

Oiler lubrication pump

Product Name: Electric Lubricator (Digital Type)
Performance and characteristics: YET-A2



During inspection or use, the system pressure must be greater than 1.5Mpa each time oil is injected. At this time, the tail of each port of the distributor should protrude. Otherwise, the system pressure and the distributor piston should be checked in time.

1. Won the EU CE certification.
2. Three boot modes can be set:
 - (a) Lubrication: The lubricating time is counted first when the machine is turned on.
 - (b) Intermittent: The interval time is counted first when the machine is turned on.
 - (c) Memory: Continue the previous action time when starting up.
3. Lubrication and intermittent time can be adjusted.
4. Equipped with a liquid level switch, the buzzer will give an alarm when the oil is insufficient, and the abnormal liquid level signal can be output.
5. There is a decompression device in the volume system.
6. Equipped with motor self protection device to prevent excessive temperature and overload.
7. The constant pressure function of the pressure test valve can protect the pump and pipeline and reduce damage.
8. Lubrication time (seconds/minutes) and intermittent time (seconds/minutes/hours/times) units can be selected.
9. The panel indicator light can display the operating status of the oiler.
10. It can be set as the basis for intermittent cycle counting according to the number of mechanical actions.
11. The pressure switch can be freely selected according to customer requirements (YET-A2P2)
12. Equipped with "RES" key for forced lubrication.
13. The longest lubricating time is ≤ 2 min, and the shortest intermittent time is ≥ 3 min.
14. Type and technical parameters:



Type	Project	Single phase voltage (V)	Power(W)	Abnormal output contact capacity(A)	Lubrication time (s/min/h/time)	Spitout caliber	Maximum discharge pressure(kgt/cm2)	Vomit volume (cc/min)	Pressure switch (kgt/cm2)	Tank capacity(L)	weight(kg)
YET-A2	YETA2P2	AC110/220	100	3	1-999	Ø6	15	150	无	2	2.70
11.5									3	3.00	
										4(aluminium)	3.30
											3.70

15. It is recommended that customers use lubricating oil with an oil viscosity of about 32~150cst. The loss of lubricating oil is faster than that of lubricating grease. When using, it is necessary to pay attention to whether the oil supply is sufficient. The recommended oiling frequency is 0.3cm³/hr.
16. Pour an appropriate amount of unused clean lubricating oil into the fuel tank.
17. Properly wire according to the electrical wiring diagram in the pump top housing.
18. Confirm that the wiring is correct, and the pump body must have a reliable grounding or zero connection.
19. Turn on the power supply, carry out pre-oil injection, exhaust the air in the lubrication system, inspect the main circuit to ensure that there is no oil leakage, and inject oil until every lubricating point is filled with oil.

Print Head Operation Instructions

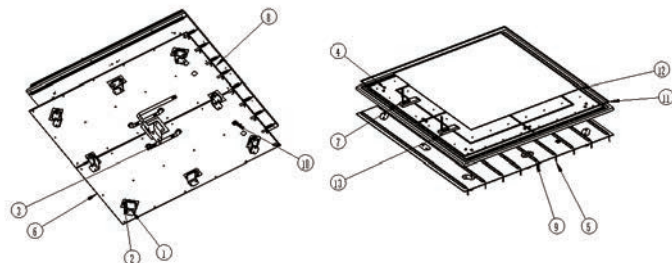
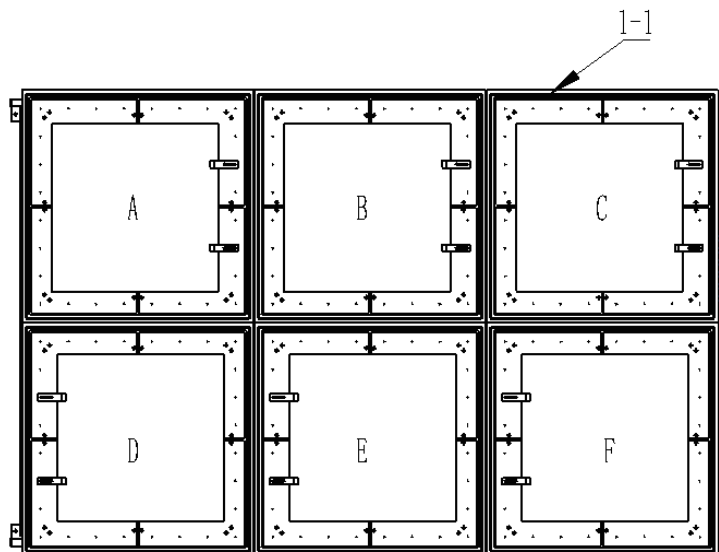
This machine adopts a customized print head, with functions of extrusion, shutdown, automatic refill, etc., including servo motor, reducer, storage hopper, discharge port, extrusion screw, heating heating wire in A1 area, heating wire in A2 area , heating the heating wire in the A3 area, heating the heating wire in the A4 area, pressing the wheel Temperature sensors, shut-off cylinders and other components.

- (1) For the heating temperature of the four zones of the print head, please set the heating temperature according to the requirements of the training materials;
- (2) (2)When the heating temperature does not reach the set temperature, the P-axis extrusion is in a locked state, and when the temperature is reached, it is automatically unlocked;
- (3) Empty the residual material in the storage hopper through the discharge port before use to prevent the material from being wet and foaming during printing, which will affect the product;
- (4) The cylinder must be turned on and off, so that the nozzle is in a normally open state, and the residual material inside the extrusion screw is extruded and emptied.

Project	Item	Question	Solution
1	Servo motor	The motor does not turn	1.Check whether the motor wire is connected well; 2.Check whether the motor has high temperature and fever alarm;
2	Storage hopper	The observation port shows that there is no feeding or feeding all the time	1.Check whether the induction switch is normal and whether the feeder is working normally; 2.The sensor lights up and down, indicating that the material is full; 3If the sensor light is not on, it will automatically feed;
3	Discharge port	The printing material is foamed or needs to be replaced	Open the ball valve and clear the material that has been placed in the hopper for a long time until the feeder starts to feed.
4	Temperature line	The system does not display the temperature or the display temperature is abnormal	Check whether the connection of the temperature sensing line is normal;
5	Heating zone	No heating	1.Check whether the connecting line is connected well; 2.Check whether the relay is working normally, the green light is normal, and the red light is abnormal;
6	Shut off the cylinder	Unexpected or lax	1.Check if the cylinder is open; 2.Check whether the fork position of the cylinder pin is loose;

This machine adopts a customized version of the temperature-controlled workbench, which has the functions of heating and vacuum adsorption. Including smooth heating plate, heat insulation board, heating wire and other parts.

- (1) The total area of the workbench is 2500*3725 (mm);
- (2) The worktable can be heated up to 180°C, please be careful not to touch it when using the heating, and protect the workpiece when you move it up and down;
- (3) The heating plate of the workbench is divided into 6 zones, and the heating can be controlled separately.



Basic parameters		
1	Number of temperature control workbenches(blocks)	6
2	Single block temperature control table size (length * width)	1250*1250
3	Maximum temperature	180
4	The maximum heating power of a single temperature control workbench	7.2KW
5	The total heating power of the temperature control workbench	43.2KW



Before operating the machine tool every day, the operator should pay attention to the following phenomena. If any abnormality is found, he should immediately investigate the cause, or contact our company to take corrective measures.

1. Before start

- (1) Check power cords and other wiring, and pipe connectors for damage or contact.
- (2) Check whether the fluid level of the cutting fluid reservoir needs to be added with cutting fluid.
- (3) Is the air pressure normal.
- (4) Is there an oil leak.
- (5) Whether the safety protection devices are normal and there are no personnel in the dangerous area.
- (6) Spindle test run and heat engine program.

a. Spindle warm-up program for normal startup of the machine.

Check freezer operation	Visual refrigerator oil temperature display and oil quantity are normal, The surface temperature of the spindle is normal when touched by hand
Check the air curtain function	Touch the nose of the spindle with your hand and feel the air blowing out
Check the clamping and broaching force	The clamping and loosening of the knife and the manual rotation of the spindle are smooth and no abnormal noise
Hot engine running	25% of top speed 5 minutes
	50% of top speed 5 minutes
	75% of top speed for 10 minutes

b. Periodic inspection

Item	Check item	Time	Content	Remark
1	Airtight pressure at the nose of the spindle	daily	0.8~1.0 kgf/cm ²	
2	Air pressure unit filter	daily	stagnant water removal	
3	Spindle oil cooler circulating oil	daily	Is the oil level marked on the dipstick?	
4	Spindle clamp loose tool inspection	daily	Check if the tool is clamped	
5	Spindle oil cooler air filter	monthly	Wash	Neutral detergent and clean water
6	Air pressure unit filter (5μ)	every 3 months	Filter cleaning or replacement	Wash with clean water and dry

2. After startup

- (1) Whether the temperature rise of the spindle is too high or abnormal sound
- (2) Whether the automatic oiling machine is in compliance with the following operating conditions
 - a. 3~5kgf/cm²The oil supply pressure should be 3~5kgf/cm²
 - b. Whether the oil consumption is normal (if there is any abnormality, please check whether the pipeline and joint are damaged)
 - c. Are the running and stopping times correct?
- (3) Machining program check for missing or insufficient
- (4) Check whether the machining tool is missing or insufficient
- (5) Check whether the fixture is damaged or whether the basic point is still normal
- (6) Keep the area near the keys of the operation panel dry and clean at all times
- (7) Whether the transformer is high temperature.
- (8) Is the air blowing of the main shaft normal?

3. At the end of the job

- (1) The taper hole of the spindle is cleaned daily with a cleaning rod
- (2) The accumulated debris on the triaxial guard and the accumulated debris in the water tank should be cleaned daily
- (3) The debris on the knife handle should be cleaned at least once every 8 hours
- (4) Daily cleaning of each axis motor
- (5) Clean the appearance of the machine once before leaving get off work or handover
- (6) Move the three axes to the middle of the stroke to maintain the balance accuracy of the machine
- (7) After the machine is cleaned, the worktable should be coated with anti-rust oil
- (8) Check whether each safety door is closed
- (9) Check whether the power switch is turned off
- (10) Check whether the power source switch is turned off

Preventive maintenance**(1) Maintenance Instructions**

a. To ensure the safety of maintenance work, the electrical doors and covers must not be opened except for the needs of maintenance work;

b. Do not use compressed air to clean the machine or other components. (If the environment is not clean enough, dust and metal chips may be blown into the bearing or slideway).

(2) Daily maintenance matters

a. Clean the workbench, the chips, dust and debris on the base;

b. Clear everything on the surface of the slideway (no shield is not divided);

c. Clean the shields of each shaft and slideway;

d. Spindle inner taper hole;

e. Clean all exposed electrical parts and limit switches;

f. Check the height of the oil level of the central lubricating oil drum and the main shaft lubrication box, and keep it at the recommended level from time to time ;

g. Confirm whether the water in the air filter is completely drained;

h. Check to make sure the pressure is correct:

Lubrication system: $3\sim 5\text{kgf/cm}^2$

Air pressure circuit: 6 kgf/cm^2 or more

i. Visually check the machine and hydraulic unit for oil leakage;

j. Check the cutting oil pipe and barrel, remove all debris;

k. Check the cutting fluid capacity;

l. Check if all working lights or all warning lights are normal;

m. Check and clean the tool magazine;

n. Is the terminal block screw loose;

o. Whether the relay has too much carbon deposition.

(3) Weekly maintenance matters

a. Check the top of the spindle, tool holder and other accessories for abnormal noise, breakage or damage and clean around the spindle;

b. Check the indicated height of the oil gauge of the oil pressure unit. If the oil level is insufficient, add an appropriate amount to check whether the origin position of each axis drifts;

c. Clean the cutting fluid water tank filter weekly;

d. Clean and check whether the three-point combined oil tank is normal;

e. Keep the keys on the operation box panel dry and clean.

(4) Monthly maintenance

a. Clean the operation panel, the inside of the control box and the heat exchanger filter;

b. Check the level of the workbench and the base and confirm that the foundation bolts are locked;

c. Check whether the chute wedge needs to be adjusted;

d. Clean the air filter and replace if necessary;

e. Check whether the solenoid valve, limit switch and limit switch function are normal;

f. Clean the oil filter screen of the oil pressure unit;

g. Check whether the wire connector is loose or has poor contact;

h. Check whether the interlock device and timer are normal, check whether the relay has proper contact pressure and clean the contact surface of the relay;

i. Drain the cutting water, rinse the water tank and water pipes, and refill the cutting water;

j. Confirm that the NC controller is operating normally.

(5) Semi-annual maintenance matters

a. Handle and perform monthly maintenance work;

b. Clean NC unit, control unit and machine;

c. Flush the lubricating oil pump to replace the lubricating oil;

d. Clean all motors;

Regular maintenance of machine tools

- e. Test all electronic parts, units and relays, high voltage panels;
- f. Check whether the test program is executed smoothly;
- g. Measure the backlash of the NC servo axis, and adjust and correct it if necessary;
- h. Use test programs to verify the action and function of the machine;
- i. Disassemble the three-axis chip guard, clean the ball screw, rack, and three-axis limit;
- j. Check if there is any abnormal sound when all motors are started;
- k. Check and clean all cooling fans to see if they work well;
- l. Whether the yaw run out range of the main shaft is too large, and whether the main shaft bearing clearance is abnormal;
- m. Check for loose bolts or nuts;
- n. Check all contacts, connectors, sockets, and switches to see if they are normal. Check insulation resistance comprehensively and record.

2.Attachment: Machine Tool Periodic Maintenance Checklist

- : Check
- : Replace if necessary
after inspection
- ? : Adjust if necessary
(notify sales staff)
- ◎ : Oil supply
- § : Functional check
- ※ : Clean or clear

Maitenance&inspection chart for vertical machining center							
NO.	Maintain items	daily	weekly	monthly	Six months	yearly	Remark
1	Nose taper	※					
2	Lubrication oil level	●					
3	Lubrication oil tank inlet filter			※			
4	Lubrication status for sliding way					○?	
5	Hydraulic oil gauage level				◎		
6	Static preeision					○?	
7	Positional preeision					○?	
8	F.R.L.Unit lubrication oil		○				
9	Lighting indicator on operating panel		§				
10	Coolant tank and filter			※			
11	Electric box air cooler check		§				
12	Remove chips	※					

1. Maintenance and maintenance

- (1). In order for your machine and lubrication system to work properly, be sure to use clean lubricating oil and keep lubricating clean oil.
- (2). Check and clean the filter screen at the oil tank and the oil suction port every month to prevent the filter screen of the oil suction port from being blocked, resulting in a decrease in the output of the oil pump and insufficient pressure.
- (3) For the life of the oil pump, please do not adjust the pressure of the oil pump relief valve too high, generally not more than 2.5MPa.
- (4) When starting the main engine every day, it is necessary to check whether the lubrication system is working normally, and often check whether the lubrication system circulates oil according to the set time period during the working process. If the time control system fails and the motor keeps running, the abnormality should be stopped immediately to prevent the motor from being burned or even incurring serious losses.
- (5) After the oil pump is connected to the power supply, it is forbidden to open the top cover of the pump to prevent electric shock and fire accidents.

2. Common faults and troubleshooting methods

NO.	Phenomenon	Reason	Method of exclusion
1	Motor does not turn	Use the wrong voltage	Use the correct voltage power supply
		Wiring error	Wiring according to the correct electrical connection diagram
		Inhaling fine grit traps the gears	Remove the bottom gear pump for cleaning (this must be done by a professional)
2	Not enough pressure	Pressure gauge is damaged	Replace the pressure gauge
		Main oil pipe leak	Check the main oil pipe to rule out leakage
		When the oil pump is pressurized, there is a serious oil out of the branch oil pipe	Check and replace the reversing valve in the distributor of the oil outlet pipe
		Oil pump relief valve seal is not good	Remove for cleaning
		The suction port is blocked	Clean the fuel tank, filter at the suction port
3	No oil	The air in the pump is not exhausted	Pump oil several times, if necessary, loosen the oil outlet and then pump oil
		Motor does not turn	See item No. 1
4	Low oil output	The suction port is blocked	Clean the filter at the suction port
		The overflow valve is not well sealed	Remove the overflow valve for cleaning
5	Pressure switch failure	Insufficient system pressure	Check the piping system pressure must be greater than 10kgf/cm ²
		Wiring error	Correct wiring according to the electrical wiring diagram
6	Level switch malfunctioning	Float hits fuel tank	Try to correct the level switch position

1. Before replacing parts, the following data must be recorded

- (1) The production serial number of the machine
- (2) The specifications and brands of the parts to be replaced
- (3) The relationship position of the upper and lower connections to avoid reloading errors

2. After the new parts are assembled, the old parts should not be discarded until their normal function is confirmed

3. Maintenance precautions

- (1) The operator should understand the shutdown steps, and only after the shutdown can be repaired
- (2) When repairing the interior:
 - a. First cut off the power
 - b. If the power must be turned on, the machine should be locked before entering the interior

4. When the machine is running, due to excessive chips, it must be removed immediately

- (1) Press [Pause] first, then press [Mechanical Lock] to clear the cutting
- (2) When removing and cutting, use tools such as brushes to clean up, and do not remove by hand to avoid injury

Maintenance rights and responsibilities

1. Allow the operator to repair or replace by himself

- (1) Screws, sheet metal, etc. that do not affect the accuracy of the machine
- (2) Simple spare parts, such as fuses, switches, oil pipe joints
- (3) If the replacement parts cannot be assembled and restored, please ask the maintenance personnel of our company to repair

(4) If the maintenance personnel cannot provide time-limited service, and the company can teach maintenance by telephone or fax

2. The following items require professionally qualified personnel to perform maintenance work

- (1) Maintenance of spindle deflection is too large
- (2) Abnormal noise maintenance of main shaft
- (3) Main shaft oil leakage maintenance
- (4) Ball screw maintenance
- (5) Linear slide maintenance

Notice:

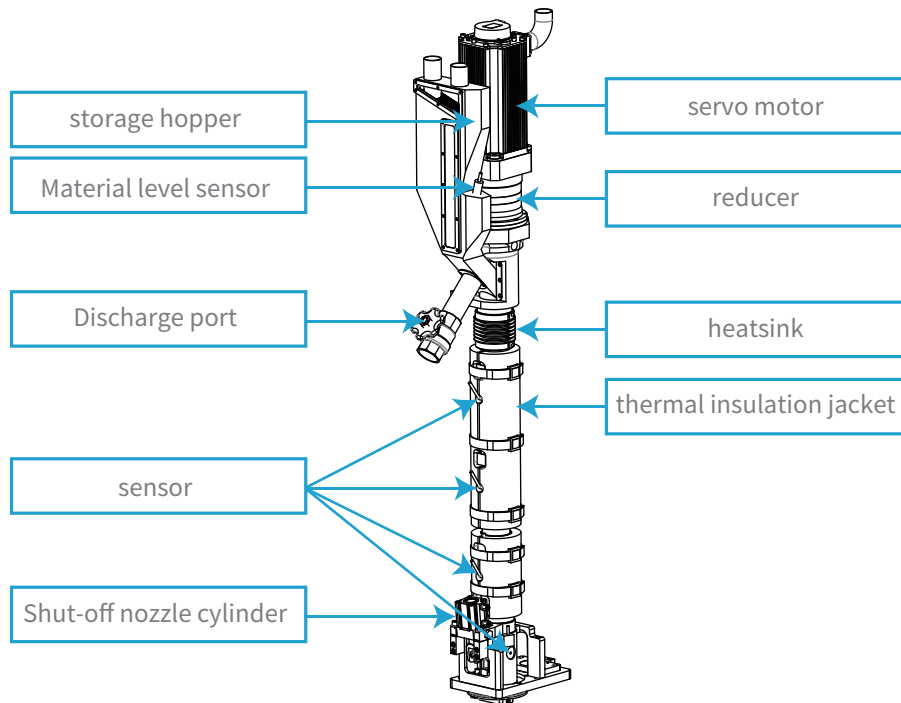
(1) Only the detachable protective cover can be used for simple maintenance and cleaning.

