

AITALMAC

Heng Sheng Road , Gao Chun Economic Development Zone ,
NANJING,211300 P.R.CHINA

CLIENTE

AITALMAC CO.,LTD

MACHINE

CNC
SAWJET

MAIN POWER SUPPLY

VOLT. 380
FREQ. 50-60

WIRING DIAGRAM

Sawjet-250705

CUBICLE DIMENSION

L (mm) 1835
H (mm) 560
P (mm) 320

CONDUCTORS DESIGNATION

COLOR	FUNCTION	MINIMUM SECTION
BLACK	power circuit A.C./D.C.	1,0mm ²
RED	A.C. auxiliary circuit	1,0mm ²
WHITE	D.C. auxiliary circuit	1,0mm ²
BLUE	N	2.5mm ²
YELLOW GREEN	protection earth	2,5mm ²
SCREEN CABLE	reference - signal	0.75 mm ²
RED +/BLUE -	thermocouples	COMPENSATED CABLE
	PLC circuit	0,25mm ² (0,5mm ² I<2A)

THE WIRING DIAGRAM IS INDICATED WITHOUT TENSION, AIR, OIL AND WATER FLOW.

LOCATION SYMBOLS

- Components on the door
- Components inside the cubicle (usually omitted)
- Machine components (usually omitted)

COMPONENTS DESIGNATION

- C Condensers
- D CNC control model
- E Component not in this list
- F Protection Devices
- FU Fuses
- G Generators, feeders
- H Signalling devices
- KA Relays
- KM Contactors
- L Drives
- M Motors
- N Analog integrated circuits
- P Switching power supply
- Q Circuit breaker
- QS Highly versatile change over switch
- R Resistors
- SQ Sensor, Limit
- S Filter
- SB Buttons
- T Transformers
- U Modulators converters
- V Rectifiers, semiconductors
- EV Solenoid valves
- X Terminal wire clamps, connectors
- Y Electricity actuating devices

COLORS

WH White	GY Gray
YE Yellow	BU Blue
RD Red	BK Black
OG Orange	GNYE GreenYellow

MAIN CIRCUIT BREAKER OPERATING TIME: _____
SYMMETRICAL SHORT-CIRCUIT CURRENT: _____

WARNING: THE PROTECTION OF THE MAIN POWER SUPPLY AND THE CONNECTION TO THE EARTH'S SYSTEM ARE DEPENDANT ON THE CUSTOMER. IN RESPECT TO THE EUROPEAN STANDARD EN60439-1 SPECIFICATIONS - CEI 17-13.1 DOSSIER 1433 - AND DPR 547 DD 27/04/1955, THE MAIN POWER SUPPLY MUST BE PROTECTED WITH A PROPER MAGNETIC-THERMAL SWITCH HAVING BREAKING CAPACITY NOT LOWER THAN 10 KILOAMPERE.

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Designed By :

ZLJ

Checked By :

Trimness By :

Description :

Machine :

Sawjet

Date:

07.10.2025

Revision:

Sawjet-250705

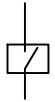
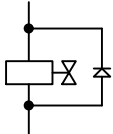
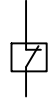
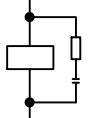
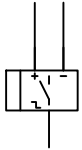
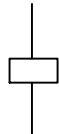
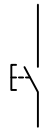

Approved By :

Pag.

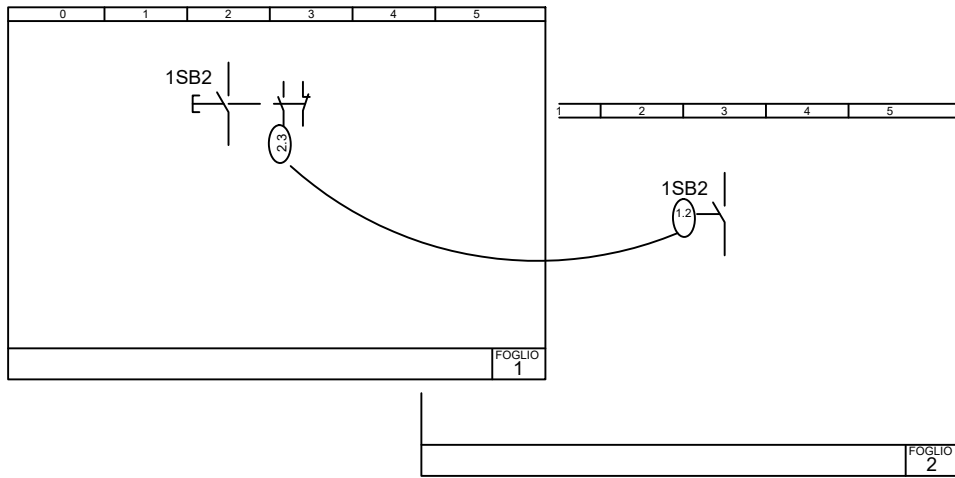
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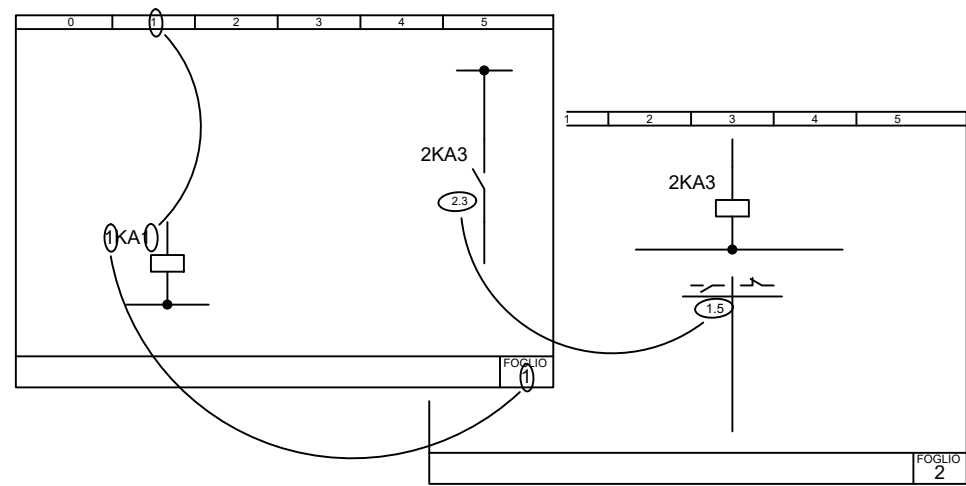
1.1

SYMBOL	MEANING	SYMBOL	MEANING
	NORMALLY OPEN CONTACT		SOLENOID VALVE
	NORMALLY CLOSED CONTACT		AC CONTACTOR
	SENSOR		RELAY
	BUTTON		
	LAMP		

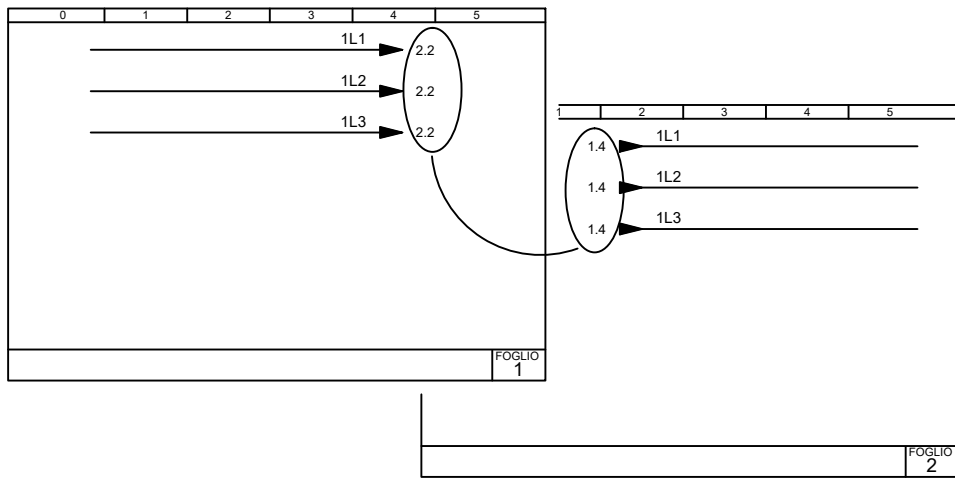
COMPONENT REFERENCE



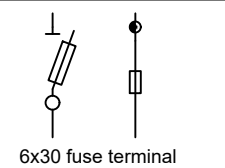
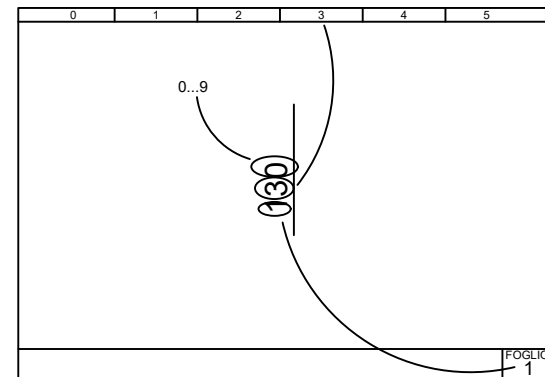
COMPONENT NAME/COIL-CONTACT POSITION



