When Spindle Failed to Stop/Rotate

*** If you have spindle issue, please send **order ID + machine model + problem description + test results** to below e-mail: support@foxalien.com

We will arrange the replacements for your based on the test results.

I. Spindle Fails to Stop (Continuous Rotation)

- Symptom: Spindle continues running after power-on and cannot be switched off.
- Root Cause: Damaged relay on control board (loss of switching control).
- **Solution:**
  a) Immediately POWER OFF the entire machine.
  b) Replace the control board.

II. 60W Spindle Not Rotating (Masuter Pro, Masuter 3)

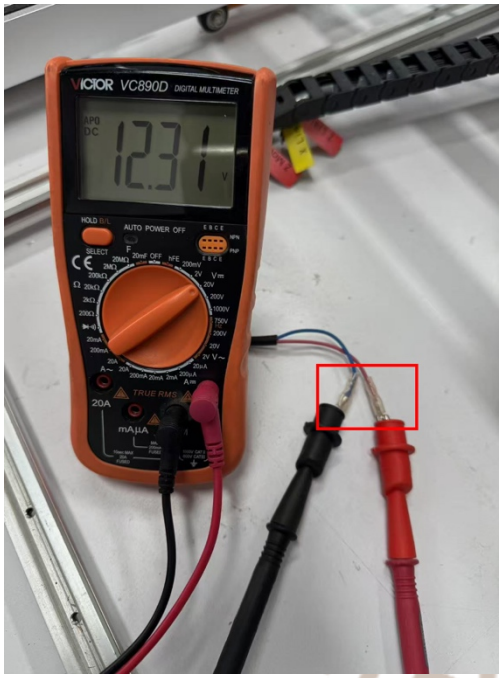
Troubleshooting Steps:

1. Basic Checks

- Toggle the mode switch to “Spindle”.
- Enable spindle in software, confirm relay "click" sound.

2. Spindle Voltage Test (Multimeter: DC 20V range)

- Red probe → Spindle red wire; Black probe → Blue wire.
- If 12V detected → Spindle motor damaged. **Replace spindle**.
- If 0V detected → Proceed to next step.



3. Controller Box Voltage Test

- Measure voltage at the spindle output port (red/black wires - zero/live wire).
- If 12V detected → Spindle cable open circuit. **Replace spindle wire.**
- If 0V detected → Control board power module damaged. **Replace control board.**

III. 400W High-Power Spindle Not Rotating (Masuter 3S, XE-PRO, Vasto, CL-4X4)

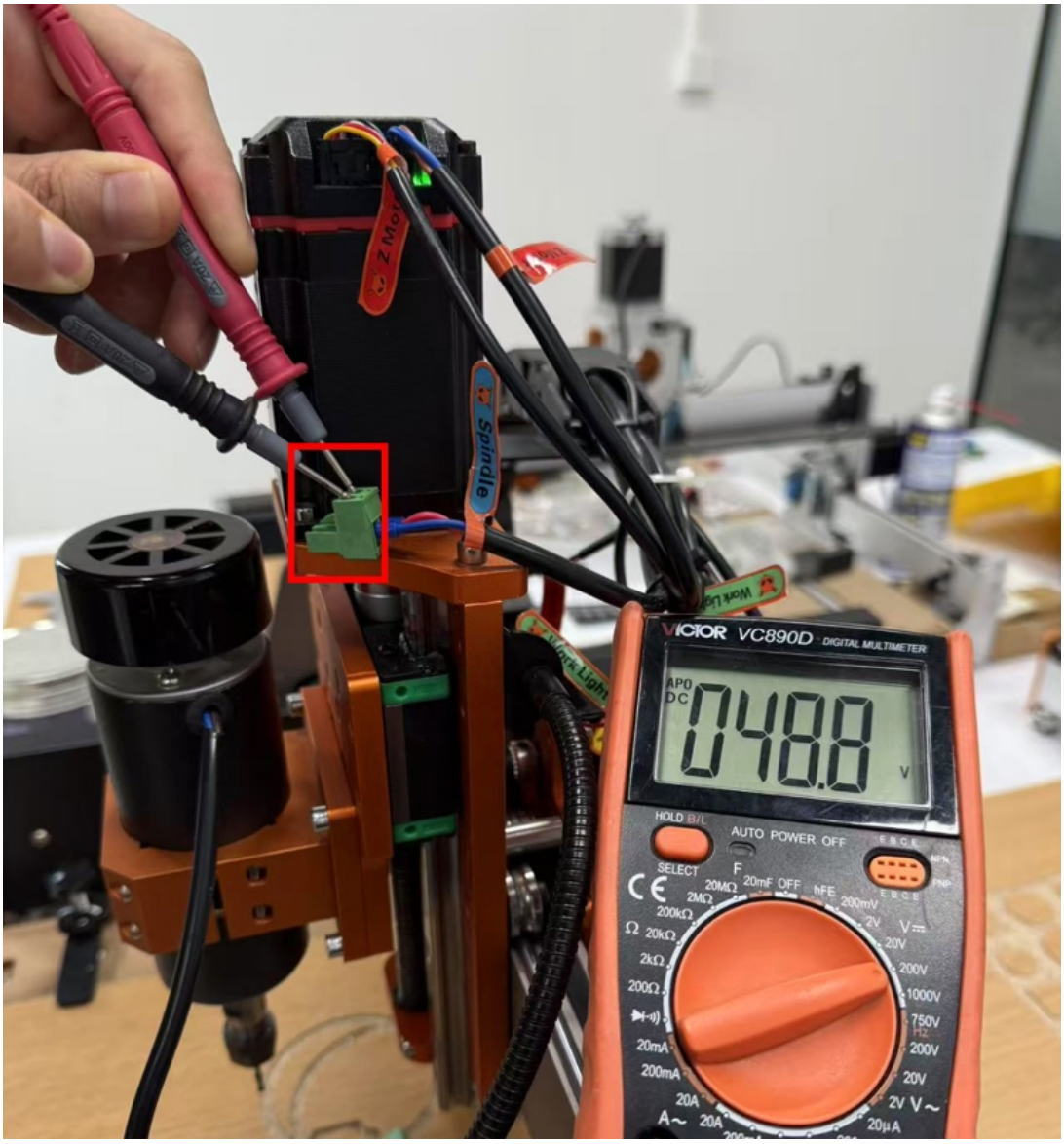
Troubleshooting Steps:

1. Basic Checks

- Rotate the speed knob to MAX position; Toggle mode switch to “Spindle”.
- Enable spindle in software, confirm relay "click" sound.

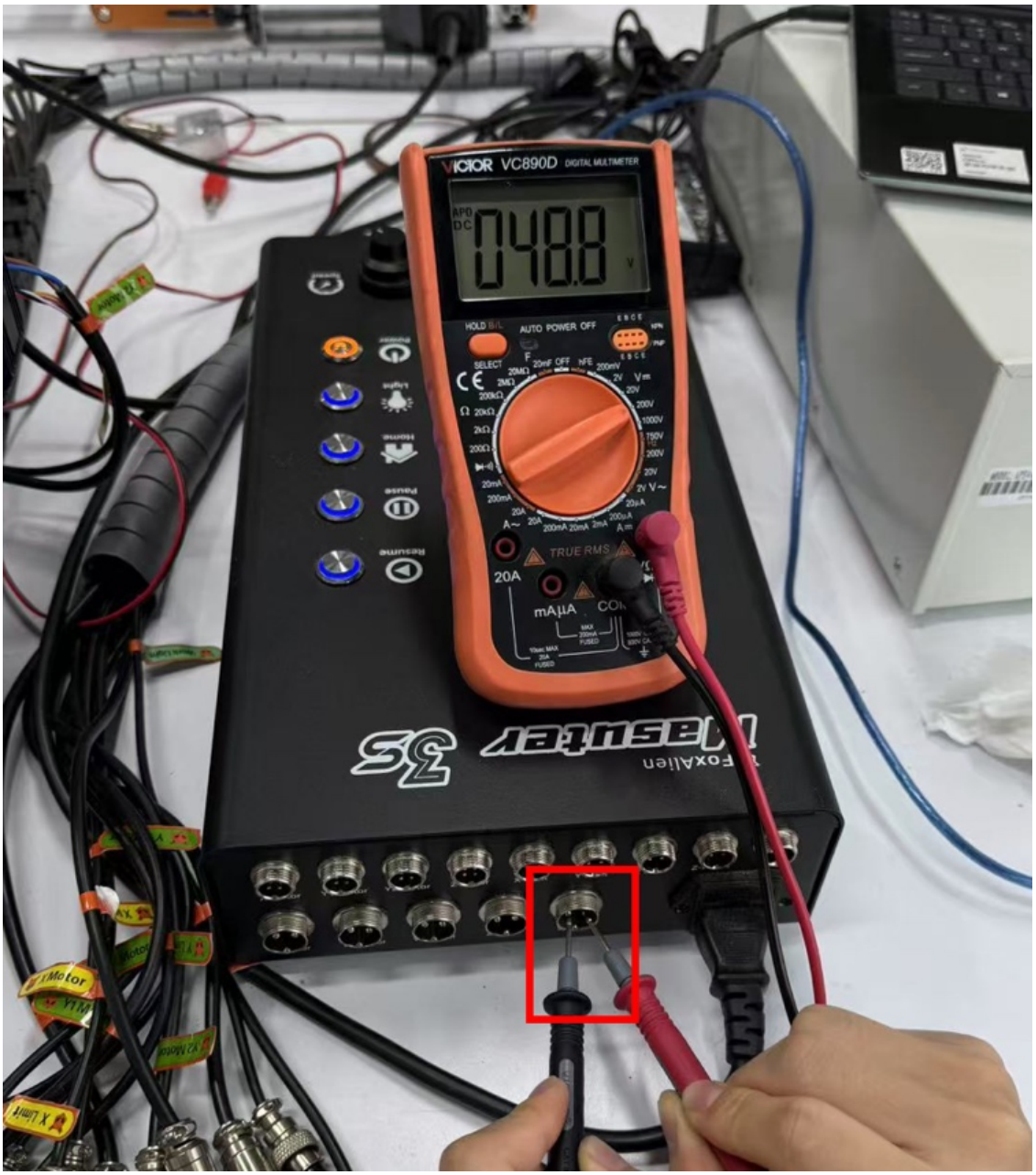
2. Spindle Voltage Test (Multimeter: DC 200V range)