(2) The circuit box cannot be disassembled for maintenance.

(3) The heating area is wrapped with thermal insulation cotton, and it is forbidden to disassemble it.

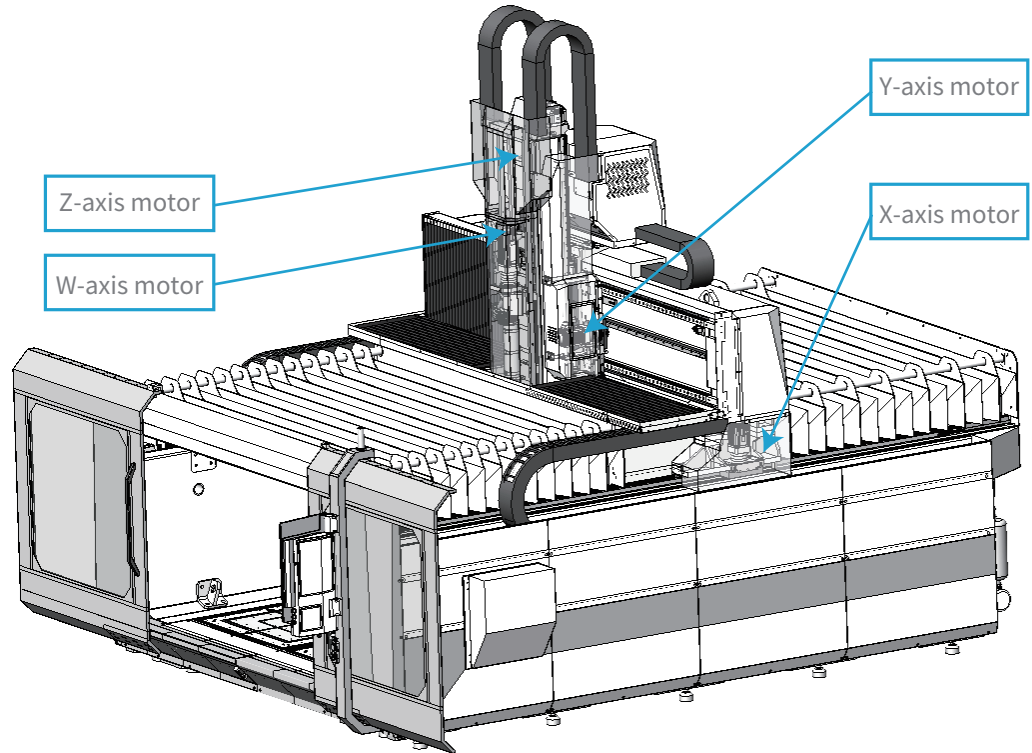
(4) It is forbidden to adjust the sensor on the storage hopper.

(5) The position of the temperature sensor is prohibited from being adjusted.



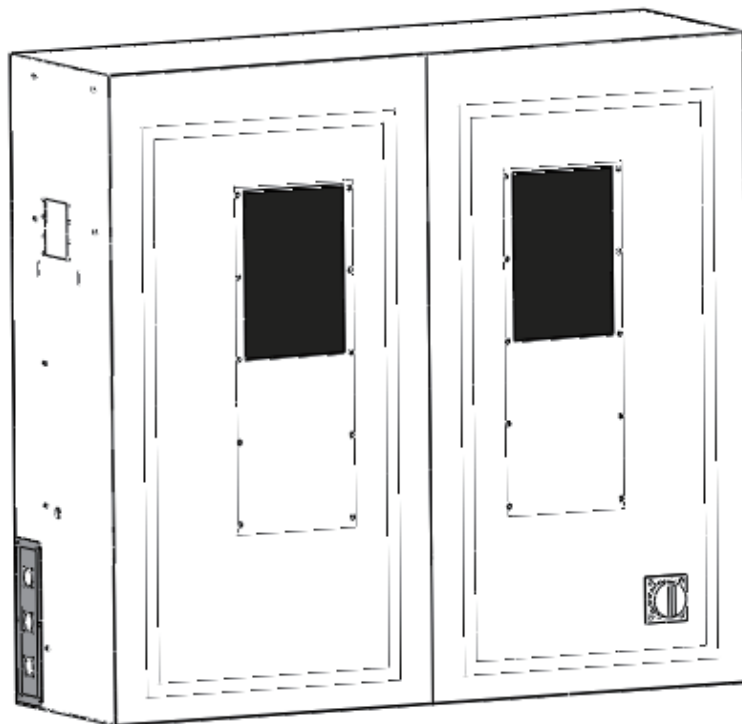
Notice:

- (1) Only perform simple maintenance and cleaning on the detachable protective cover.
- (2) Both the X motor and the Y motor have a reducer, and disassembly is prohibited.
- (3) Both the X axis and the Y axis are geared and can only be adjusted for backlash.
- (4) The Z axis and the W axis are driven by screw rods, and adjustment is prohibited.
- (5) X-axis and Y-axis racks, guide rails, Z-axis screw, W-axis screw are lubricated with lubricating oil, and it is forbidden to modify the lubricating oil circuit.
- (6) The Z-axis guide is lubricated by the lubricating oil box.



Notice:

- (1) Only the removable filter can be cleaned.
- (2) The electric cabinet does not have the function of opening the door and powering off.
- (3) To open the electric cabinet, please disconnect the handle of the plastic box circuit breaker.
- (4) It is forbidden to modify the internal circuit of the electric cabinet.



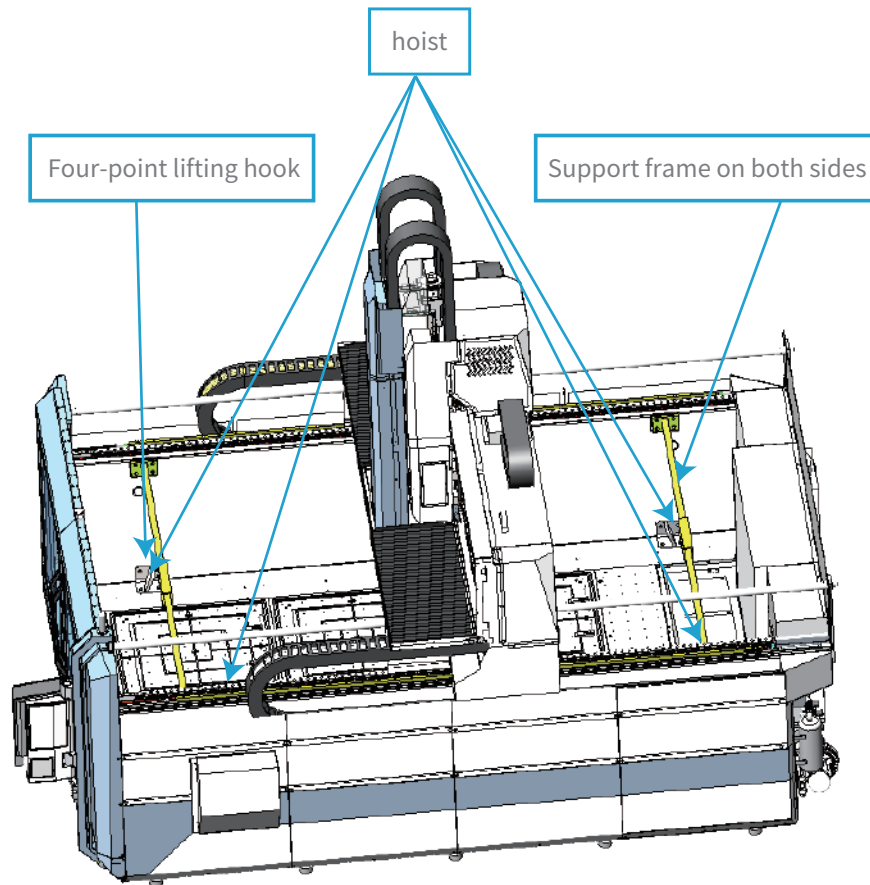
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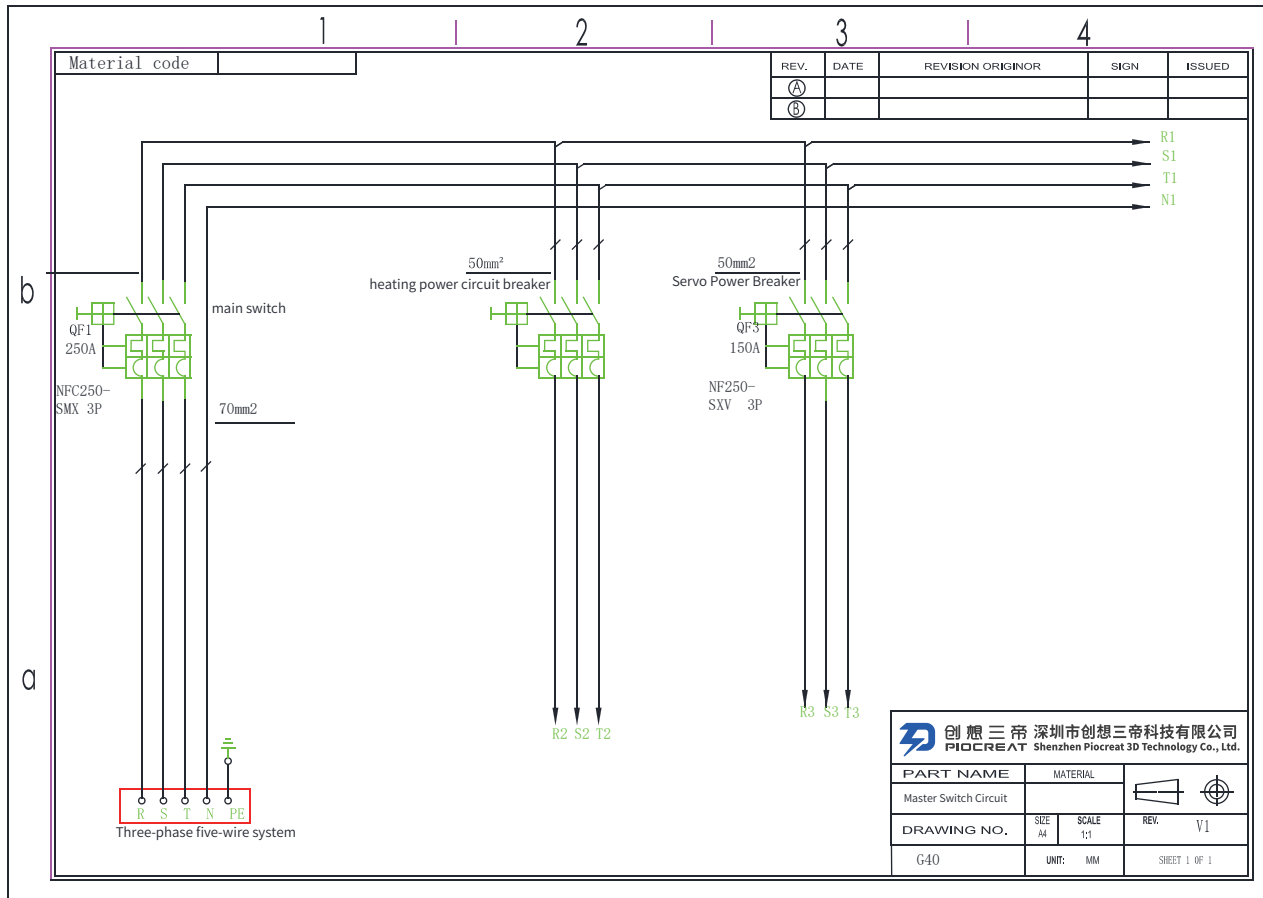
(1) Before hoisting, remove the accessories of the fuselage to the state shown in the figure, and remove all the connection cables of the external equipment of the power distribution cabinet;

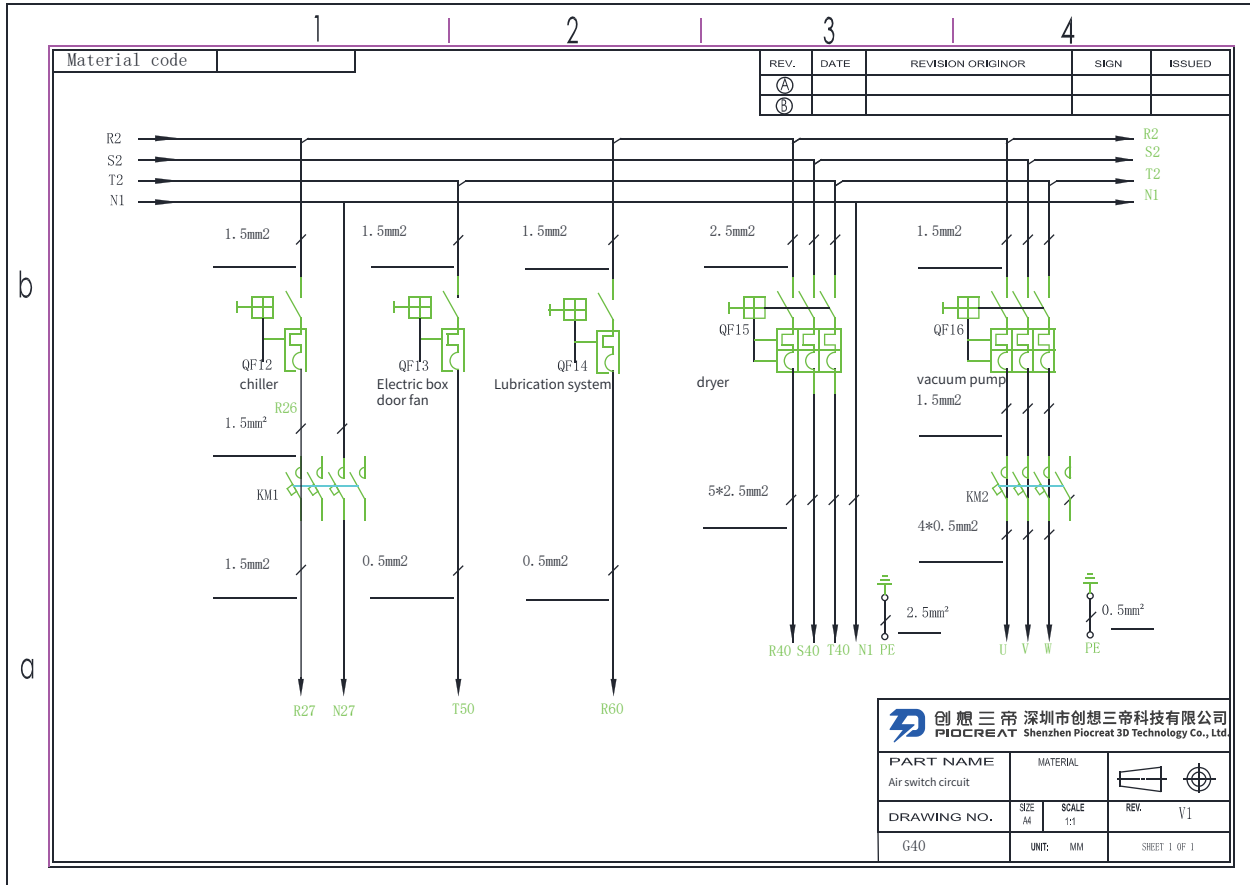
(2) The top block must be installed on the moving axis of the fuselage before lifting. There are two top blocks on the left and right of the X axis, and two top blocks on the left and right of the Y axis. About 100mm away from the worktable, use the locking steel frame to fix the Z-axis slide, and at the same time, the W-axis is lowered to about 100mm of the steel frame, and the end face nozzle of the print head is fixed with a wooden square.

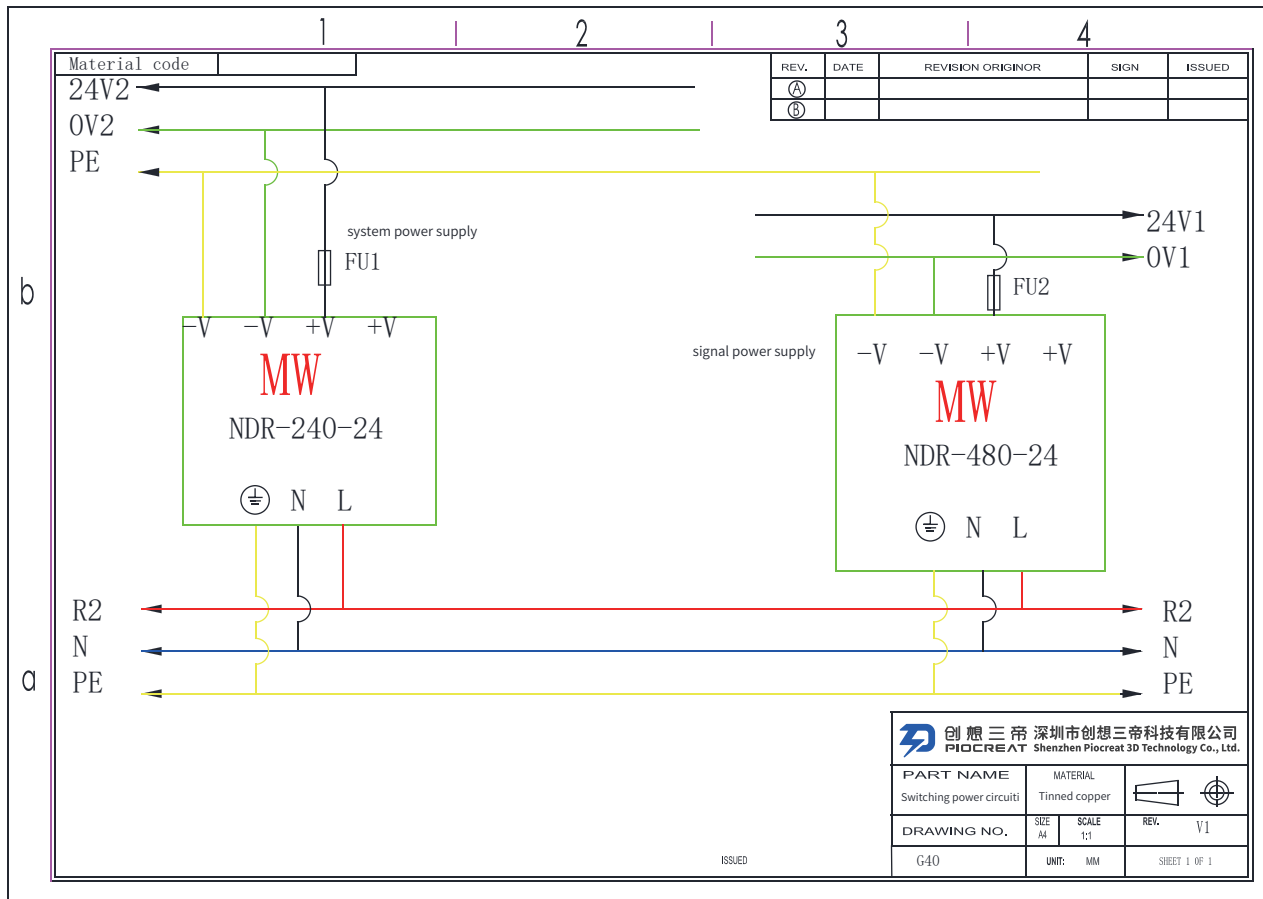
(3) The weight of the body is 15000kg. When the crane is transported, it needs to be used with a crane over 50T. The steel cable of the crane must be able to bear the weight of the machine;