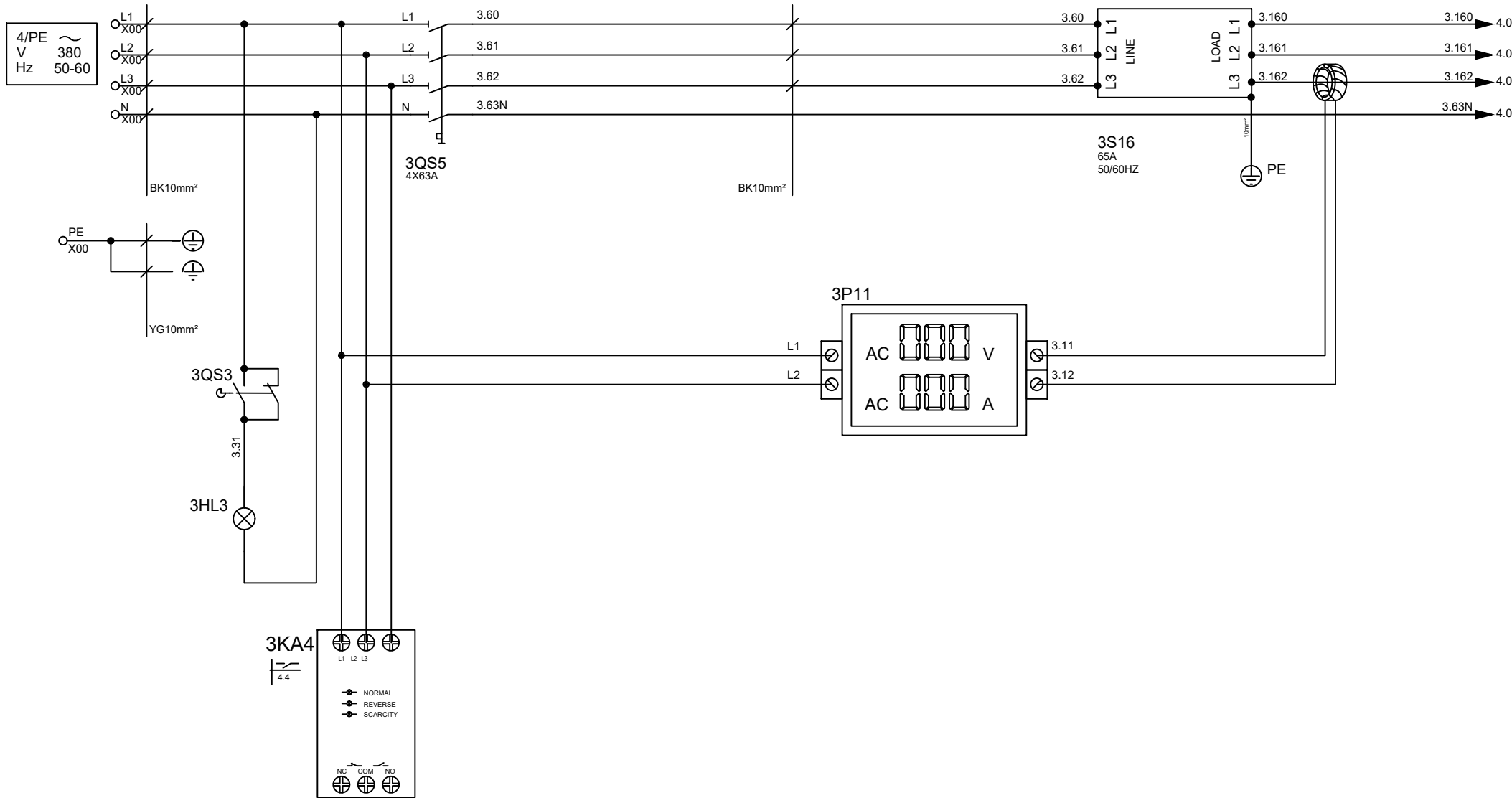
SIGNALS



WIRE NUMBER

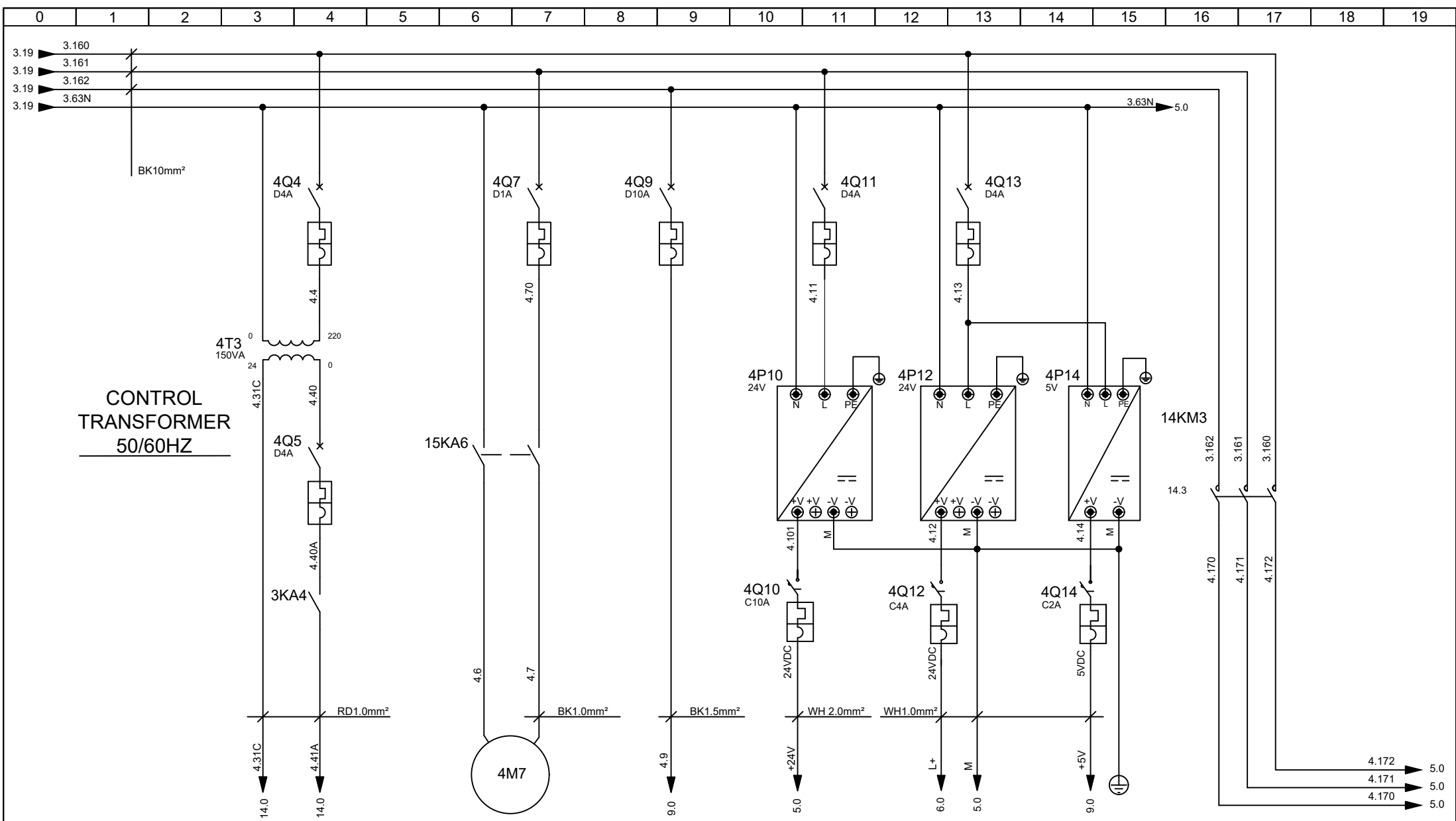


0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19



EXAMINE
AND PHASE
REPAIR PROTECTION
LAMP RELAY GENERAL
SWITCH

FILTER



AUXILIARY
CIRCUIT
SUPPLY

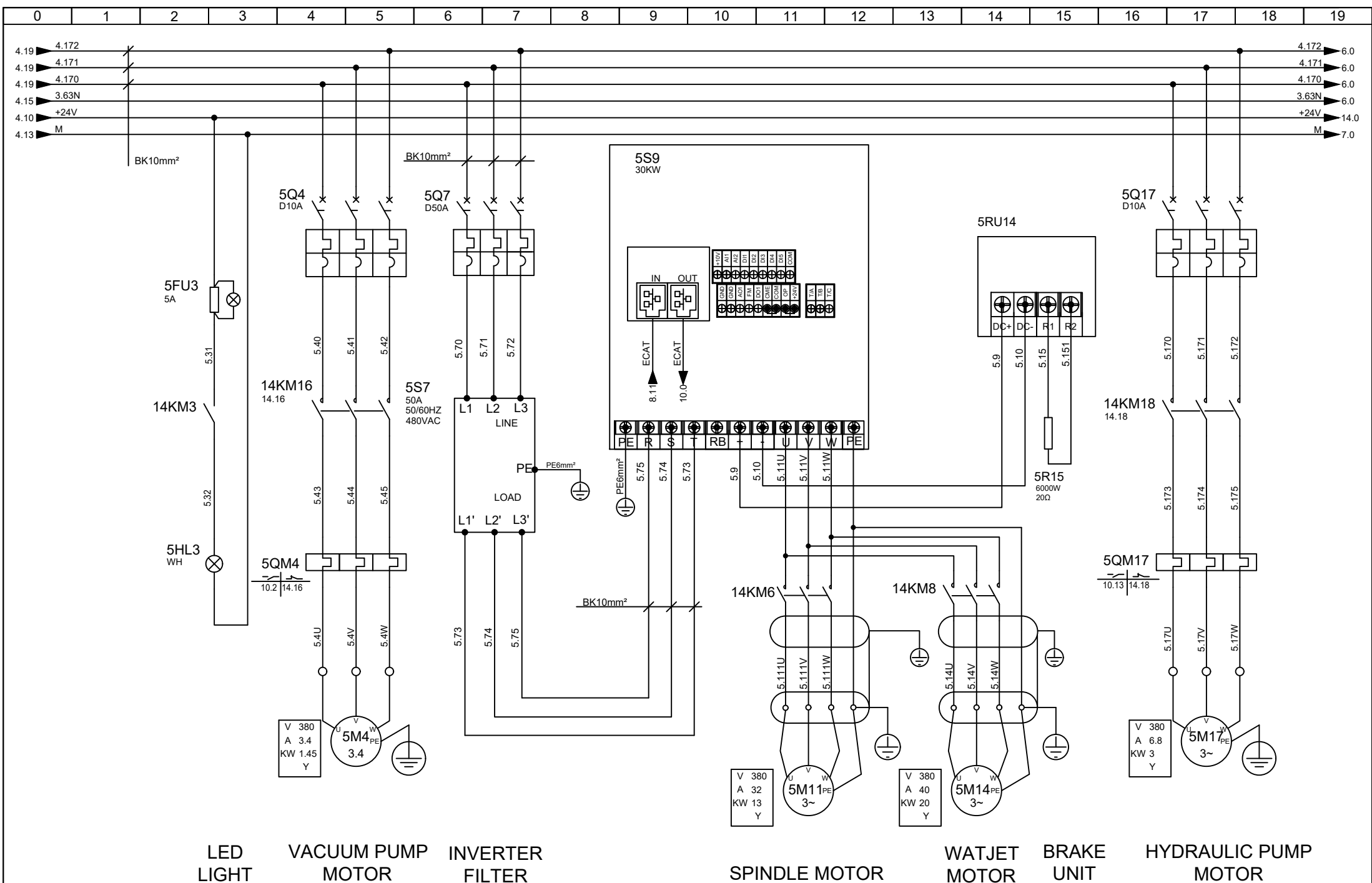
GREASE
PUMP

PC
POWER

POWER SUPPLY
24VDC10A

POWER CONTROL
24VDC5A 5VDC3A

GENERAL
CONTACTOR



LED LIGHT

VACUUM PUMP MOTOR

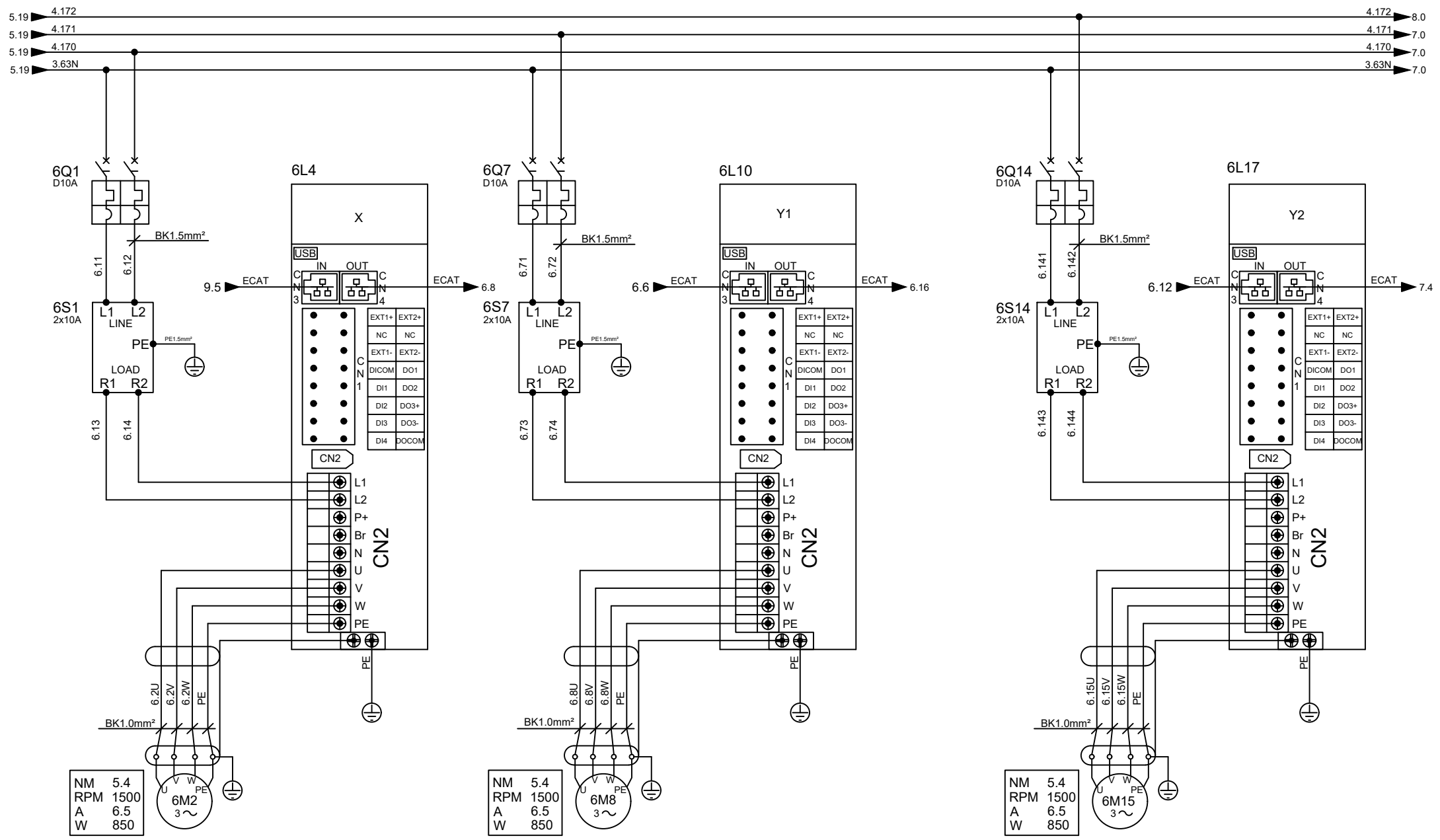
INVERTER FILTER

SPINDLE MOTOR

WATJET MOTOR

BRAKE UNIT

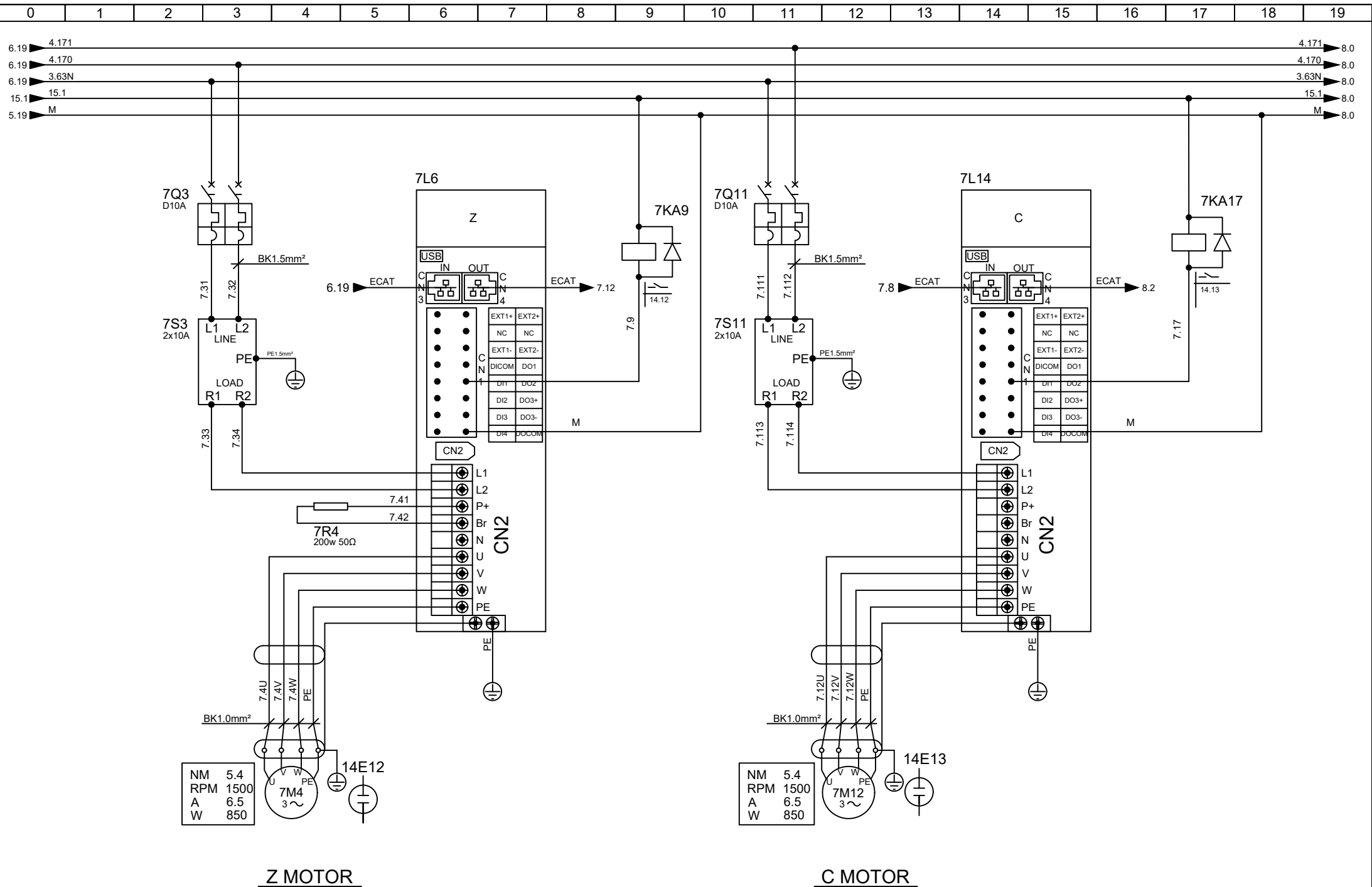
HYDRAULIC PUMP MOTOR



X MOTOR

