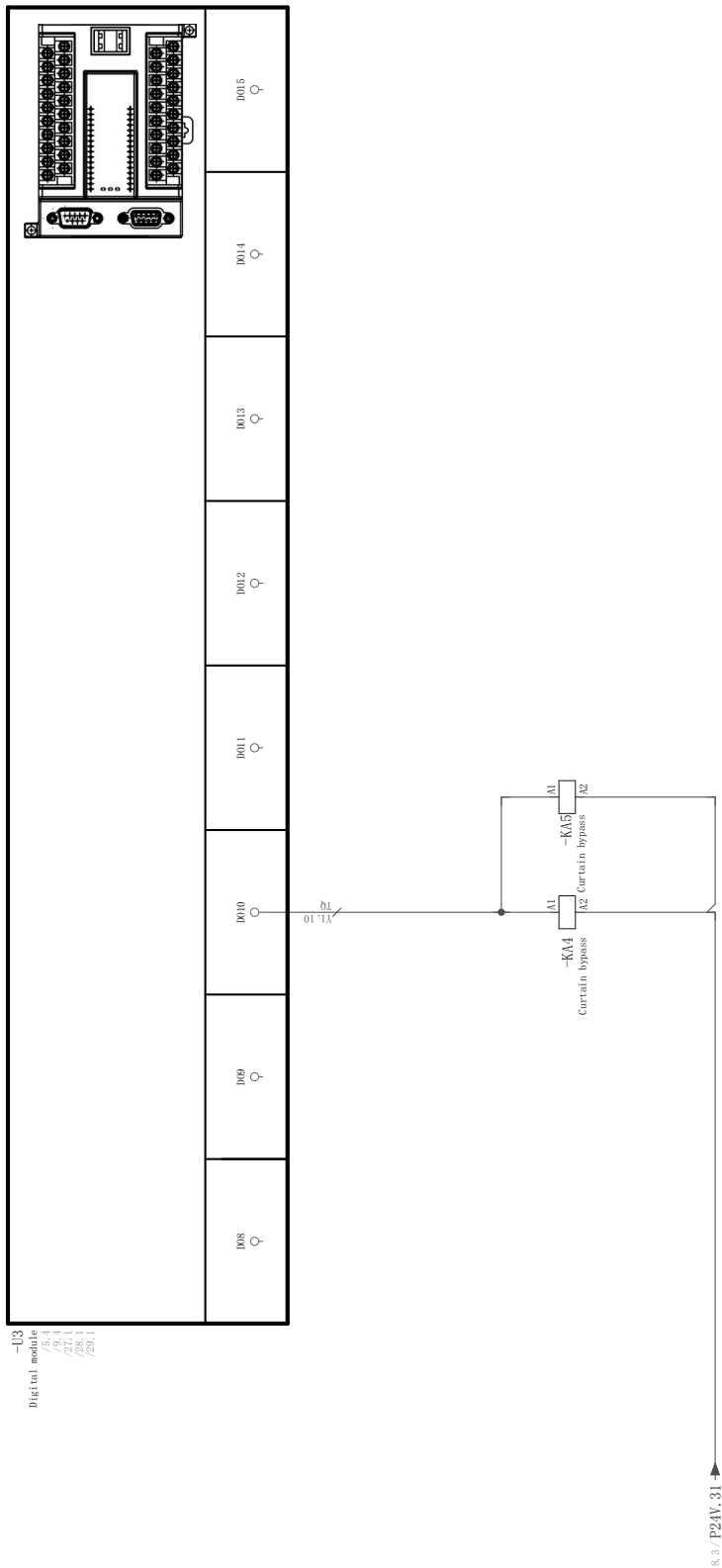
System digital 1 input signal 2



System digital 1 output signal 1



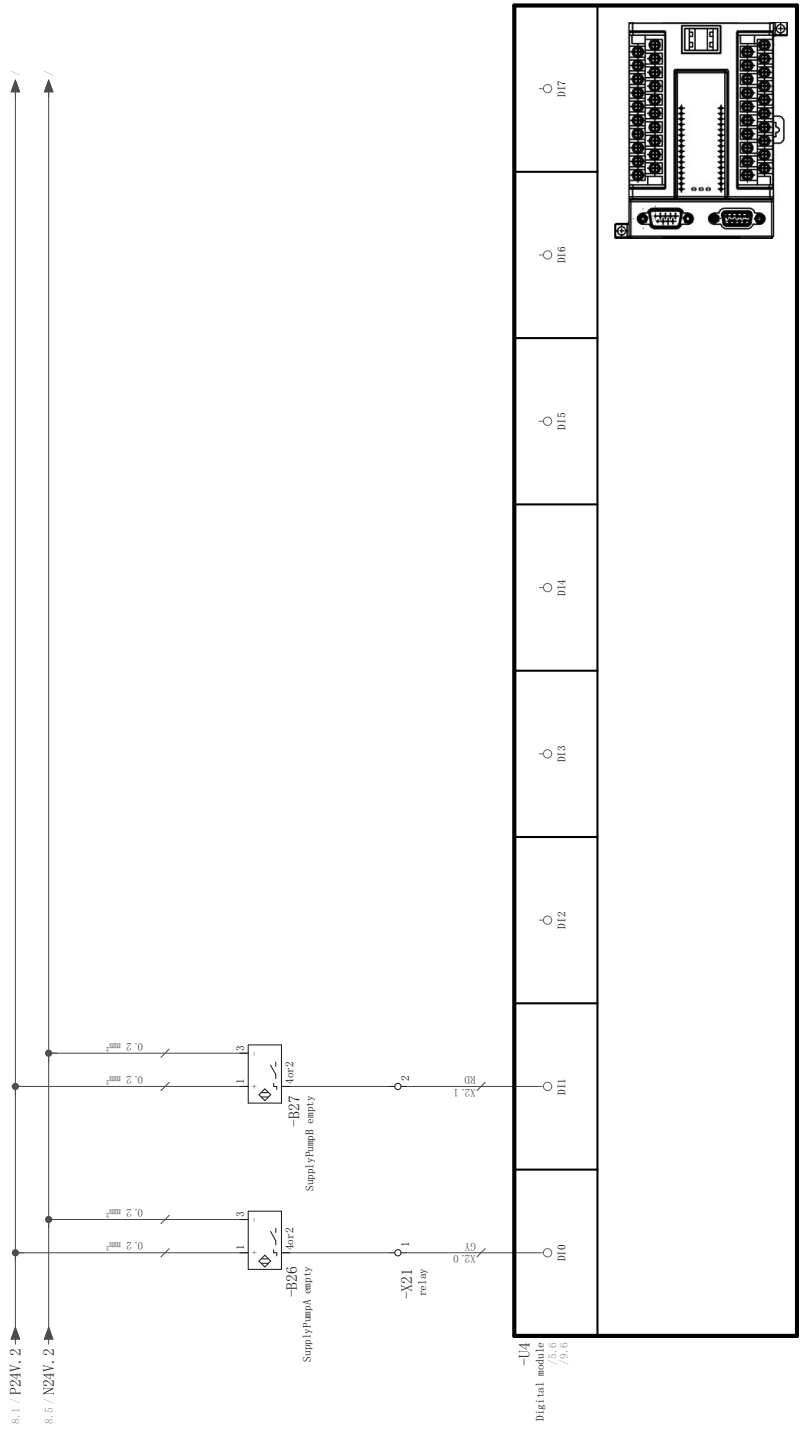
System digital 1 output signal 2



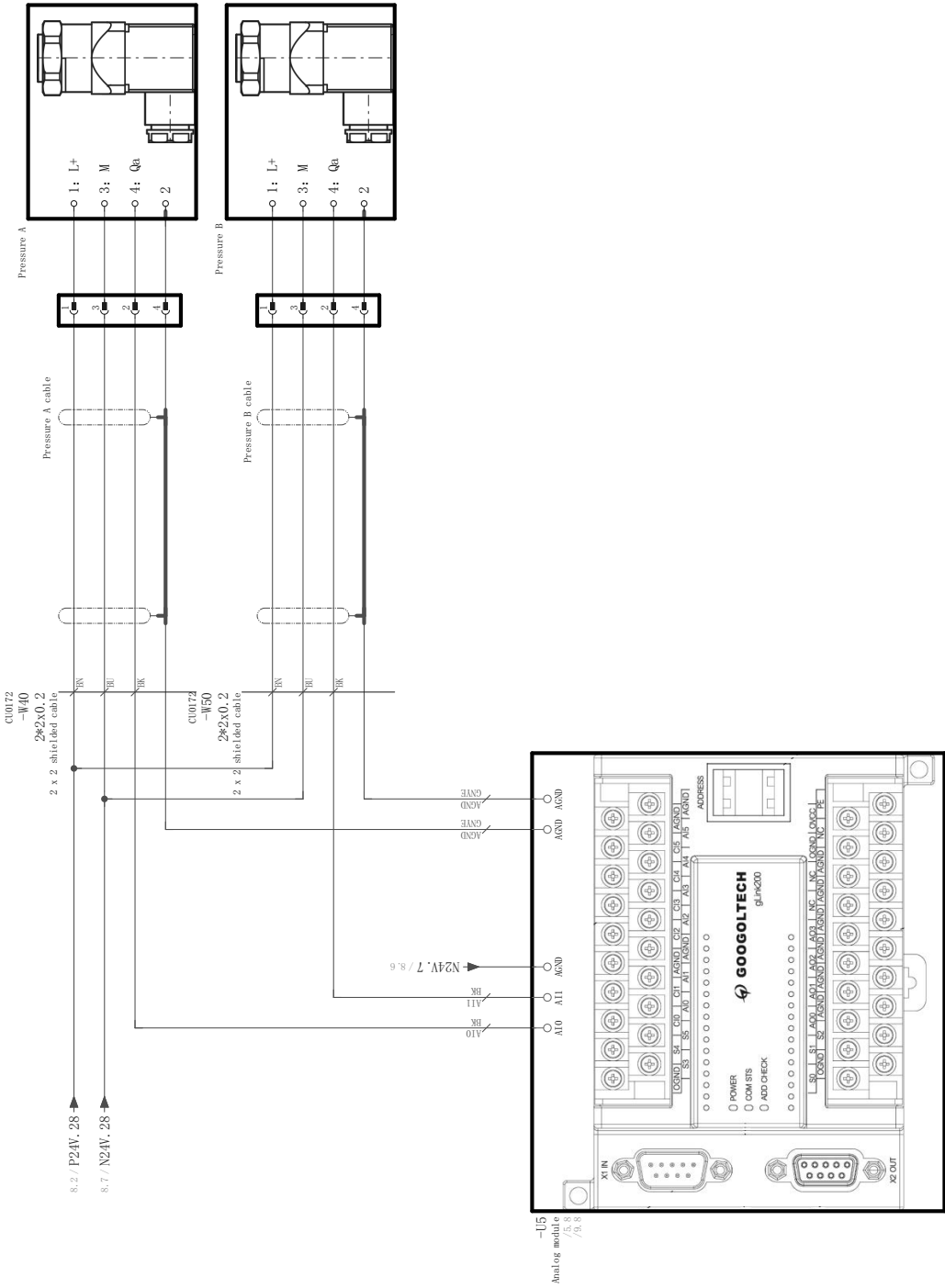
-113
Digital module
/5.4
/28.1
/28.1

5-9 / 16.4 5-9 / 16.6

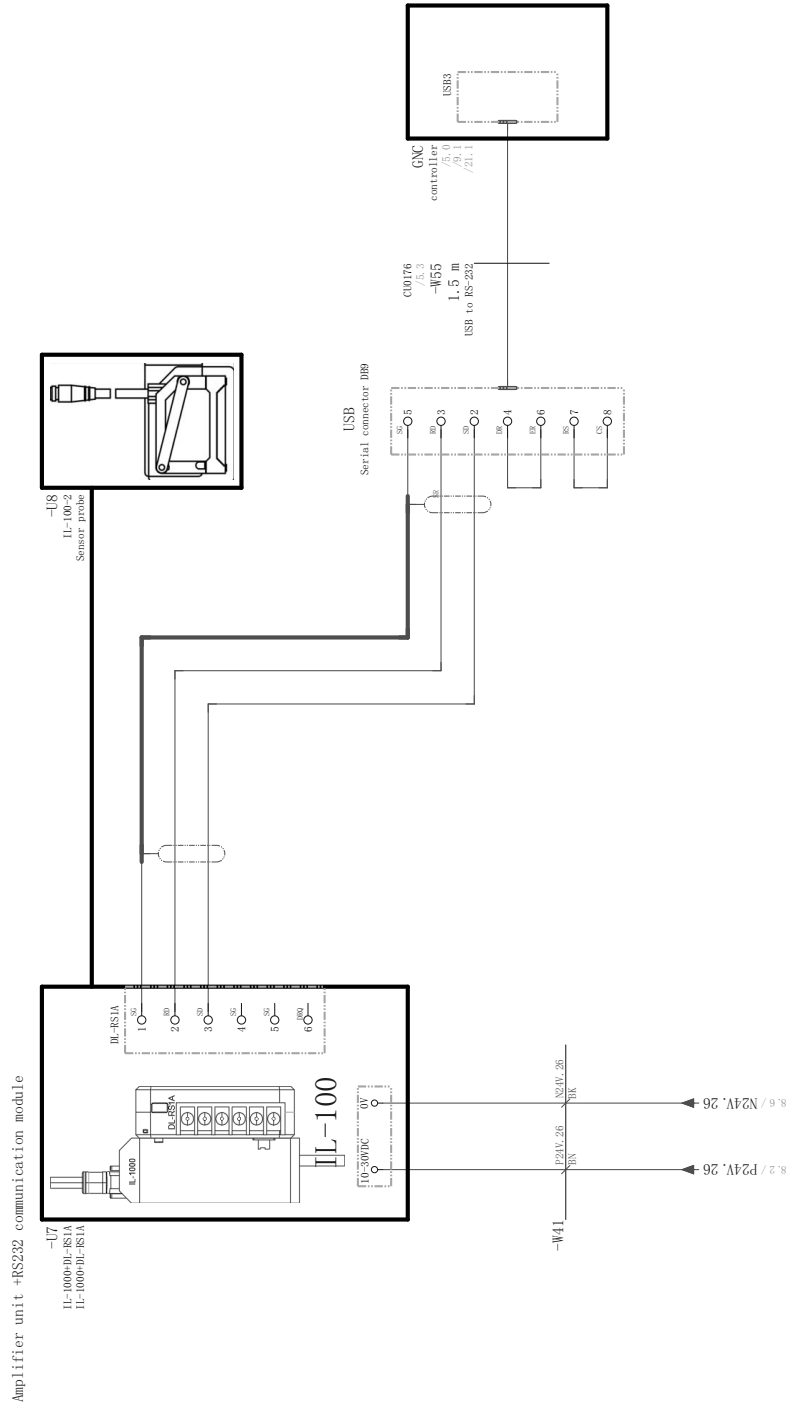
System digital 2 input signal 1



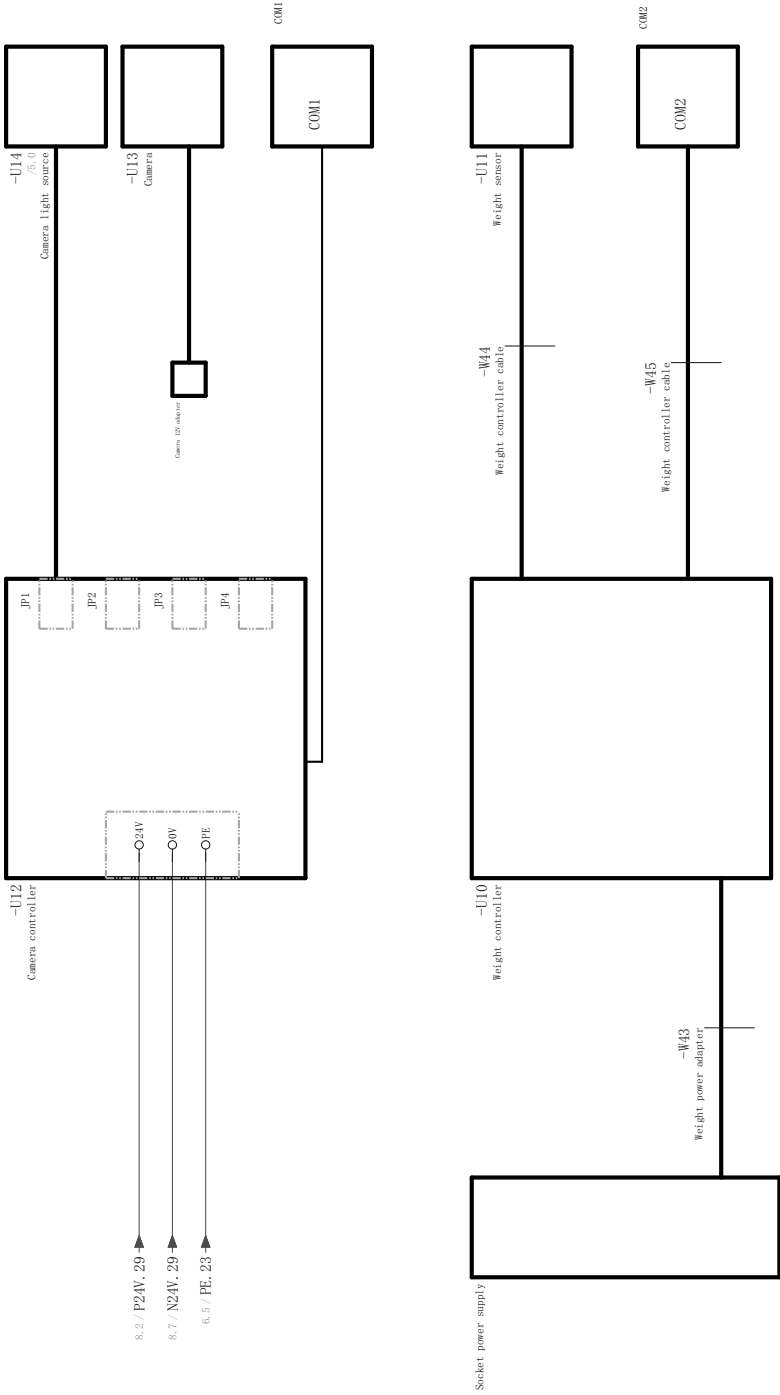
Pressure sensor



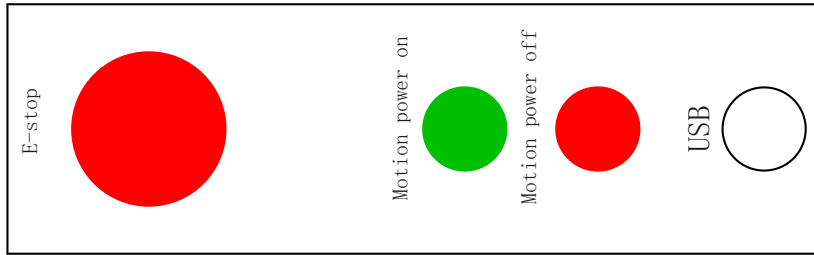
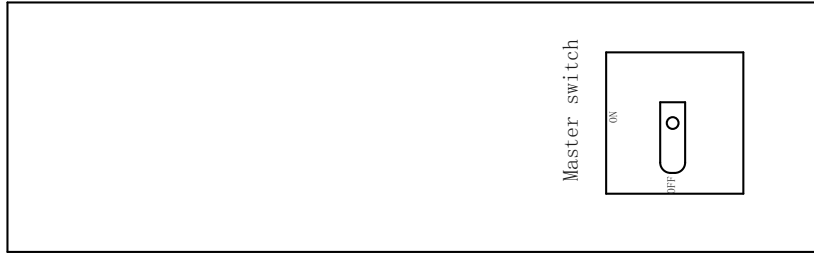
Height sensor