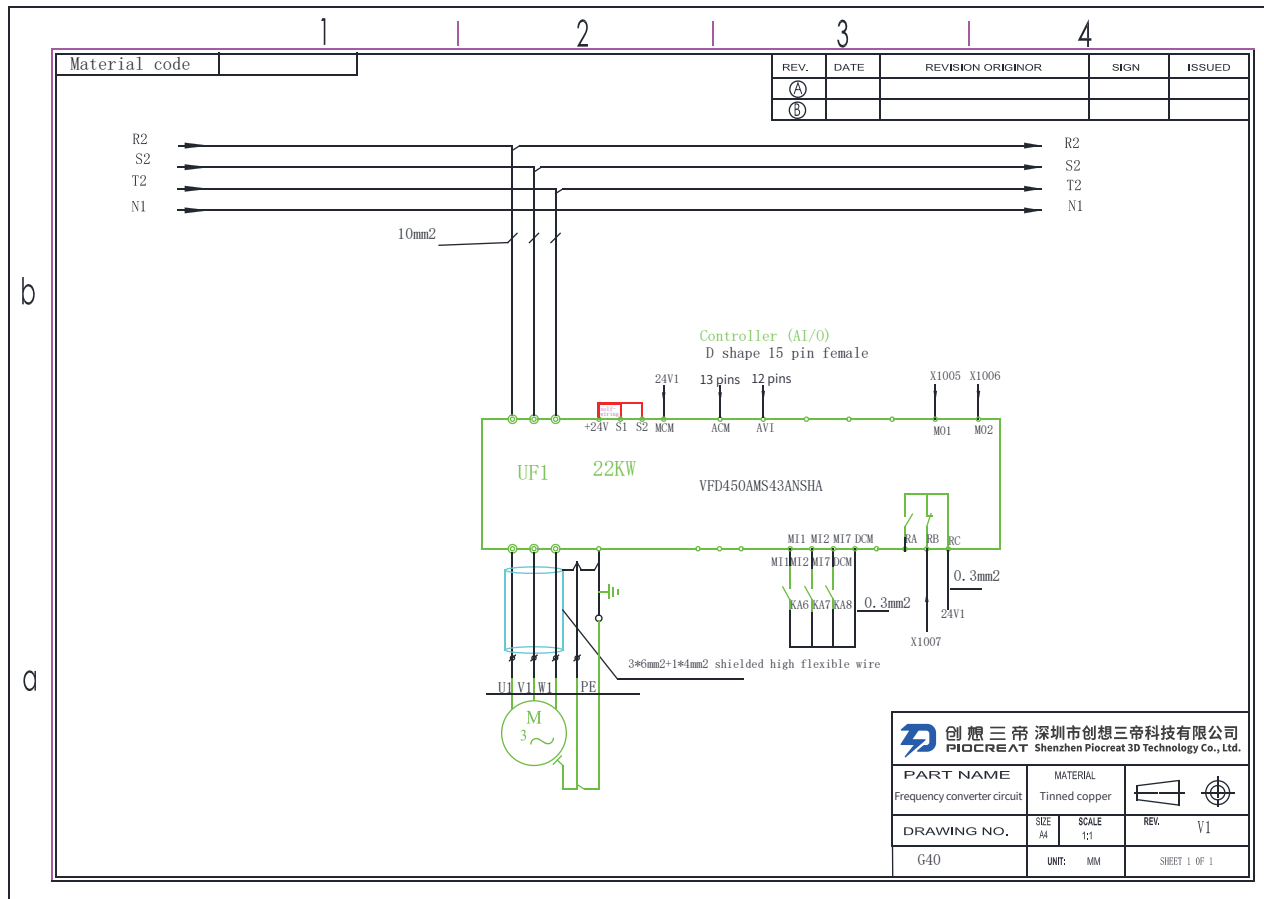
(4) Lifting method: The machine is equipped with 4 hooks, the hooks are fixed on the corners on both sides of the chassis by bolts, and the sheet metal and the top shield are compressed and fixed forward and backward. Remove the interfering sheet metal, and the outer sheet metal on both sides, and install the shackle and steel cable.