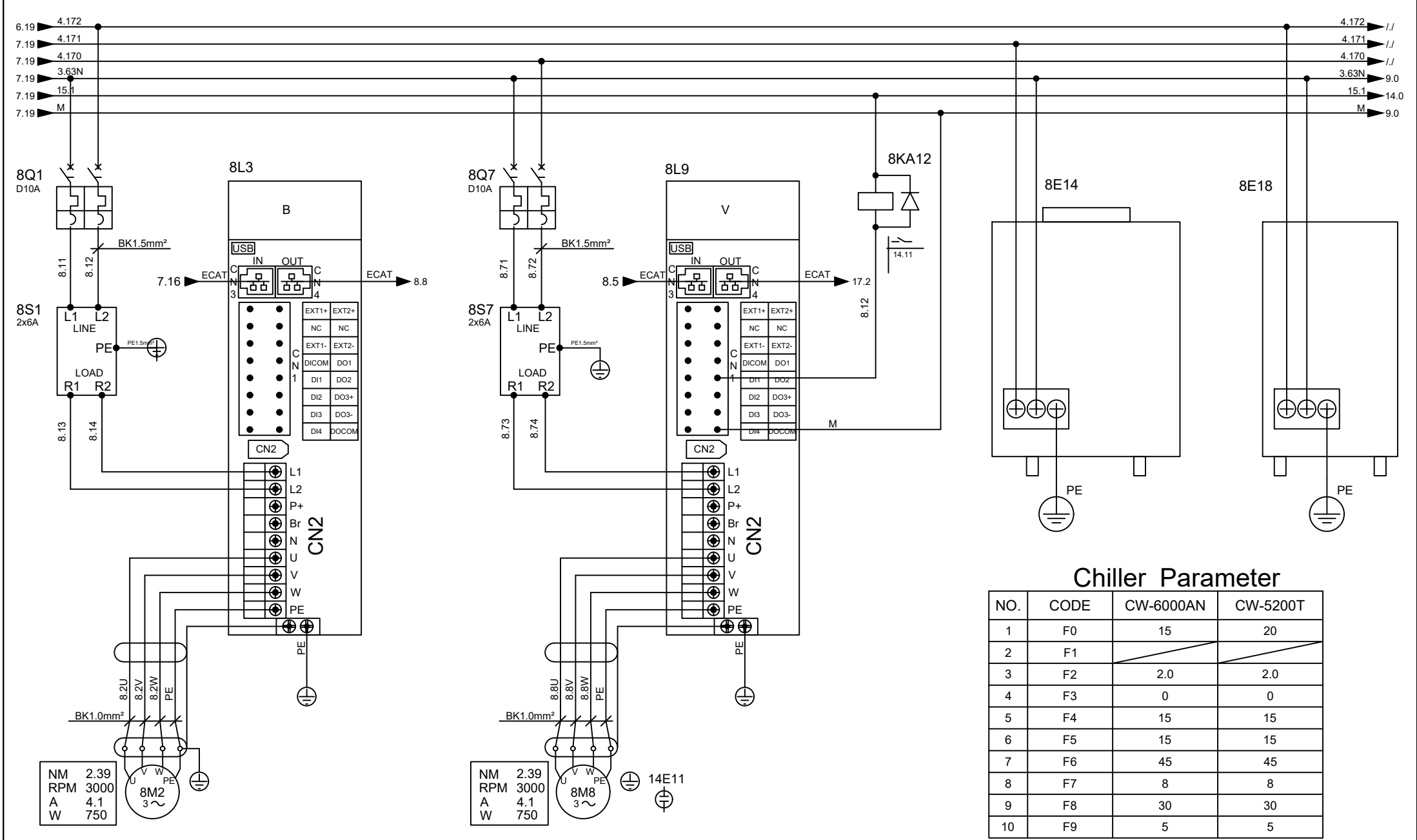
Y1 MOTOR

Y2 MOTOR



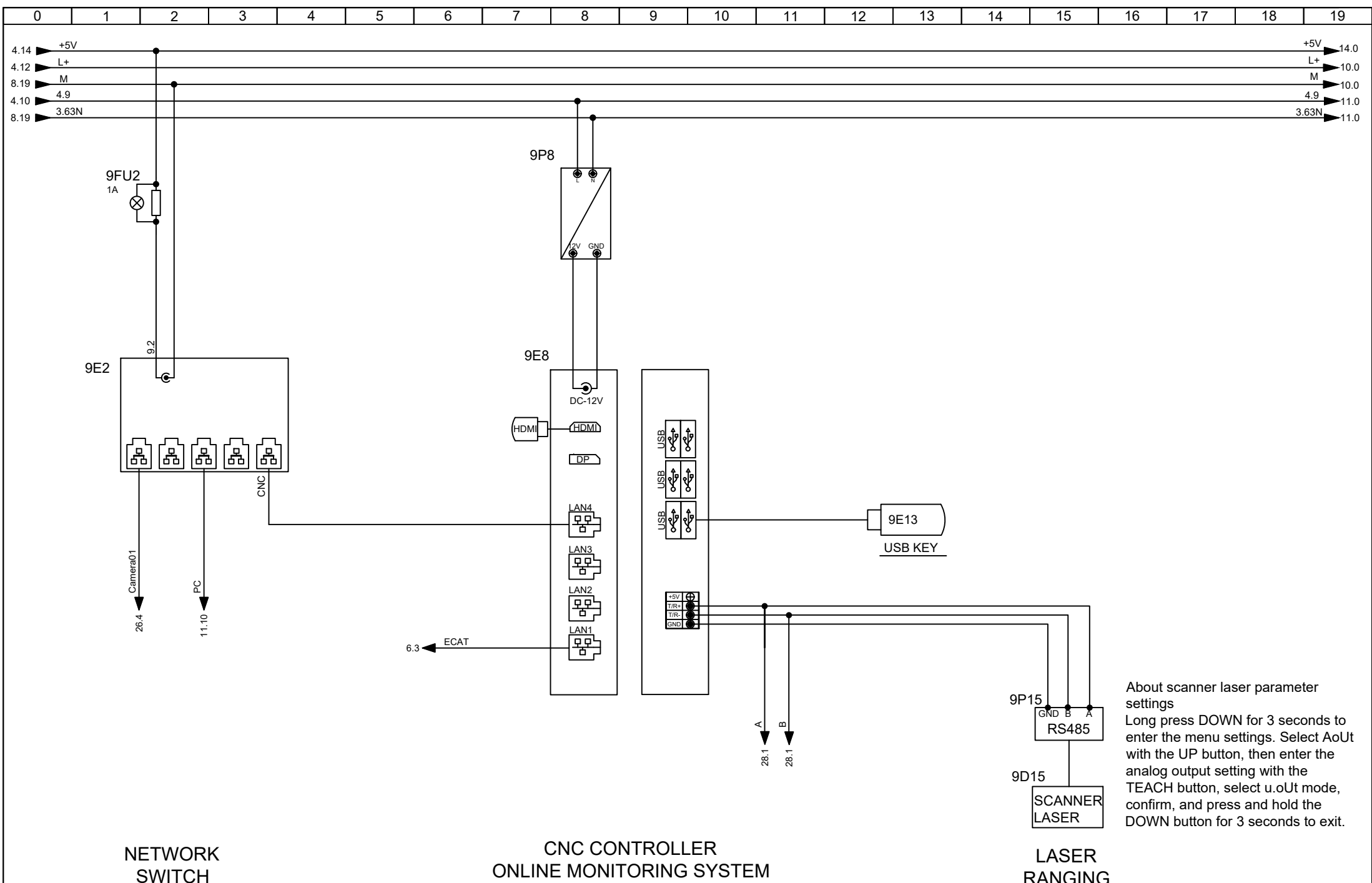
Z MOTOR

C MOTOR



Chiller Parameter

NO.	CODE	CW-6000AN	CW-5200T
1	F0	15	20
2	F1		
3	F2	2.0	2.0
4	F3	0	0
5	F4	15	15
6	F5	15	15
7	F6	45	45
8	F7	8	8
9	F8	30	30
10	F9	5	5

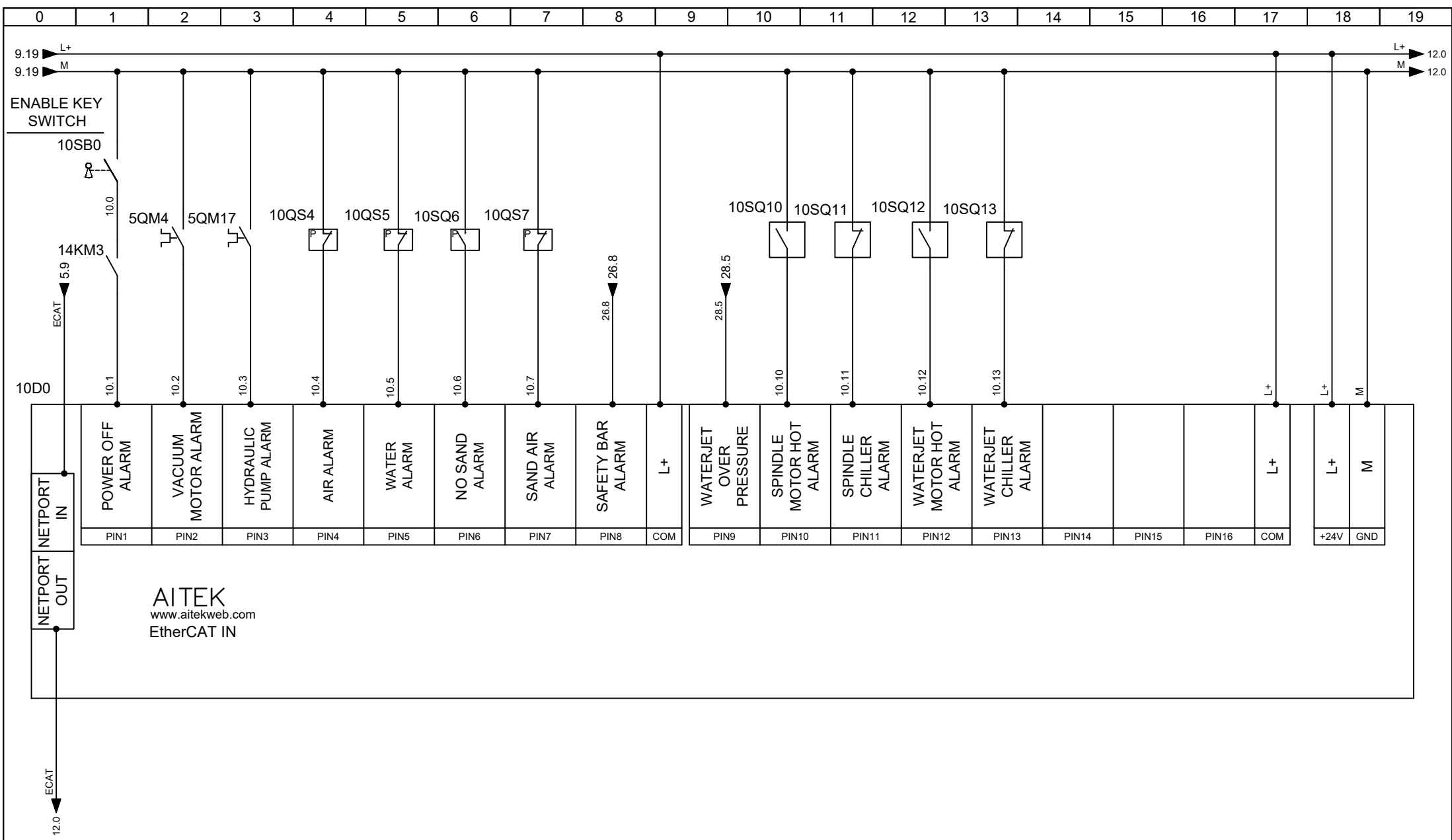


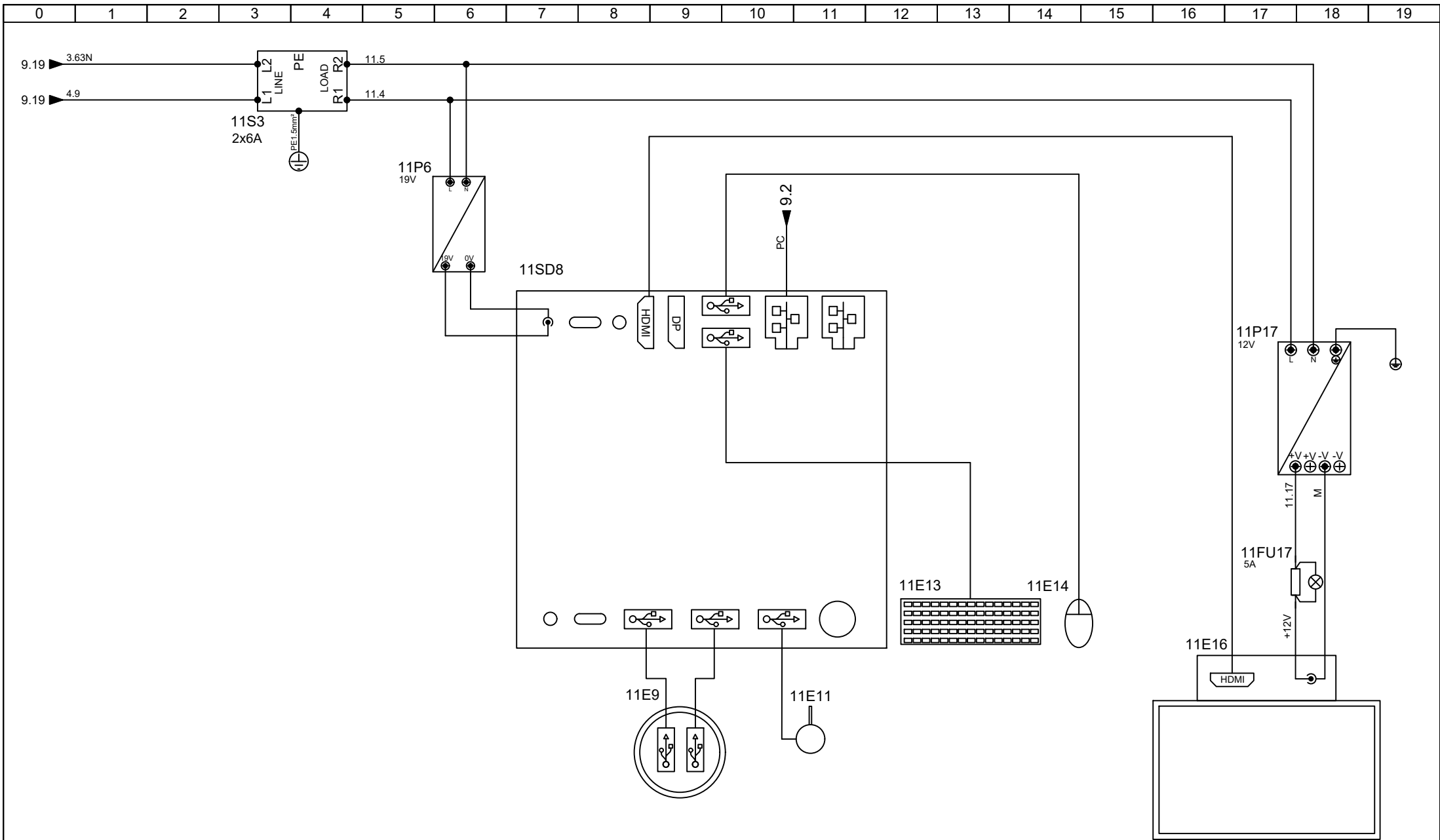
About scanner laser parameter settings
 Long press DOWN for 3 seconds to enter the menu settings. Select AoUt with the UP button, then enter the analog output setting with the TEACH button, select u.oUt mode, confirm, and press and hold the DOWN button for 3 seconds to exit.