- Red probe → Red wire; Black probe → Blue wire.
- If 48V detected → Spindle motor damaged. **Replace spindle.**
- If 0V detected → Proceed to next step.



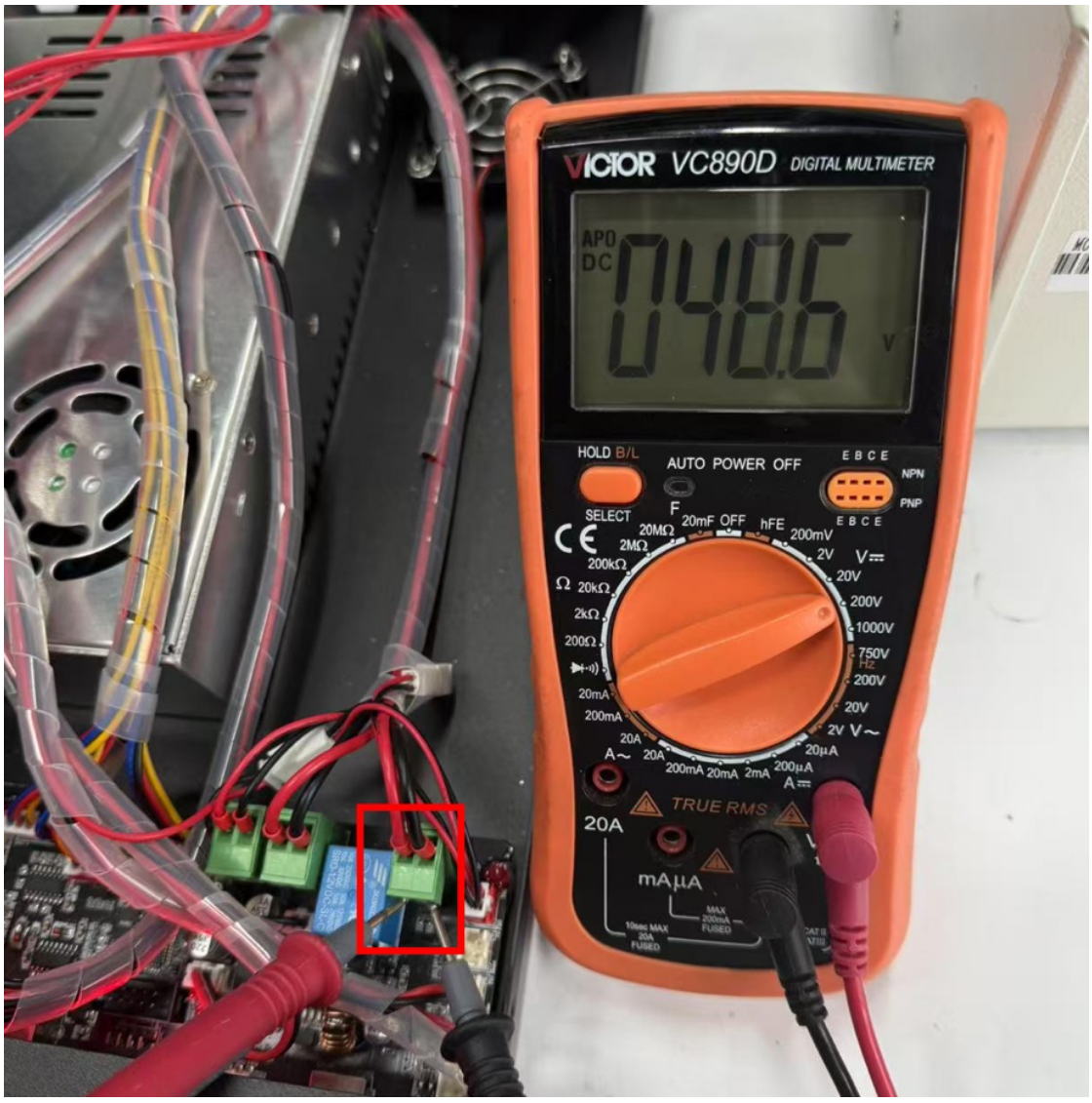
3. Controller Box Port Voltage Test