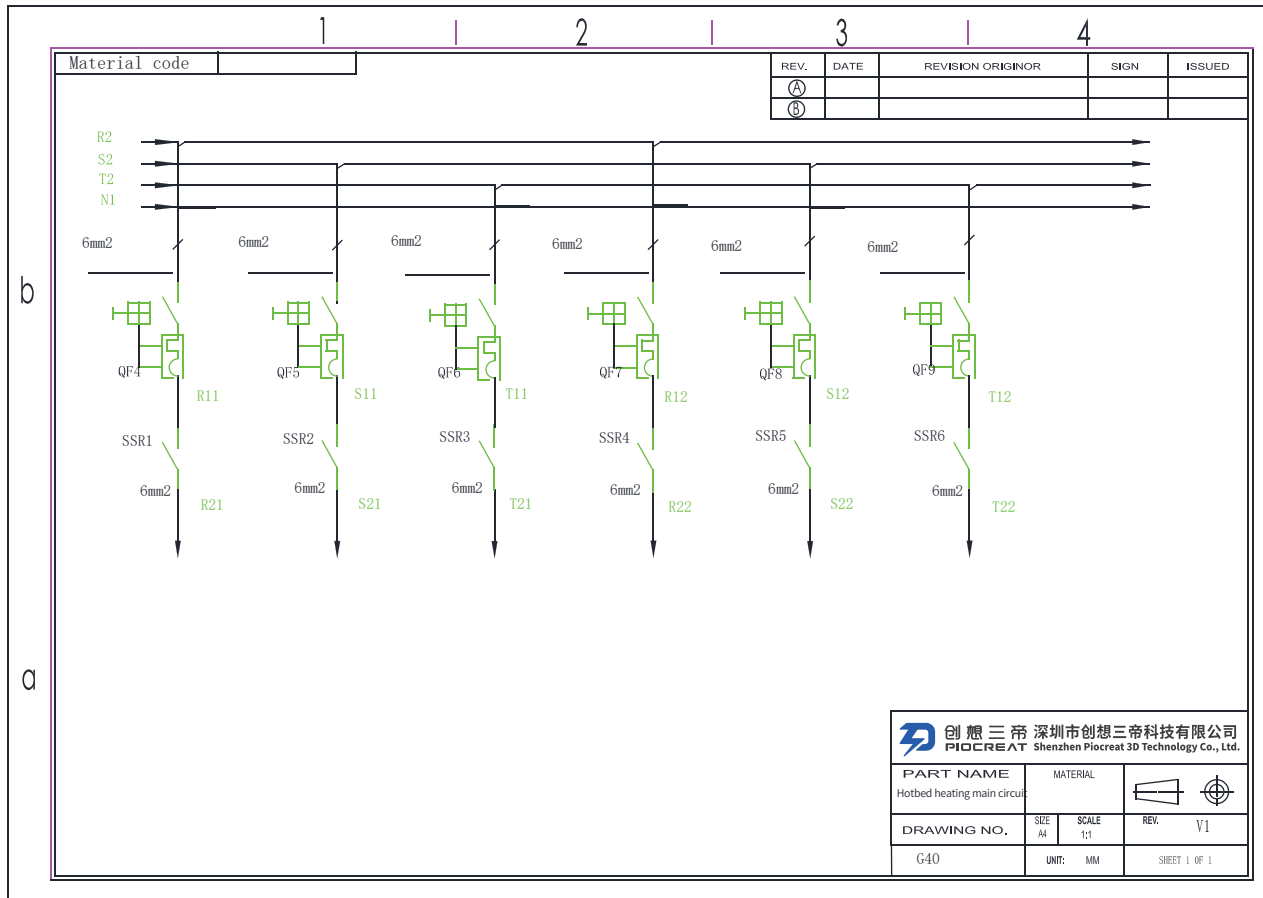


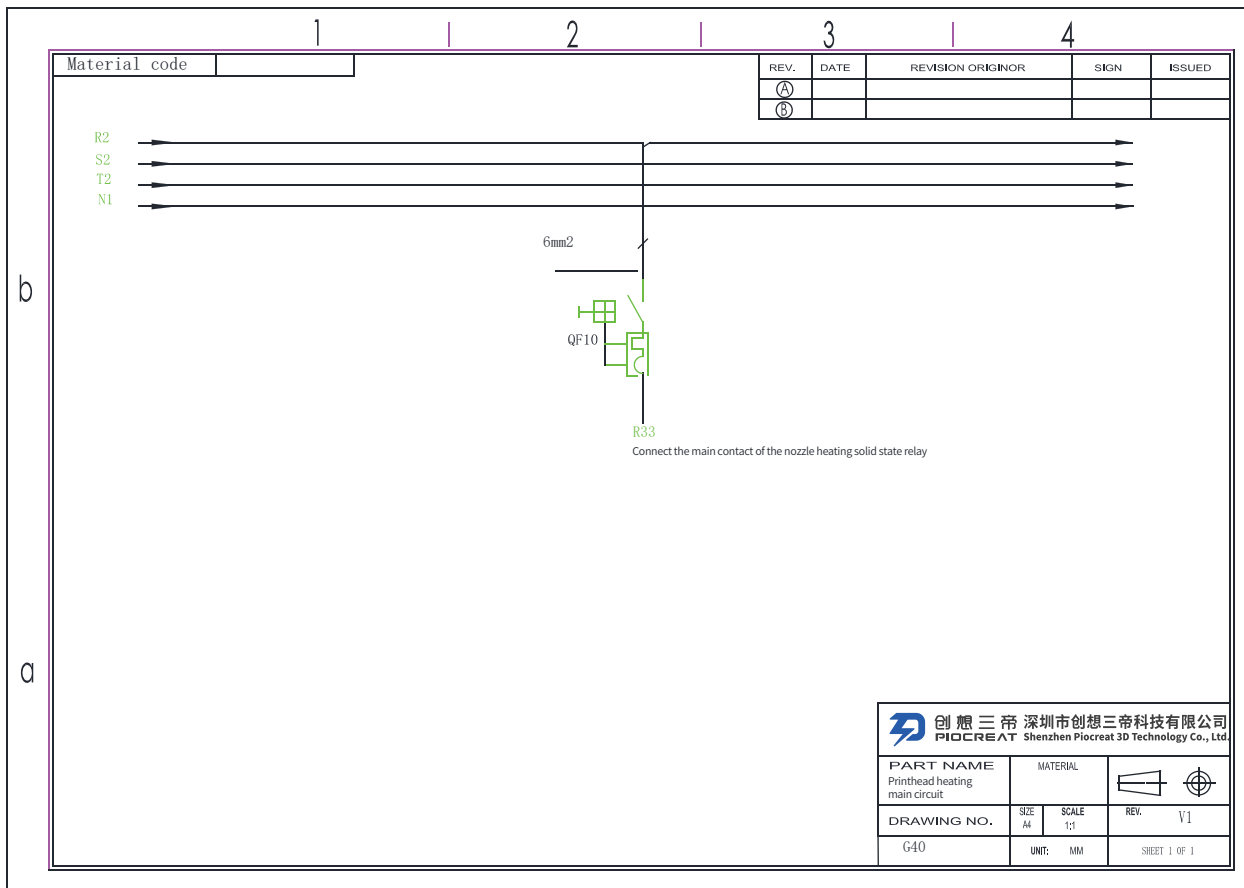


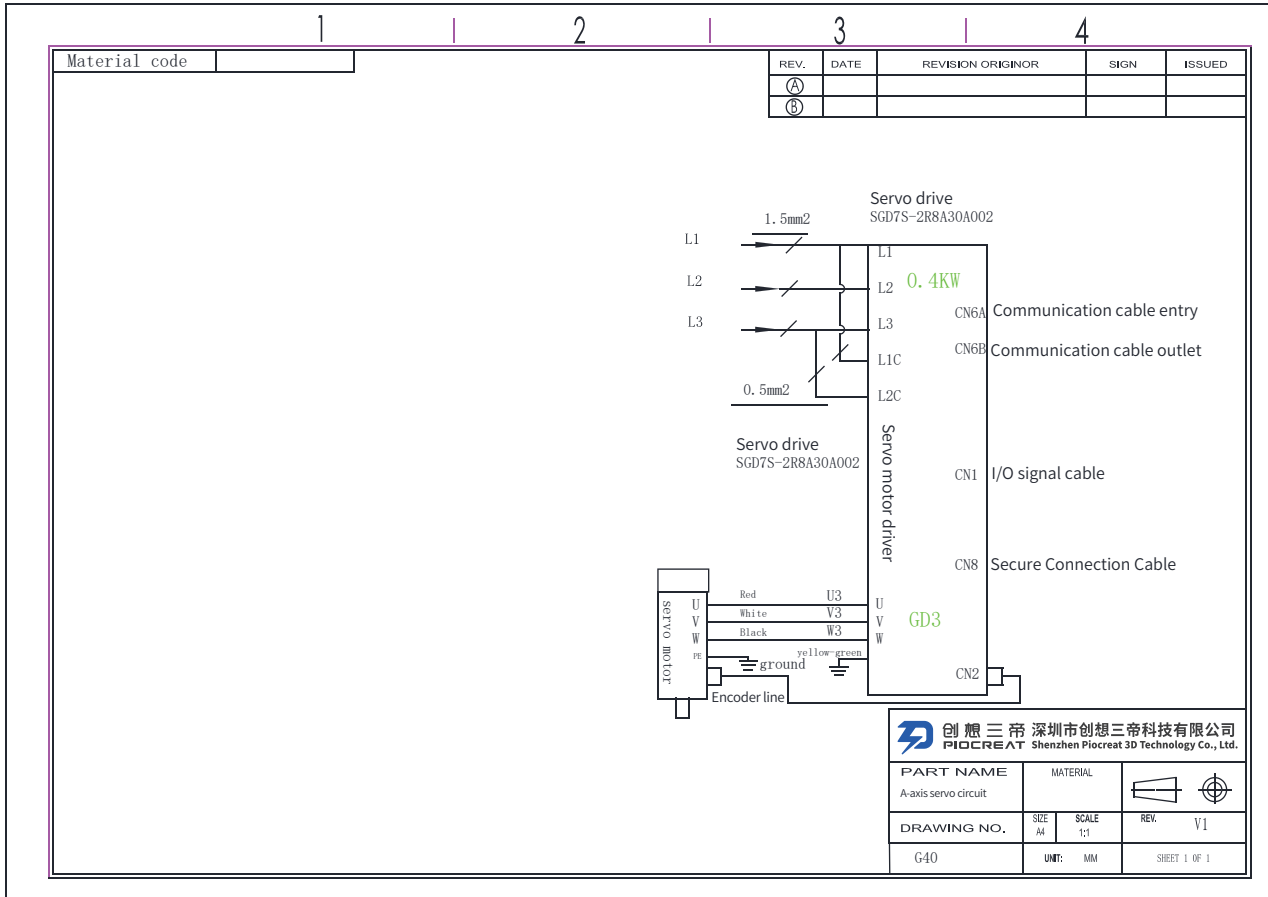


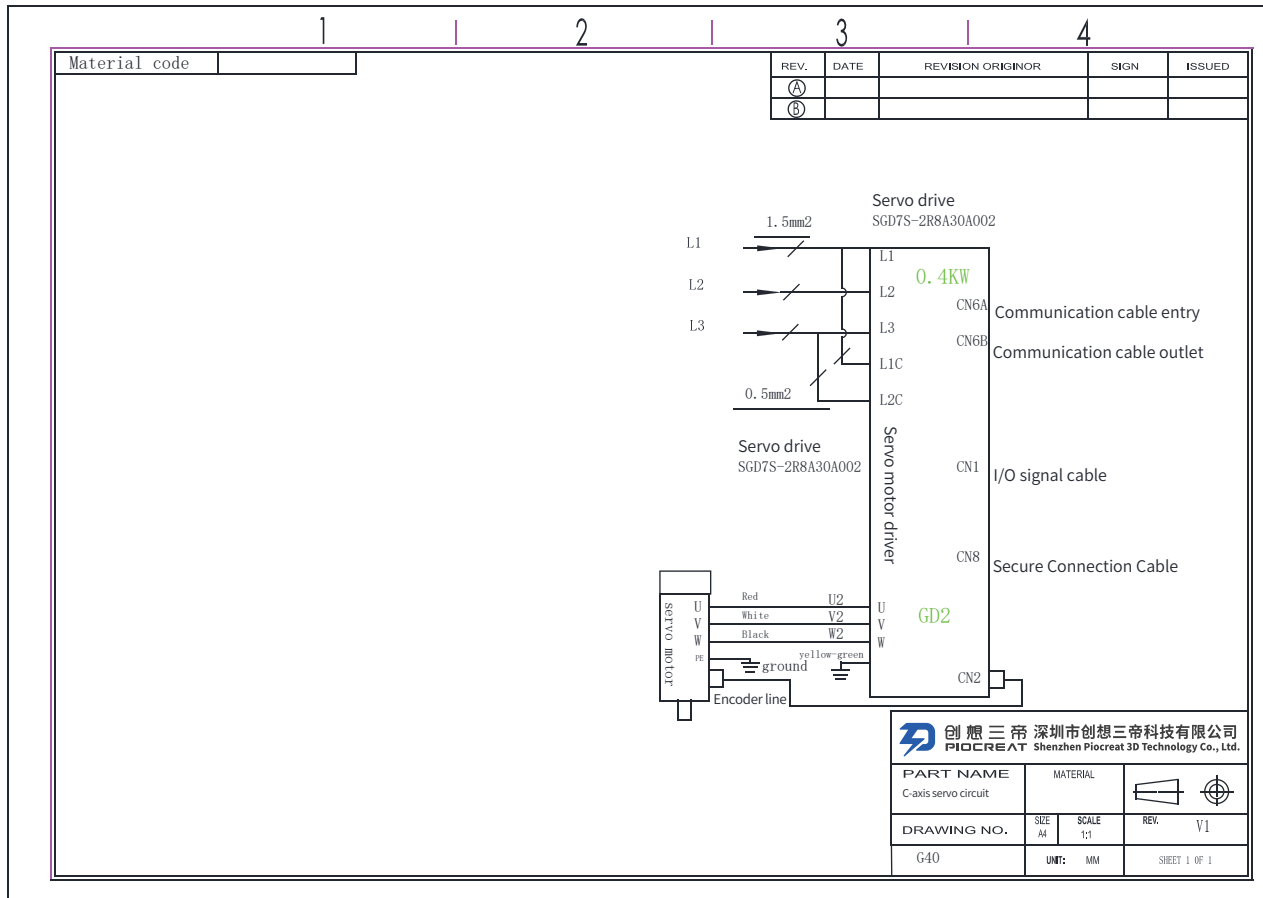


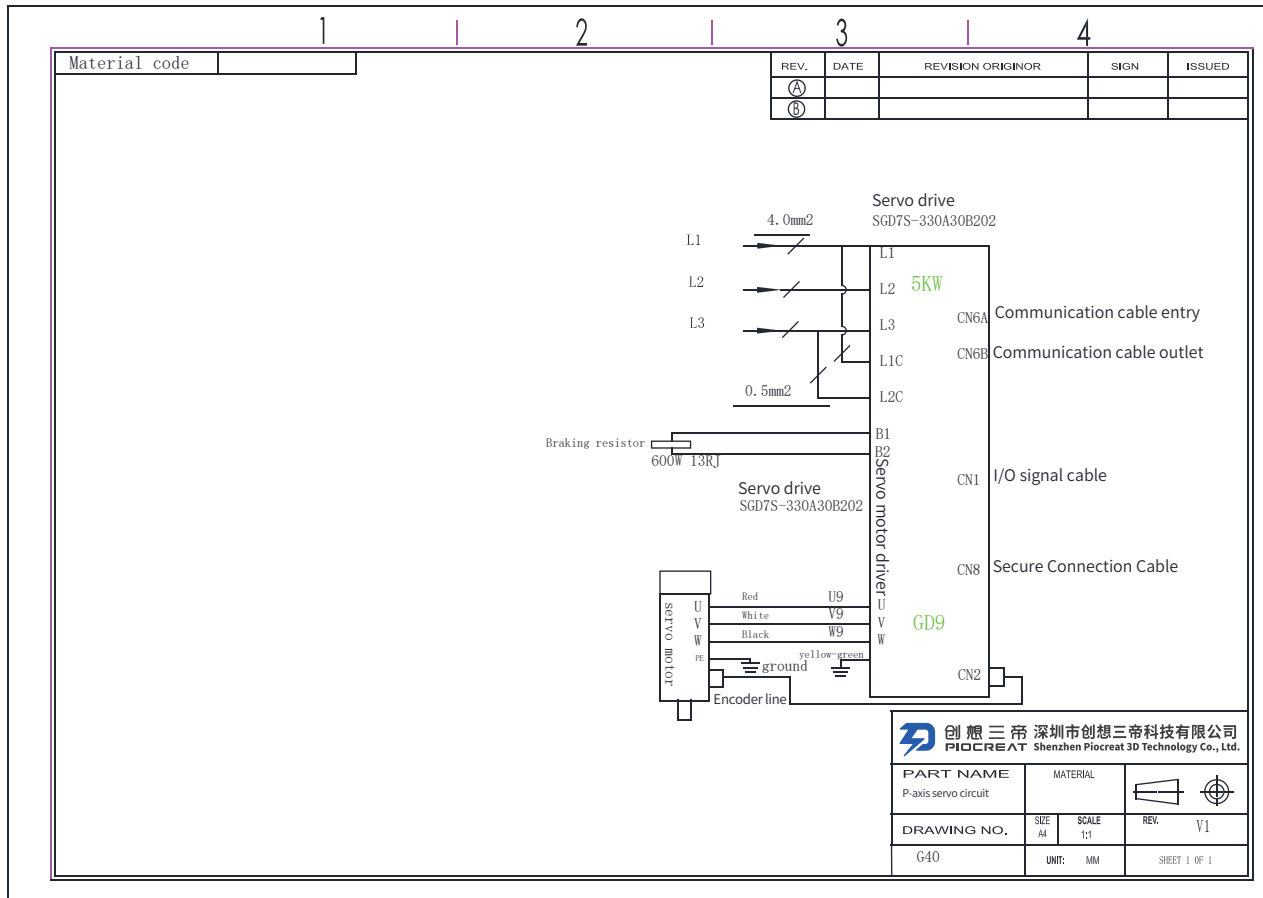
Hotbed heating main circuit

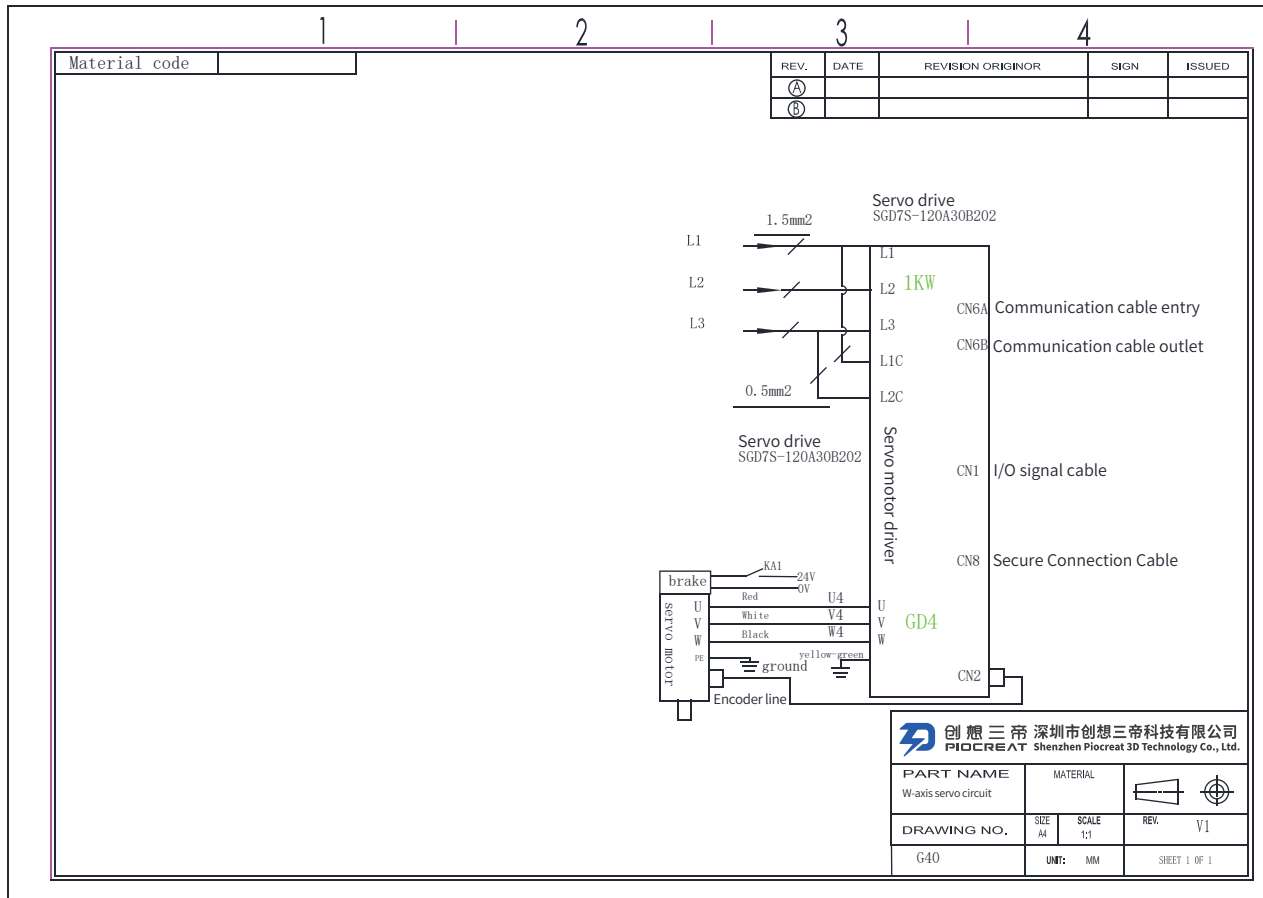


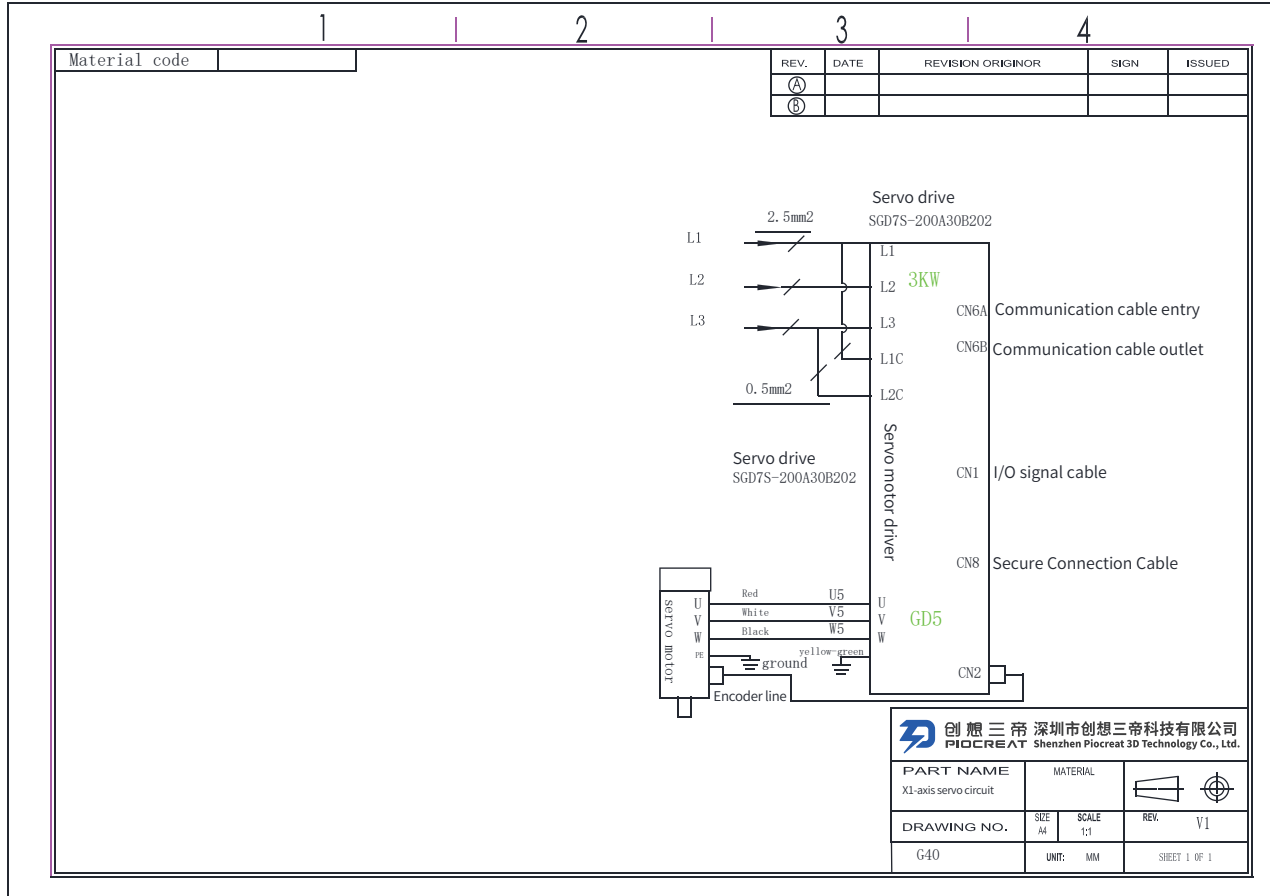






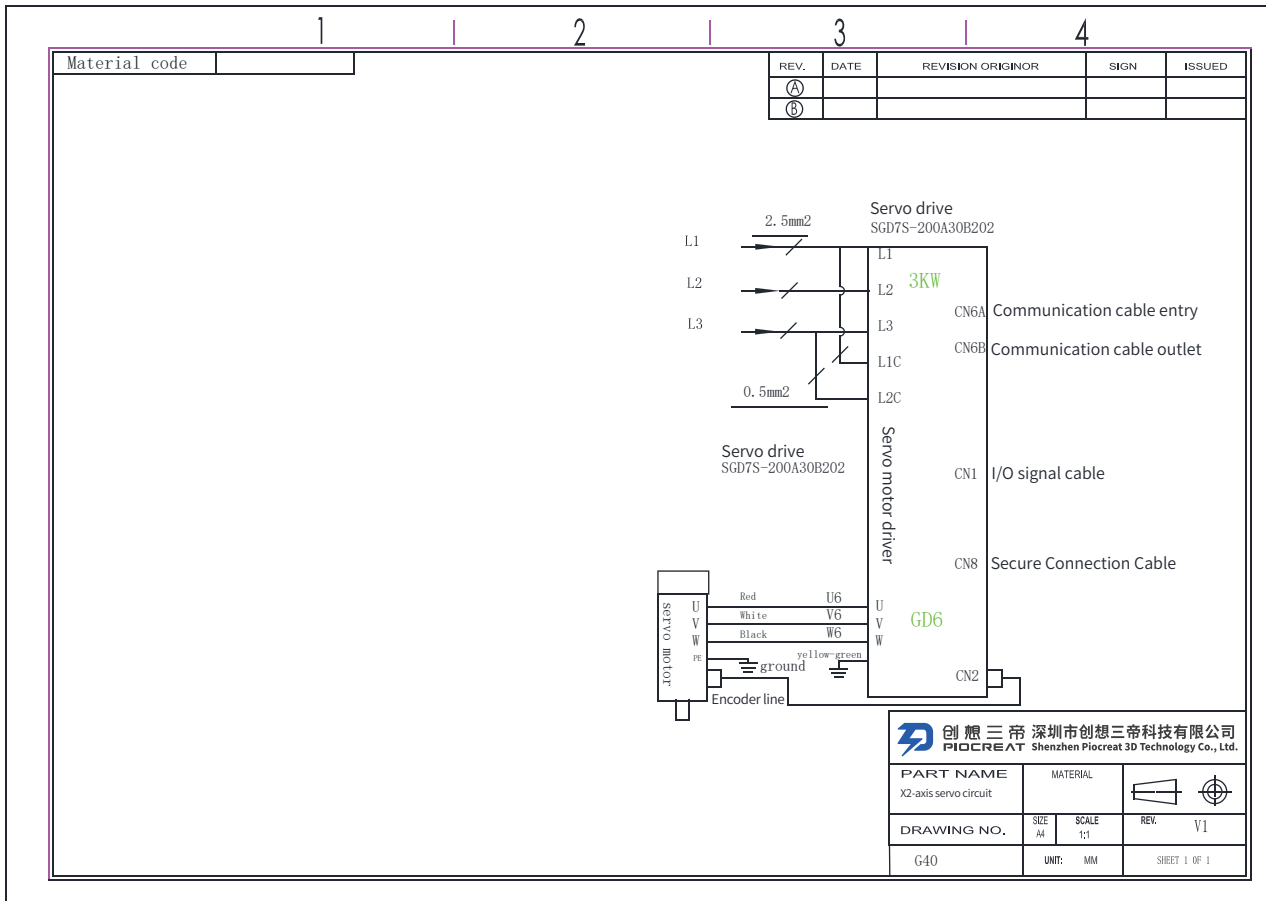