Camera control and weight control




















Operating panel



GSD In-line System

Device list =+ - =+-B22

Device tag Part number Type number	Function text Article designation	X-Ref	Symbol
-B1	Y positive limits	/22.2	
-B2	Y negative limits	/23.8	
-B3	Y home	/23.8	
-B4	X positive limits	/22.8	
-B5	X negative limits	/22.8	
-B6	X home	/22.8	
-B7	Z positive limits	/24.8	
-B8	Z negative limits	/24.8	
-B9	Z home	/24.8	
-B10	Air pressure alarm	/27.1	
-B13	Part present	/27.4	
-B14	Y-axis needle calibration	/23.8	
-B15	X-axis needle calibration	/22.8	
-B19	Tool setting gauge	/24.8	
-B20	A home	/25.8	
-B21	A negative limits	/25.8	
-B22	A positive limits	/25.8	

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Device list ==-B23 - ==-G1

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Device tag Part number Type number	Function text Article designation	X-Ref	Symbol
-B39	Wait cyl rise	/32.1	
-B40	Process cyl rise	/32.2	
-B41	Lift cyl A rise	/32.3	
-B42	Lift cyl B rise	/32.4	
-B43	Wait cyl drop	/32.5	
-B44	Process cyl drop	/32.6	
-B45	Lift cyl A drop	/32.7	
-B46	Lift cyl B drop	/32.8	
-G1	battery	/10.4	

Device tag Part number Type number	Function text Article designation	X-Ref	Symbol
-B23	A home	/26.8	
-B24	A negative limits	/26.8	
-B25	A positive limits	/26.8	
-B26	SupplyPumpA empty	/31.1	
-B27	SupplyPumpB empty	/31.2	
-B35	Wait entrance	/31.3	
-B36	Wait position	/31.4	
-B37	Process position	/31.5	
-B38	Exit position	/31.6	

Device list =+-G2 - =+-KA3

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Device tag Part number Type number	Function text Article designation	X-Ref	Symbol
-GSHD3		/12.3	
-GSHD4		/13.3	
-GSHD5		/14.3	
-GTM		/38.1	
-H1	Motion power indicator	/18.2	
-H2	Light	/18.0	
-KA1	Z-axis brake relay	/24.5	
-KA2	Light curtain	/15.6	
-KA3	=	/15.7	

Device tag Part number Type number	Function text Article designation	X-Ref	Symbol
-G2	battery	/11.4	
-G3	=	/12.4	
-G4	=	/13.4	
-G5	=	/14.4	
-GNC	controller	/5.0	
-GSHD1		/10.3	
-GSHD1-L1	L1	/10.1	
-GSHD1-U	U	/10.3	
-GSHD2		/11.3	

Device list =+-KA4 - =+-M15

F03_001

Device tag Part number Type number	Function text Article designation	X-Ref	Symbol
-M4	Y-axis servo motor	/11.9	
-M5	Z-axis servo motor	/12.9	
-M6	A-axis servo motor	/13.9	
-M7	B-axis servo motor	/14.9	
-M11	Waiting section motor 1	/38.3	
-M12	Waiting section motor 2	/38.4	
-M13	Processing section motor 1	/38.5	
-M14	Processing section motor 2	/38.6	
-M15	Exit section motor 1	/38.7	

Device tag Part number Type number	Function text Article designation	X-Ref	Symbol
-KA4	Curtain bypass	/30.3	
-KA5	=	/30.4	
-KA21	safety relay	/17.4	
-KA22	=	/16.6	
-KM1	Motion power contactor	/7.2	
-KM2	=	/7.2	
-M1	Cooling fan 1	/20.2	
-M2	Cooling fan 2	/20.5	
-M3	X-axis servo motor	/10.9	

Device list =+-M16 - =+-U6-H3







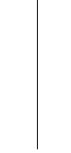





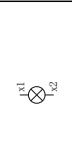
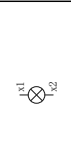
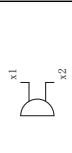






Device tag Part number Type number	Function text Article designation	X-Ref	Symbol
-M16	Exit section motor 2	/38.8	
-M17	Front electrical panel	/4.0	
-M18	Back electrical panel	/4.5	
-QF1	Leakage protector	/6.2	
-QF2	Circuit breaker	/8.1	
-QS1	Knob switch	/6.1	
-R1	Light curtain receiver	/15.5	
-S1	Contact 1	/17.2	
-S2	Motion power on button	/17.4	

Device tag Part number Type number	Function text Article designation	X-Ref	Symbol
-S3	Contact 1	/17.2	
-S5	Start auto-work	/27.7	
-T1	Light curtain emitter	/15.1	
-U2	Display	/5.7	
-U3	Digital module	/5.4	
-U4	=	/5.6	
-U5	Analog module	/5.8	
-U6	Tricolor light	/29.3	
-U6-H3	Red light	/29.4	



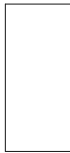



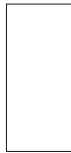

F03_001




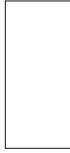



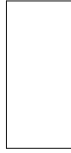

Device list =+-U6-H4 - =+-W11

F03_001

Device tag Part number Type number	Function text Article designation	X-Ref	Symbol
-U14	=	/8.0	
-USB	Serial connector DB9	/35.6	
-USB-S	Scanning gun	/9	
-V1	Power filter	/6.4	
-V2	Switch power supply	/8.0	
-V3		/37.2	
-W3	Motor Power	/10.6	
LEE.111005 (4G1.5) SUPERLEX-N-PUR	PUR control line, 4G1.5		
-W9	=	/13.6	
LEE.111005 (4G1.5) SUPERLEX-N-PUR	PUR control line, 4G1.5		
-W11	=	/14.6	
LEE.111005 (4G1.5) SUPERLEX-N-PUR	PUR control line, 4G1.5		
-U6-H4	Yellow light	/29.5	
-U6-H5	Green light	/29.6	
-U6-H6	Buzzer	/29.7	
-U7	IL-1000-01-MS1A	/35.2	
-U8	Sensor probe	/35.6	
-U10	Weight controller	/36.3	
-U11	Weight sensor	/36.8	
-U12	Camera controller	/36.3	
-U13	Camera	/36.8	

Device list ==-X21 - ==-XT16

Device tag Part number Type number	Function text Article designation	X-Ref	Symbol
-X21	relay	/31.1	ϕ_1
-XS1	Power plug	/19.0	
-XT1	terminal	/6.2	
-XT1.1	=	/6.4	
-XT2	=	/6.6	
-XT3	=	/6.8	
-XT4	=	/7.2	
-XT5	=	/7.7	
-XT6	Valve power IP24V terminal block	/18.8	

Device tag Part number Type number	Function text Article designation	X-Ref	Symbol
-XT8	relay	/8.1	
-XT9	=	/8.5	
-XT10 Up layer	=	/23.4	
-XT10 down layer	=	/22.4	
-XT11 down layer	=	/24.4	
-XT12 Up layer	=	/26.4	
-XT12 down layer	=	/25.4	
-XT15	M48V	/37.2	
-XT16	M48V	/37.6	

F03_001

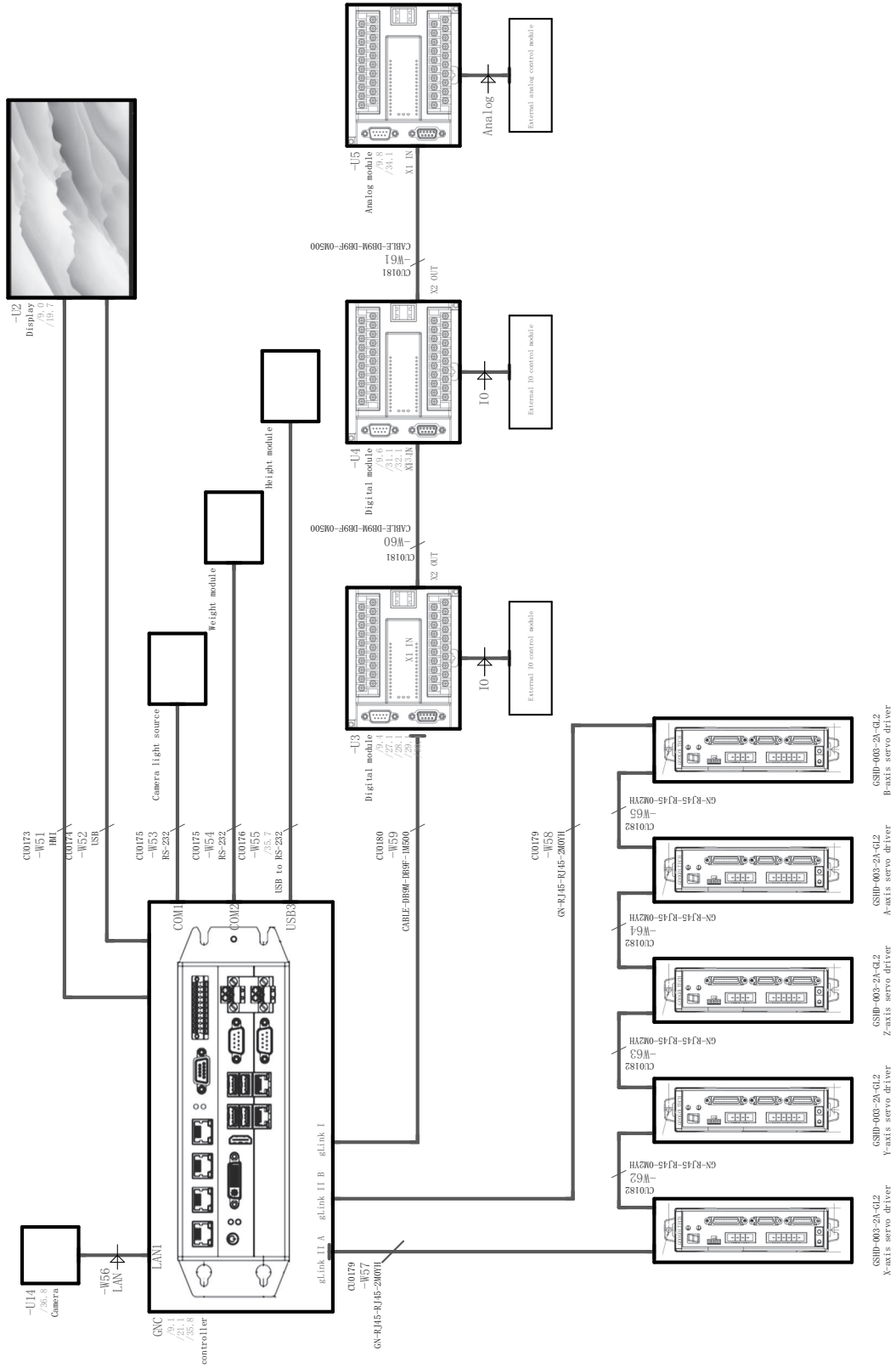
Device list =+-Y1 - =+-Y14

F03_001

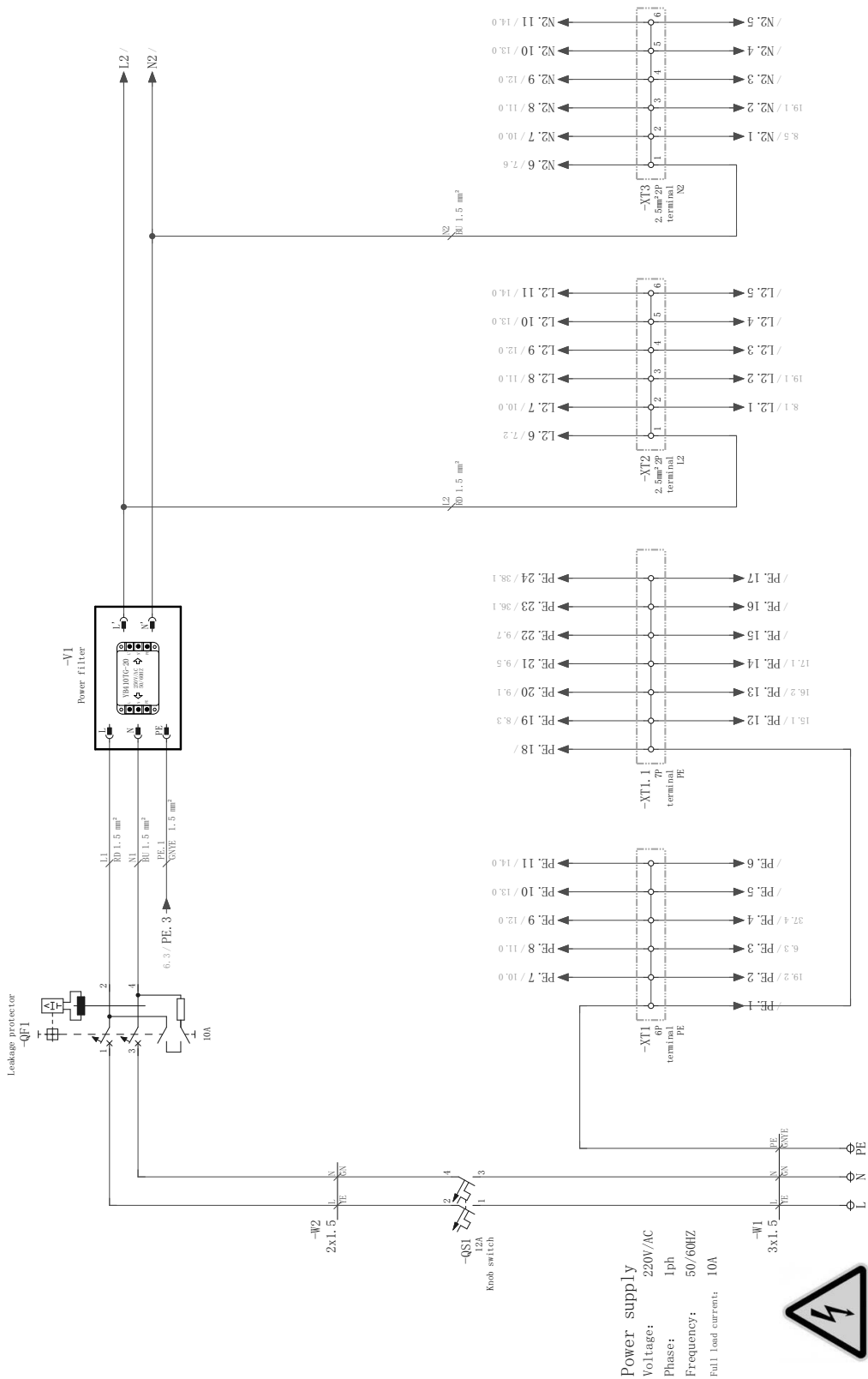
Device tag Part number Type number	Function text Article designation	X-Ref	Symbol

Device tag Part number Type number	Function text Article designation	X-Ref	Symbol
-Y1	Intake valve	/18.3	
-Y2	Wait cyl rise	/33.1	
-Y3	Process cyl rise	/33.2	
-Y4	Lift cyl A rise	/33.3	
-Y5	Lift cyl B rise	/33.4	
-Y11	SupplyA valve	/21.1	
-Y12	SupplyB valve	/21.2	
-Y13	DispenseA valve	/21.3	
-Y14	DispenseB valve	/21.4	