NETWORK SWITCH

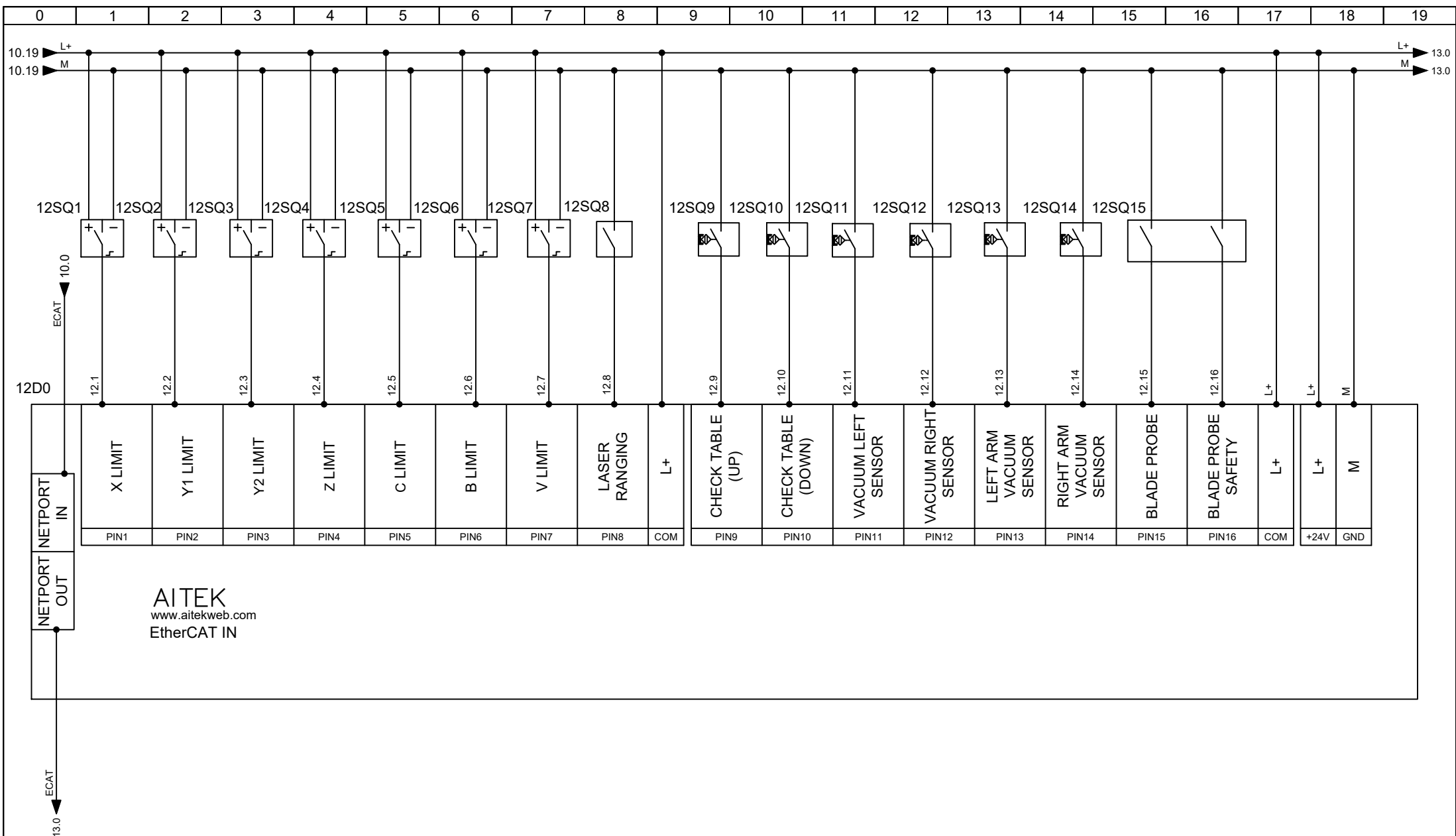
CNC CONTROLLER
 ONLINE MONITORING SYSTEM

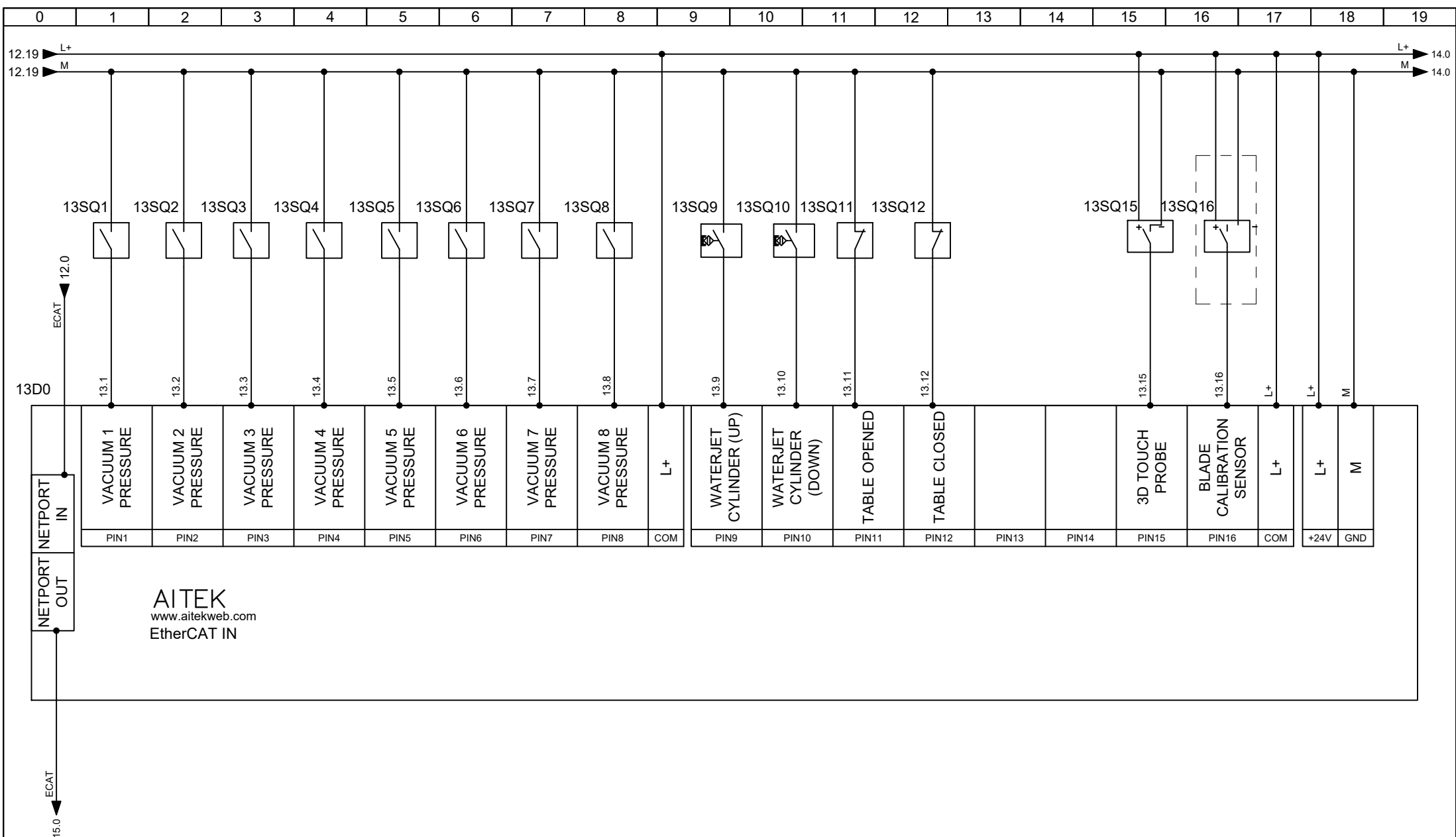
LASER RANGING





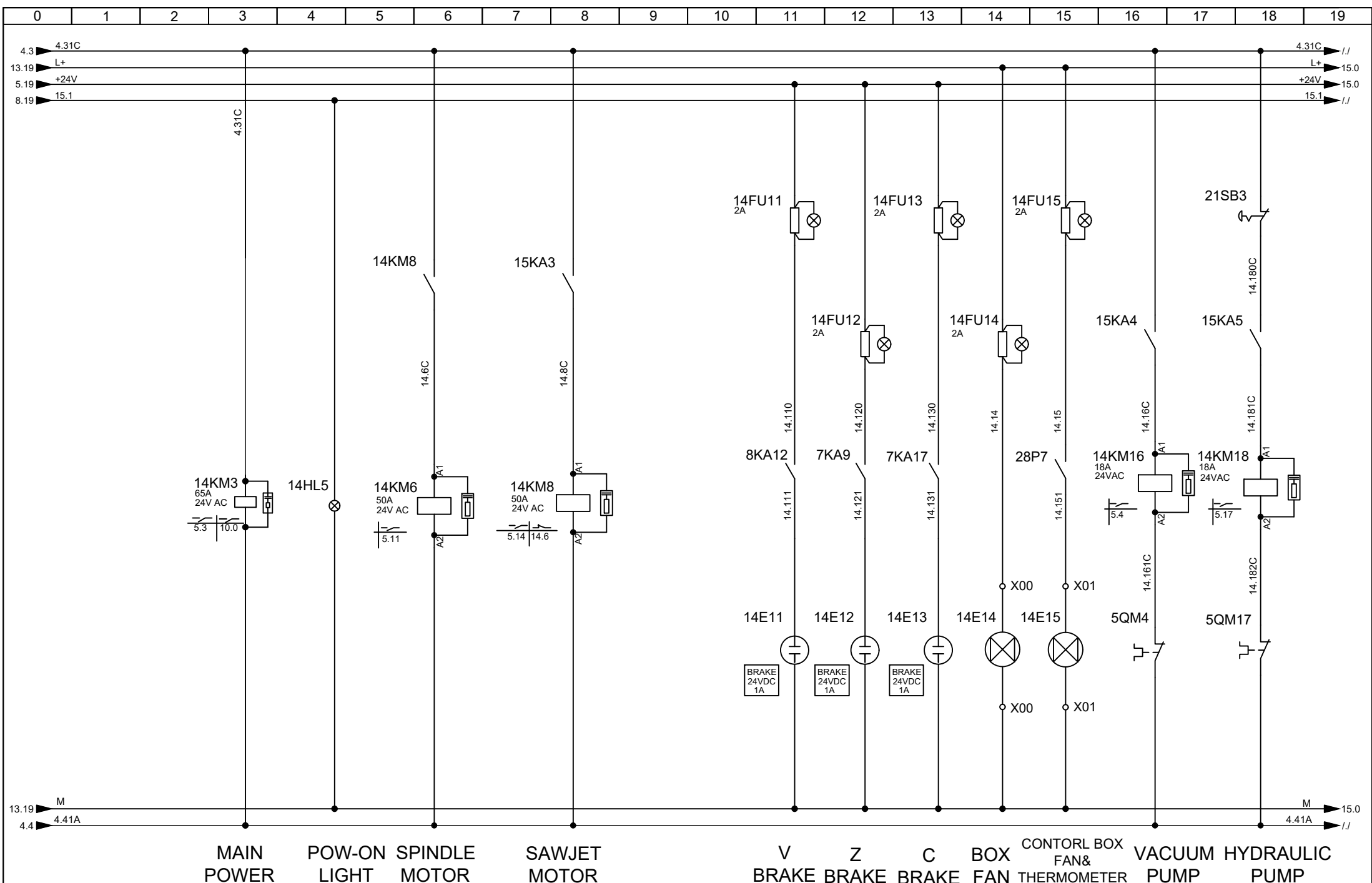
WINDOWS PC
USB EXPANSION PORT
REMOTE WIRELESS RECEIVER
KEYBOARD & MOUSE
MONITOR





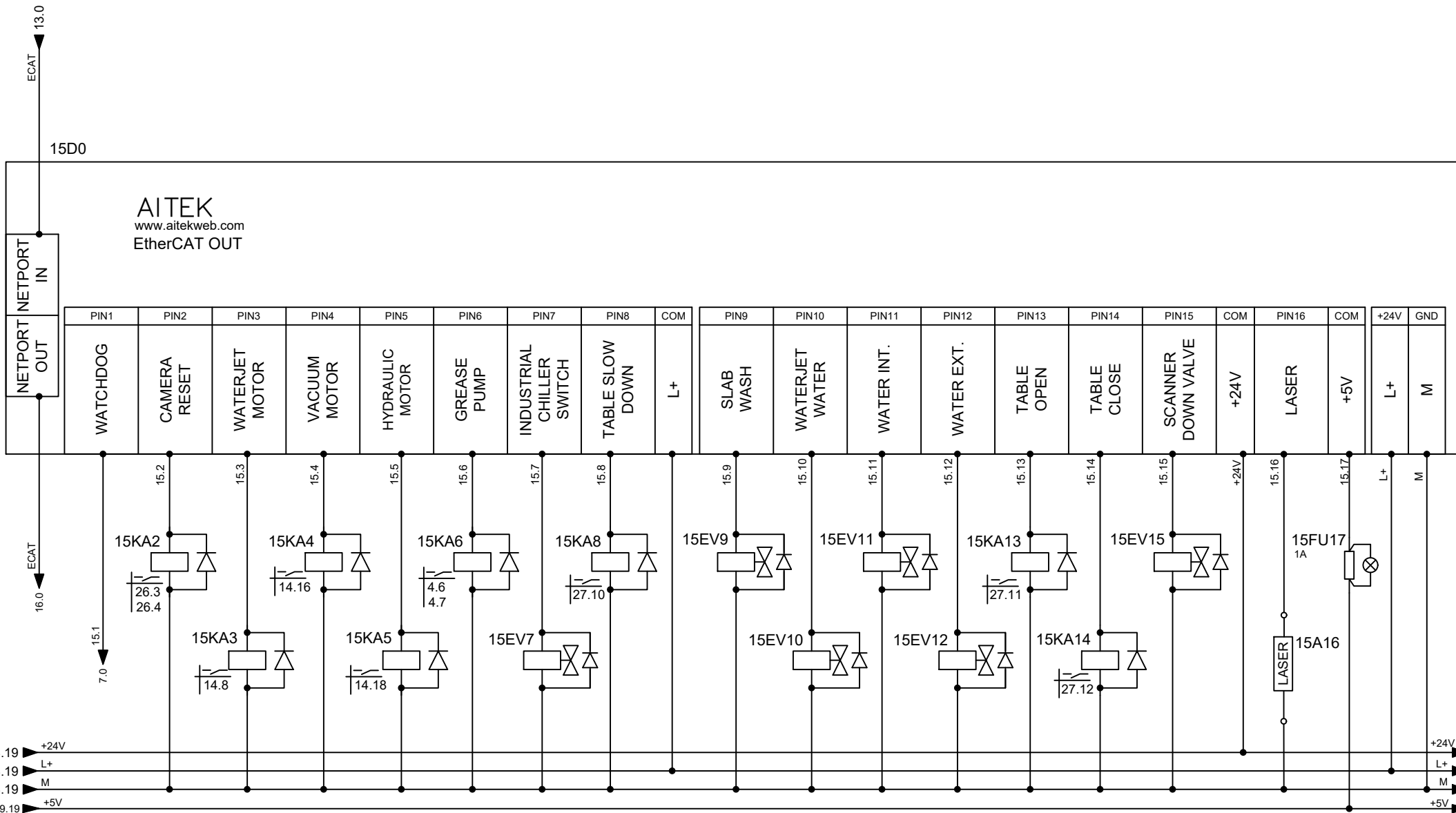
NETPORT IN
NETPORT OUT

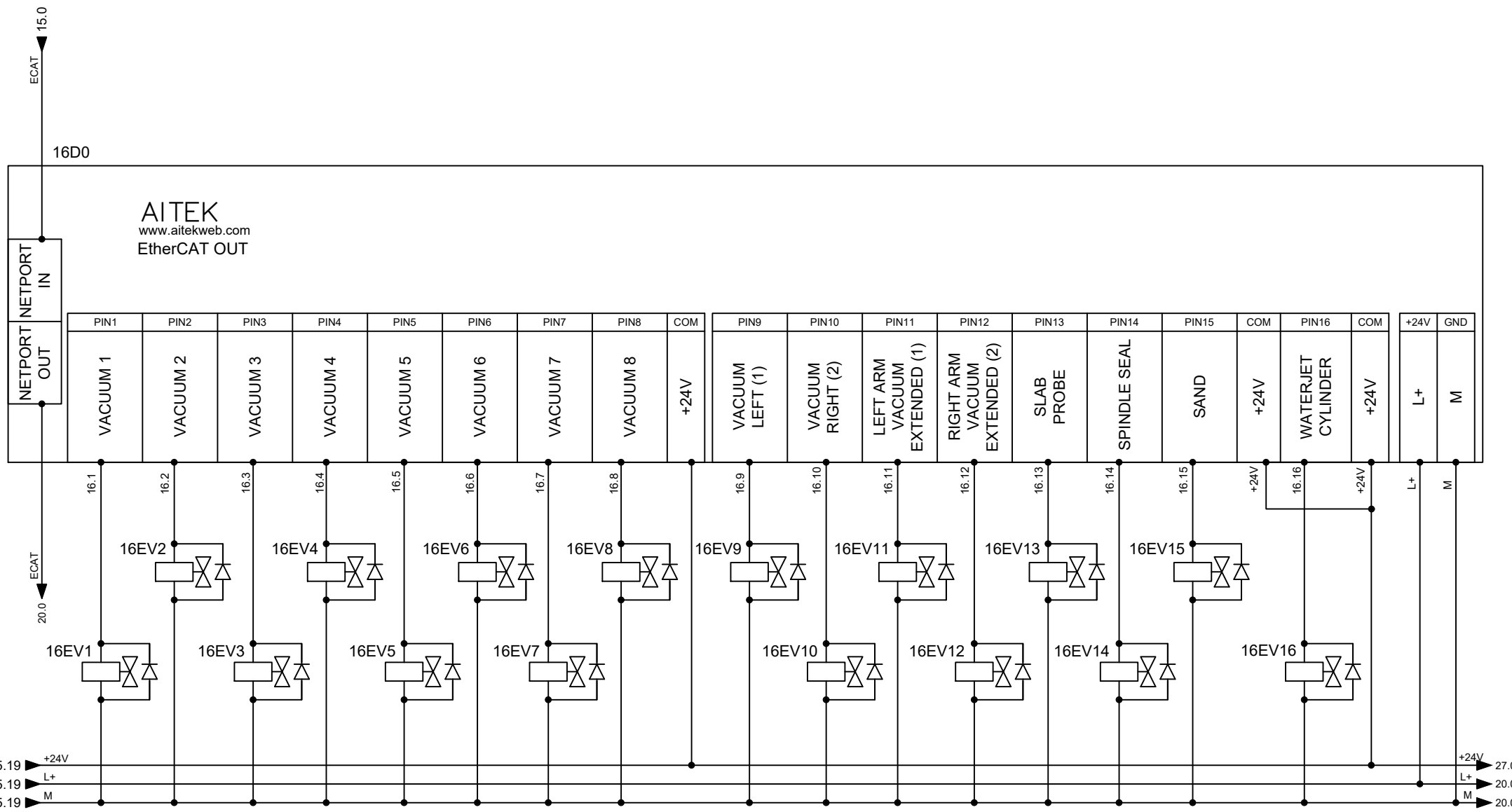
AITEK
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EtherCAT IN