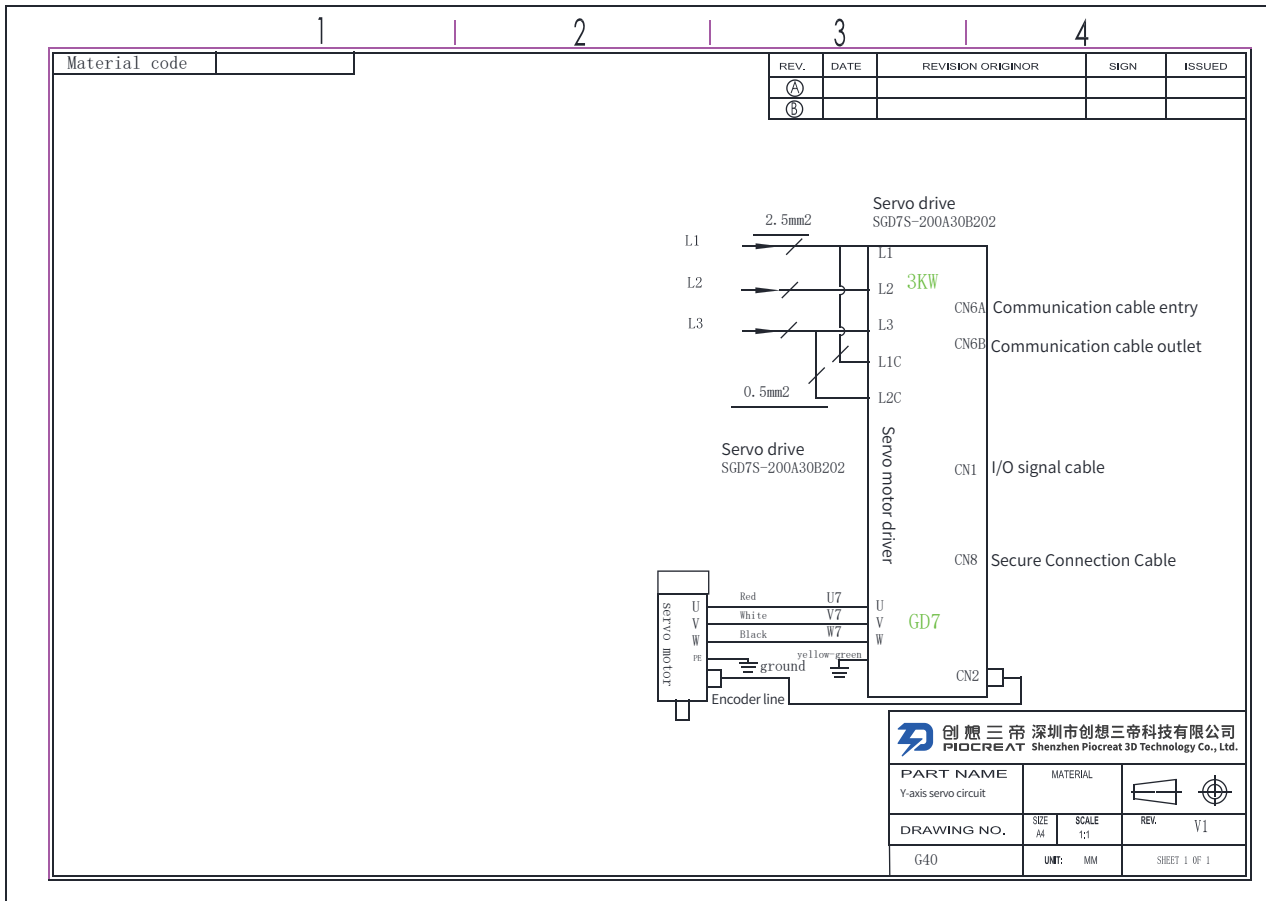


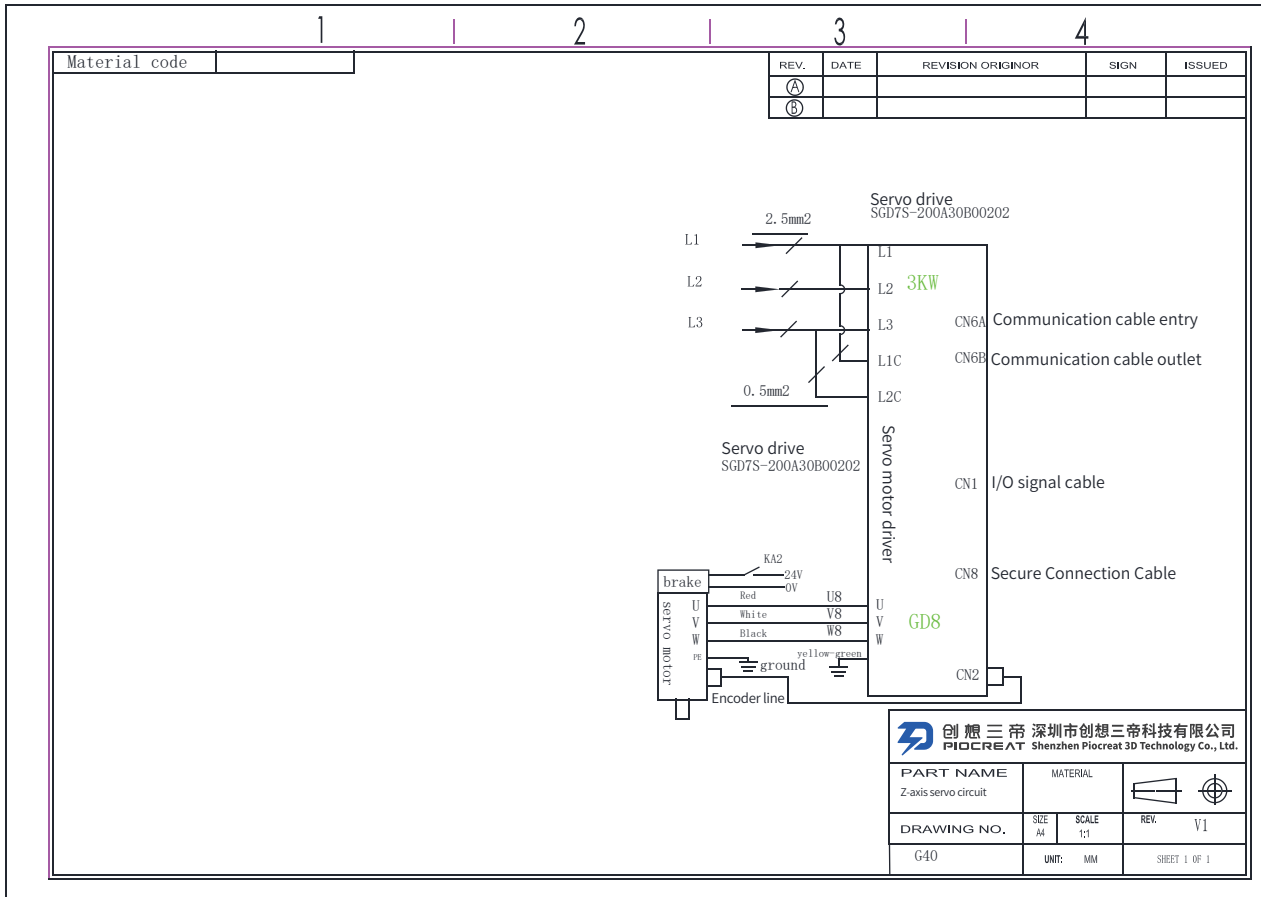


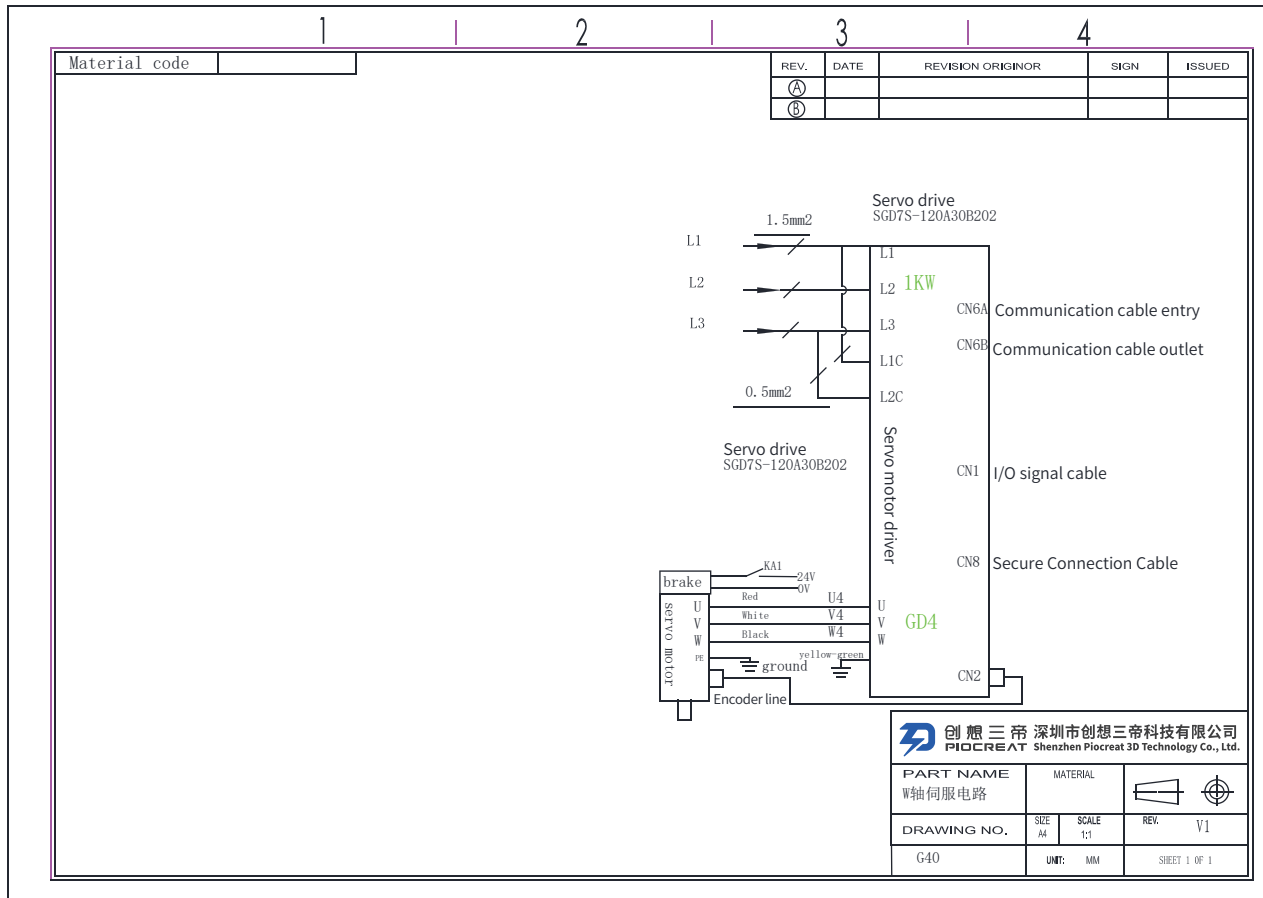
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PIOCREAT Shenzhen Piocreat 3D Technology Co., Ltd.

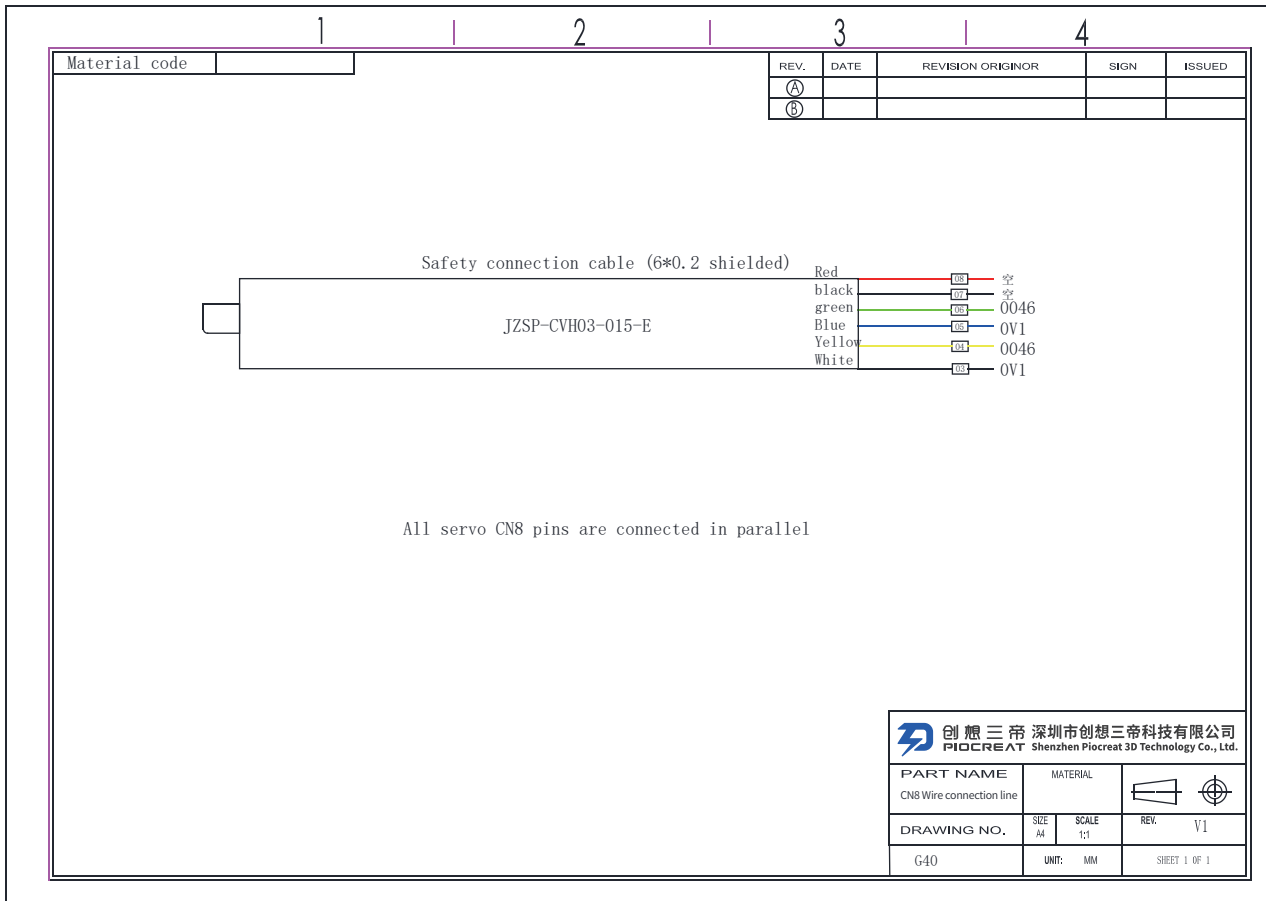
PART NAME X1-axis servo circuit	MATERIAL	
DRAWING NO.	SIZE A4	SCALE 1:1
G40	UNIT: MM	REV. V1 SHEET 1 OF 1