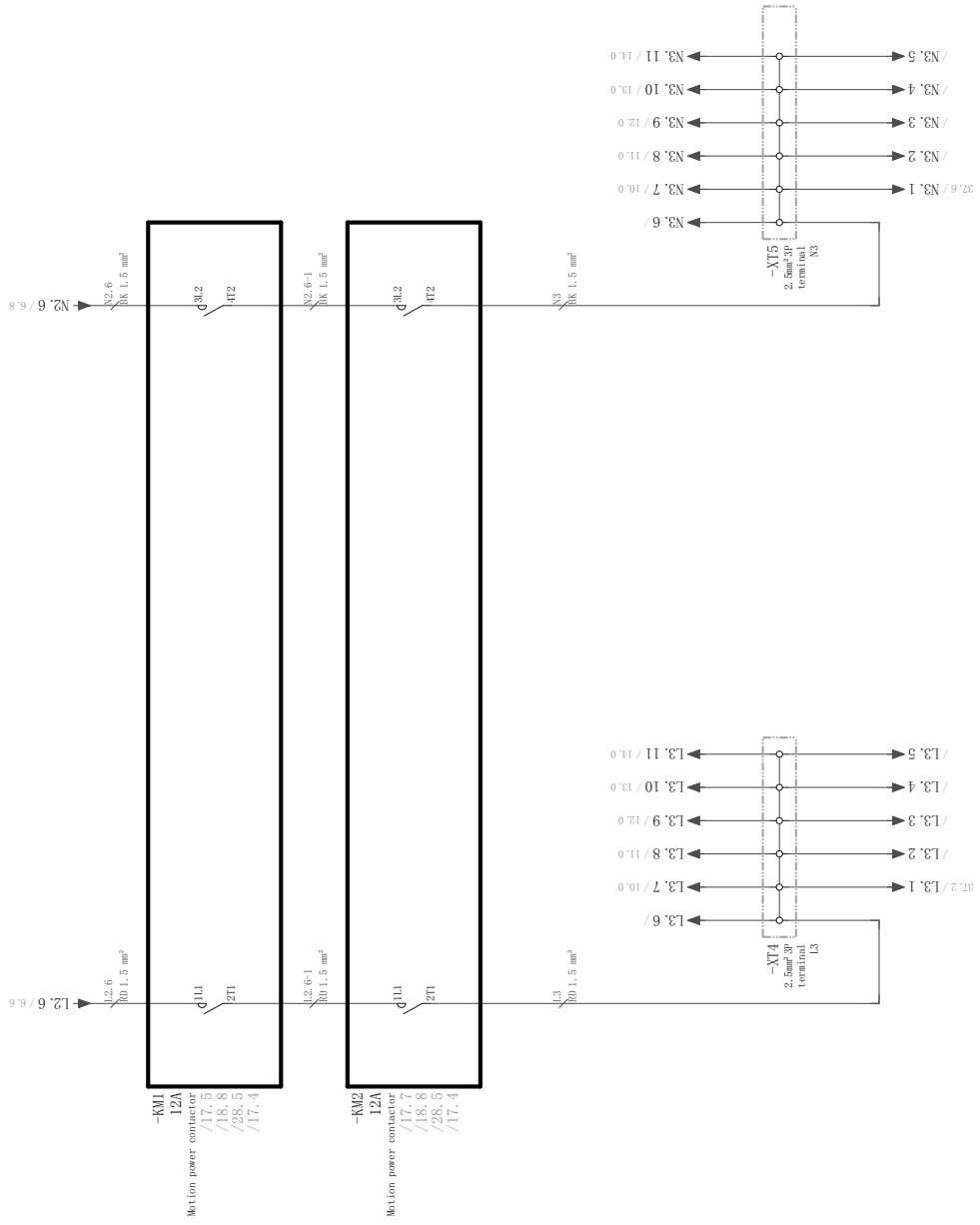
Control block diagram



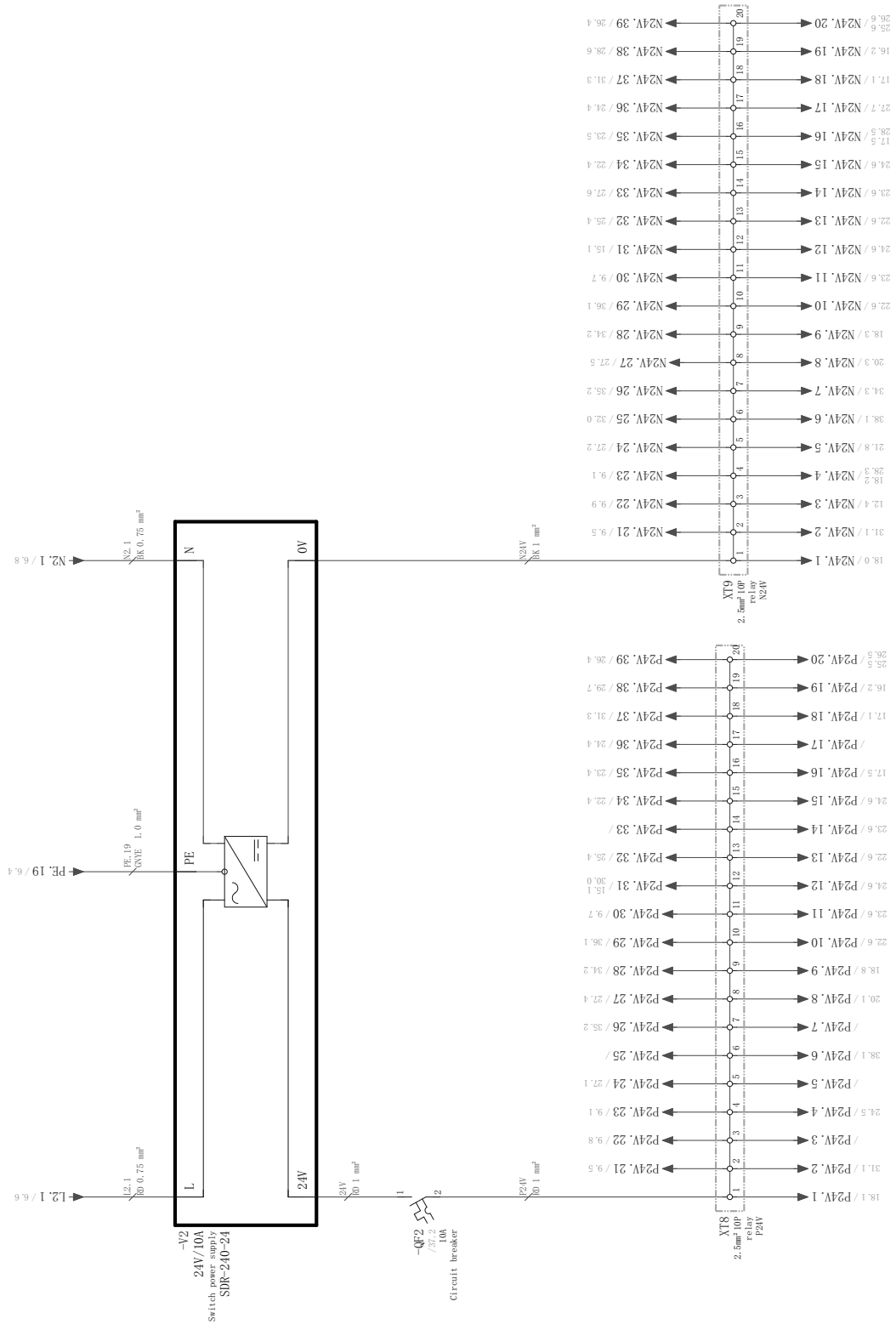
Power supply line



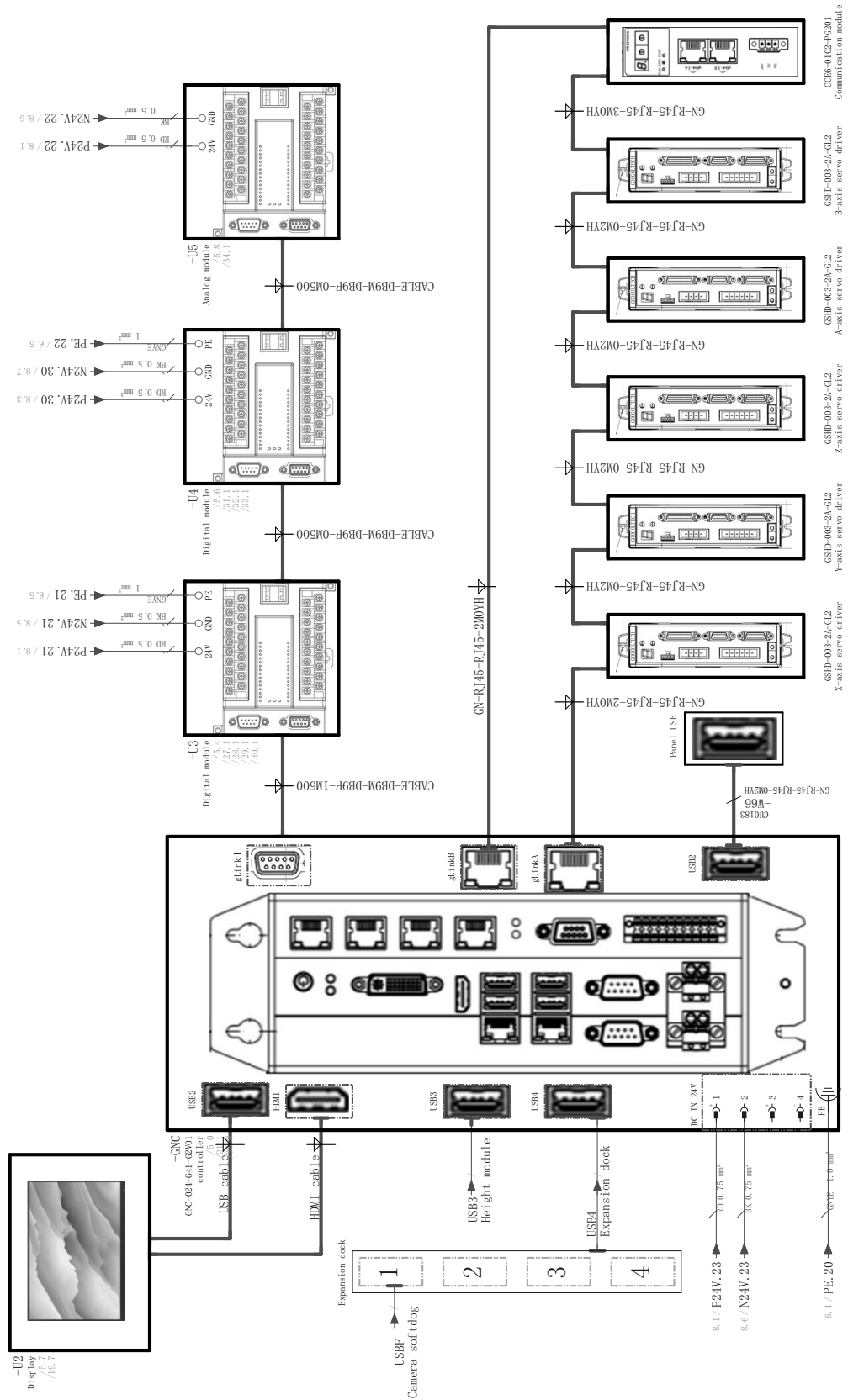
Servo power supply



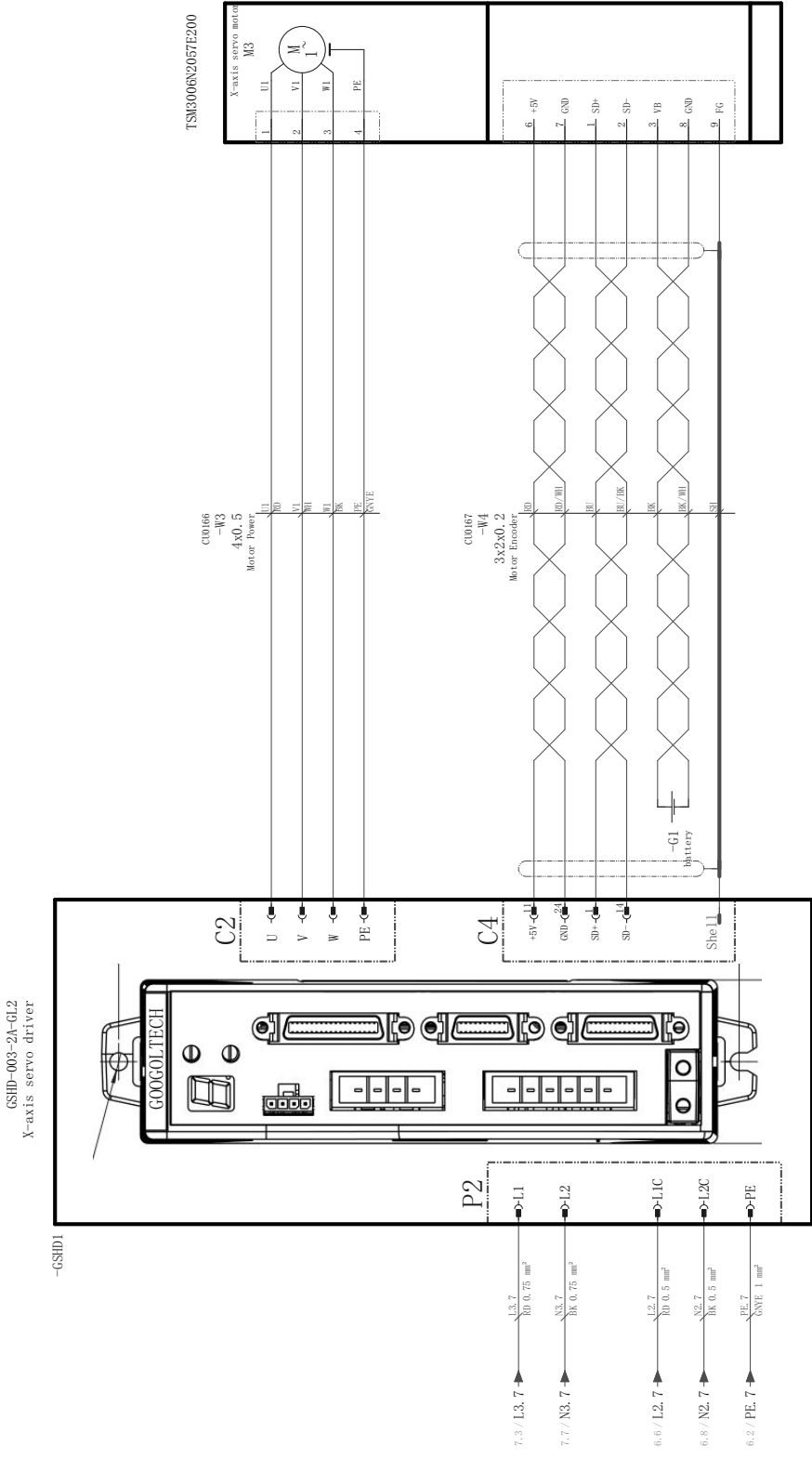
Control 24V switch power supply



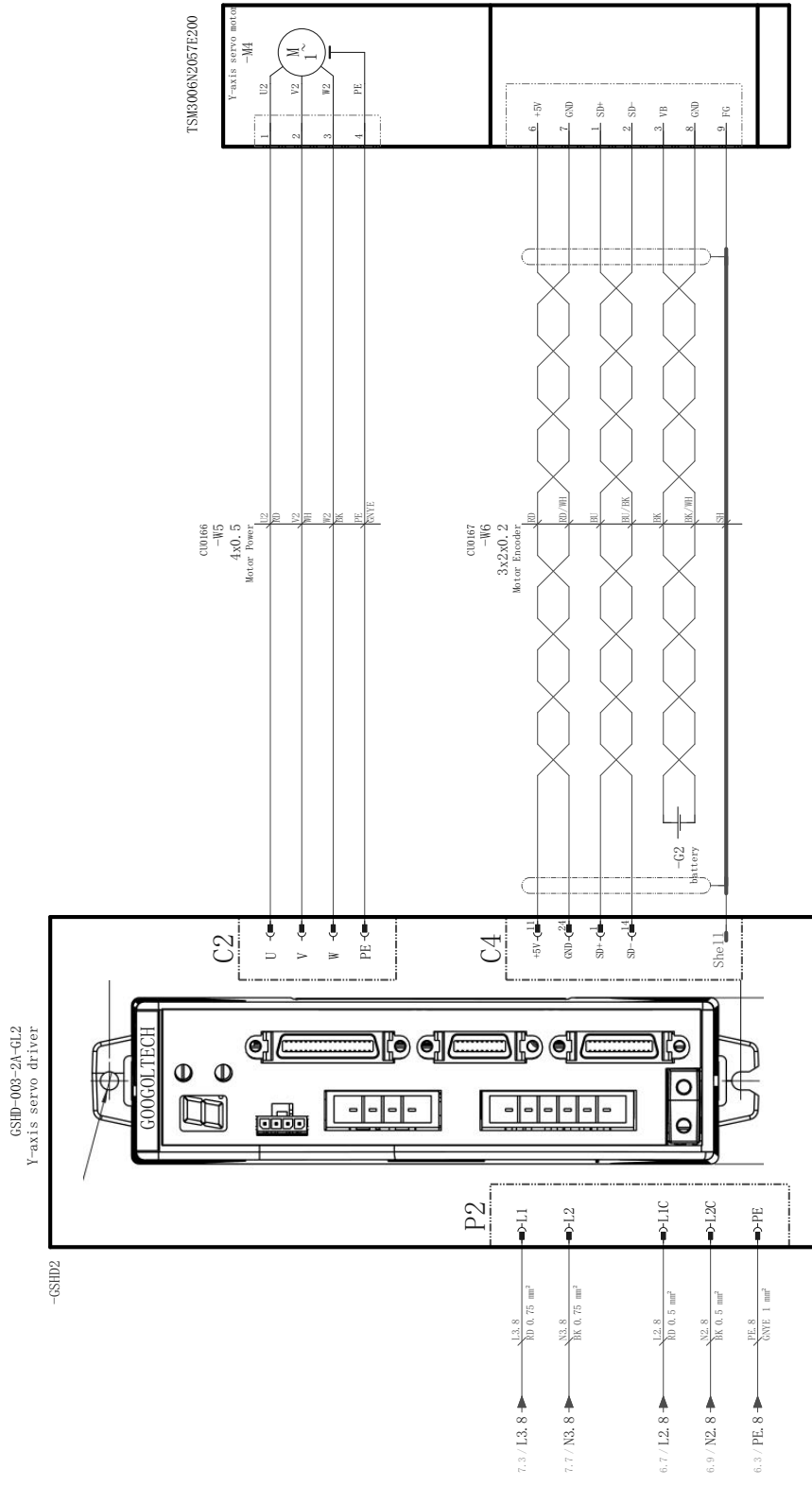
Controller power supply



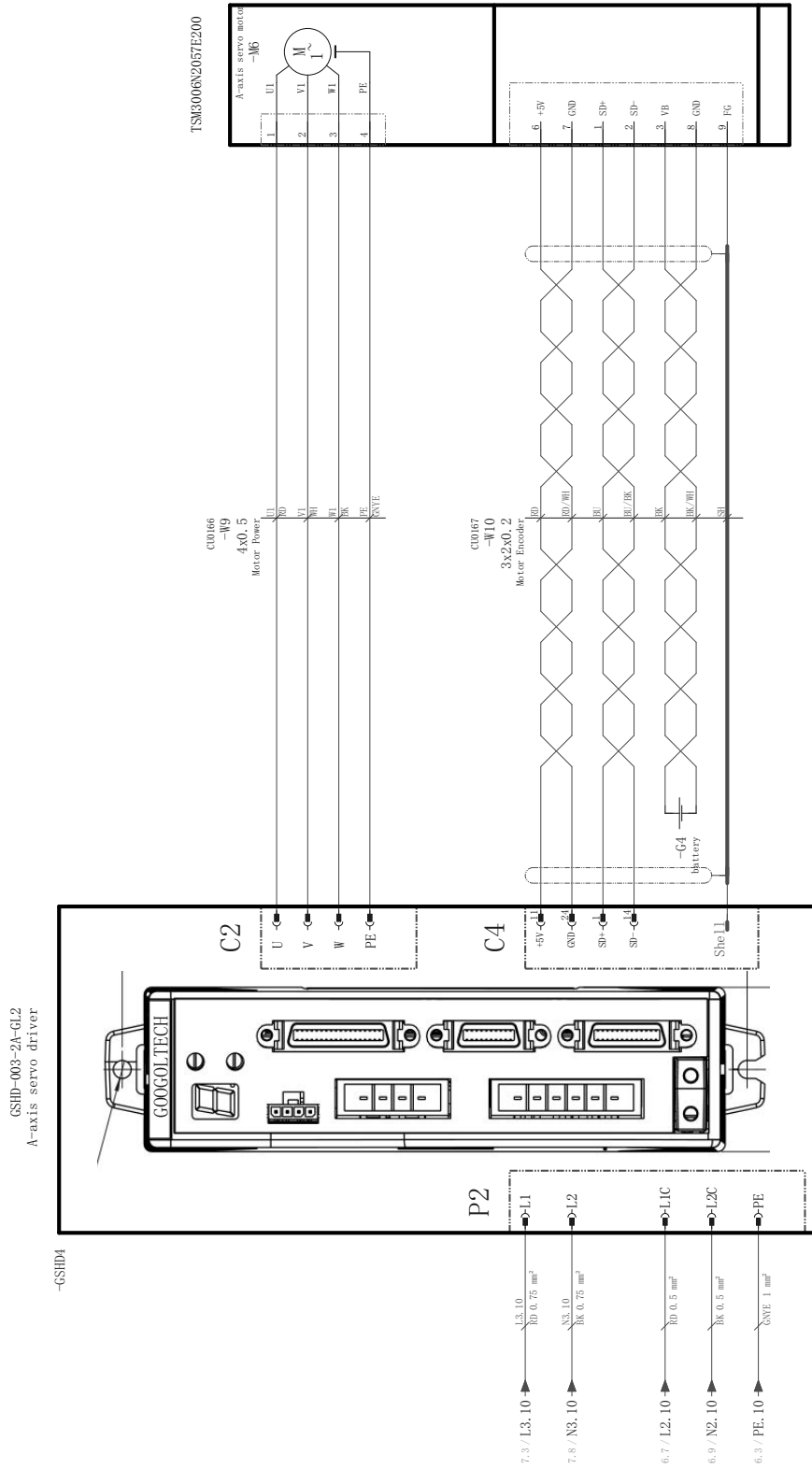