MAIN POWER POW-ON SPINDLE MOTOR SAWJET MOTOR V BRAKE Z BRAKE C BRAKE BOX FAN & THERMOMETER CONTROL BOX FAN & THERMOMETER VACUUM PUMP HYDRAULIC PUMP

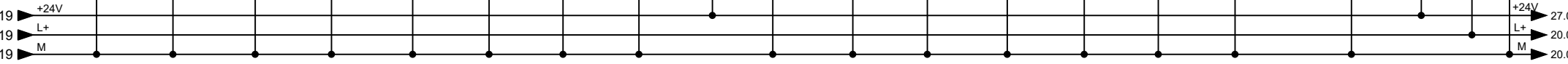
Designed By : ZLJ	Checked By :	Trimness By :	Description :
Machine : Sawjet	Date: 07.10.2025	Revision: Sawjet-250705	Approved By :
			Pag. 14
			Next 15



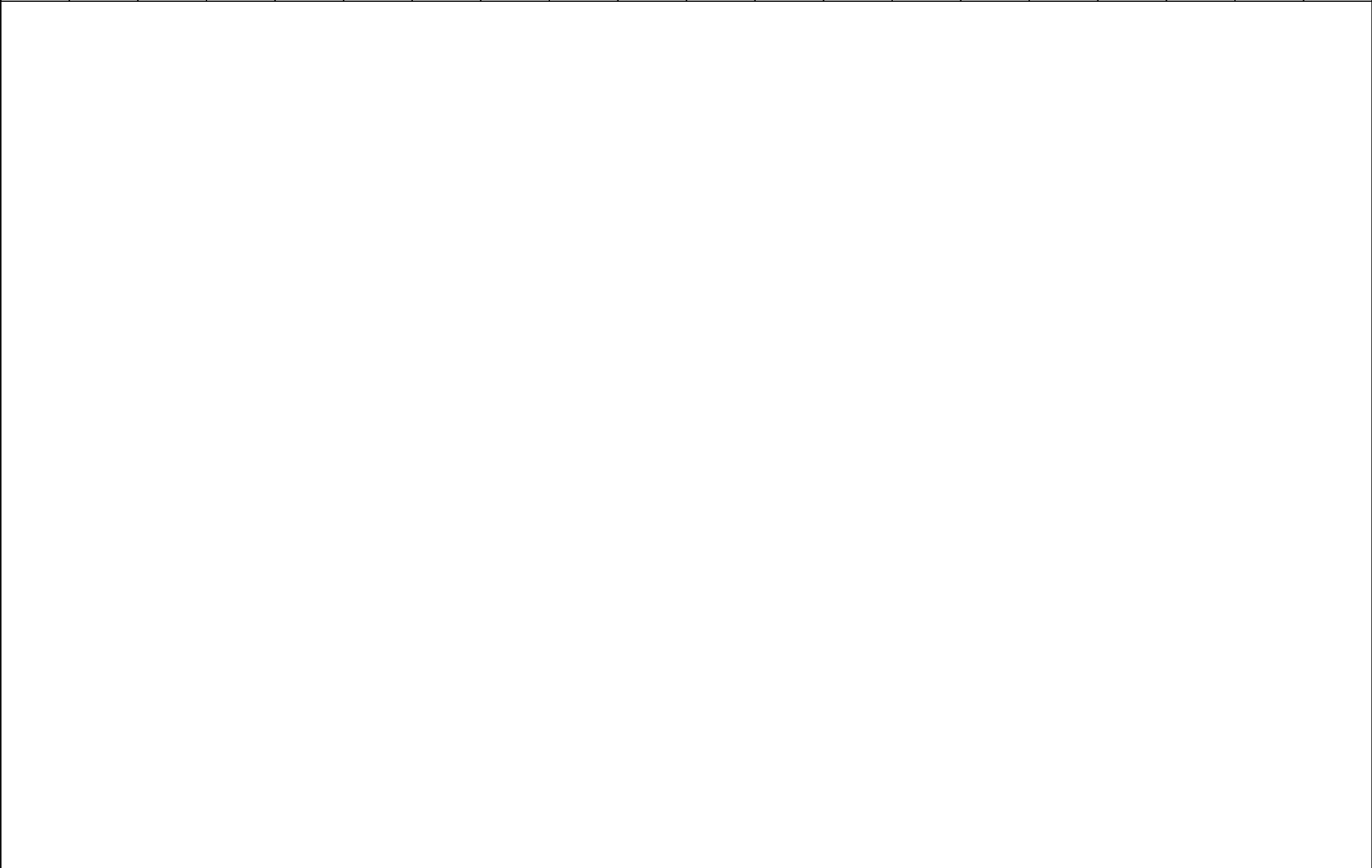


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www.aitekweb.com
EtherCAT OUT

NETPORT IN
NETPORT OUT



0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
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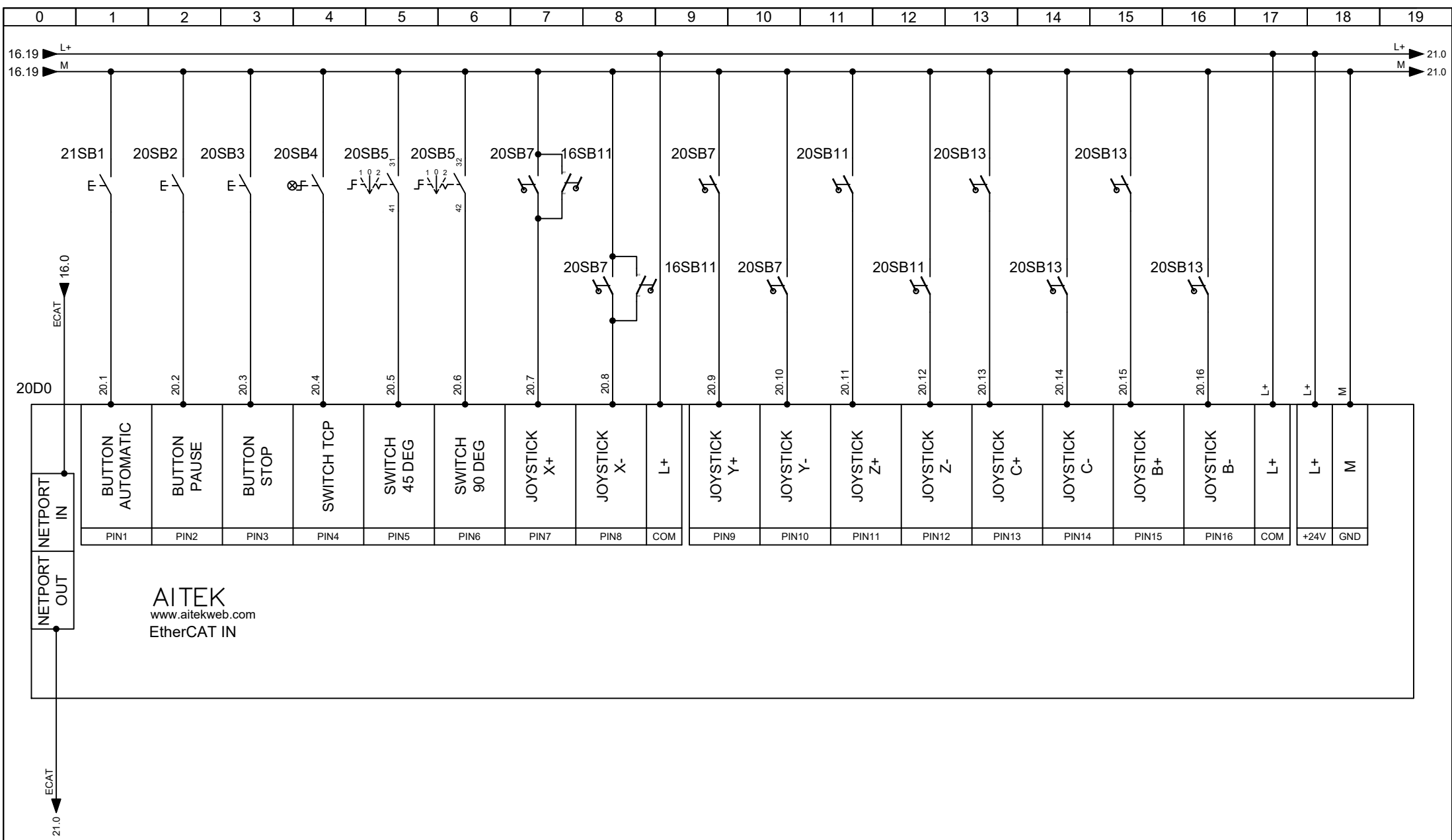
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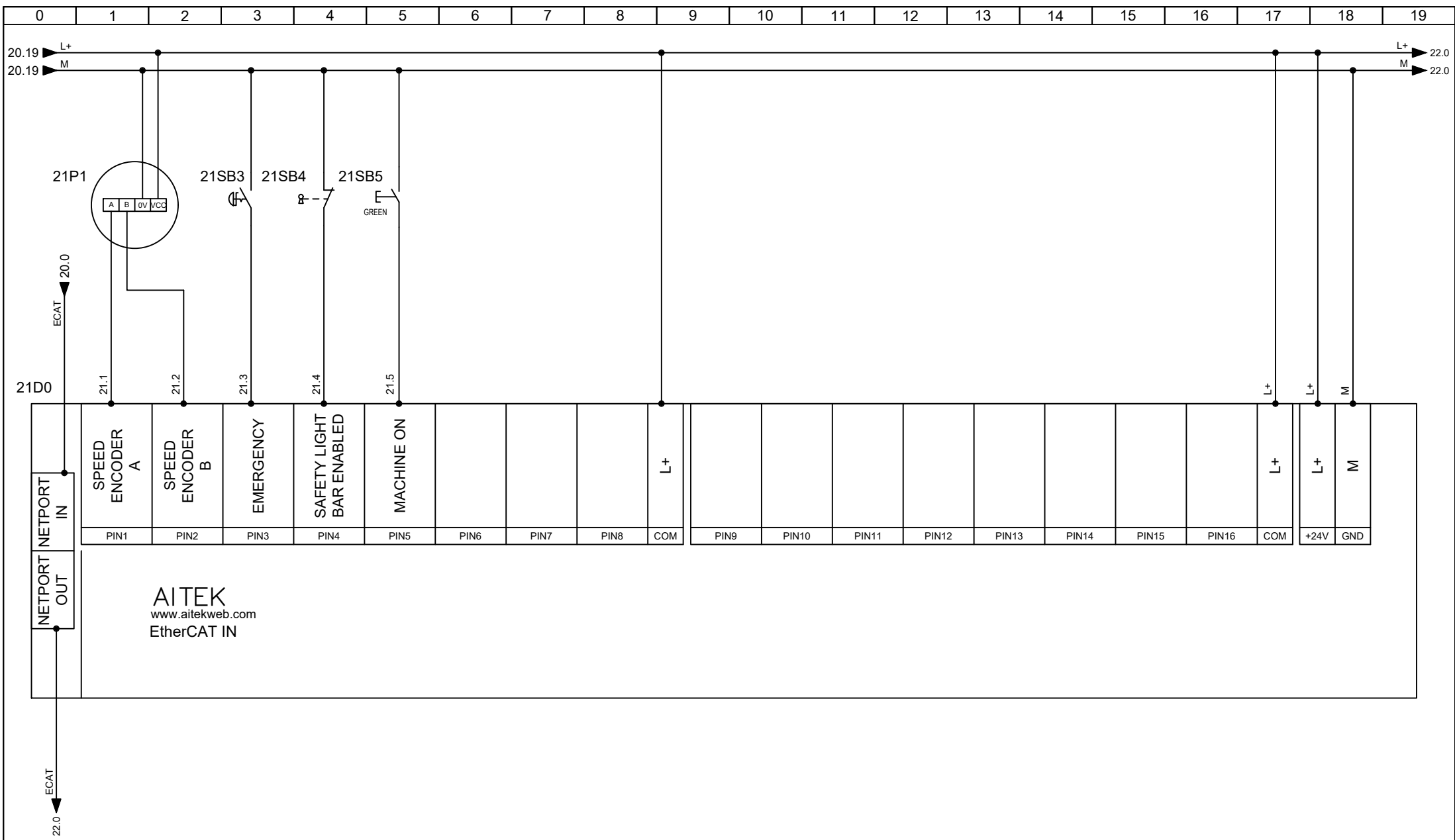
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Machine :	Sawjet		Date:	07.10.2025	Revision:	Sawjet-250705	Approved By :		Pag.	18	Next.	19

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AITEK
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EtherCAT IN



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EtherCAT IN

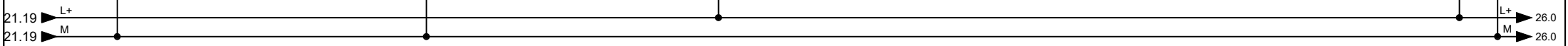
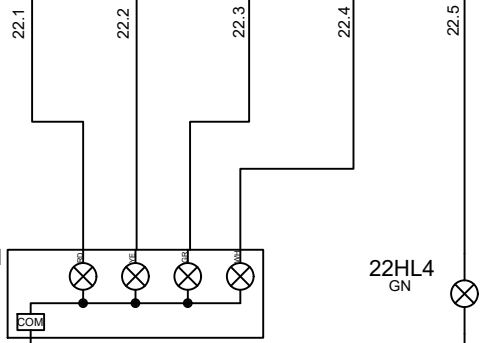
ECAT
21.0

22D0

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EtherCAT OUT

NETPORT
NETPORT
IN
OUT

PIN1	PIN2	PIN3	PIN4	PIN5	PIN6	PIN7	PIN8	COM	PIN9	PIN10	PIN11	PIN12	PIN13	PIN14	PIN15	COM	PIN16	COM	+24V	GND
RED	YELLOW	GREEN	WHITE	TCP LIGHT				L+											L+	M



ALARM LAMP

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
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Designed By : ZLJ	Checked By :	Trimness By :	Description :
Machine : Sawjet	Date: 07.10.2025	Revision: Sawjet-250705	Approved By :
			Pag. 23
			Next. 24