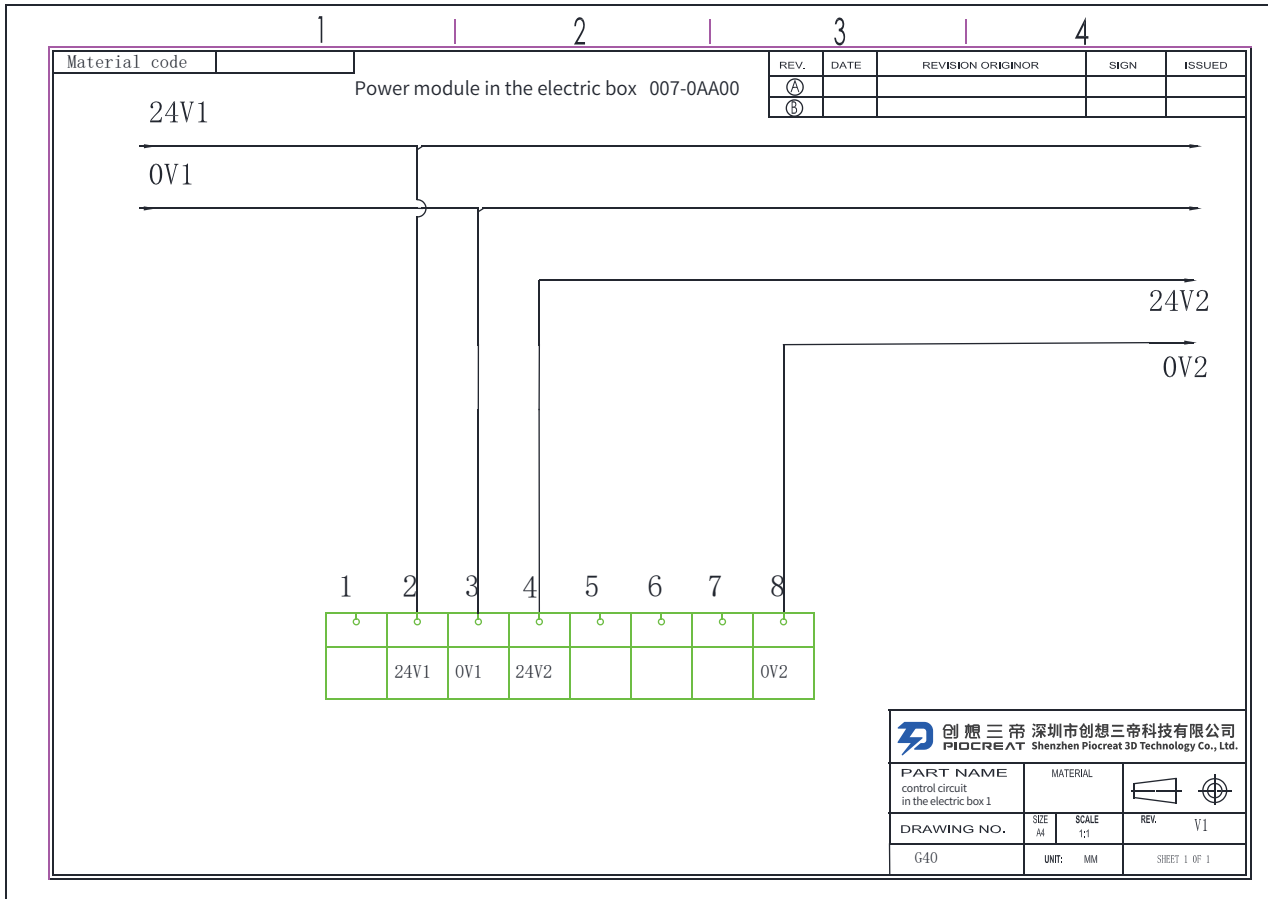


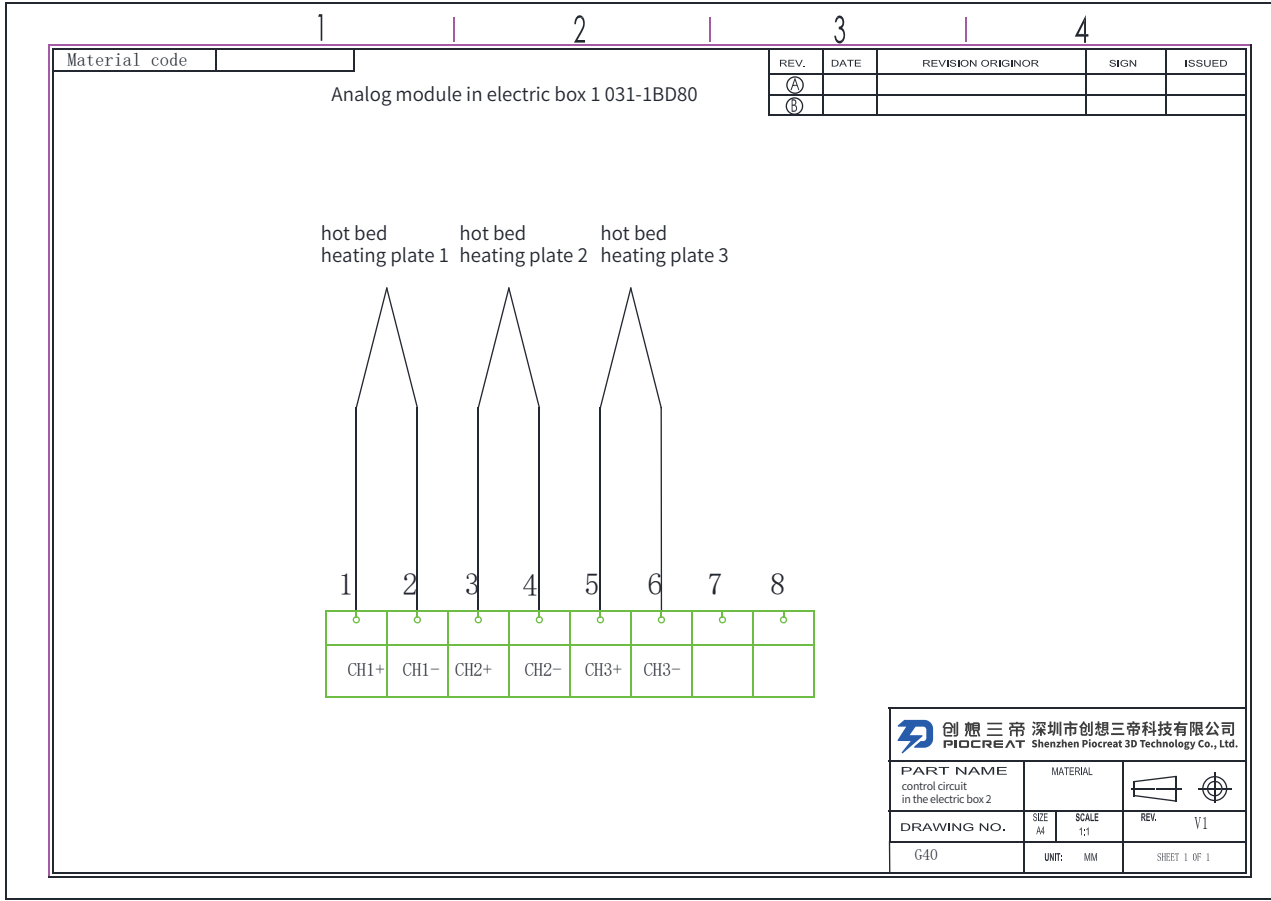


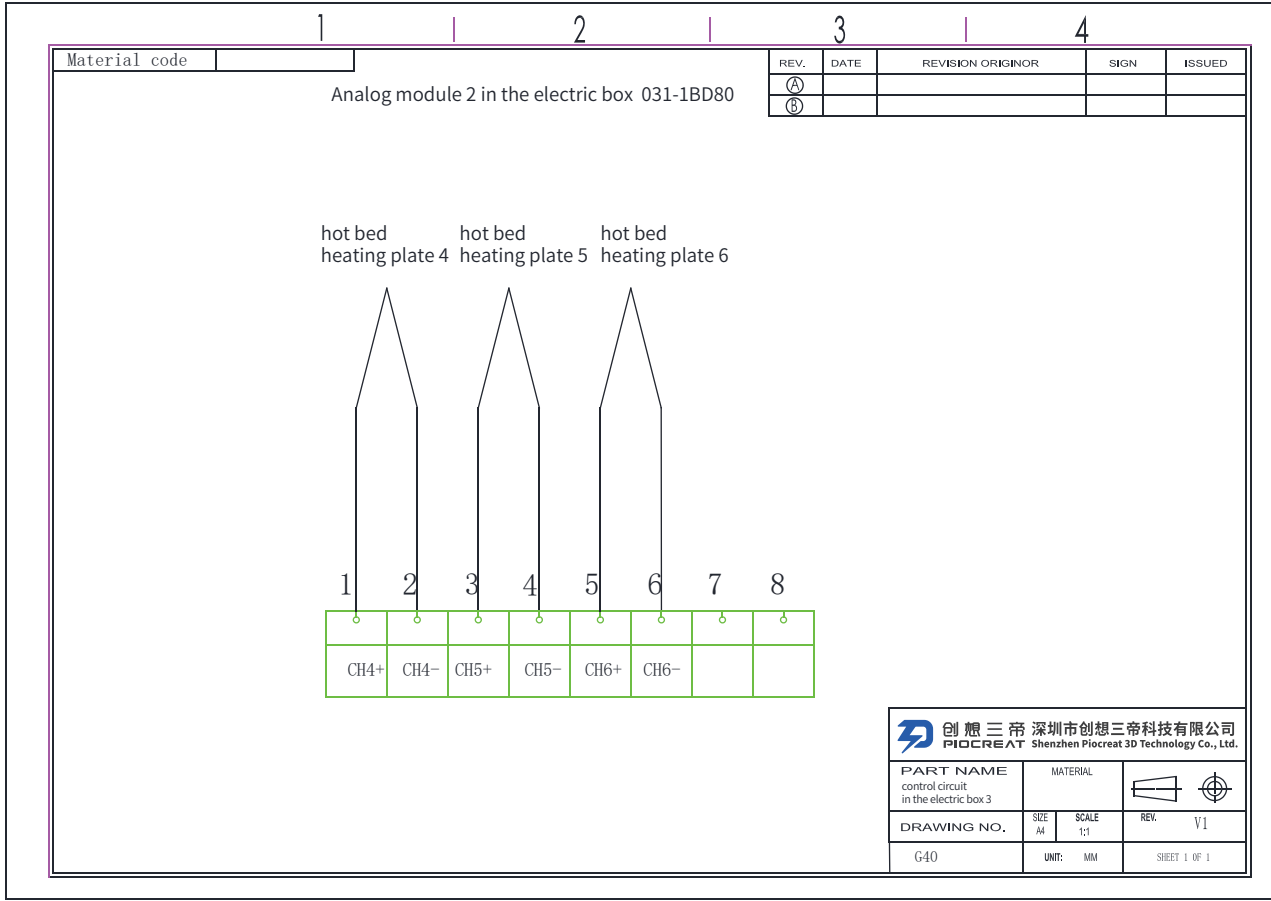




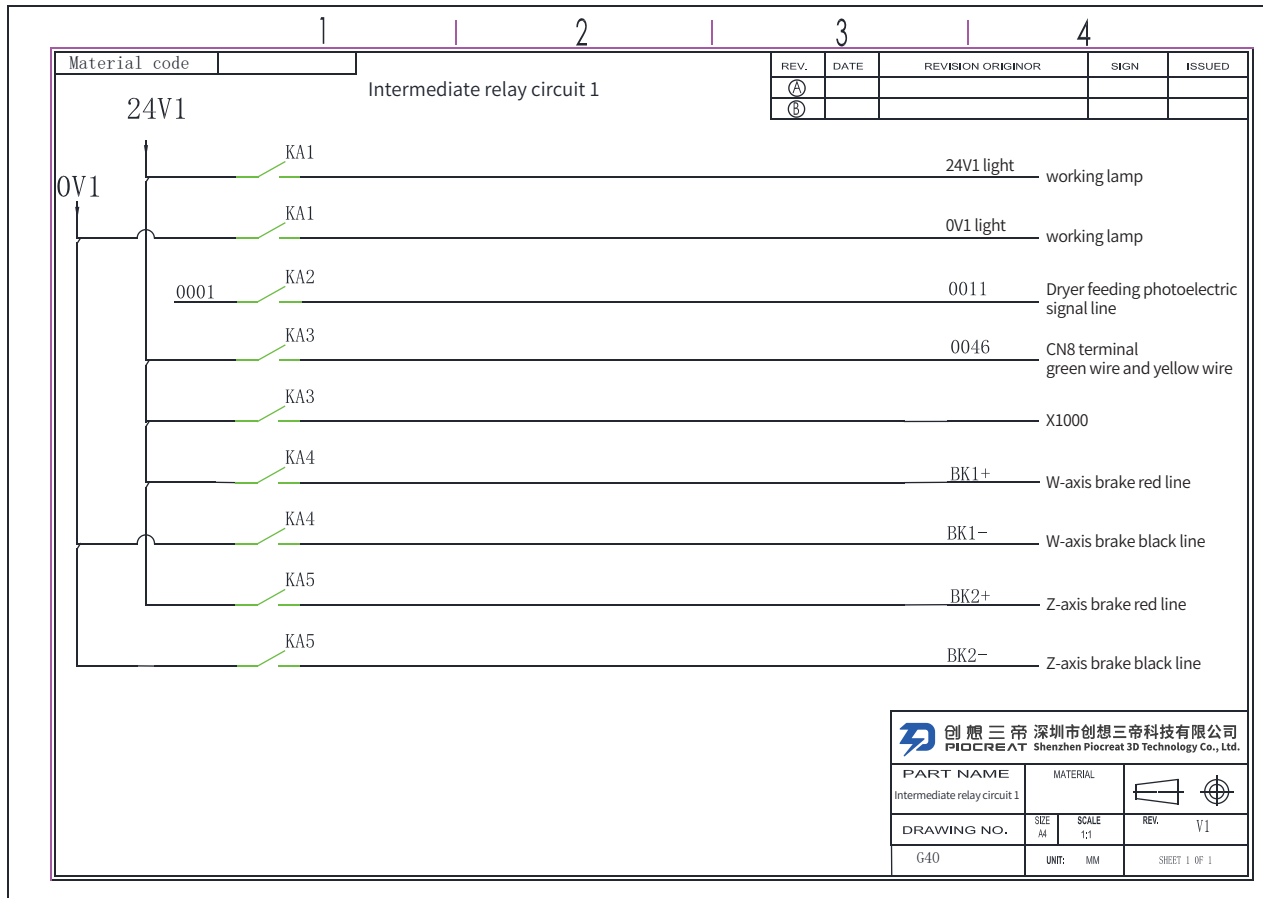
Control Circuit in the electric box 1

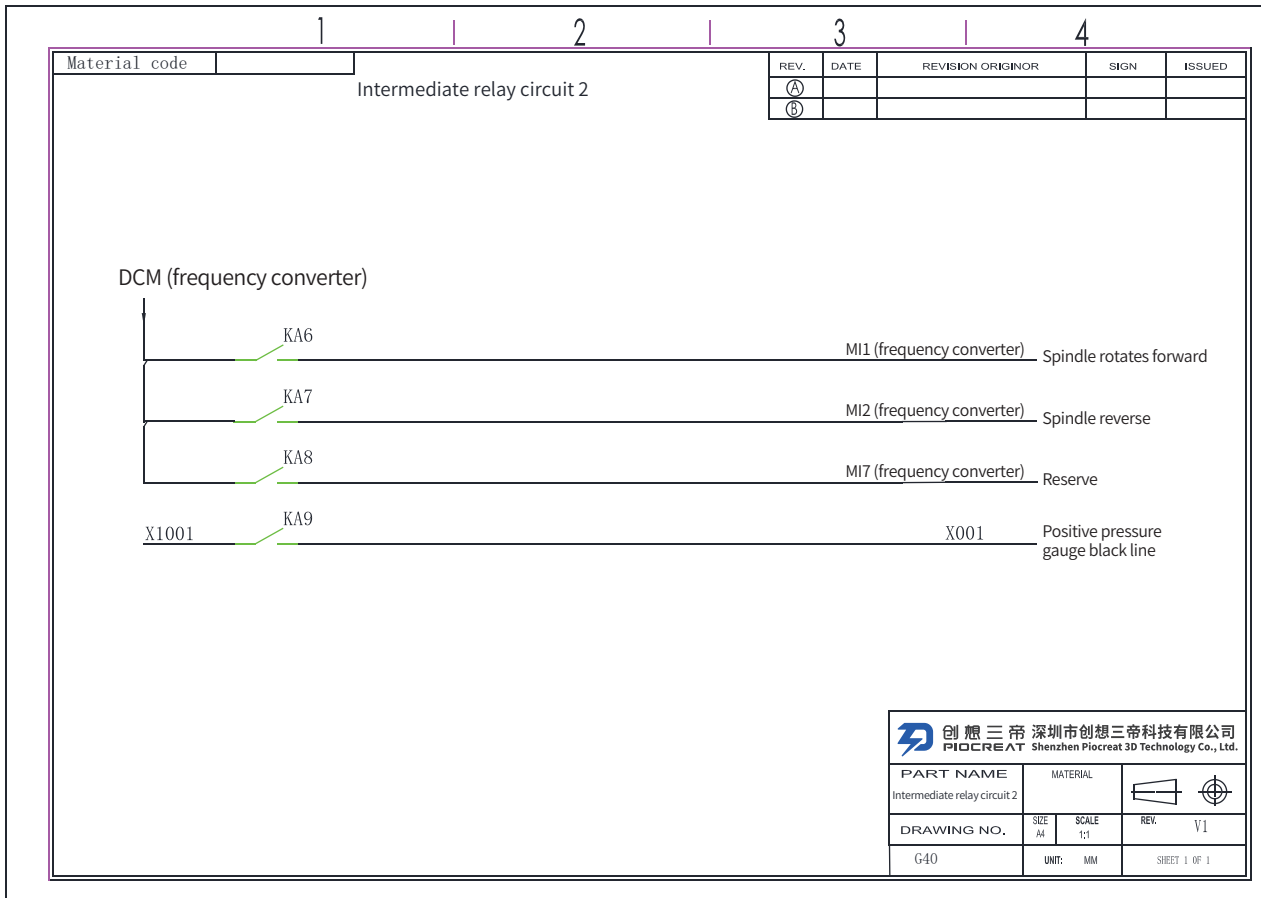


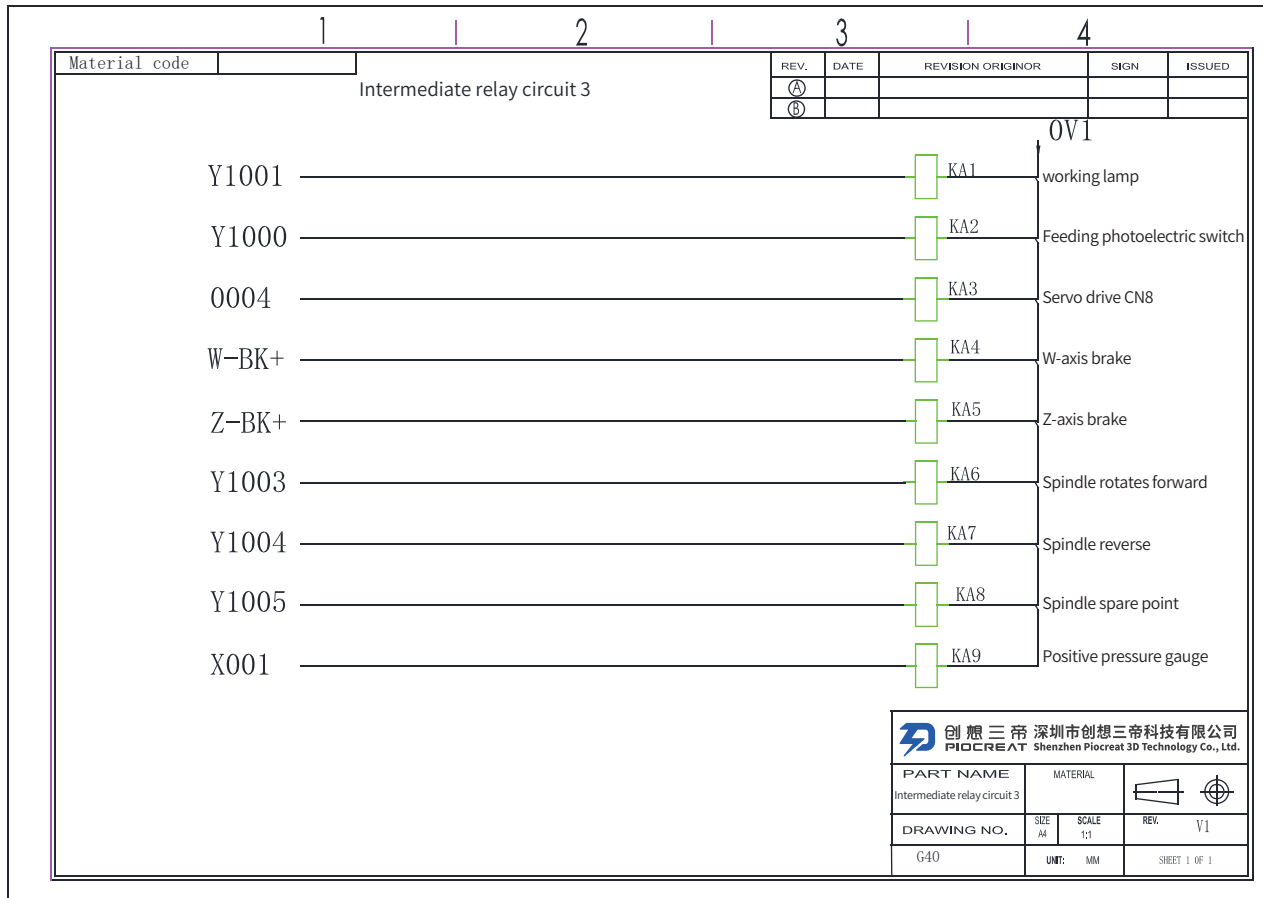




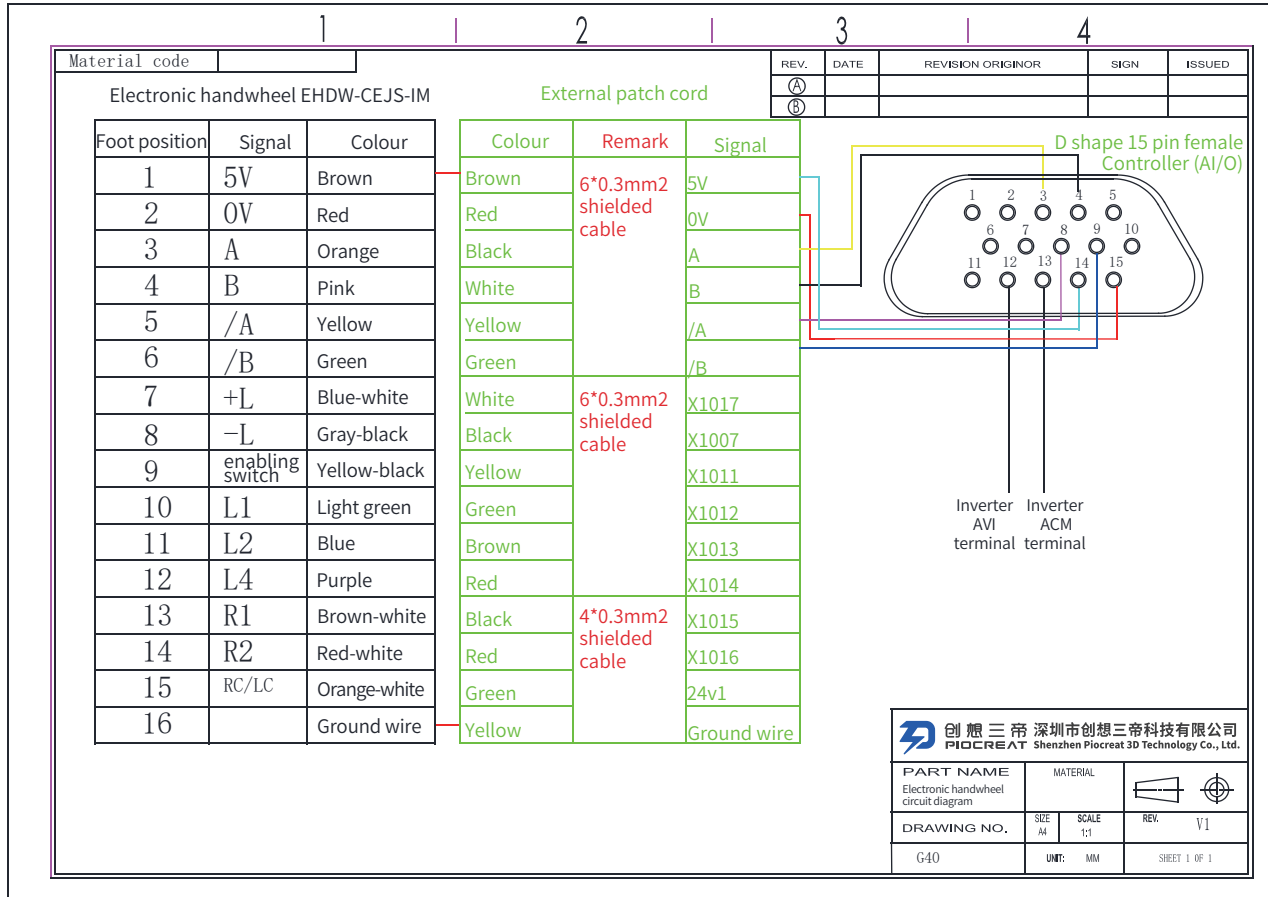
Intermediate relay circuit 1

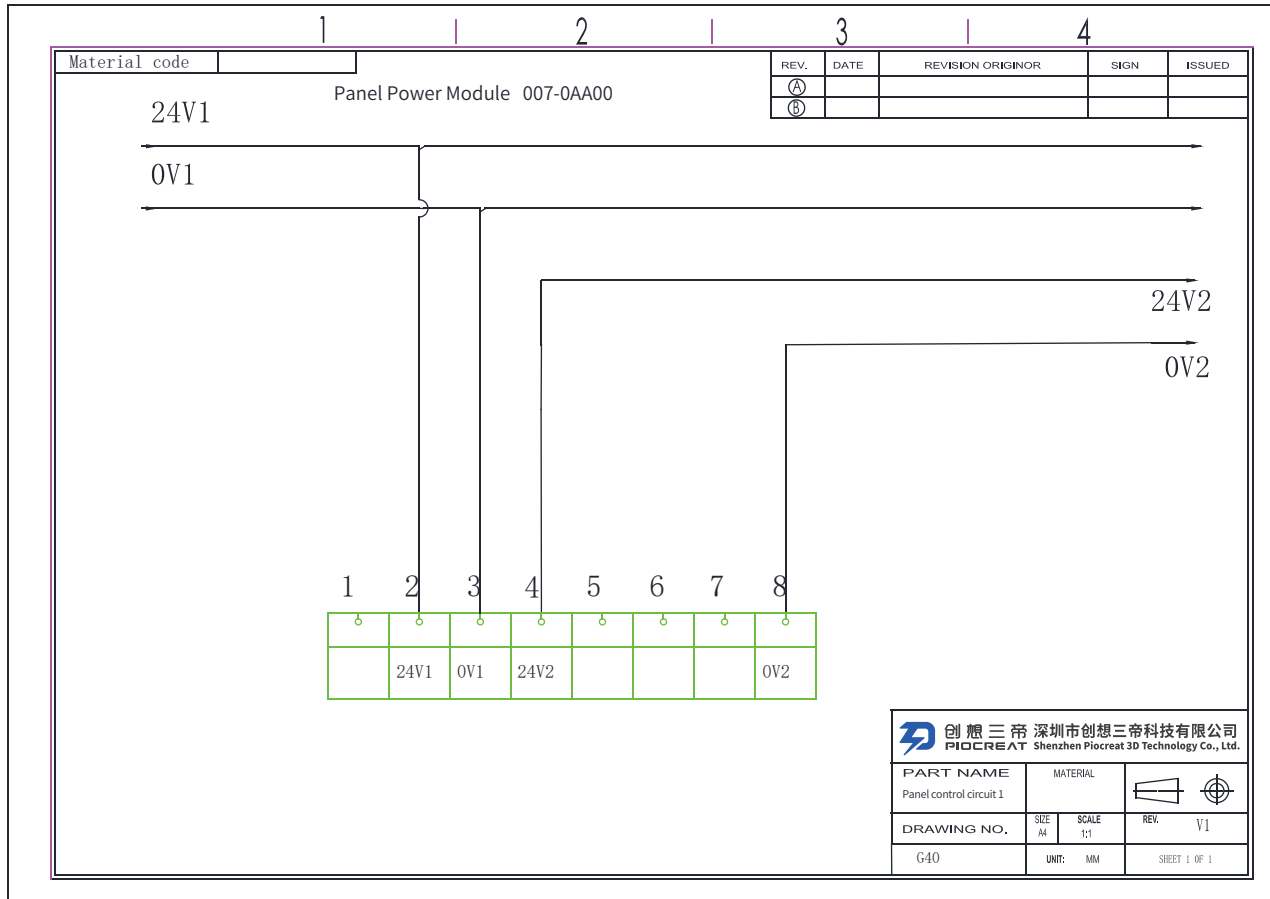


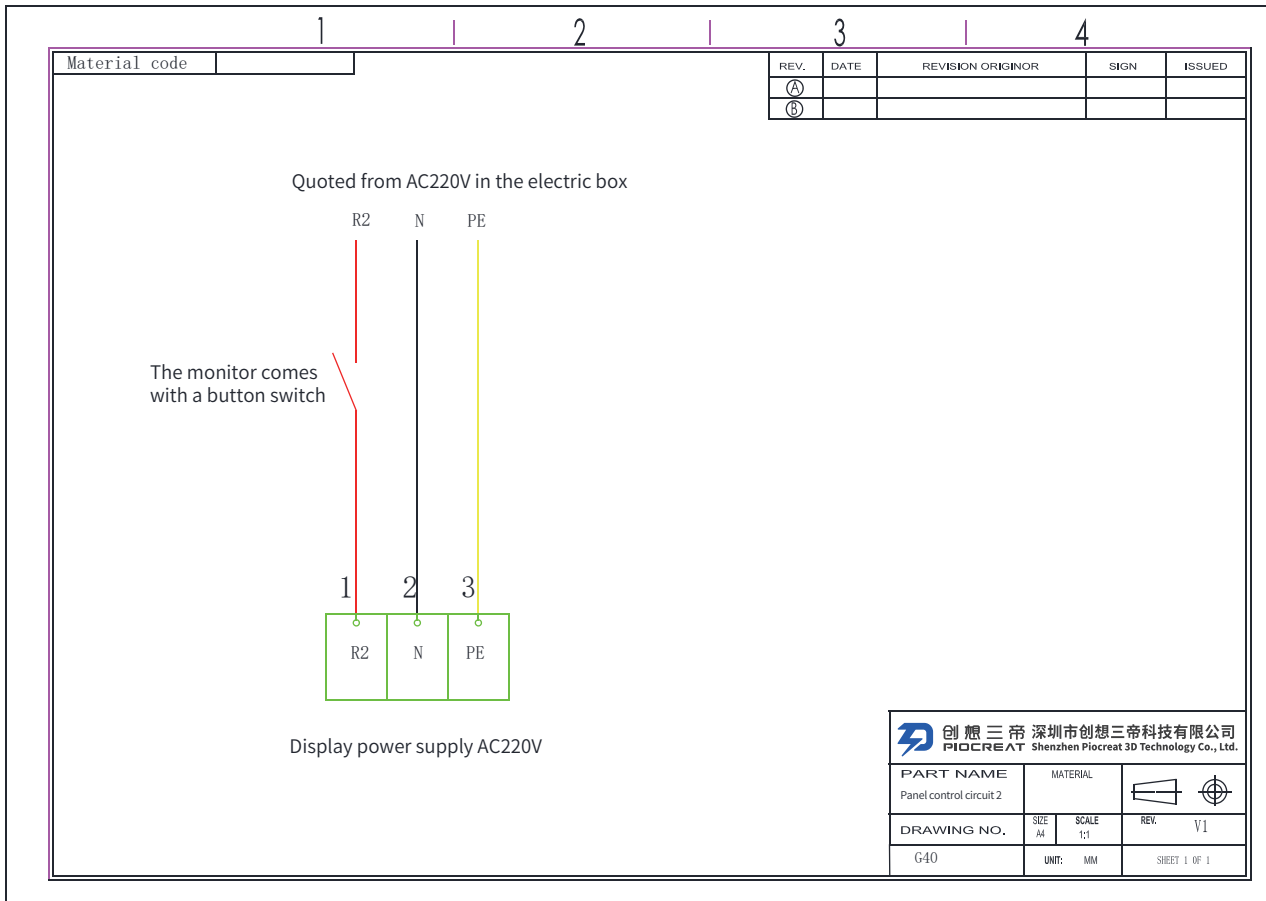




Electronic handwheel circuit diagram

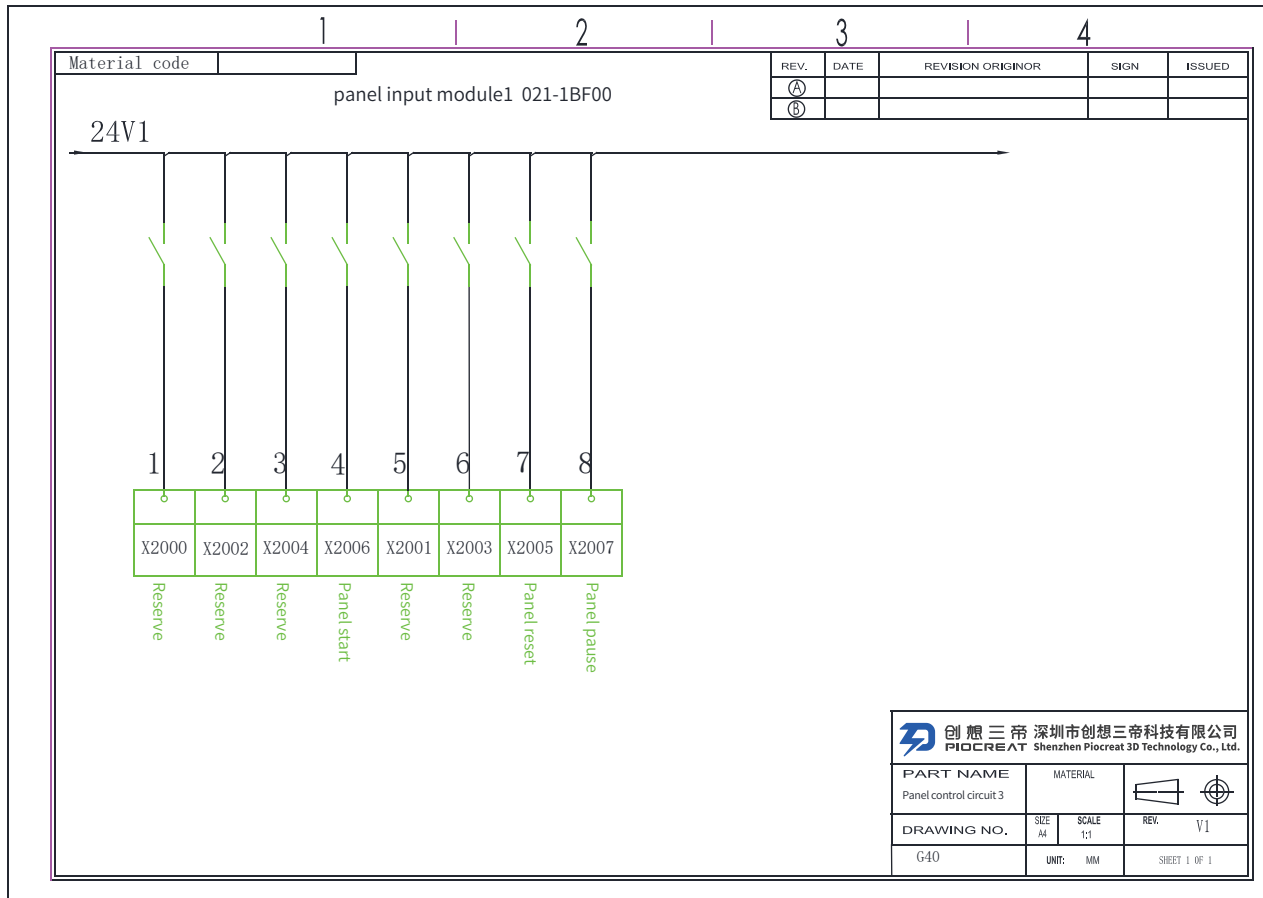






The monitor comes with a button switch