X axis servo system



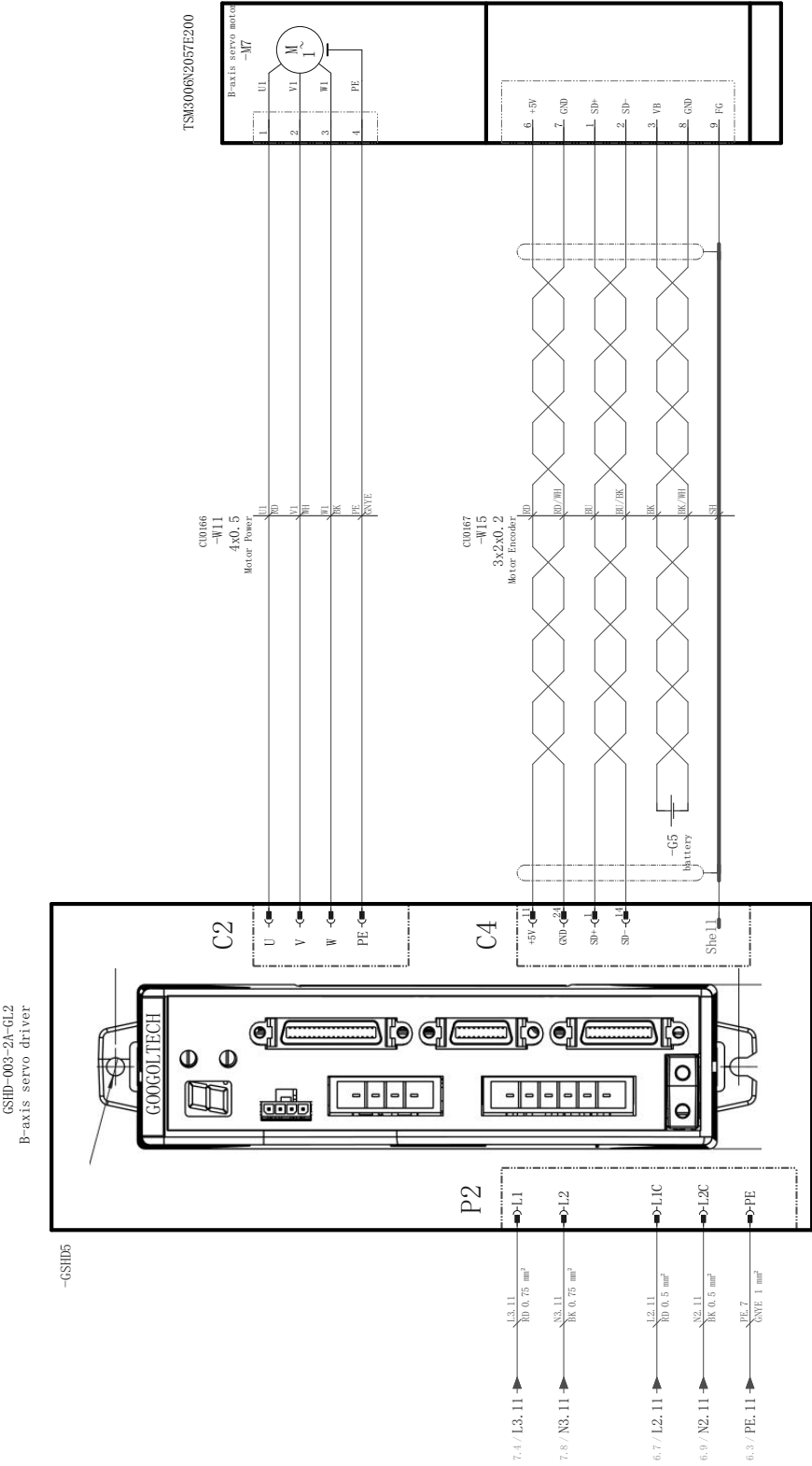
Y axis servo system



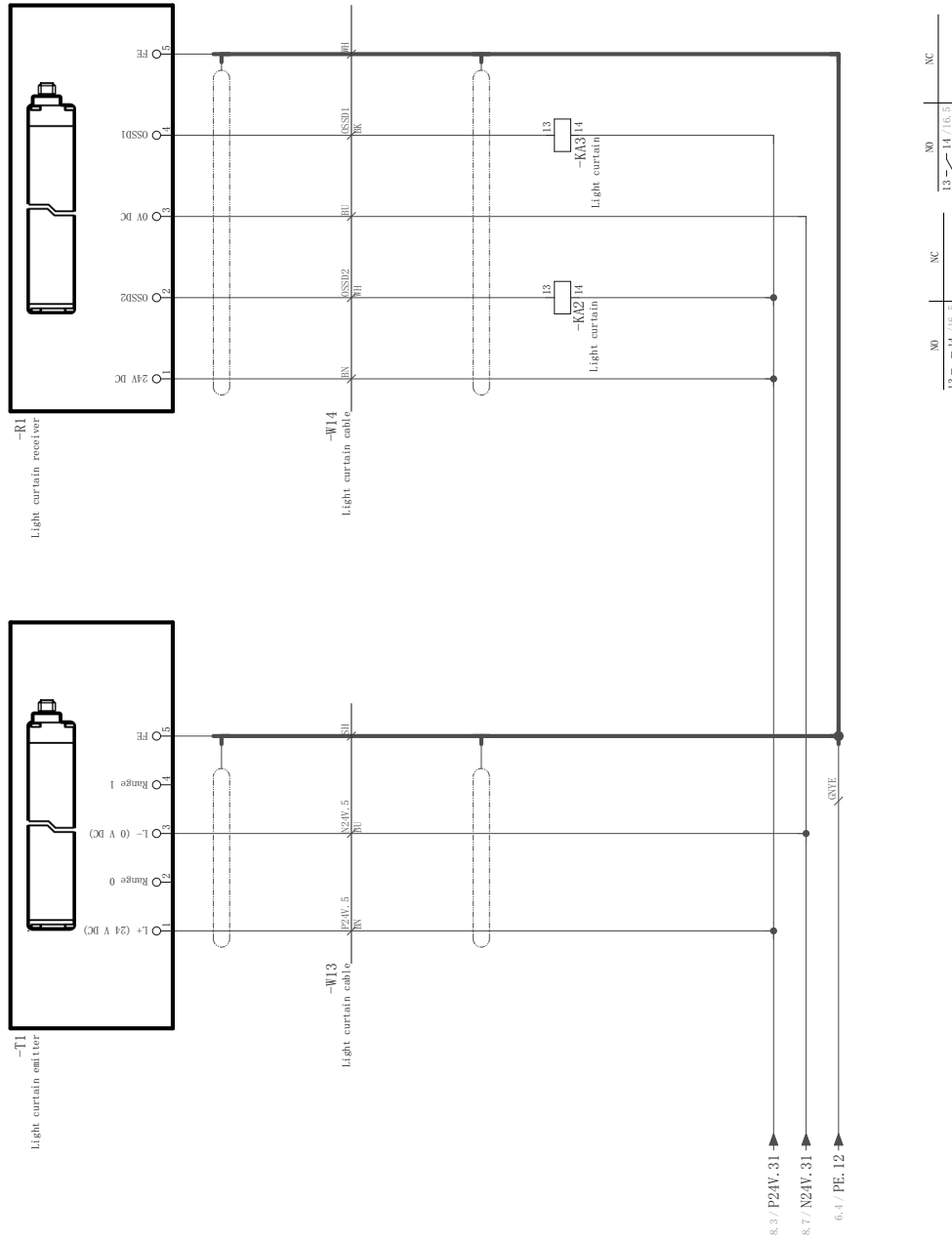
A axis servo system



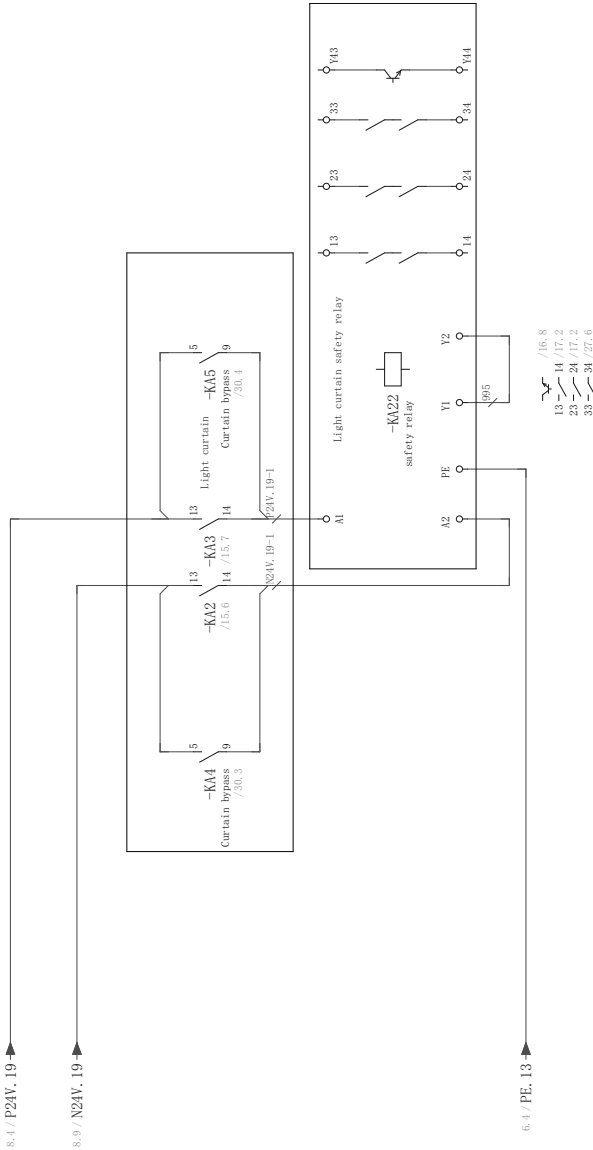
B axis servo system



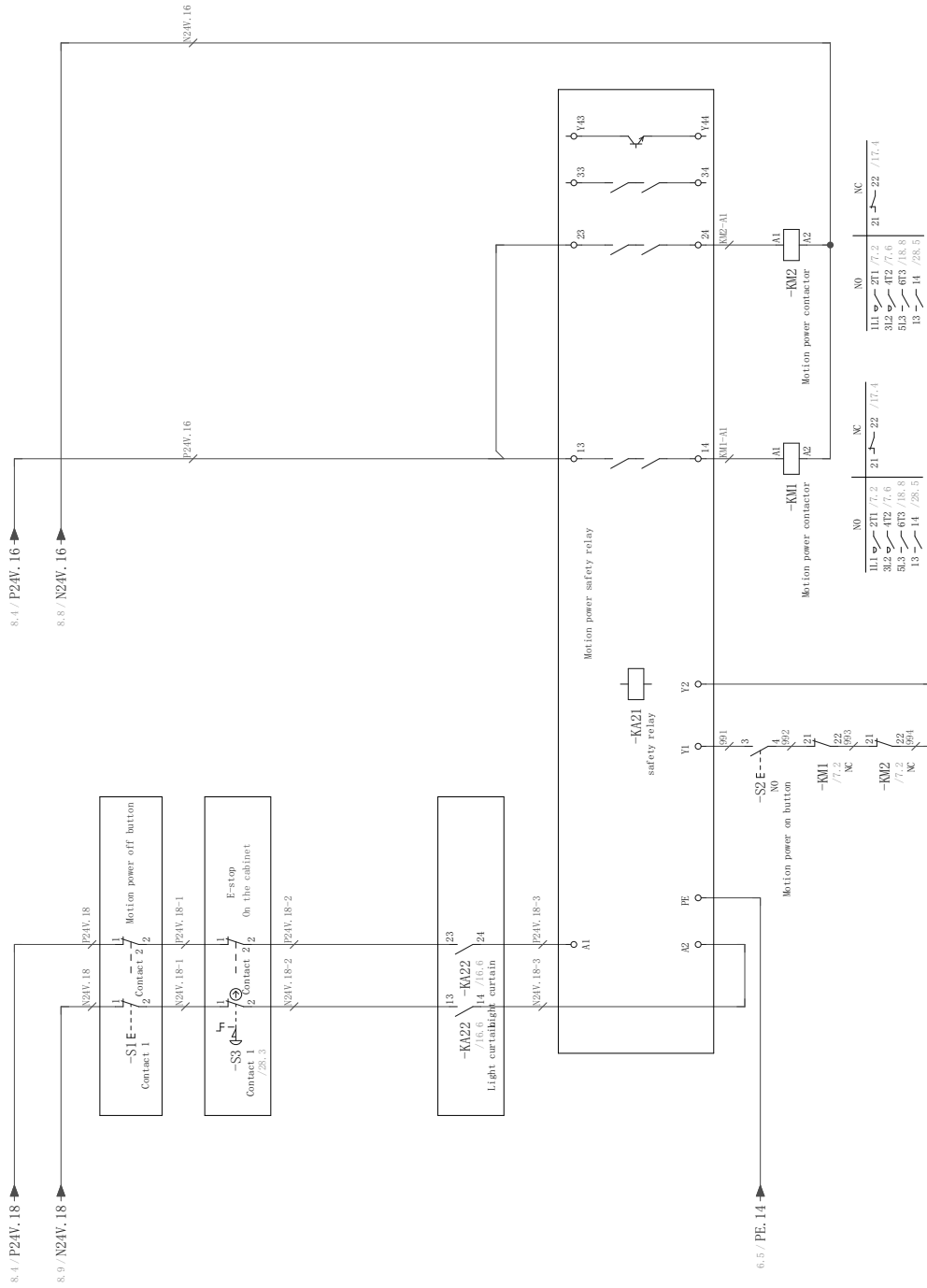
Light curtain control loop



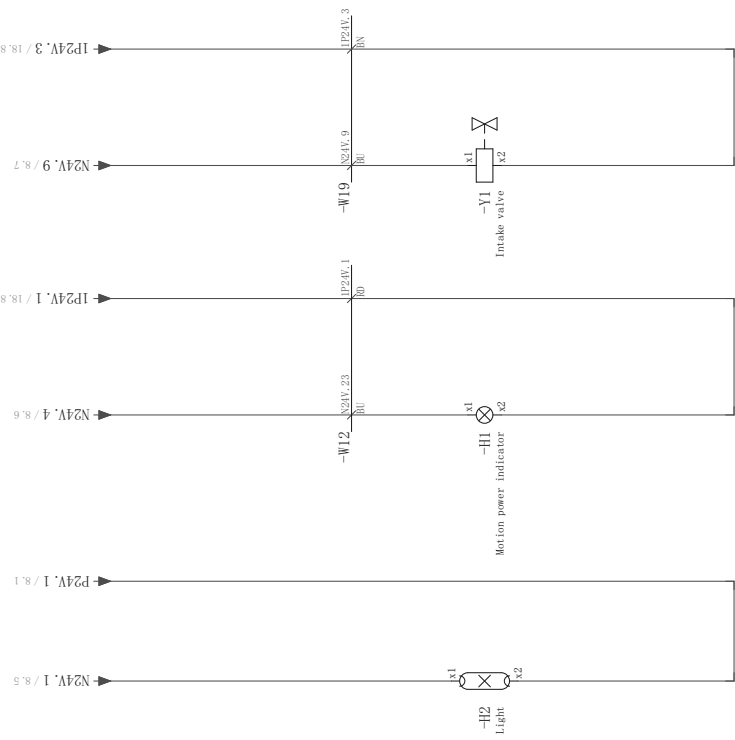
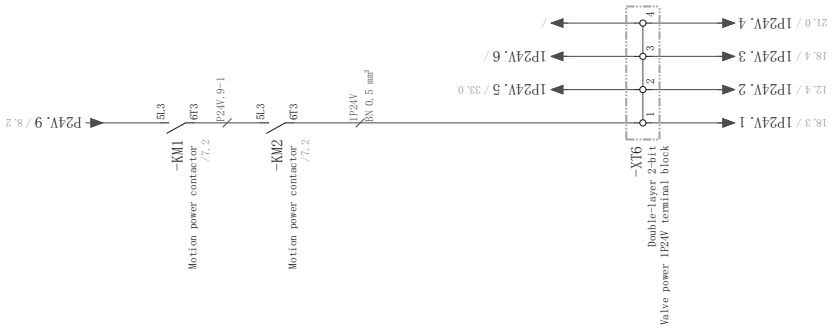
Light curtain safety relay