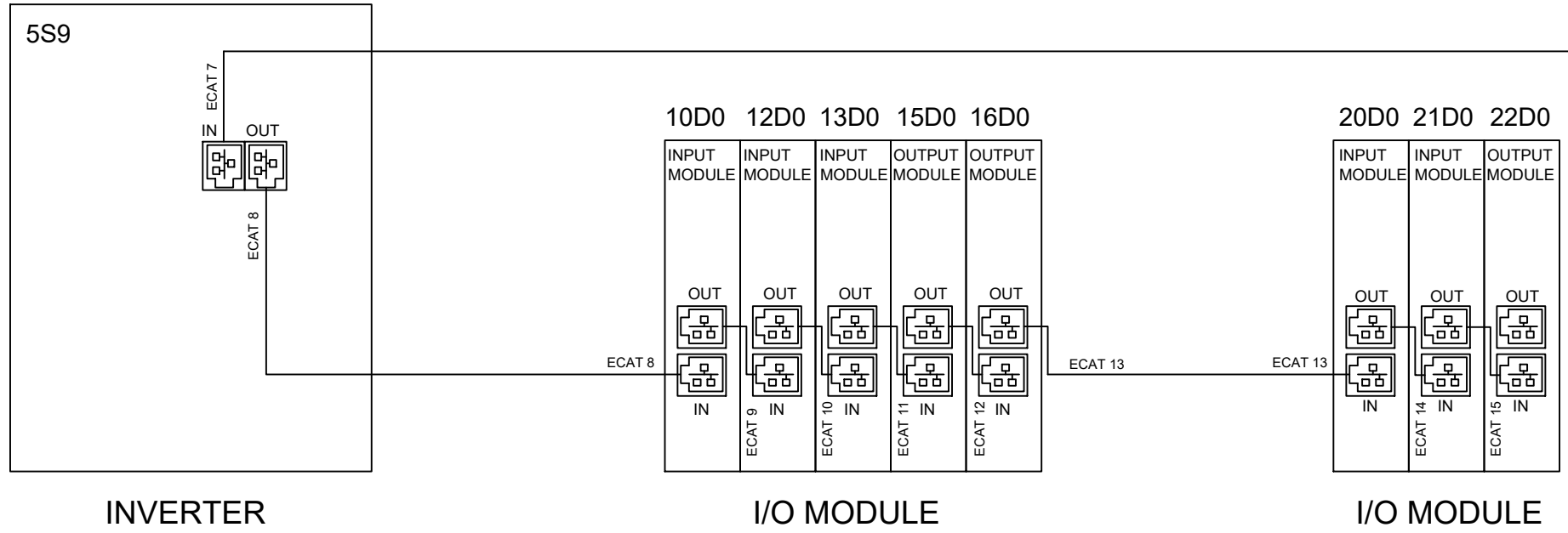
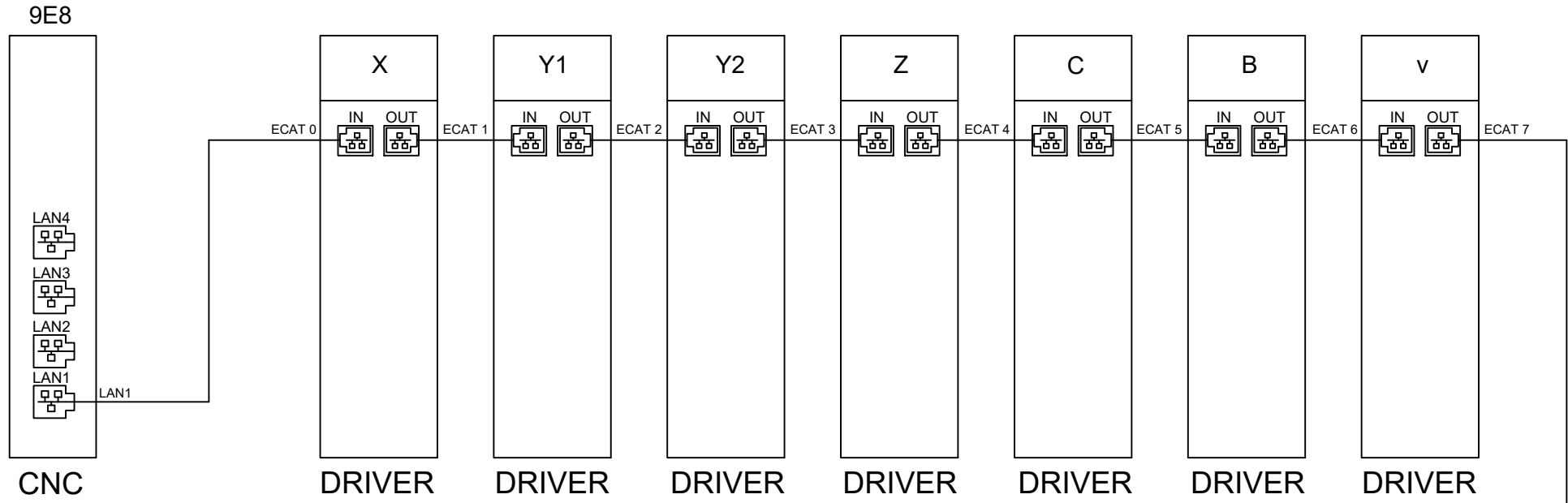
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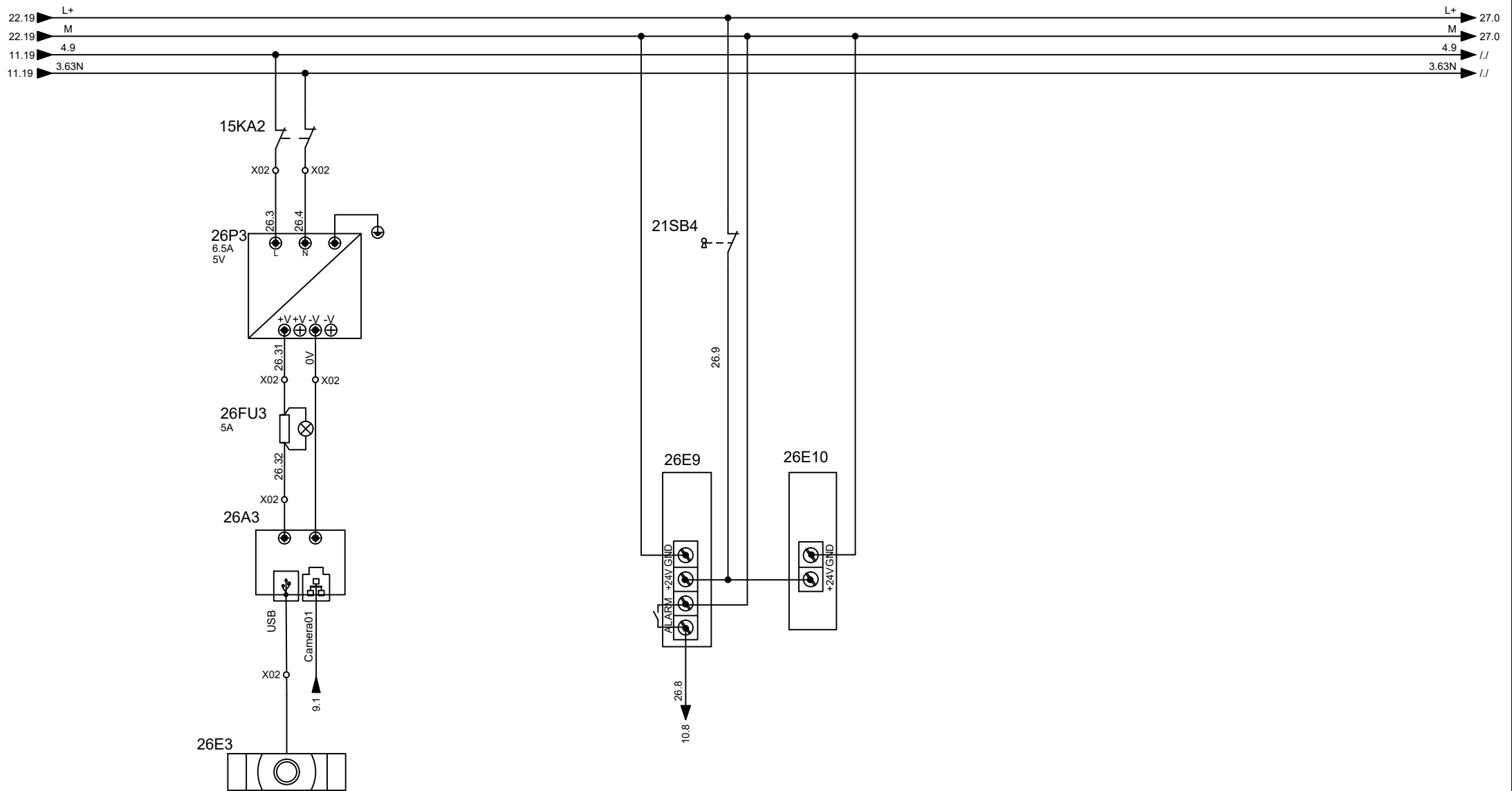


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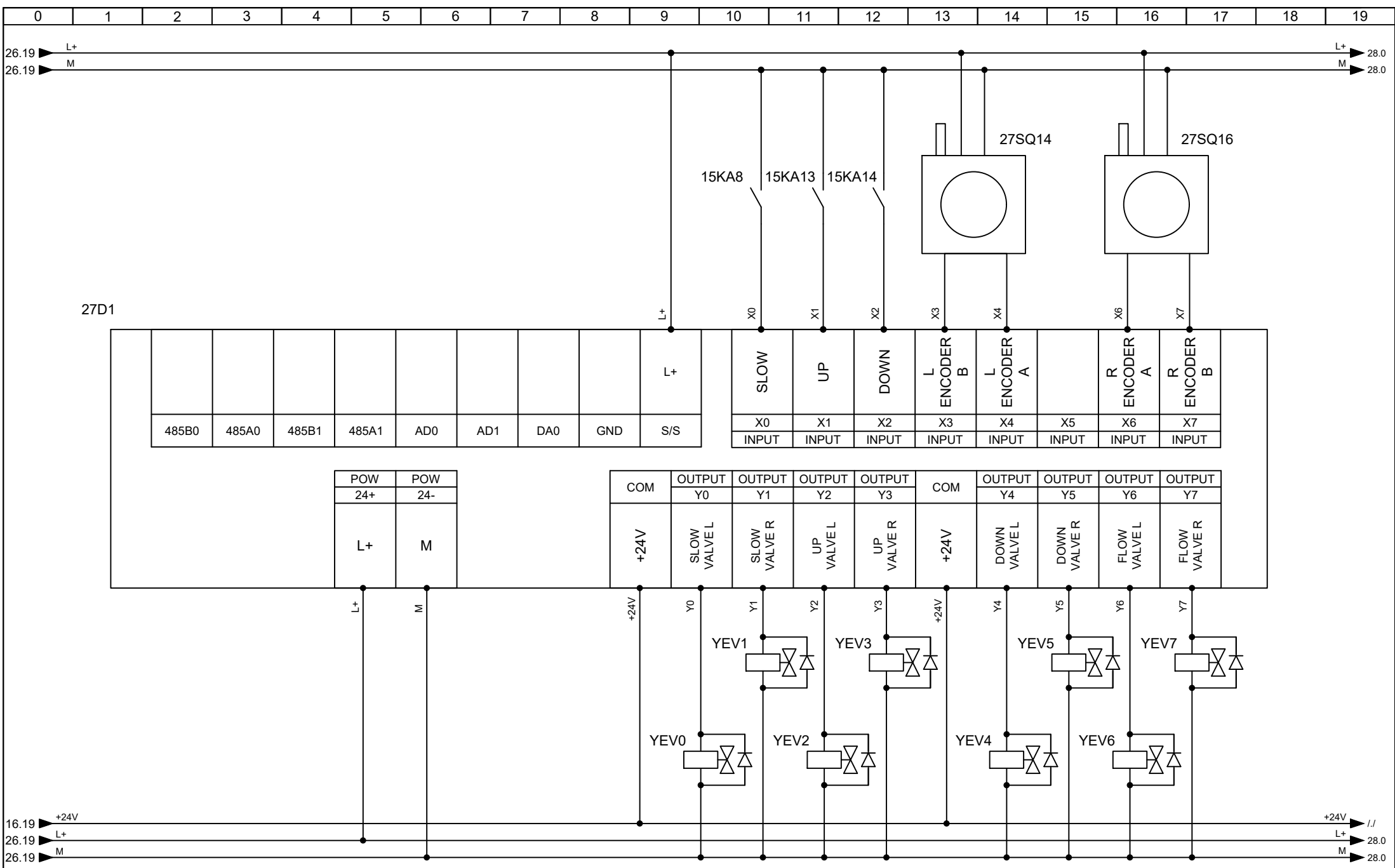
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Machine : Sawjet	Date: 07.10.2025	Revision: Sawjet-250705	Approved By :
			Pag. 24
			Next. 25

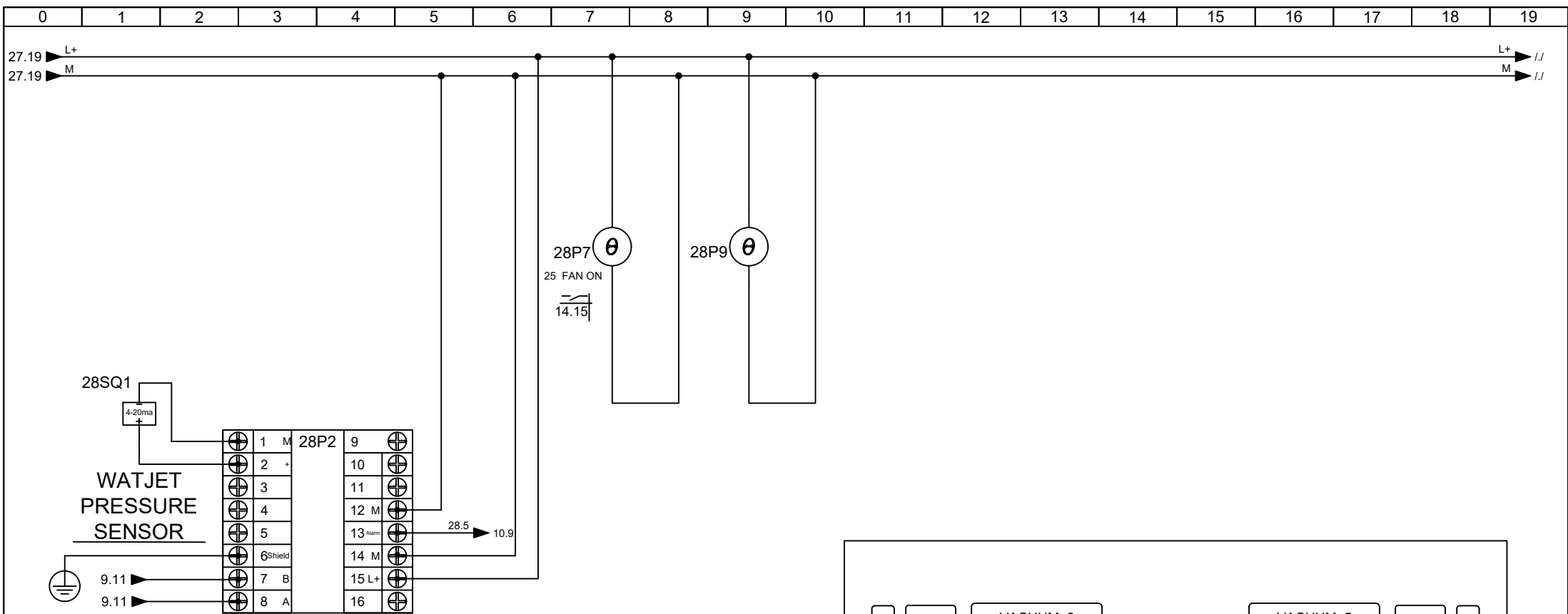




CAMERA

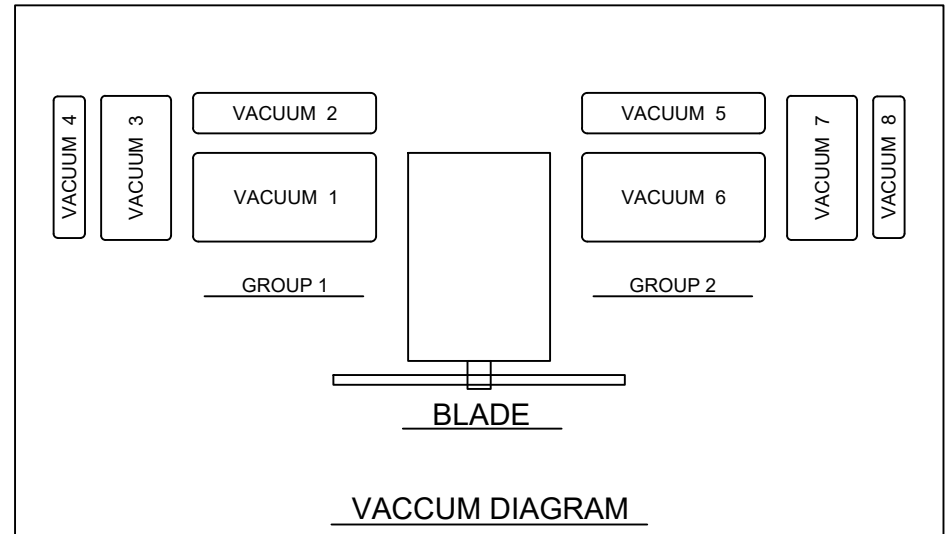
SAFETY LIGHT BARRIER





Parameter Settings
 Press SET key to set the upper alarm output pressure to 410Mpa
 Long press the SET key for 3 seconds to enter the settings mode