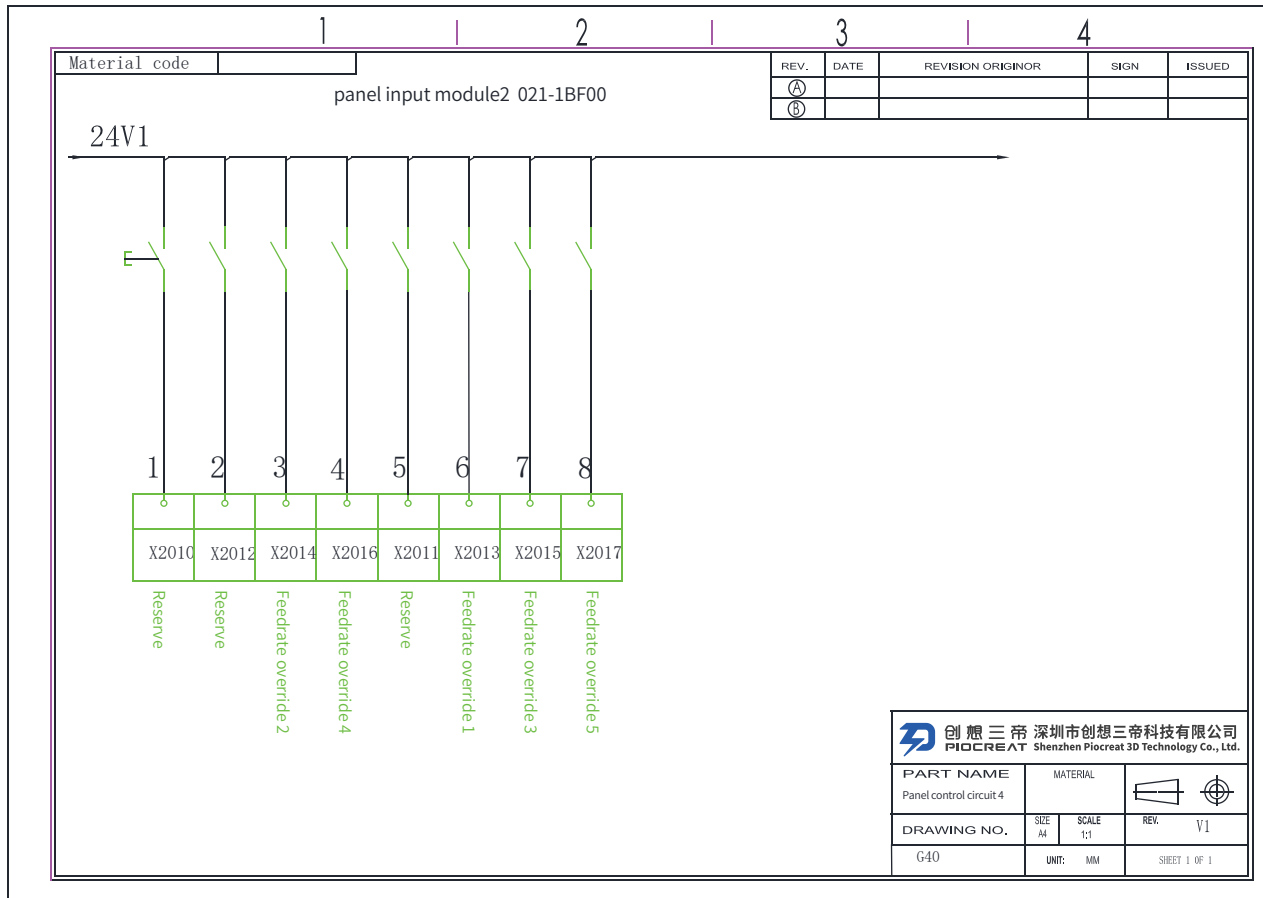
创想三帝 深圳市创想三帝科技有限公司 PIOCREAT Shenzhen Piocreat 3D Technology Co., Ltd.	
PART NAME Panel control circuit 2	MATERIAL
DRAWING NO. G40	SIZE: A4 SCALE: 1:1 REV: V1 UNIT: MM SHEET 1 OF 1

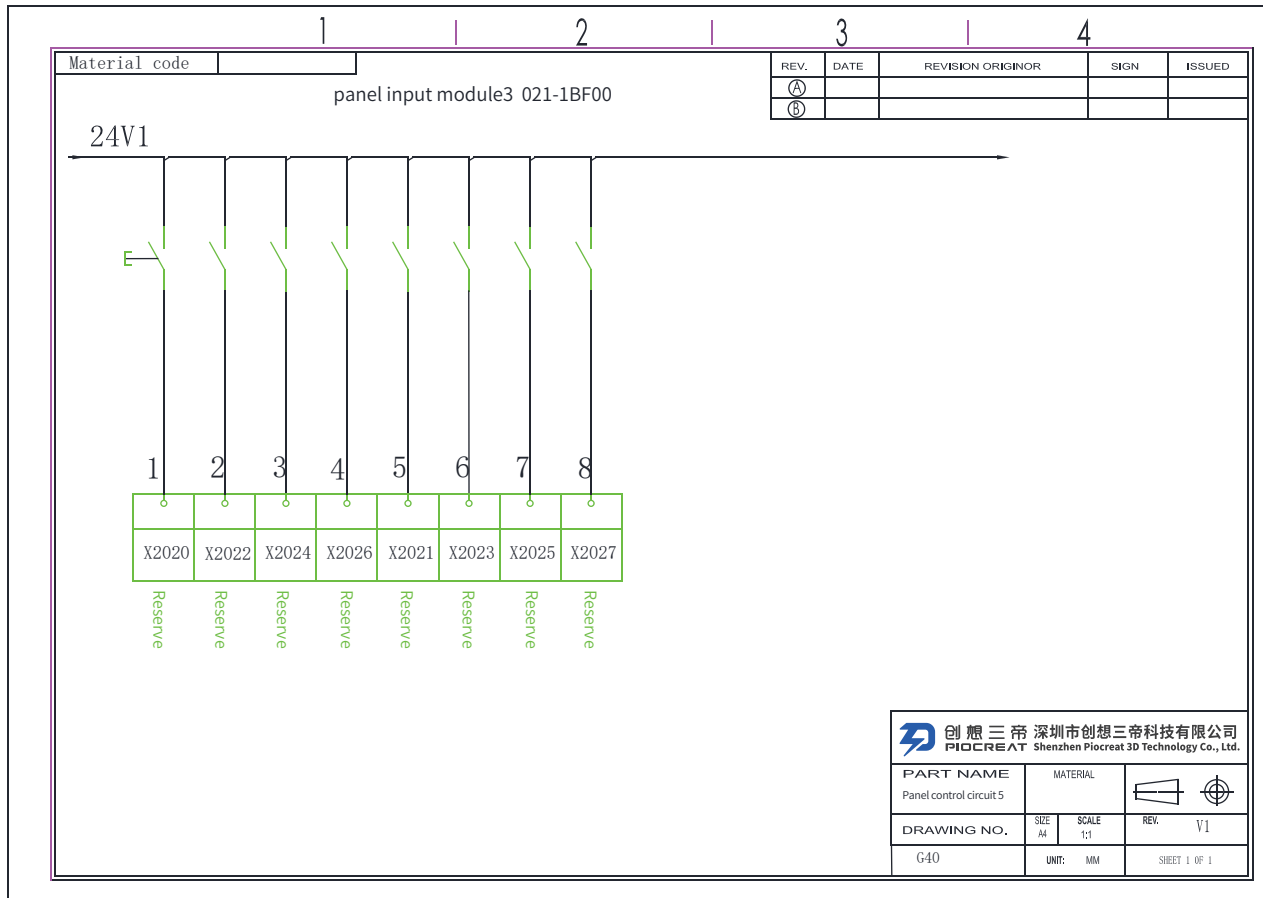


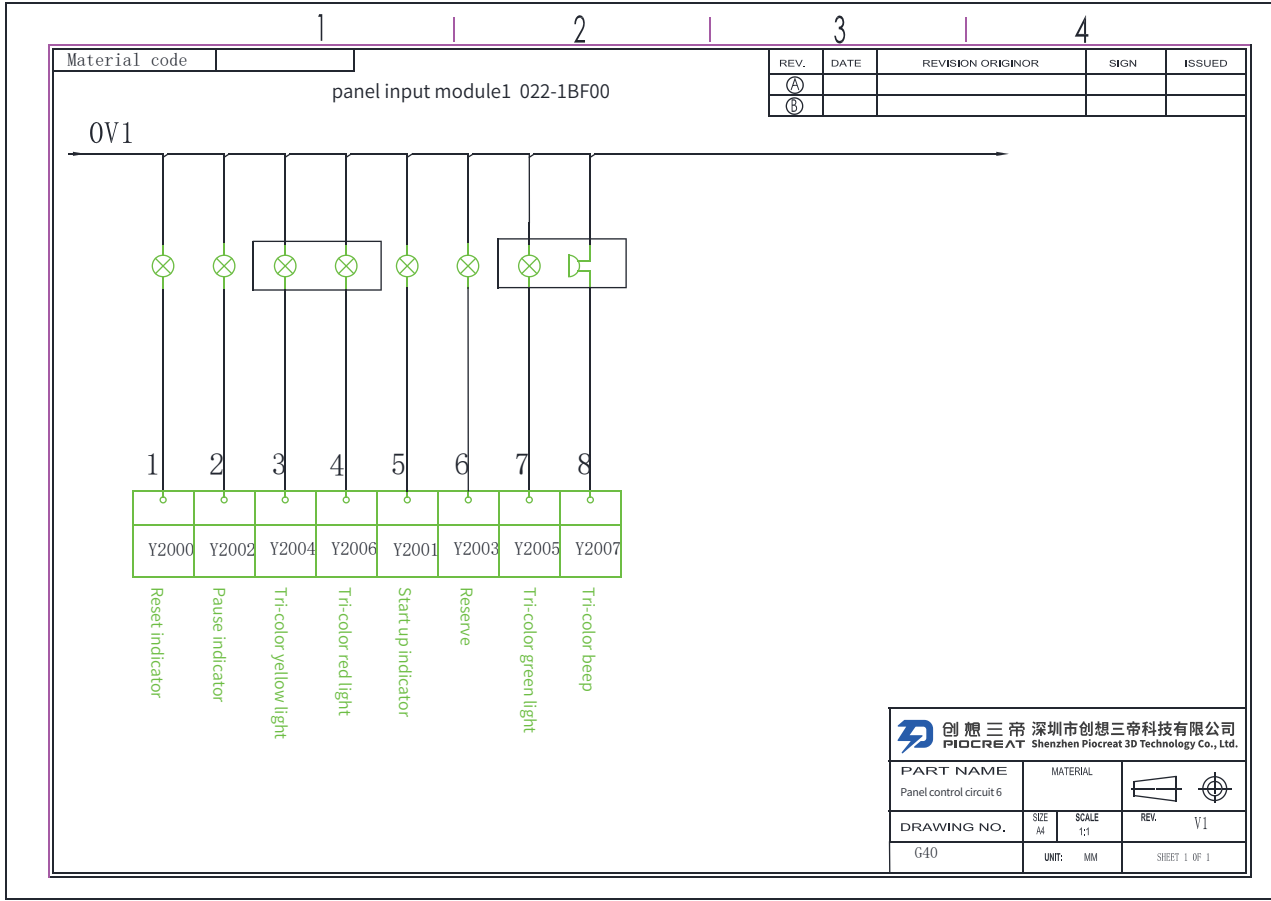
REV.	DATE	REVISION ORIGINOR	SIGN	ISSUED
④				
⑤				

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PIOCREAT Shenzhen Piocreat 3D Technology Co., Ltd.

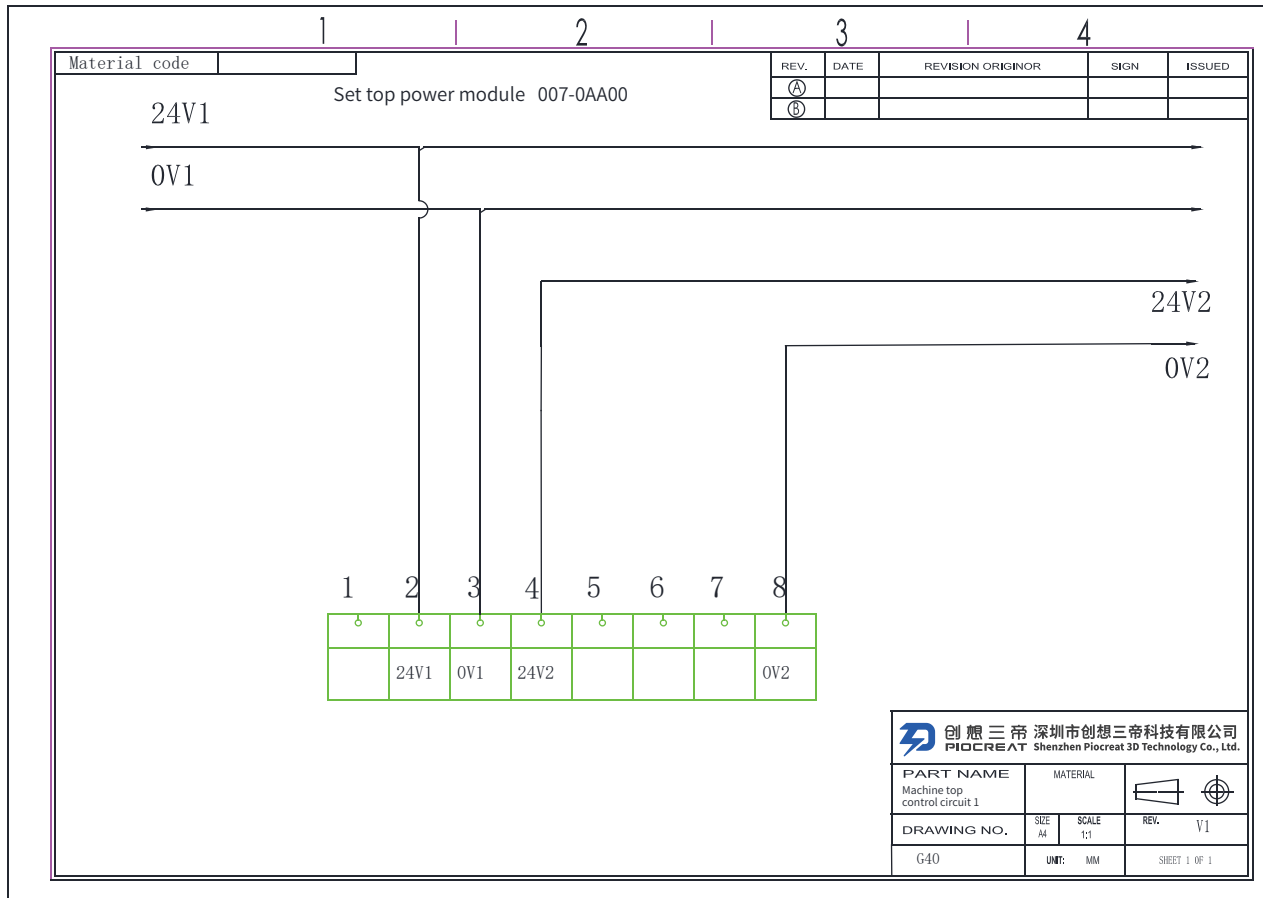
PART NAME Panel control circuit 3		MATERIAL	
DRAWING NO. G40	SIZE A4	SCALE 1:1	REV. V1
UNIT: MM		SHEET 1 OF 1	