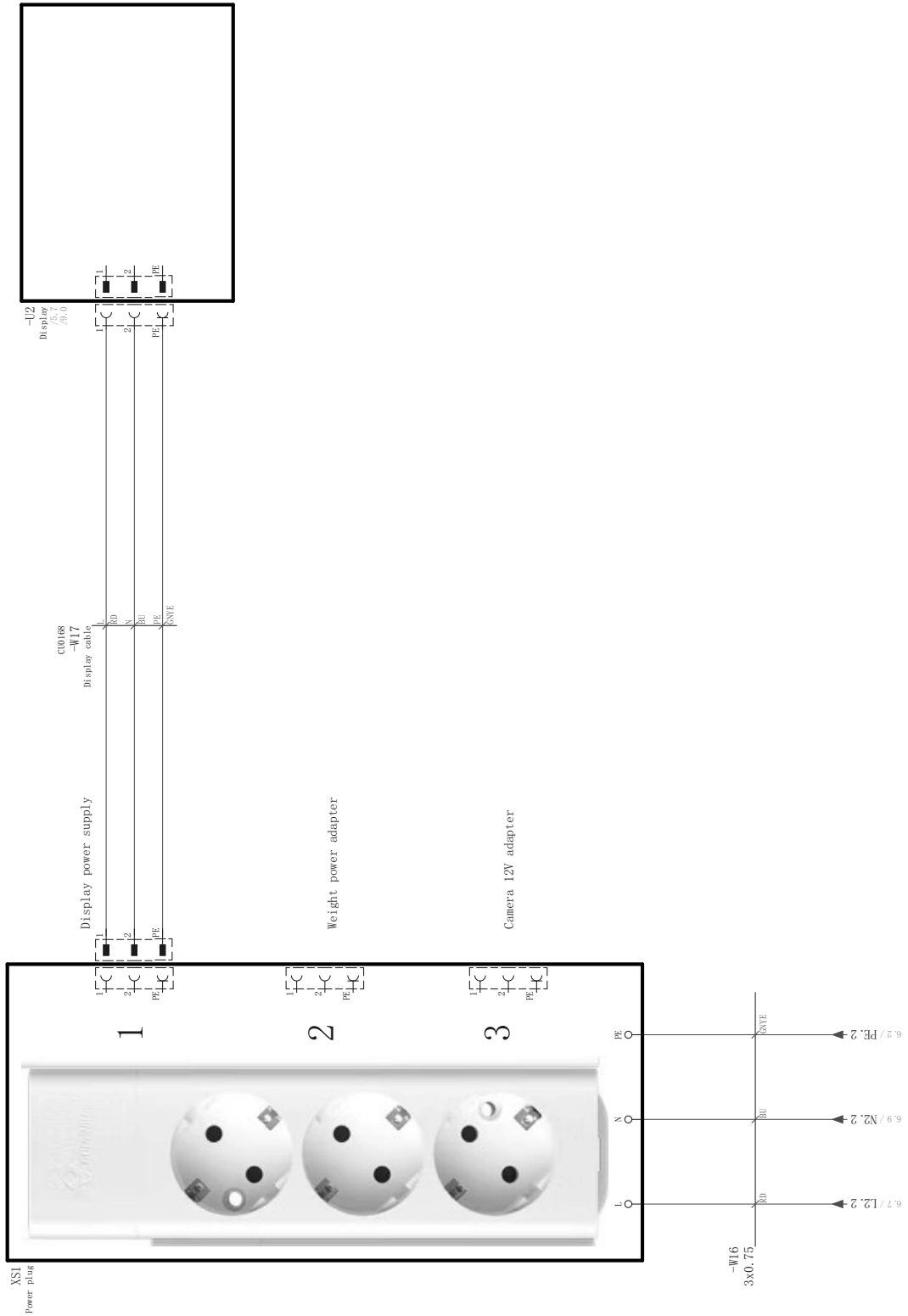
Motion power safety relay



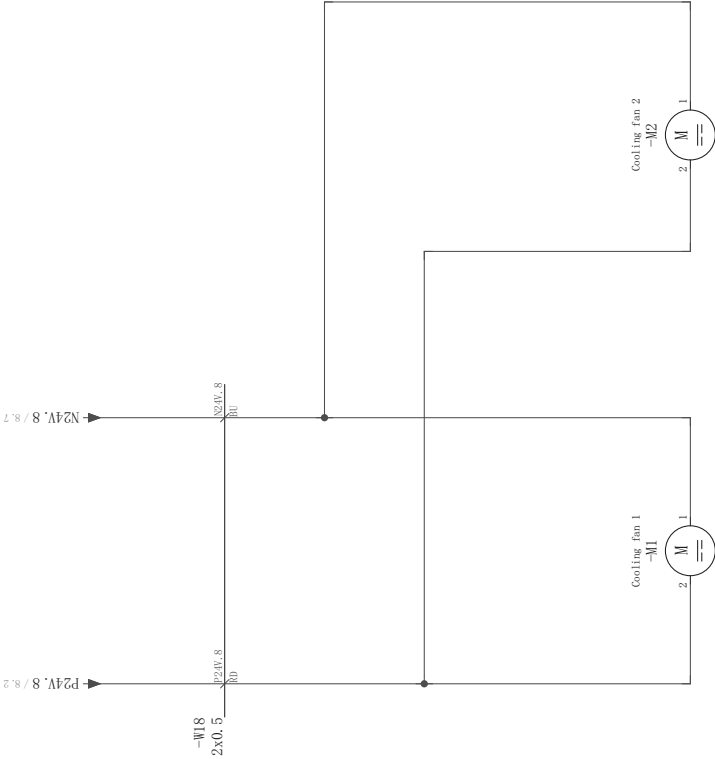
Valve output power



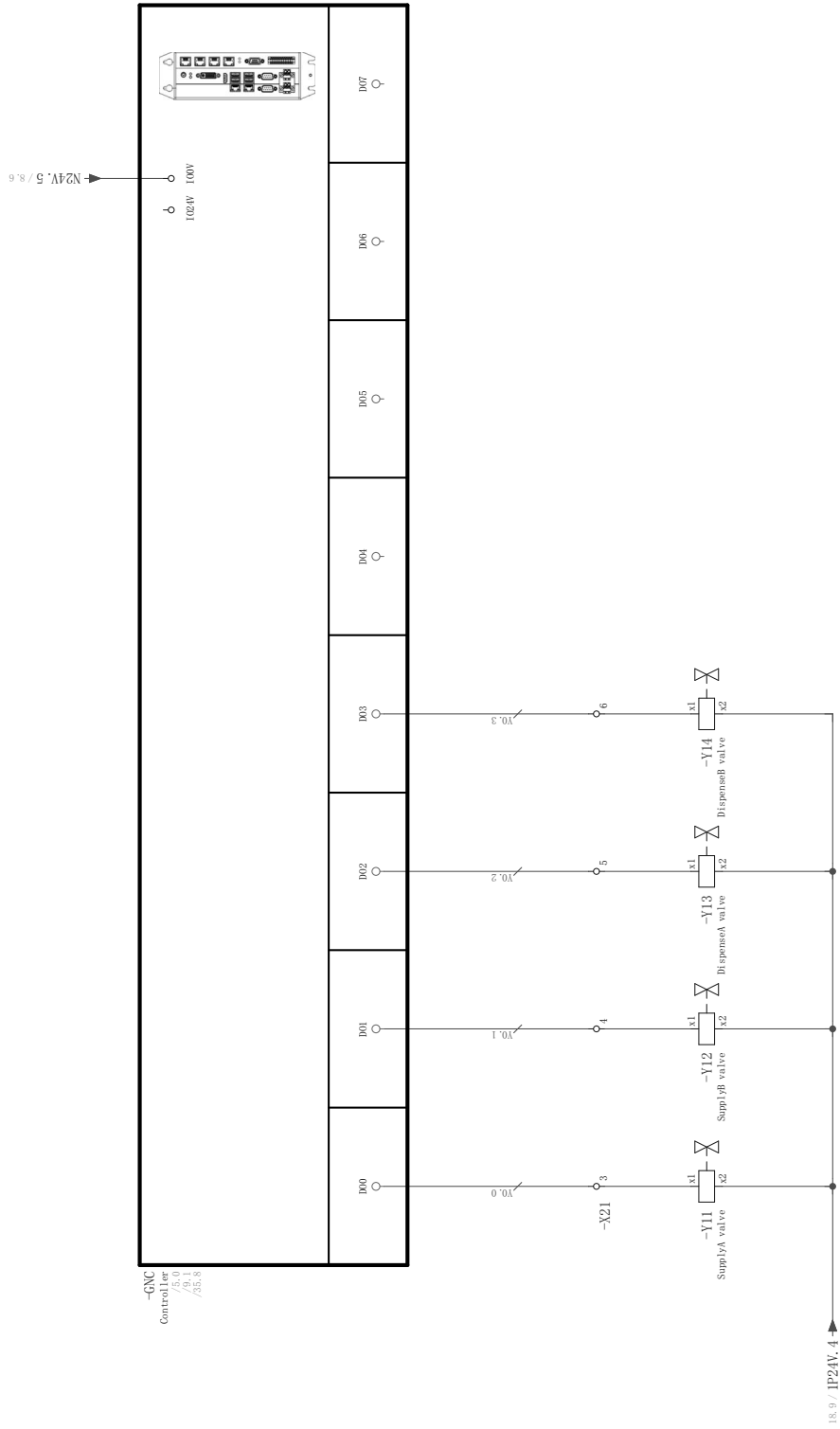
Plug power supply



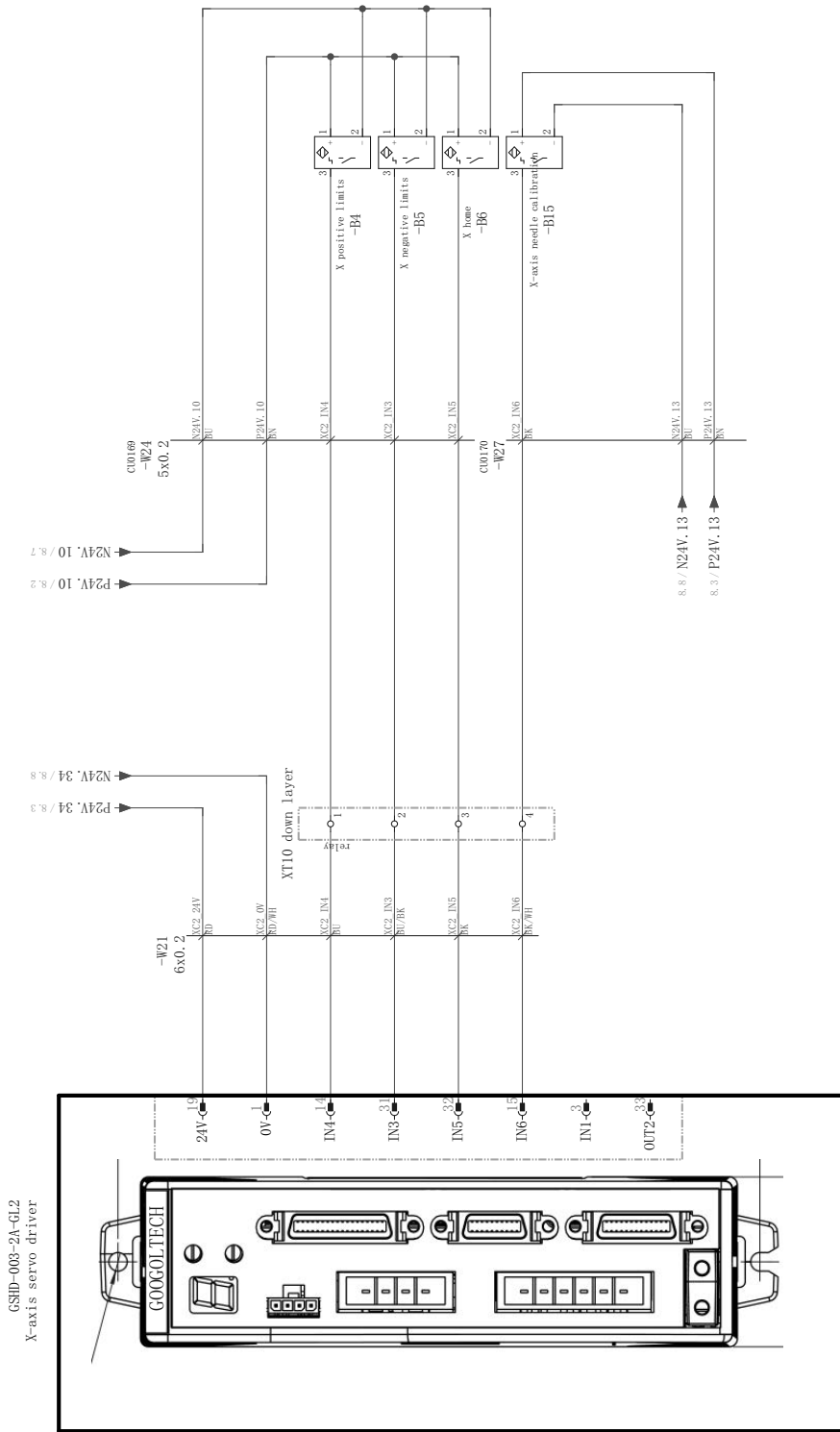
Cooling fan



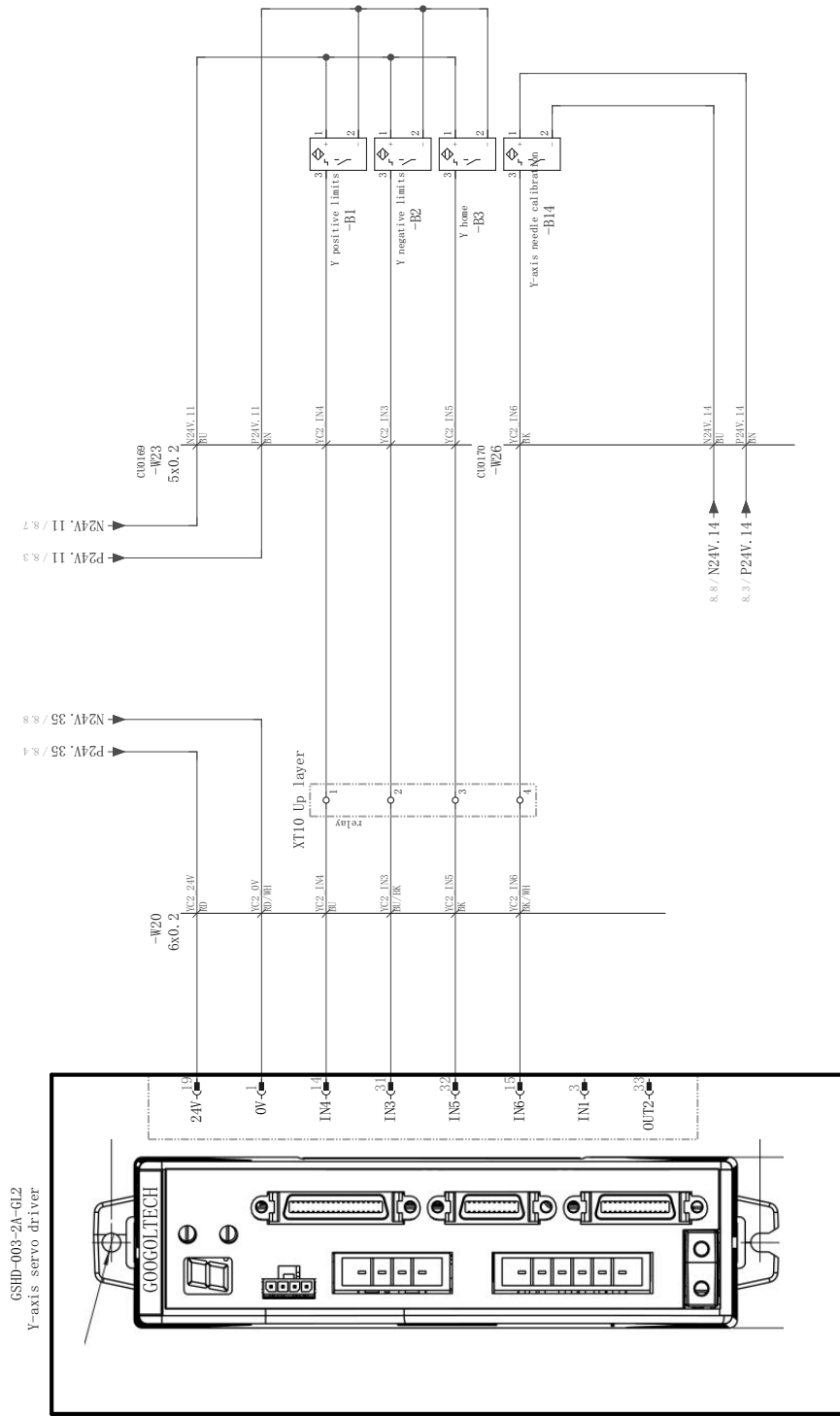
GNC-io



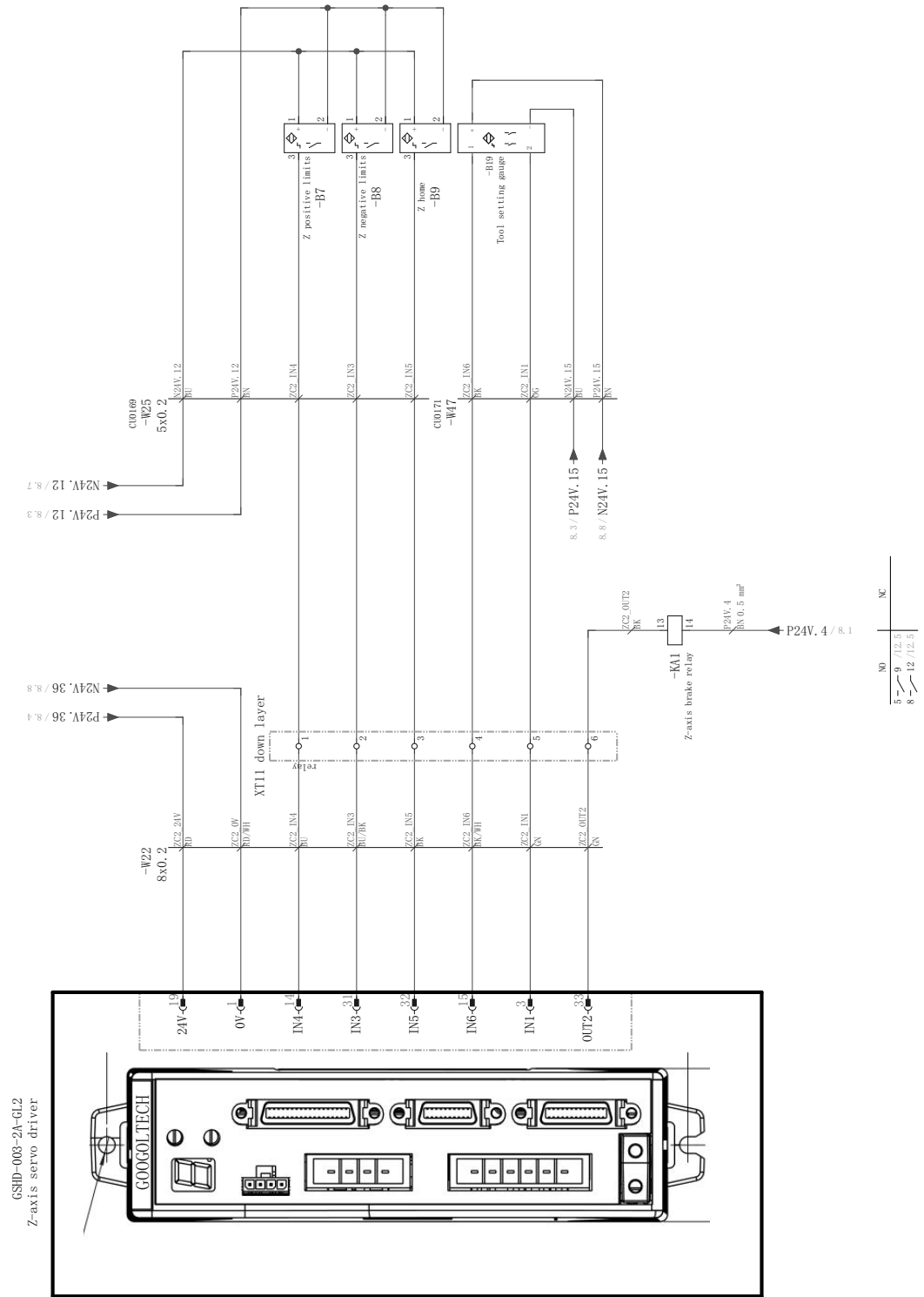
X axis servo system axis limit signal



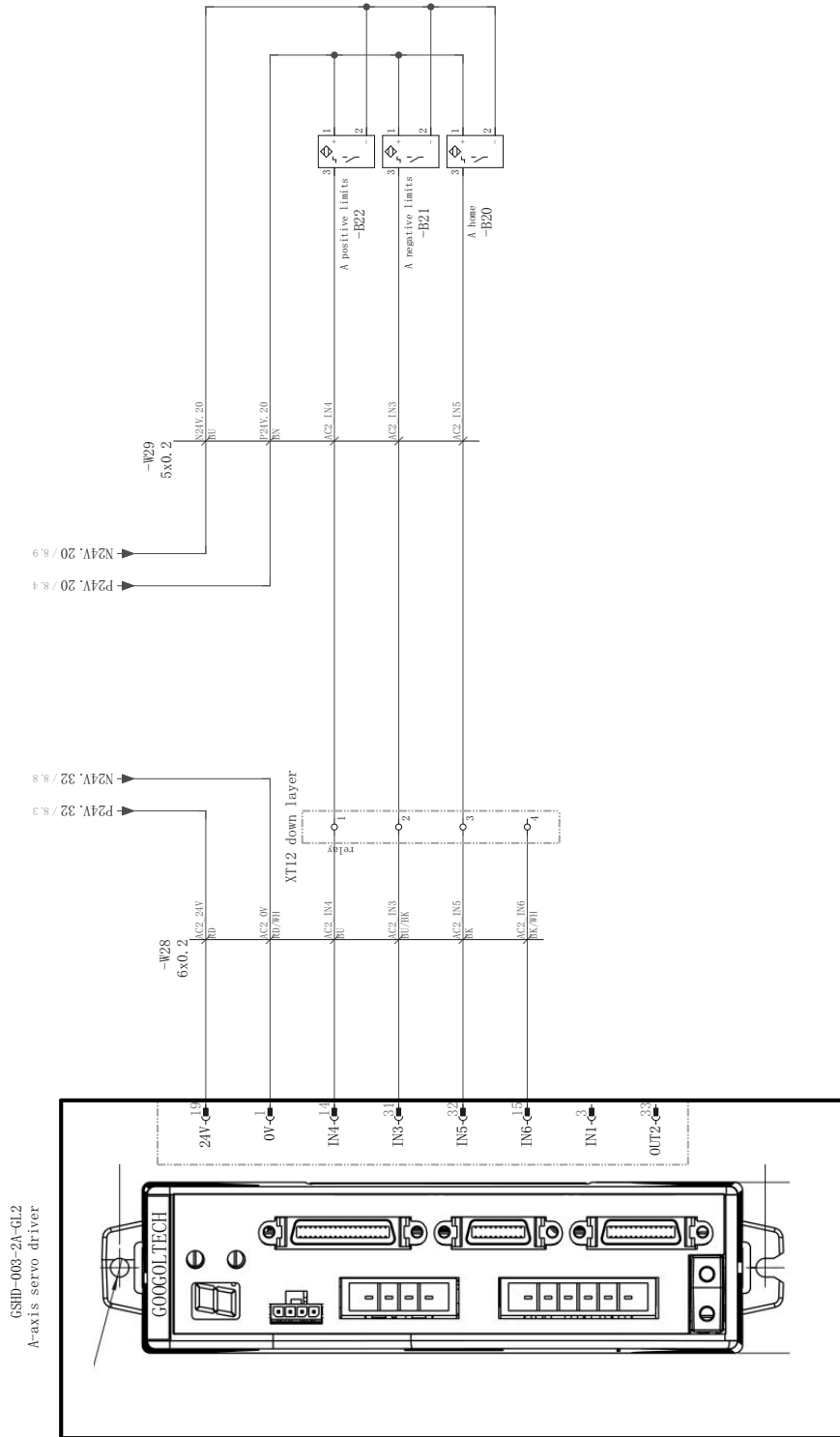
Y axis servo system axis limit signal