80% PRESSURE CALIBRATION	0.0 No
COMMUNICATION MODE	AL-2 485
COMMUNICATION ADDRESS	Add 2
FILTERING PARAMETER	-gL- 0011

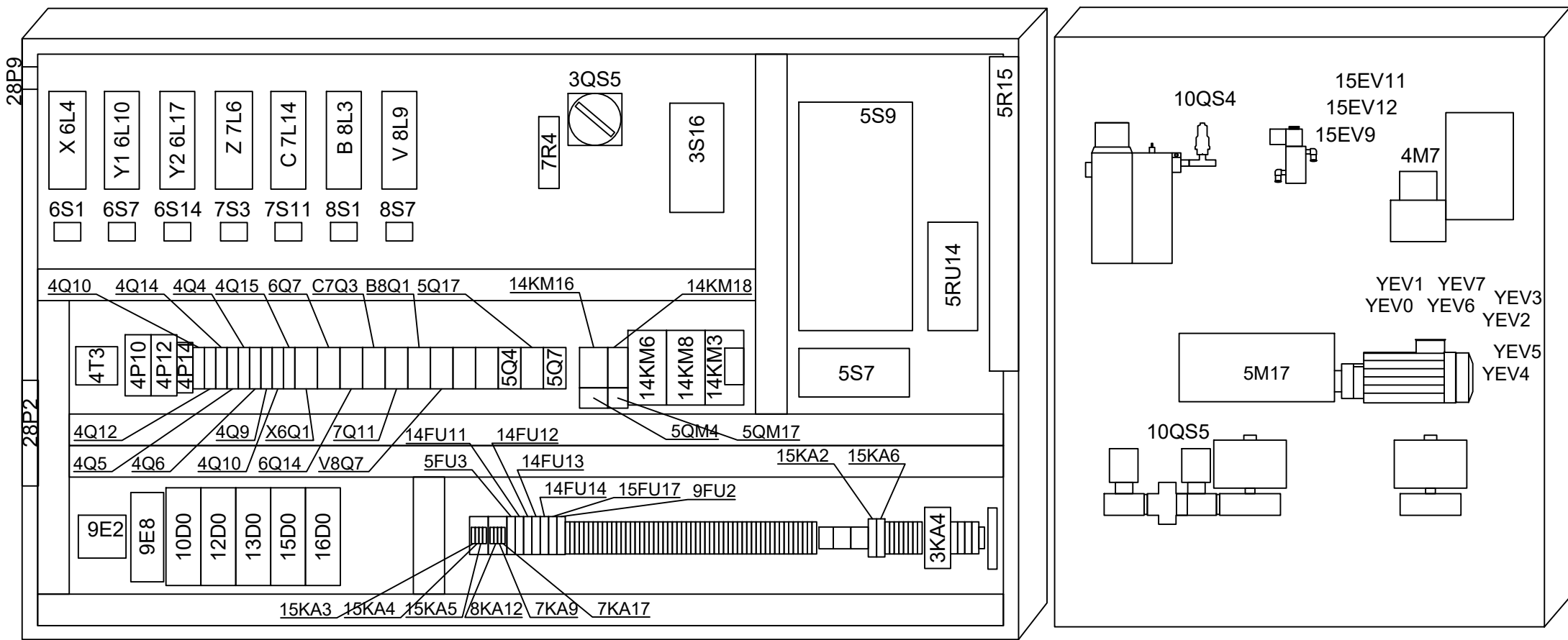


WATJET PRESSURE GAUGE

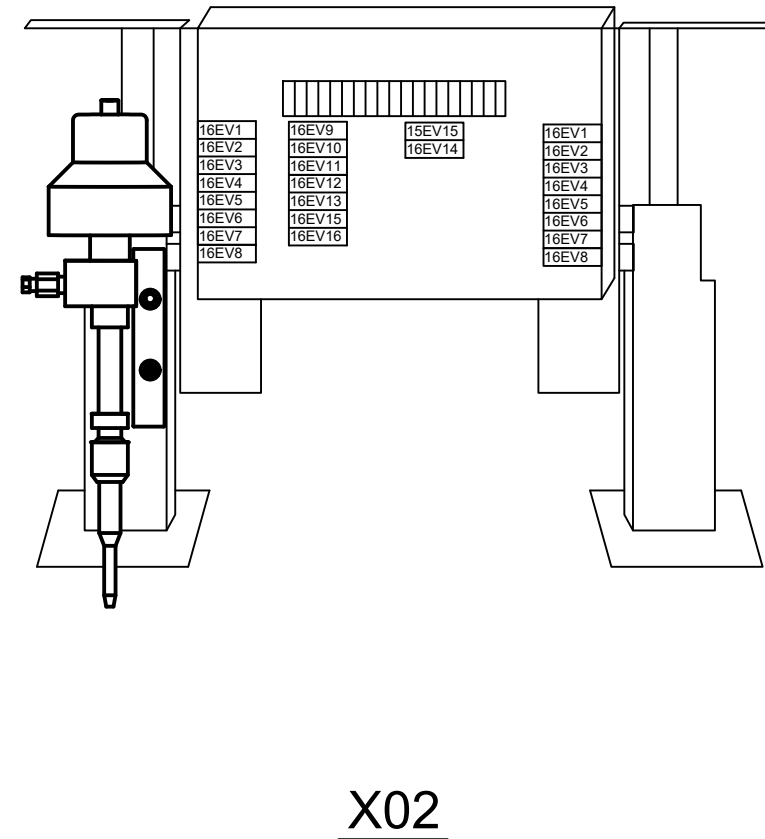
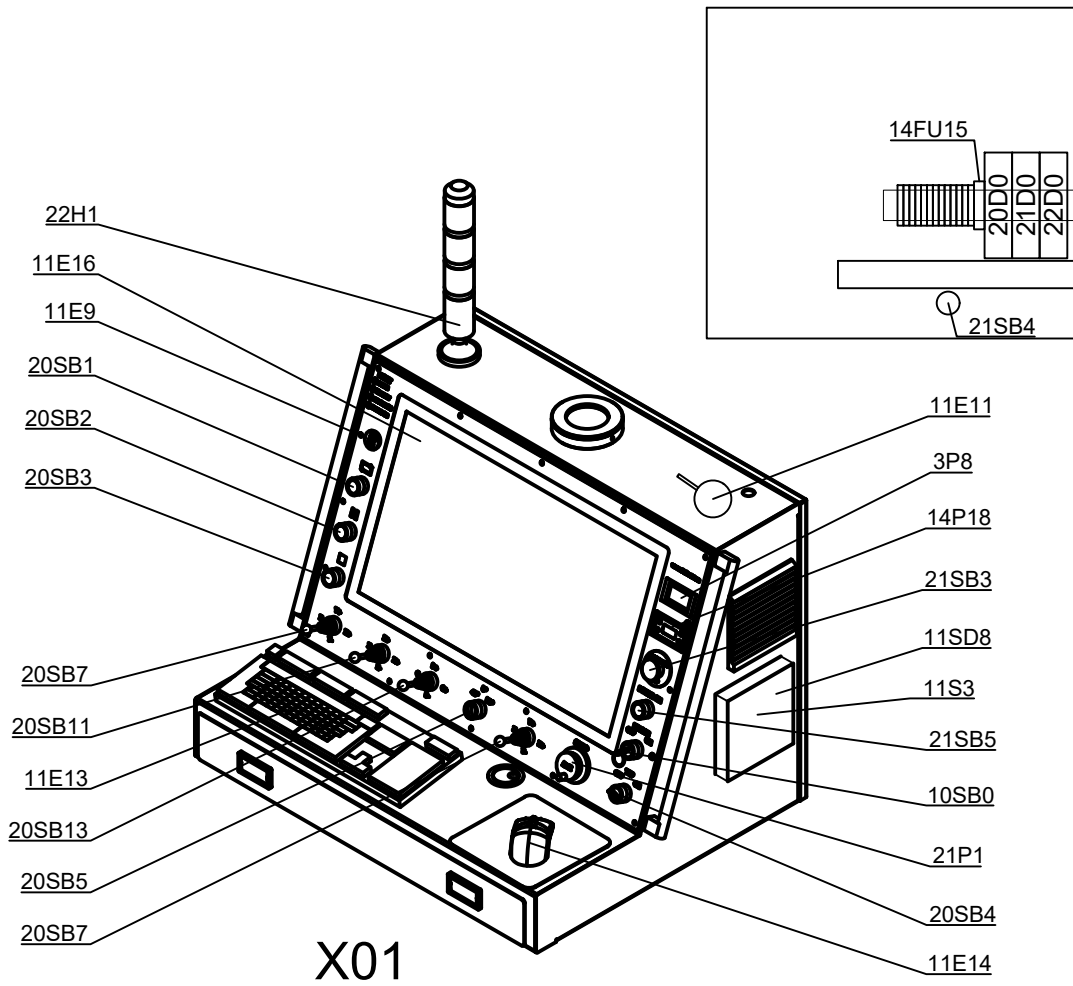
CONTROL BOX THERMOMETER

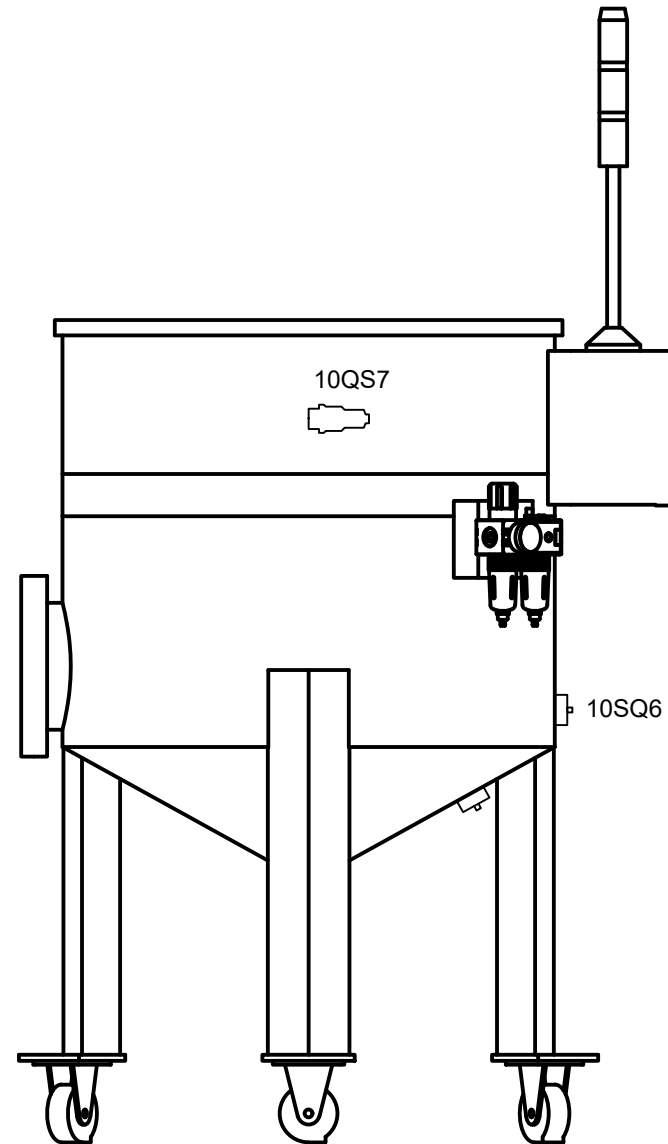
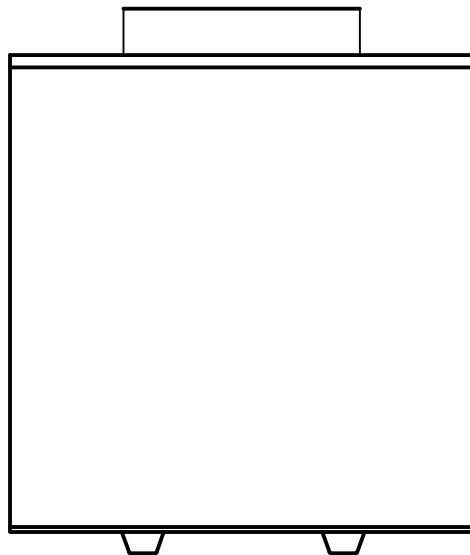
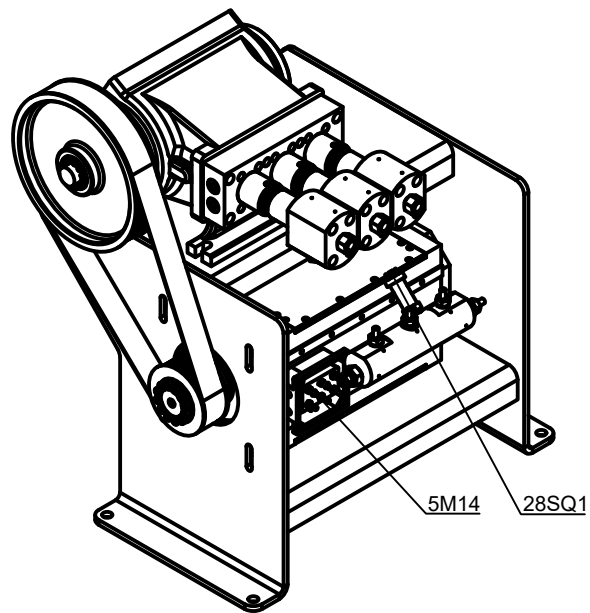
ELECTRIC BOX THERMOMETER