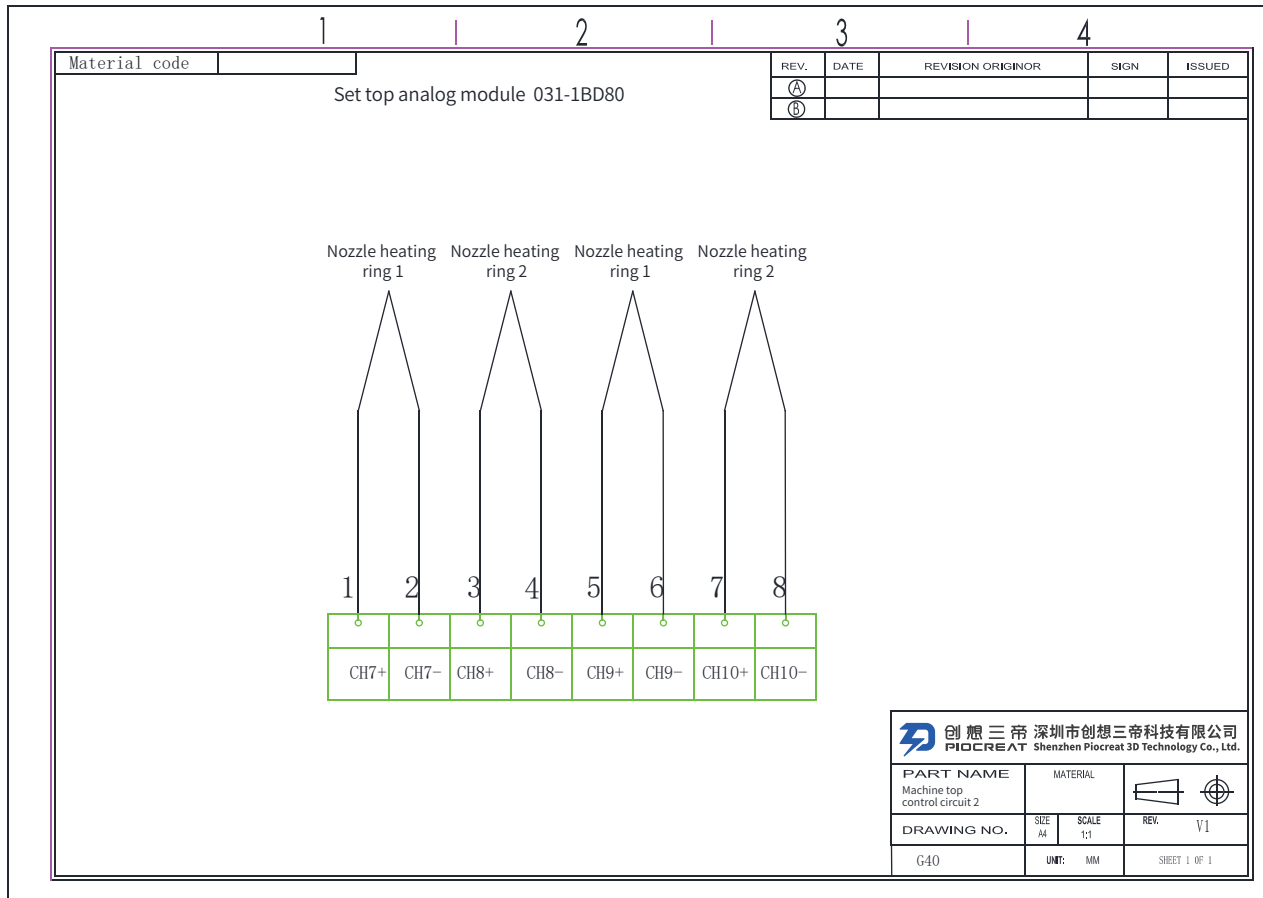


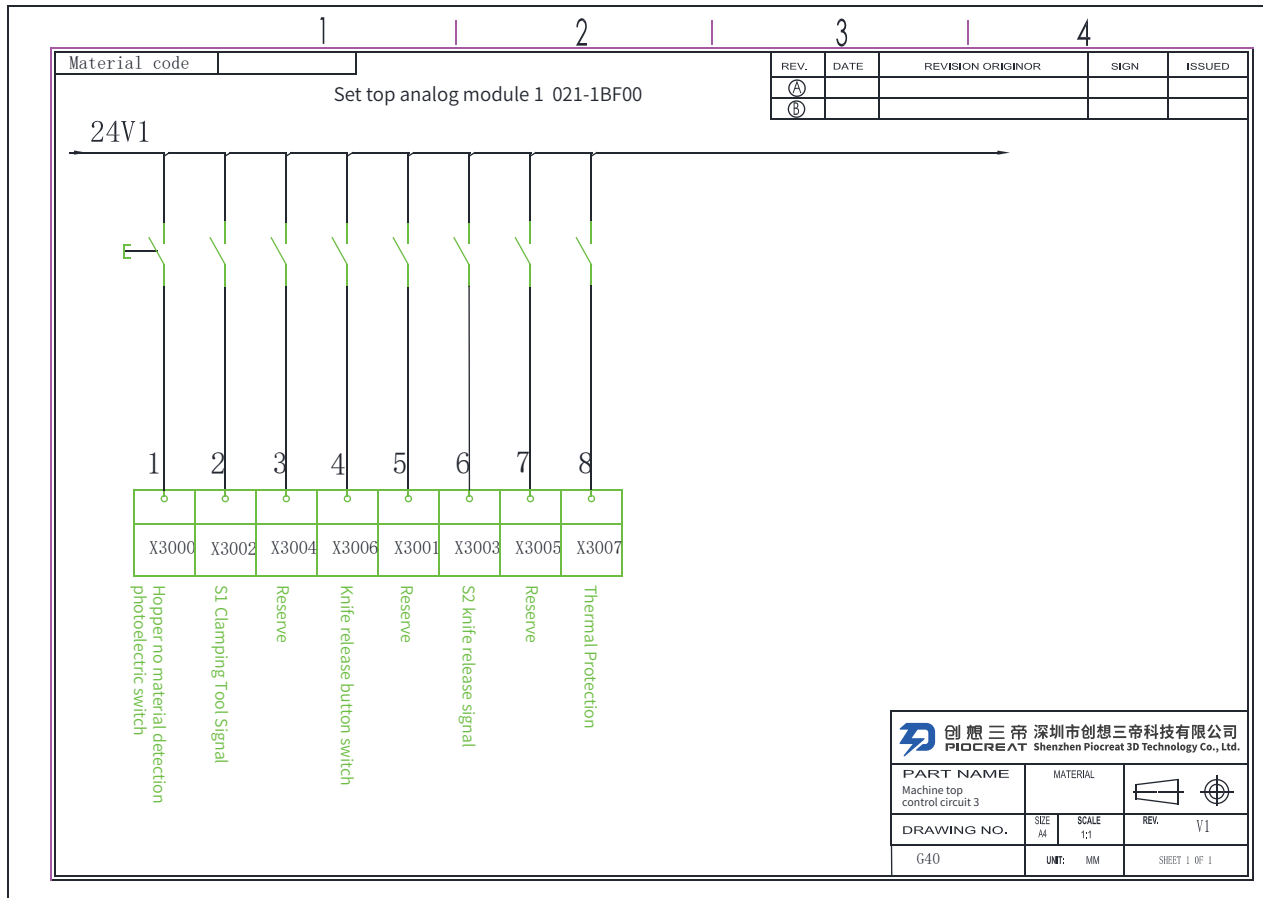


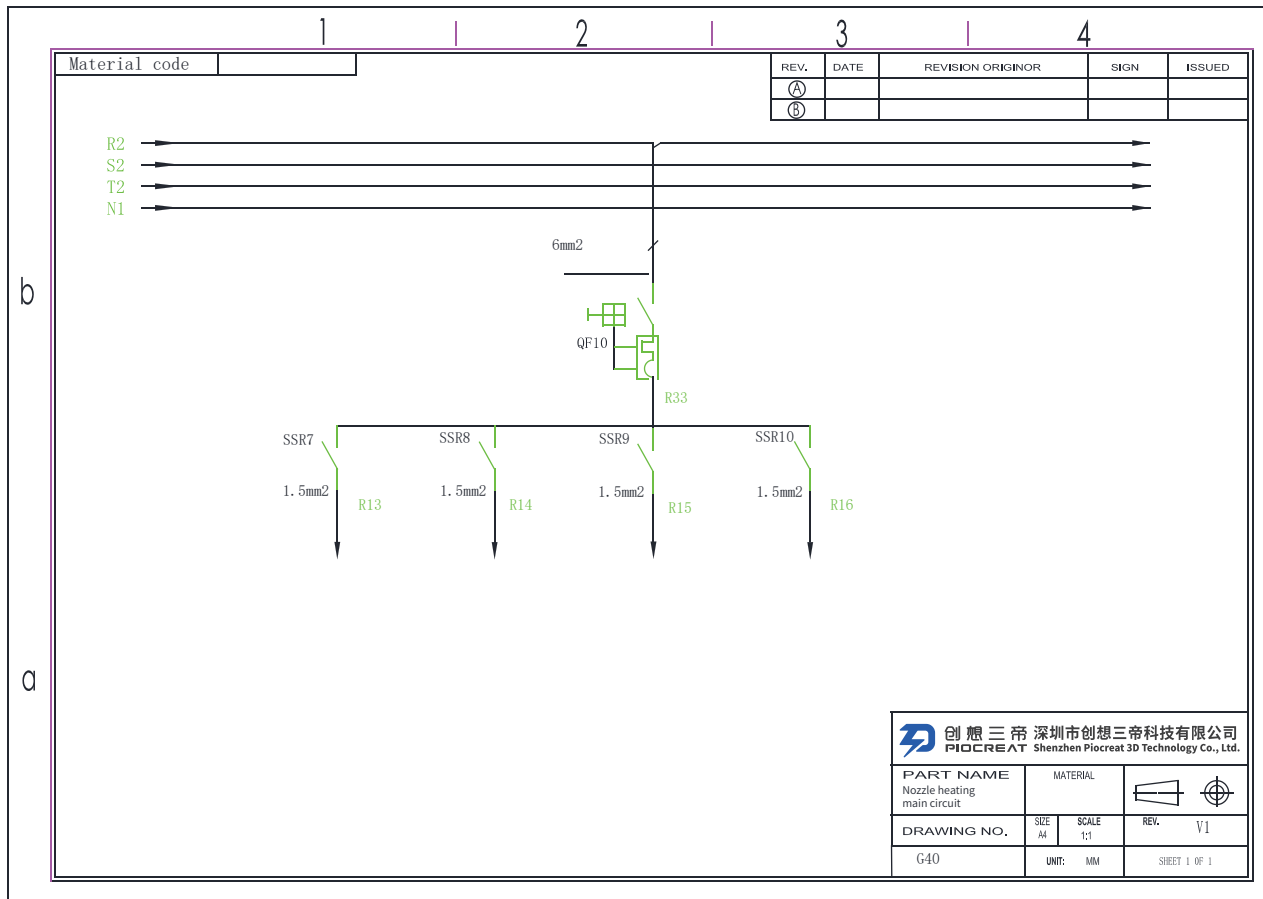


Machine top control circuit 1









1
2
3
4

Material code

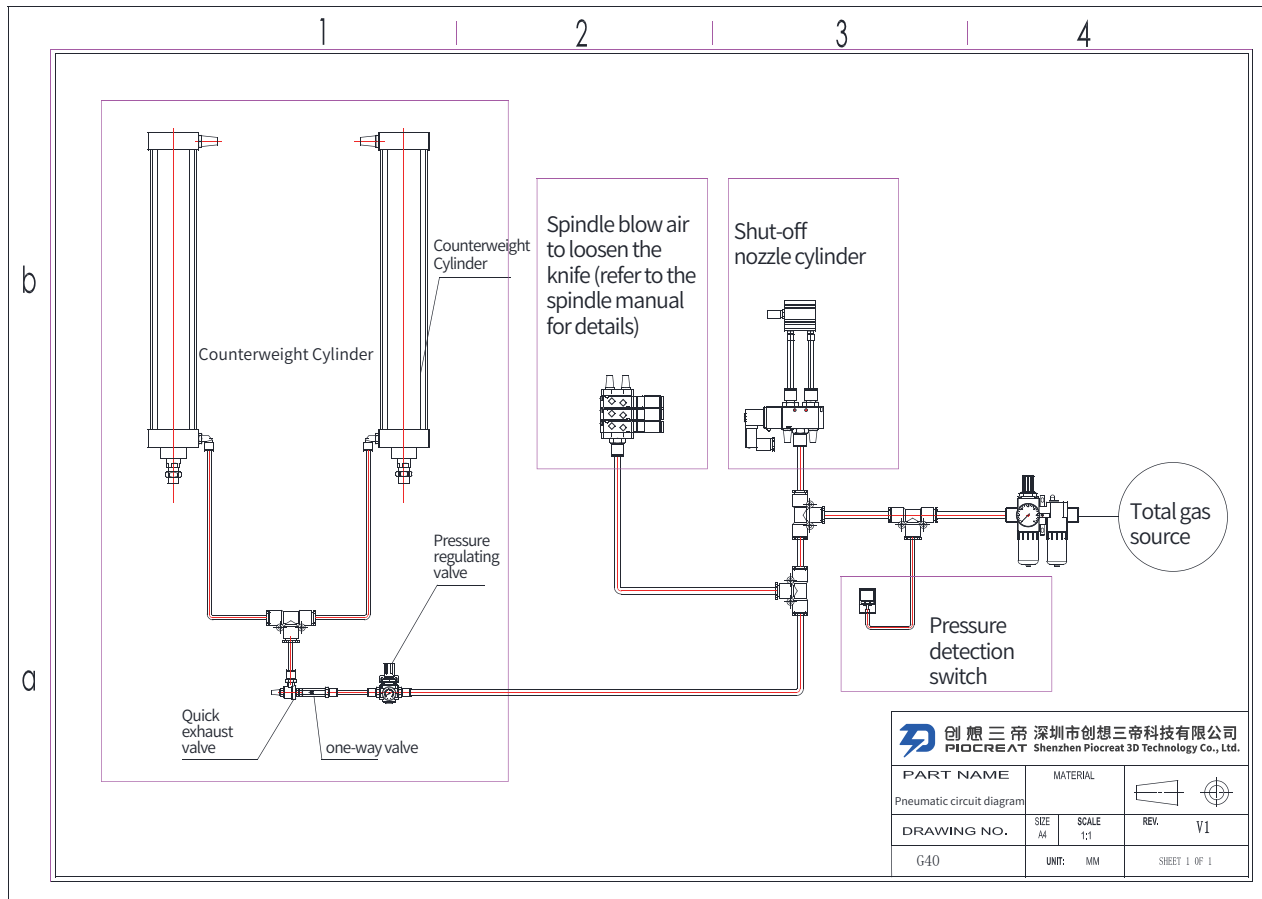
REV.	DATE	REVISION ORIGINOR	SIGN	ISSUED
④				
⑤				



SS		
Spindle signal line		
pin	definition	Signal
1	24V S1,S2,S5	24V1
2	0V S1,S2,S5	0V1
3	24V S3 exact stop	Reserve
4	0V S3 exact stop	Reserve
5	S1 tool clamp signal	X3002
6	S2 knife release signal	X3003
7	S3 exact stop signal	Reserve
8	S5 cylinder reset signal	Reserve
9		null
10		null
11		null
12		null
13		null
14		null
15		null
16	Thermal Protection	X3007
17	Thermal Protection	24V1

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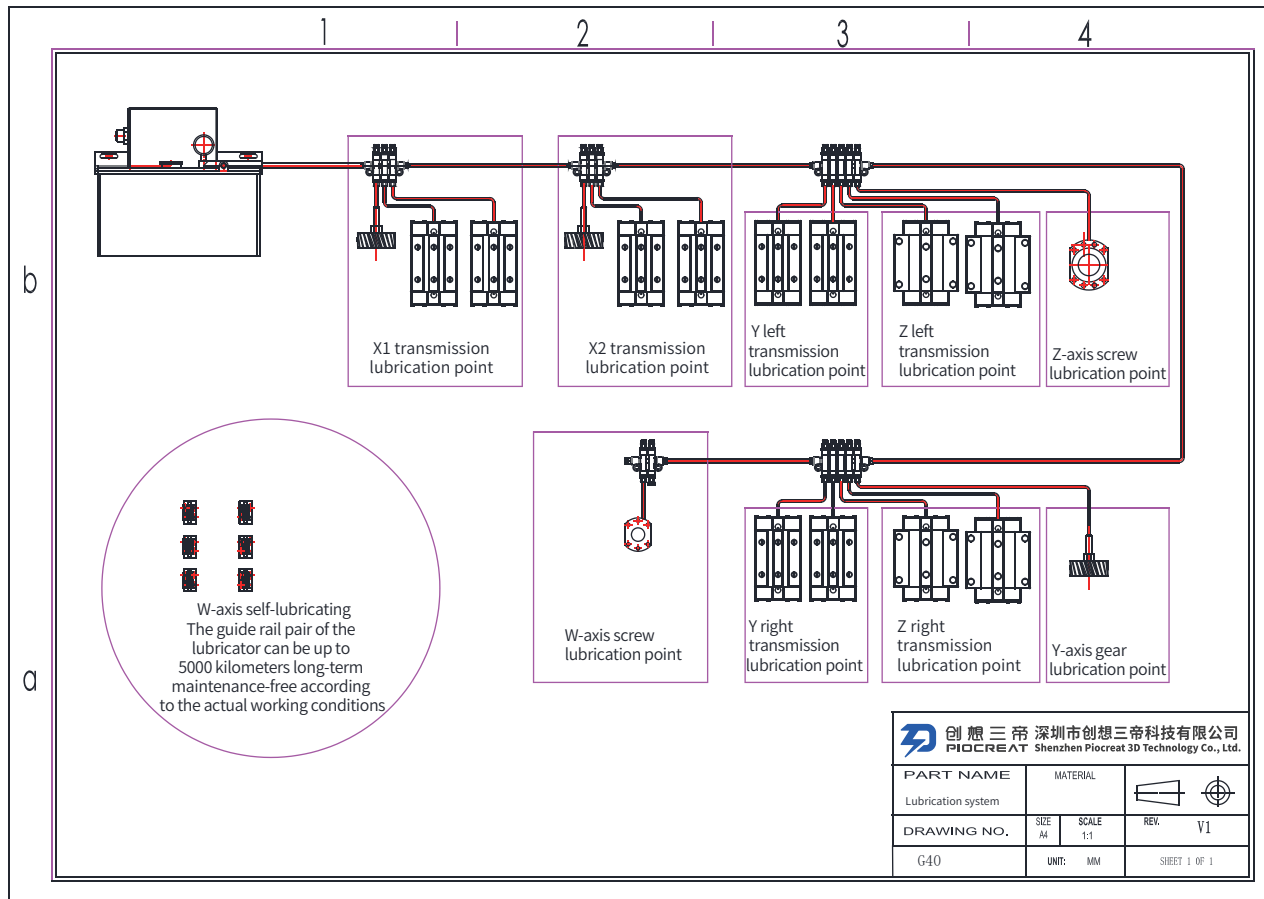
PART NAME SS spindle aviation plug signal		MATERIAL	
DRAWING NO.	SIZE A4	SCALE 1:1	REV. V1
G40	UNIT: MM	SHEET 1 OF 1	

Pneumatic circuit diagram



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PART NAME		MATERIAL	
Pneumatic circuit diagram			
DRAWING NO.	SIZE	SCALE	REV.
G-40	A4	1:1	V1
UNIT: MM		SHEET 1 OF 1	

Lubrication system circuit diagram



The model you received may be different from the picture. Please refer to the actual product. The final explanation belongs to Shenzhen Piocreat 3D Technology Co., Ltd.



Scan to learn more

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