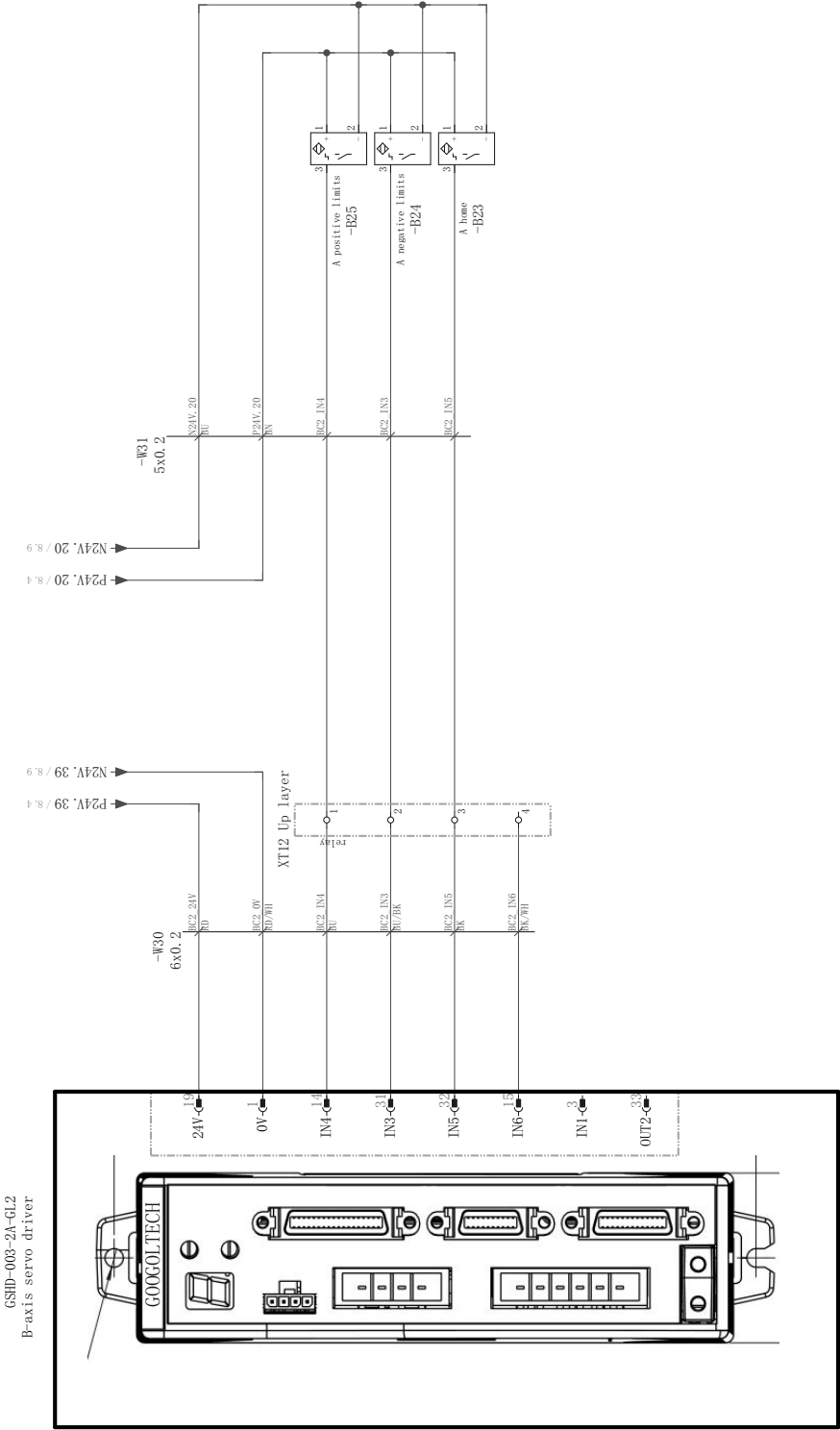
Z axis servo system axis limit signal



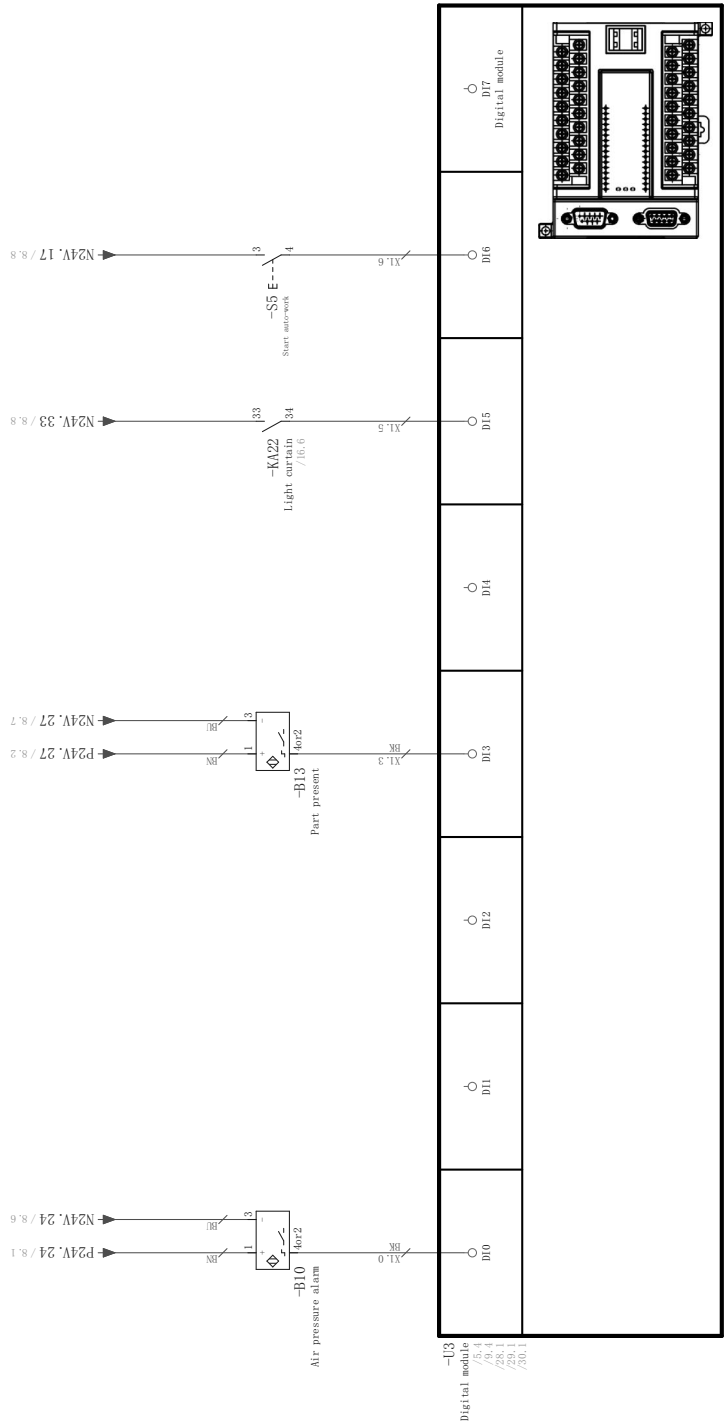
A axis servo system axis limit signal



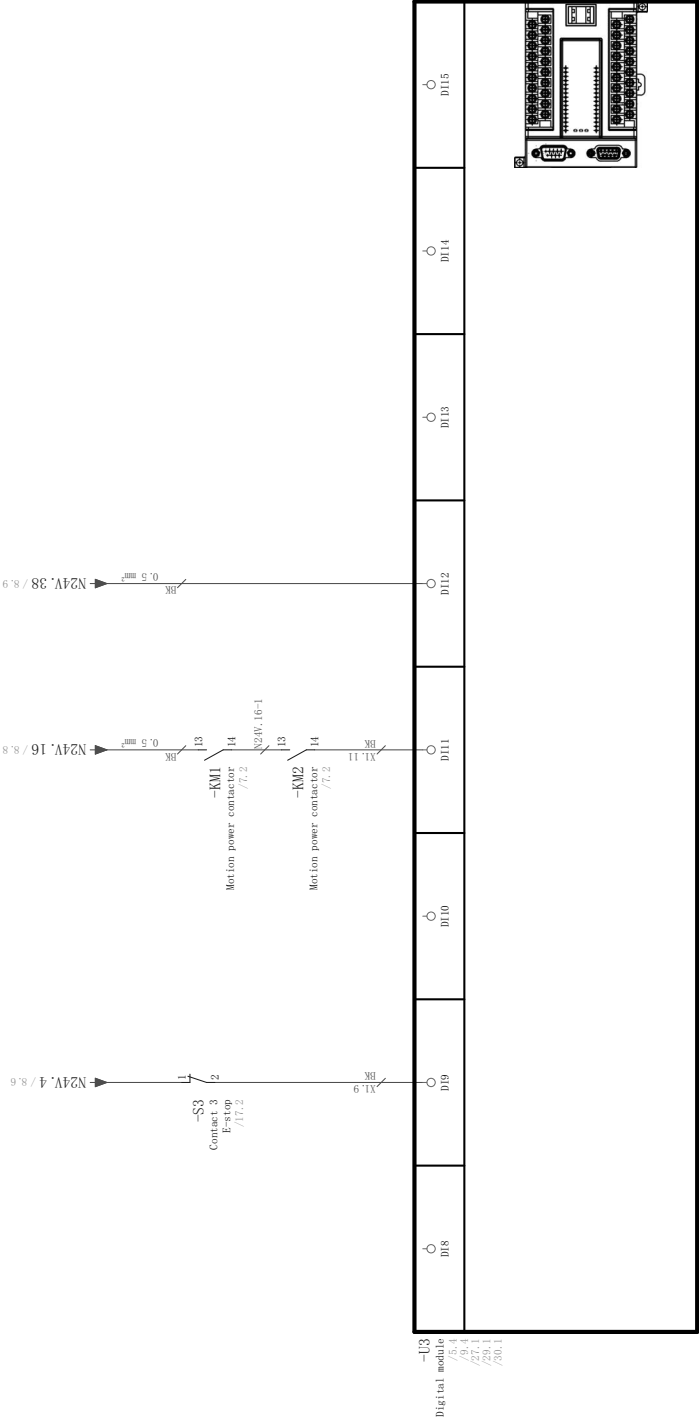
B axis servo system axis limit signal



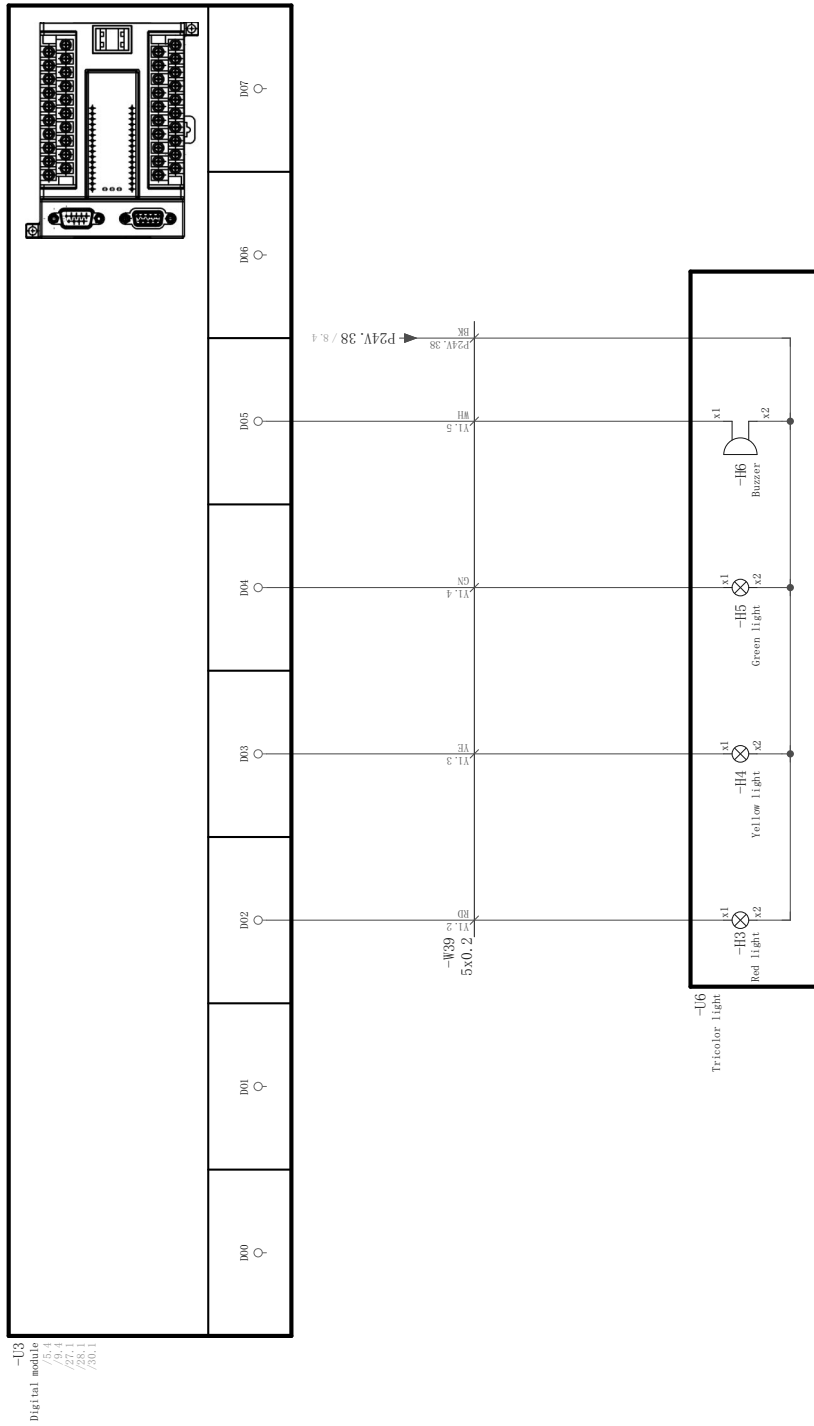
System digital 1 input signal 1



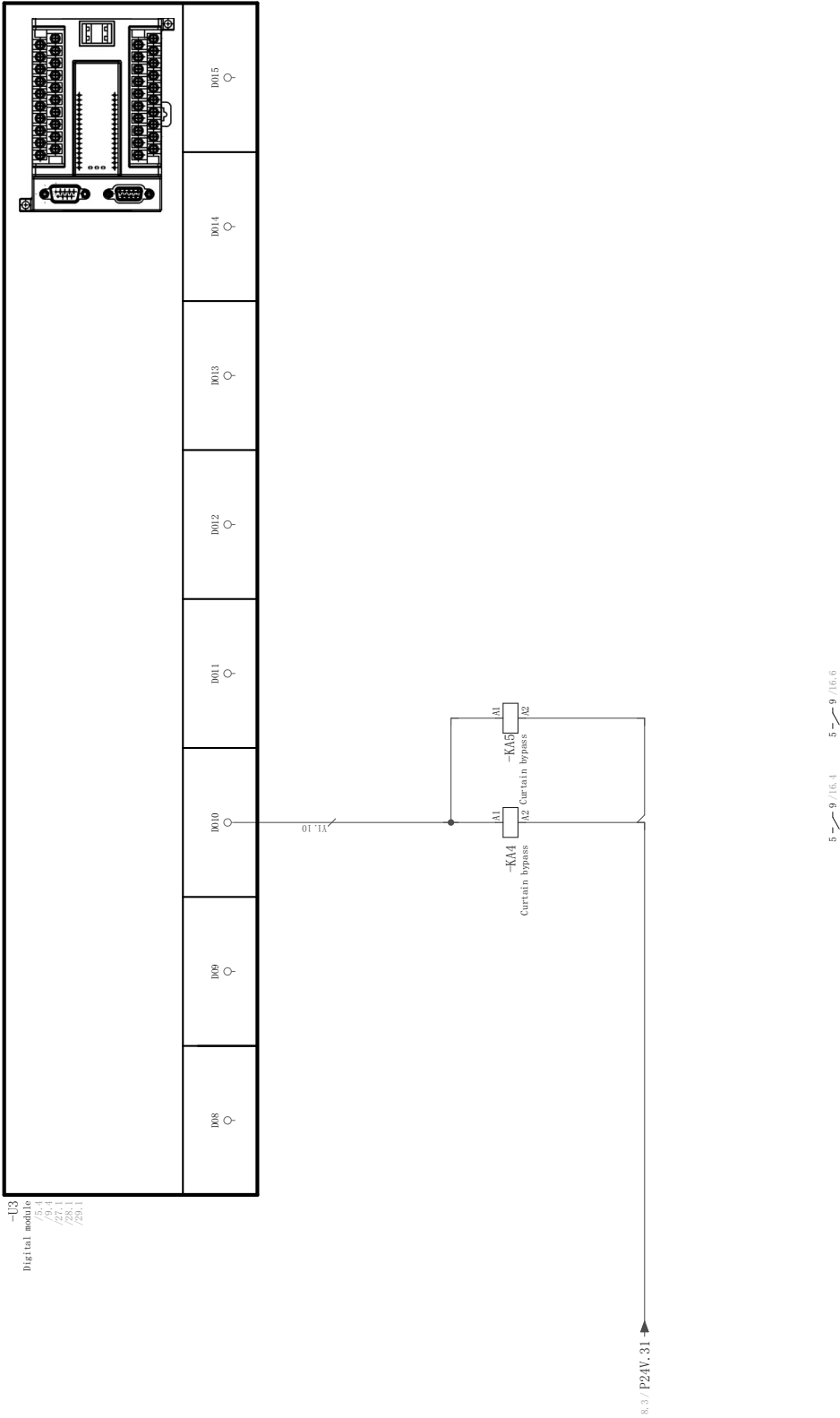
System digital 1 input signal 2



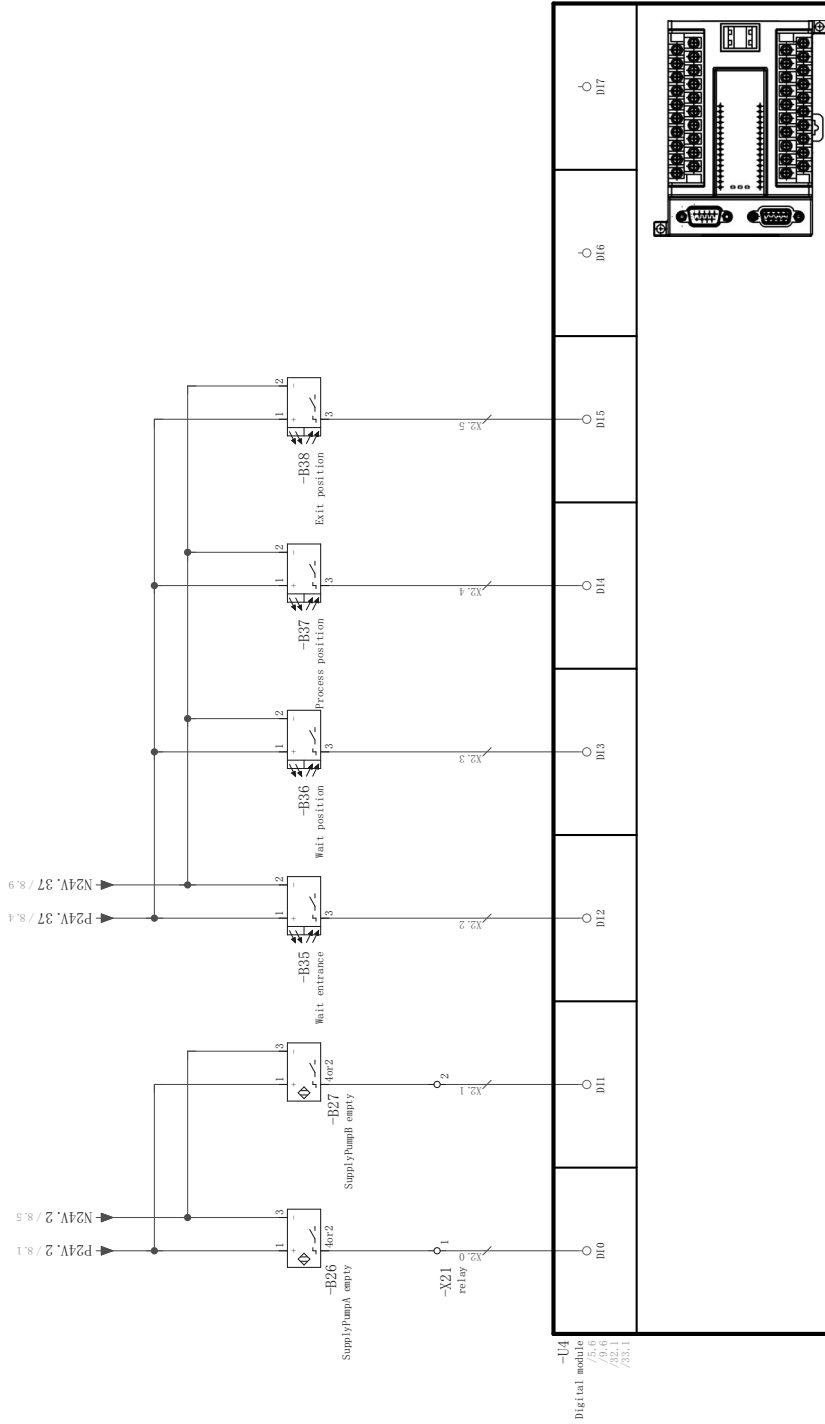