VACUUM POSITION



X00





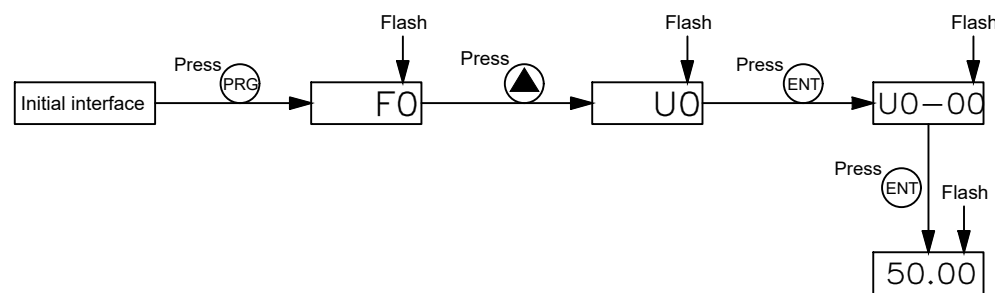
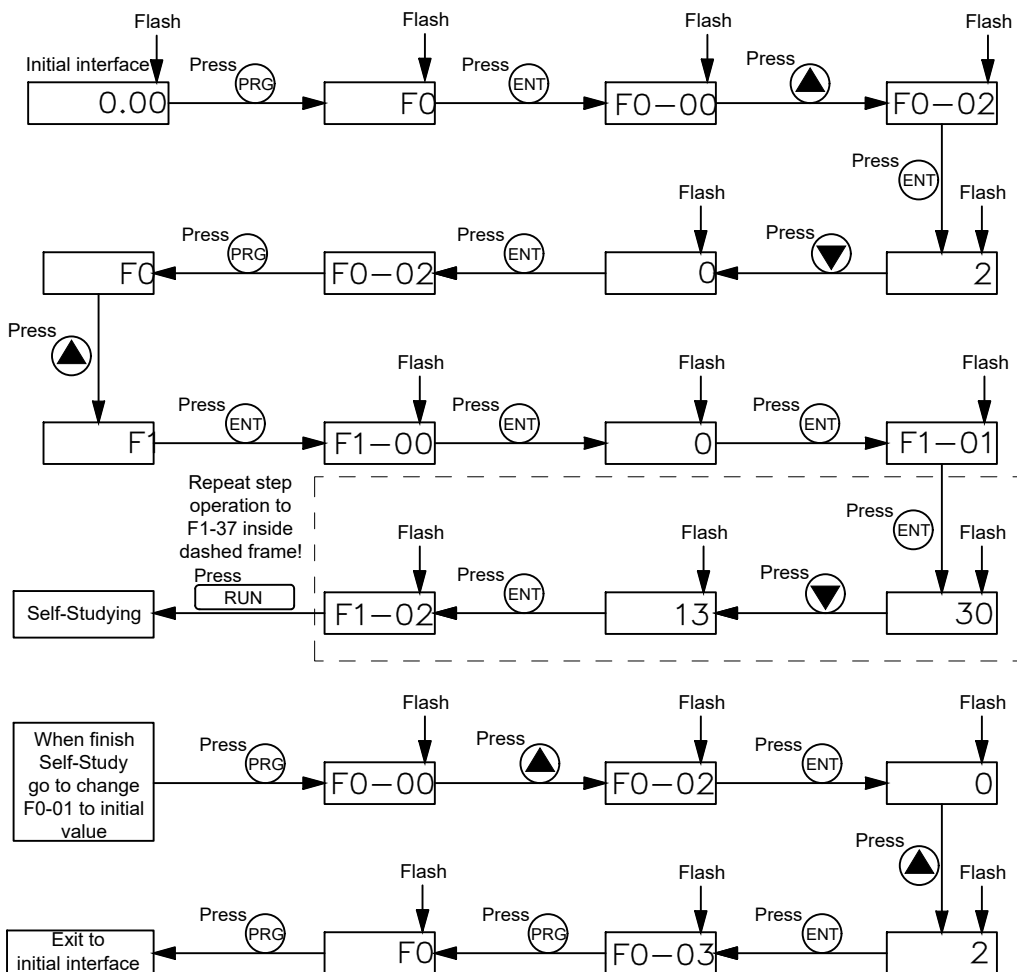
X02

Blade Motor Self-Study F1-37=2

Waterjet Motor Self-Study A2-37=3

Monitoring Function

- U0-00 Output Frequency
- U0-01 Input Frequency
- U0-06 Output Torque
- U0-14 Motor Speed



Inverter Parameter

Name	Range	Default	Units
F0-01	0,1,2	2	
F0-02	0,1,2	2	
F0-03	0-9	9	
F0-04	0-9	0	
F0-10	50.00Hz~500.00Hz	500	Hz
F0-12	0.00Hz~F0-10(MAX)	500	Hz
F0-17	0.0s~6500.0s	5	S
F0-18	0.0s~6500.0s	5	S
F0-24	0,1	0	
F0-28	0,1	1	
F1-00	0,1	0	
F1-01	0.1kW-1000.0kW	13	Kw
F1-02	1V-2000V	380	V
F1-03	0.01A-655.35A	32	A
F1-04	0.01Hz-MAX	60	Hz
F1-05	1RPM-65535RPM	1710	Rpm
F3-10	0~200	0	
F3-23	0,1	0	
F7-03	0000-FFFF	4051	
F7-04	0000-FFFF	0000	
A2-00	0,1	0	
A2-01	0.1kW-1000.0kW	20	Kw
A2-02	1V-2000V	380	V
A2-03	0.01A-655.35A	40	A
A2-04	0.01Hz-MAX	60	Hz
A2-05	1RPM-65535RPM	1710	Rpm
A2-62	0,1,2	2	

Servo Driver Parameter

Name	Range	X	Y1	Y2	Z	C	B	V
PA000	0~5000	1	1	1	1	1	1	1
PA001	0~9	9	9	9	9	9	9	9
PA002	0x0~0xFFFF	1	1	1	1	1	1	1
PA003	0~31	13	13	13	13	13	13	13
PA004	0~20000	400	550	550	350	400	300	700
PA015	0~32767	1	1	1	1	1	1	1
PA016	20~500				50			
PA017	20~5000				200			

Pg.	Code	Name	Mfrs.	Model	Pg.	Code	Name	Mfrs.	Model
3	3QS3	Examine and reepair lamp	--	--	7	7Q3	Circuit Breaker	Schneider	IC65N D10A 2P
3	3QS5	General Switch	GLELE	GLD11-63/08 +4P	7	7S3	Filter	Canny Well	CW1B-10A-L
3	3P11	Volt-ammeter	OUXIN	200-450V~0-100A	7	7R4	Braking Resistor	--	200W50Ω
3	3S16	Filter	DOTHINK	DTT2121-65-S16-S77	7	7M4	Z Motor	Leadshine	ACM13009H2E-70-L
3	3KA4	PHASE RELAY	SHNTOER	TG30s	7	7L6	Z Servo Drive	Leadshine	L7EC-1000S
4	4T3	Transformers	CHNT	NDK(BK)-150	7	7KA9	Terminal Relay Unit	Panasonic	PA1A-24V + AY33002 RT3S-24V
4	4Q4	Circuit Breaker	Schneider	IC65N D4A 1P	7	7Q11	Circuit Breaker	Schneider	IC65N D10A 2P
4	4Q5	Circuit Breaker	Schneider	IC65N D4A 1P	7	7S11	Filter	Canny Well	CW1B-10A-L
4	4Q7	Circuit Breaker	Schneider	IC65N D1A 1P	7	7M12	C Motor	Leadshine	ACM13009H2E-70-L
4	4M7	Grease Pump	ML	MYK-202-200-0 15W/220V 2L	7	7L14	C Servo Drive	Leadshine	L7EC-1000S
4	4Q9	Circuit Breaker	Schneider	IC65N D10A 1P	7	7KA17	Terminal Relay Unit	Panasonic	PA1A-24V + AY33002 RT3S-24V
4	4Q10	Circuit Breaker	Schneider	IC65H DC C10A 1P					
4	4Q11	Circuit Breaker	Schneider	IC65N D4A 1P	8	8Q1	Circuit Breaker	Schneider	IC65N D10A 2P
4	4Q12	Circuit Breaker	Schneider	IC65H DC C4A 1P	8	8S1	Filter	Canny Well	CW1B-6A-L
4	4Q13	Circuit Breaker	Schneider	IC65N D4A 1P	8	8M2	B Motor	Leadshine	ACM2-08008H2 F1-E23
4	4Q14	Circuit Breaker	Schneider	IC65H DC C2A 1P	8	8L3	B Servo Drive	Leadshine	L7EC-750S
4	4P10	Power Supply	MW	EDR-240-24 10A24VDC	8	8Q7	Circuit Breaker	Schneider	IC65N D10A 2P
4	4P12	Power Supply	MW	EDR-120-24 5A24VDC	8	8S7	Filter	Canny Well	CW1B-6A-L
4	4P14	Power Supply	MW	MDR-20-5 3A5VDC	8	8M8	V Motor	Leadshine	ACM2-08008H2 E1-E23 Brake
4					8	8L9	V Servo Drive	Leadshine	L7EC-750S
5	5FU3	Fuse	CHE	FS-101 6*30mm 24V5A	8	8KA12	Terminal Relay Unit	Panasonic	PA1A-24V + AY33002 RT3S-24V
5	5HL3	LED LIGHT	--	24V	8	8E14	Industrial Chiller	TEYU	CW6000AN AC1P220V
5	5Q4	Circuit Breaker	Schneider	IC65N D10A 3P	8	8E18	Industrial Chiller	TEYU	CW-5200T AC1P220V
5	5QM4	Thermal Relay	Schneider	LRD14C 7-10A	9	9FU2	Fuse	CHE	FS-101 6*30mm 24V1A
5	5M4	Vacuum Pump Motor	BOSHAN	2BV-2601 380V	9	9E2	Ethernet Switch	TP-LINK	TL-SG1005D
5	5Q7	Circuit Breaker	Schneider	IC65N D50A 3P	9	9E8	CNC	AITEK	ETC-V2
5	5S7	Filter	DOTHINK	DTT2121-50-S16-S77	9	9P15	RS485	--	HP-M31 0-5V RS485
5	5S9	Frequency Converter	INOVANCE	MD500T30G	9	9D16	Scanner Laser	--	HG-C1030 NPN
5	5R15	Braking Resistor	INOVANCE	6000W20Ω	9	9E13	USB KEY	AITEK	
5	5M11	Spindle Motor	AitalMac	380V 13KW	9				
5	5M12	WATJET Motor	AitalMac	380V 20KW	10	10D0	ETHERCAT	AITEK	IN MODULE
5	5RU14	Braking Unit	--	CDBR-4045	10	10SB0	Enable Key Switch	RENY	RBSNK-2
5	5Q17	Circuit Breaker	Schneider	IC65N D10A 3P	10	10QS4	Air Pressure Switch	SQW	QPM11-NC 0.1~1.0MPa
5	5QM17	Thermal Relay	Schneider	LRD14C 7-10A	10	10QS5	Water Pressure Switch	AIRTAC	X-PK510 1~10kgf/cm²
5	5M17	Hydraulic Pump Motor	WANERF	4WE6J-6X/ED24 3KW	10	10SQ6	SENSOR	--	--
5					10	10QS7	SENSOR	SQW	QPM11-NC
6	6Q1	Circuit Breaker	Schneider	IC65N D10A 2P	10	10SQ10	SENSOR	--	--
6	6S1	Filter	Canny Well	CW1B-10A-L	10	10SQ11	Chiller Sensor	--	--
6	6M2	X Motor	Leadshine	ACM13009H2F-70-L	10	10SQ12	SENSOR	--	--
6	6L4	X Servo Drive	Leadshine	L7EC-1000S	10	10SQ13	Chiller Sensor	--	--
6	6Q7	Circuit Breaker	Schneider	IC65N D10A 2P	11	11S3	Filter	Canny Well	CW1B-6A-L
6	6S7	Filter	Canny Well	CW1B-10A-L	11	11P6	Power Supply	--	19V 6.32A
6	6M8	Y1 Motor	Leadshine	ACM13009H2F-70-L	11	11E9	USB EXPANSION PORT	--	--
6	6L10	Y1 Servo Drive	Leadshine	L7EC-1000S	11	11E11	USB-remote	Aitalmac	REMOTE-V2
6	6Q14	Circuit Breaker	Schneider	IC65N D10A 2P	11	11SD8	Windows PC	AITEK	WIN-A5
6	6S14	Filter	Canny Well	CW1B-10A-L	11	11E14	USB-Mouse	Lenovo	M300
6	6M15	Y2 Motor	Leadshine	ACM13009H2F-70-L	11	11E13	USB-Keybaord	Logitech	K310
6	6L17	Y2 Servo Drive	Leadshine	L7EC-1000S	11	11E16	PC Monitor	Anmite	AN-195W01D
6					11	11FU18	FUSE	CHE	FS-101 6*30mm 24V5A
					11	11P18	Power Supply	MW	EDR-75-12 6.3A12VDC

Pg.	Code	Name	Mfrs.	Model
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Pg.	Code	Name	Mfrs.	Model
27	27D0	PLC	HUIKONG	HK3U
27	27SQ14	ENCODER	BRITER	BRT38-3M-P1T-50N-RT1-IP68
27	27SQ16	ENCODER	BRITER	BRT38-3M-P1T-50N-RT1-IP68
27	YEV0	Solenoid Valve	HDX	MST-02A-NO
27	YEV1	Solenoid Valve	HDX	MST-02A-NO
27	YEV2	Solenoid Valve	WANERF	MFZ12-37YC
27	YEV3	Solenoid Valve	WANERF	MFZ12-37YC
27	YEV4	Solenoid Valve	WANERF	MFZ12-37YC
27	YEV5	Solenoid Valve	WANERF	MFZ12-37YC
27	YEV6	Solenoid Valve	EXACTSEIKI	NO:MFS-02-P
27	YEV7	Solenoid Valve	EXACTSEIKI	NO:MFS-02-P

Pg.	Code	Name	Mfrs.	Model
20	20D0	ETHERCAT	AITEK	IN MODULE
20	20SB1	Control Box-Automatic Button	RENY	RAPNF-1A-G
20	20SB2	Control Box-Pause Button	RENY	RAPNF-1A-Y
20	20SB3	Control Box-Stop Button	RENY	RAPNF-1A-R
20	20SB4	TCP On/Off Switch	RENY	R2SNS-2FE-1D-G
20	20SB5	B Axis Angle Knob	RENY	R2SNS-3TB-2A-B
20	20SB7	XY Axis-Joystick Controller	Schneider	XD2-PA24CR φ22mm
20	20SB11	X/Z Axis-Joystick Controller	Schneider	XD2-PA24CR φ22mm
20	20SB13	B/C Axis-Joystick Controller	Schneider	XD2-PA24CR φ22mm

28	28SQ1	Waterjet Pressure Sensor	--	--
28	28P2	Waterjet Pressure Gauge	--	PY500
28	28P7	Thermometer	JQS	XY-WT01
28	28P9	Thermometer	JQS	XY-WT01

21	21D0	ETHERCAT	AITEK	IN MODULE
21	21P1	Speed Control Wheel	AITEK	24VPLC
21	21SB3	EMERGENCY Button	RENY	R2PNR4-1B
21	21SB4	Switch	RENY	RBSNK-2
21	21SB5	Power On Button	RENY	R2PIF-1D-2GL

22	22D0	ETHERCAT	AITEK	OUT MODULE
22	22H1	Alarm Indicator lamp	TAYB	TB50-4T-D 24V

26	26P3	Power Supply	MW	5V
26	26FU3	Fuse	CHE	FS-101 6*30mm 24V5A
26	26A3	CARD	RASPBERRY PI	PI4-4G
26	26E3	CAMERA	CANON	--
26	26E9	SAFETY DOOR	ELLYSON	ALX-ABI106
26	26E10	SAFETY DOOR	ELLYSON	ALX-ABI106
26				