System digital 1 output signal 1



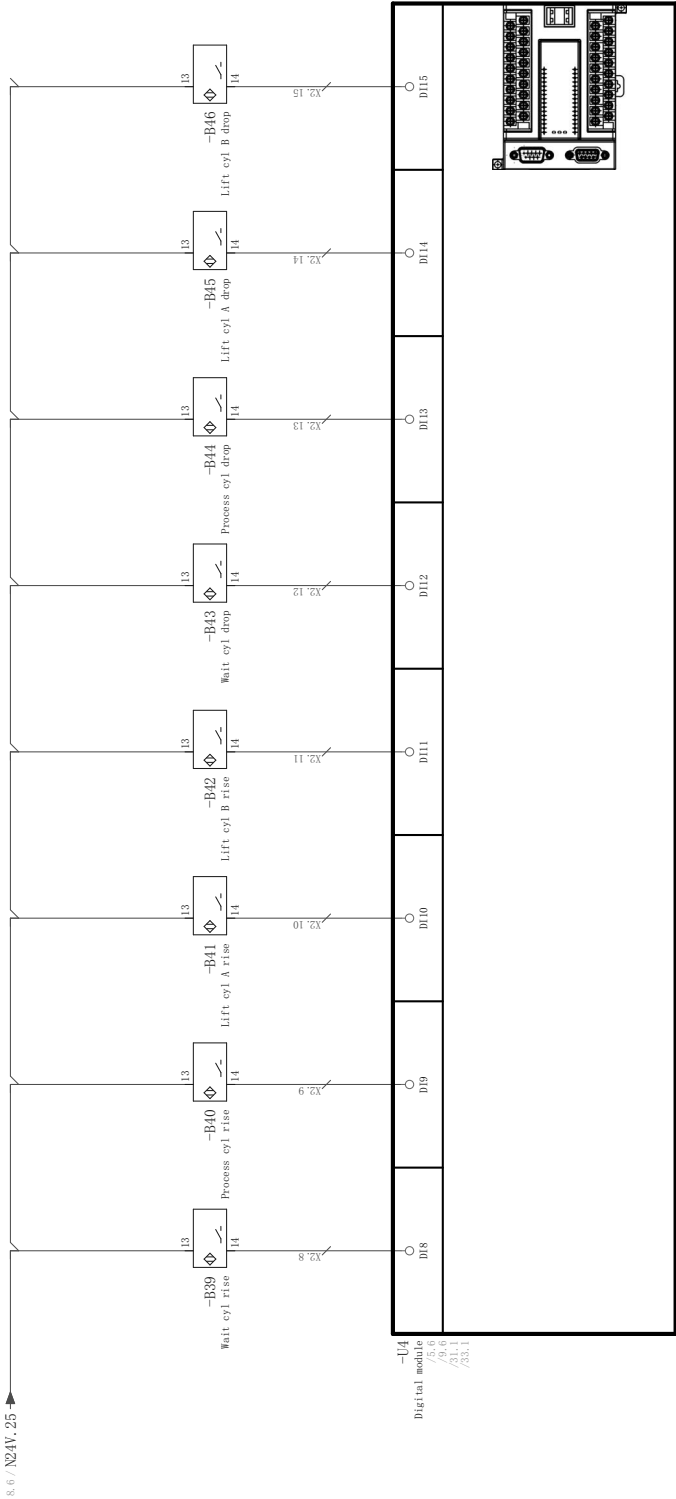
System digital 1 output signal 2



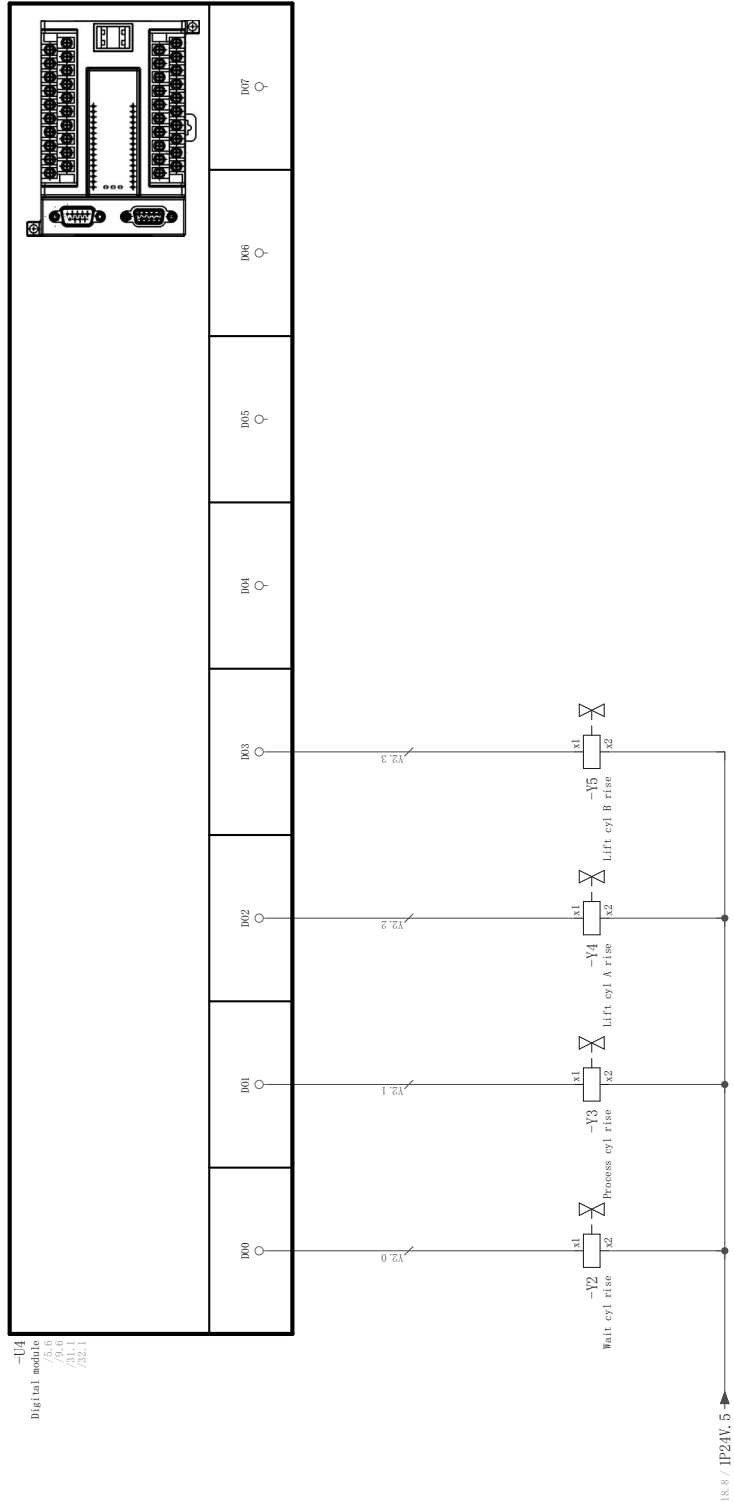
System digital 2 input signal 1



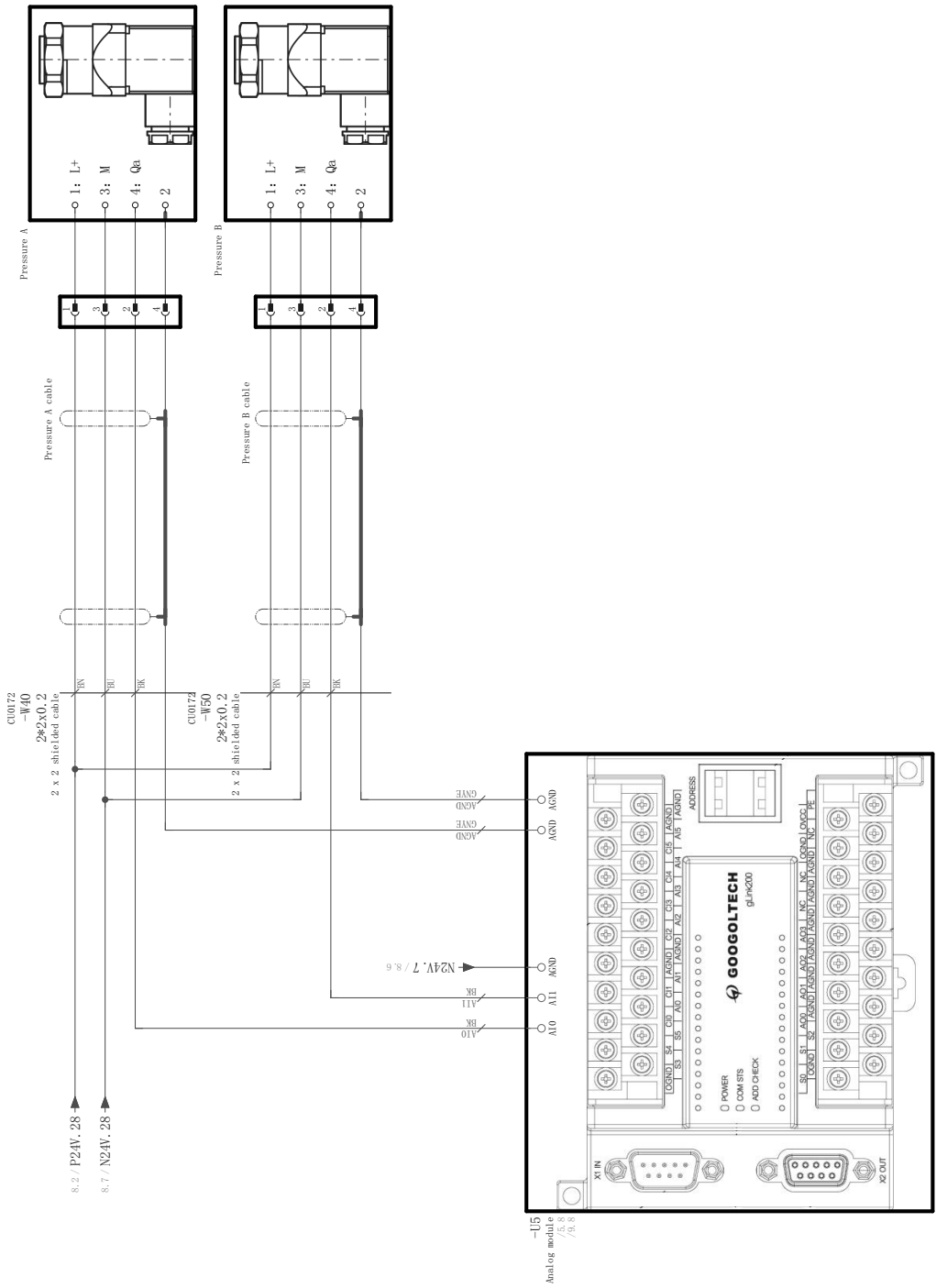
System digital 2 input signal 2



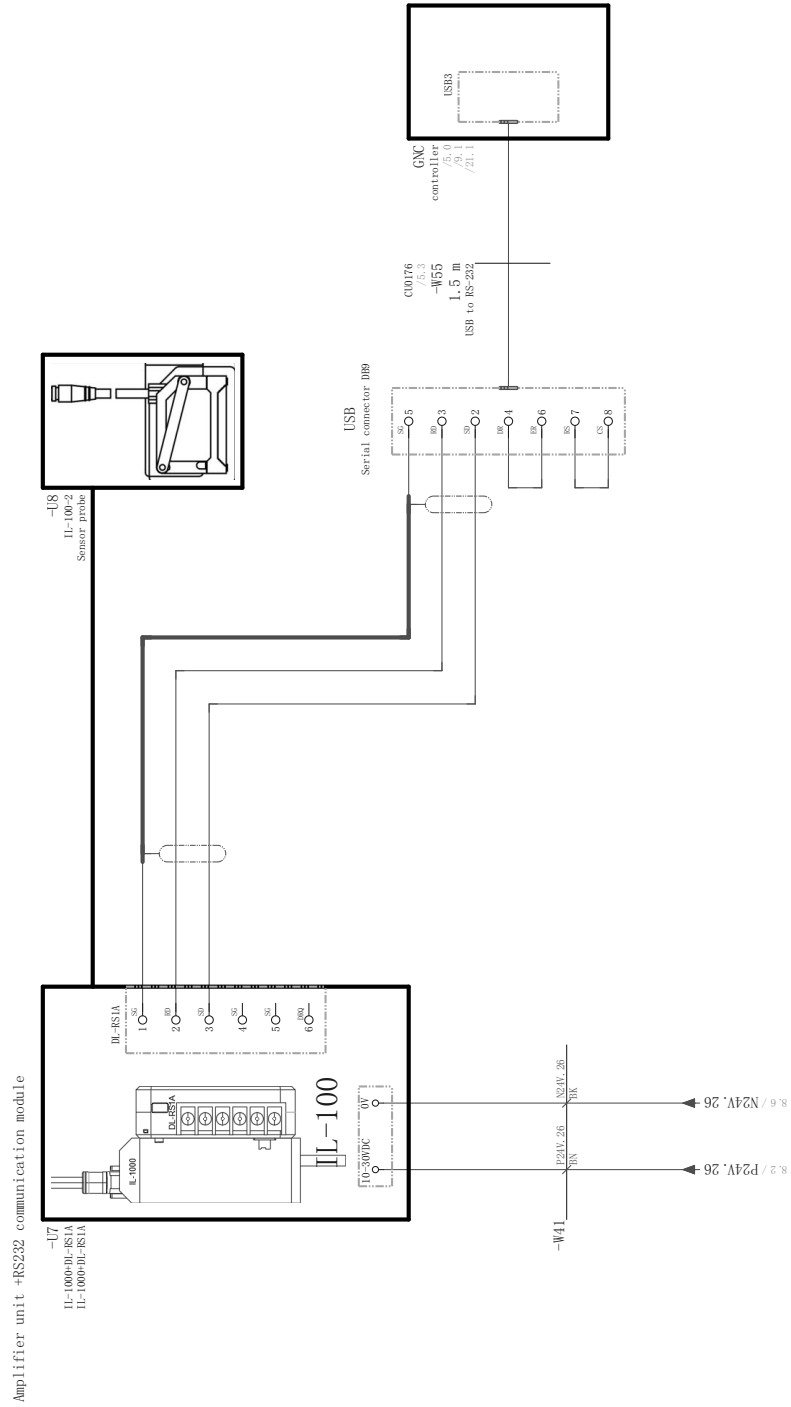
System digital 2 output signal 1



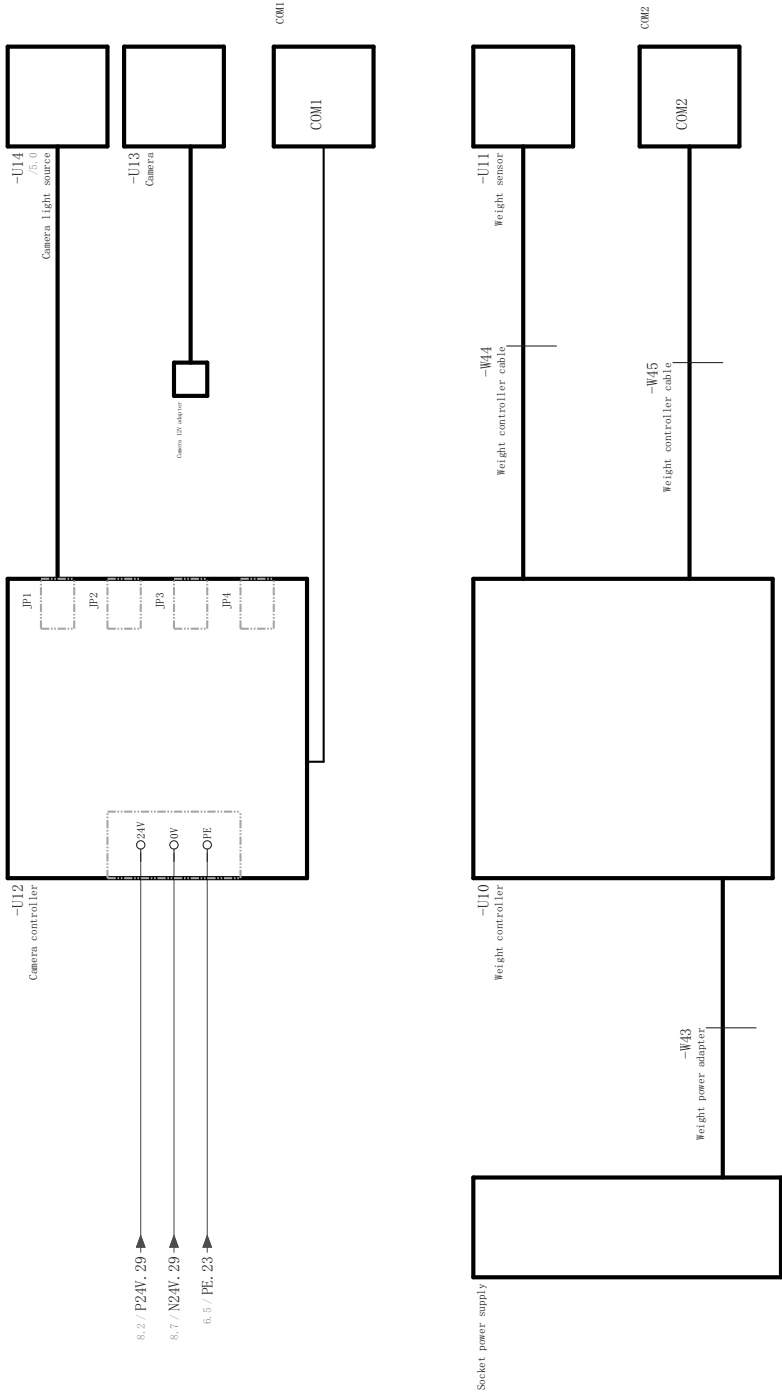
Pressure sensor



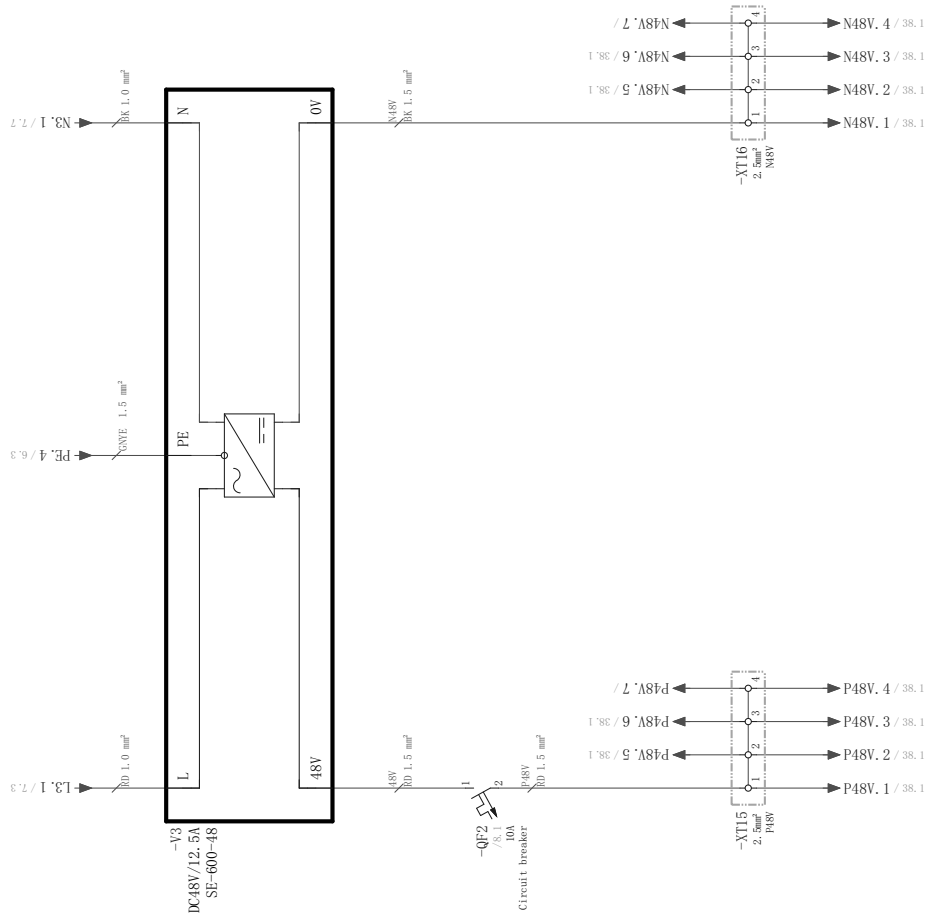
Height sensor



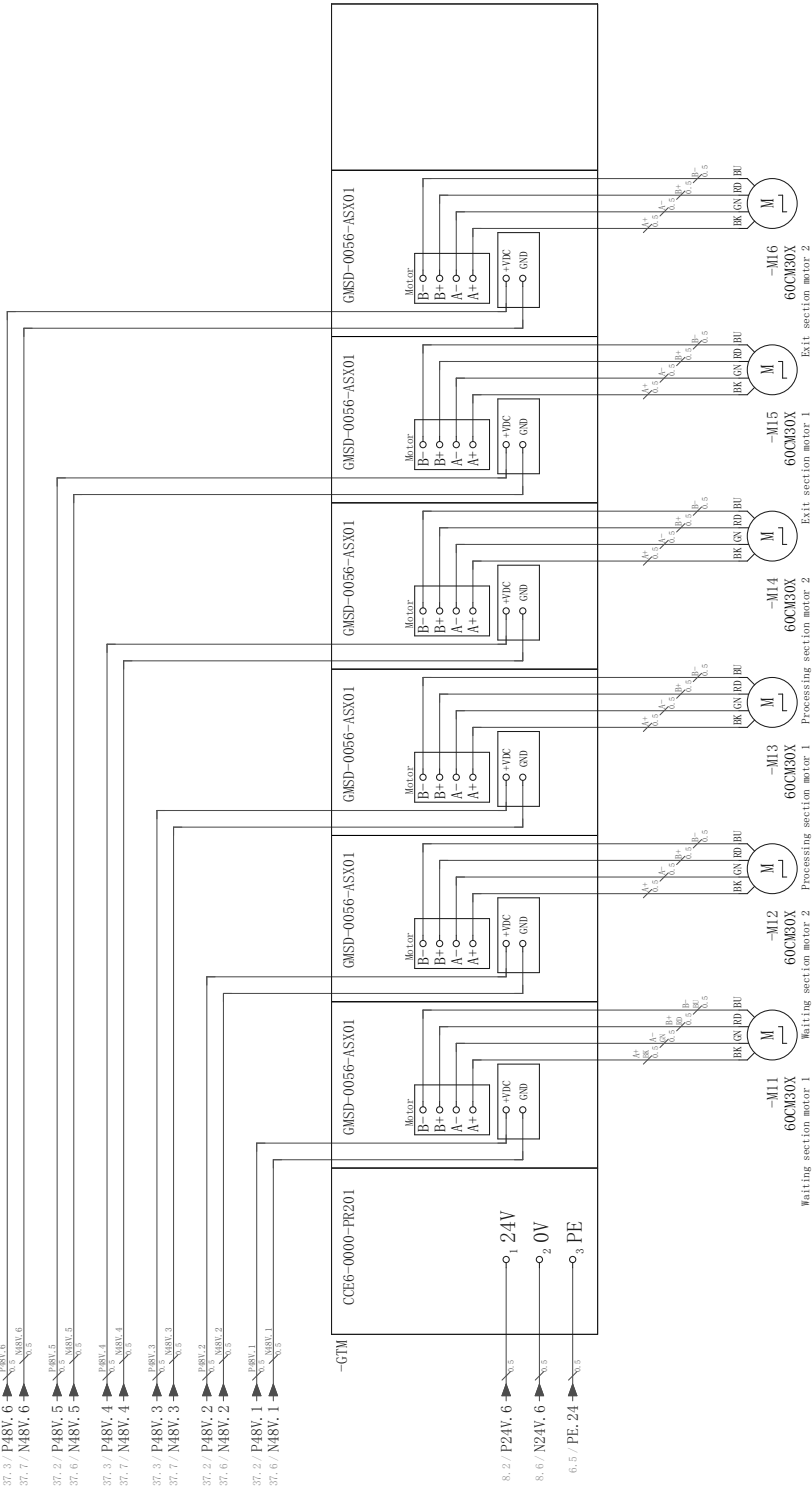
Camera control and weight control



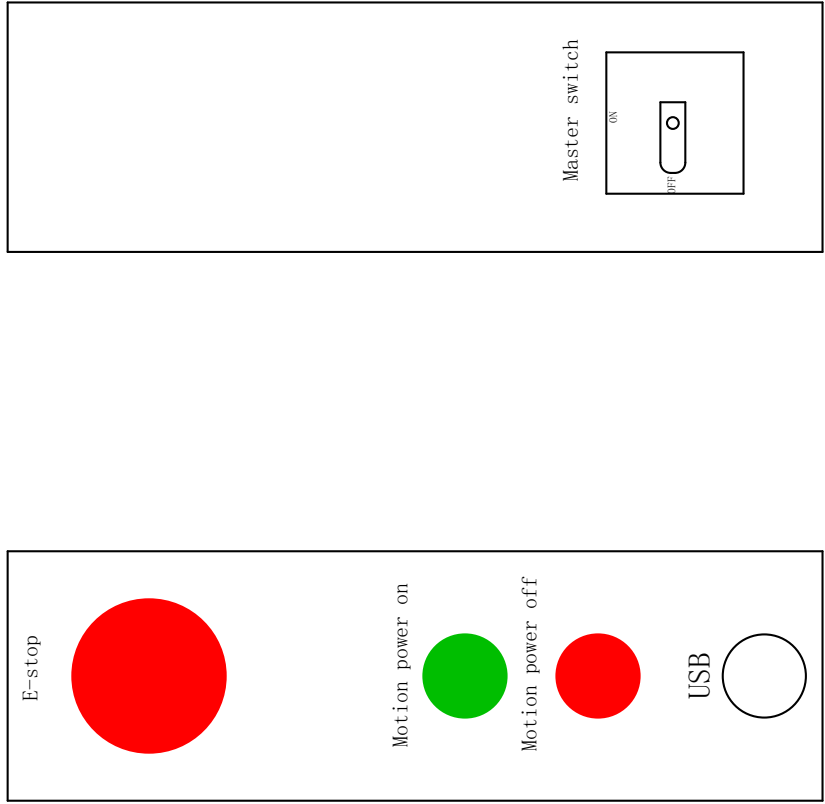
48V switch power supply



Step driver



Operating panel



California Proposition 65

CALIFORNIA RESIDENTS

 **WARNING:** Cancer and reproductive harm – www.P65warnings.ca.gov.

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Original instructions. This manual contains English. MM 3B0272C

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