- Measure spindle port's output port (left zero, right live wires).
- If 48V detected → Spindle cable damaged. **Replace spindle wire**.
- If 0V detected → Open the controller box for further checks.



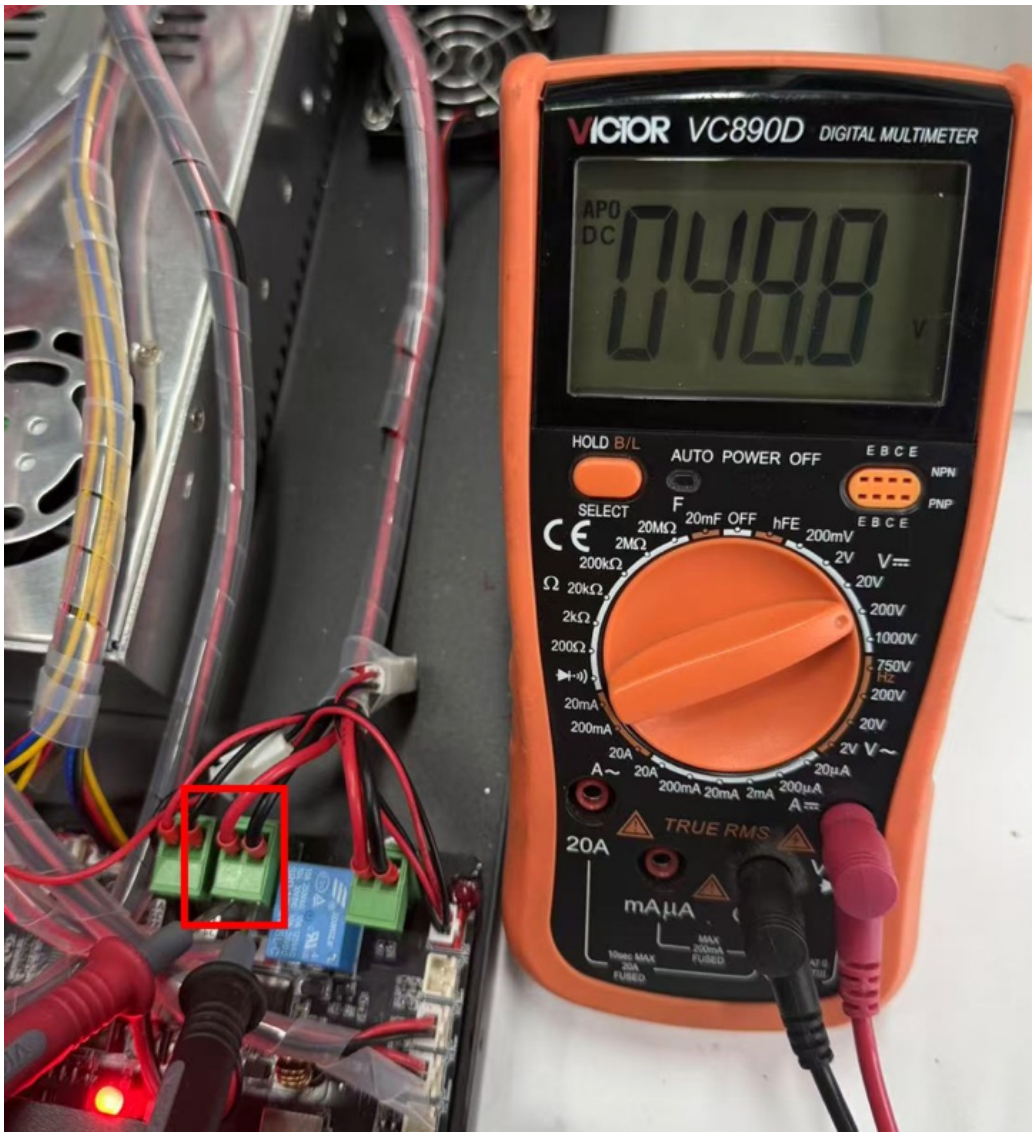
4. Control Board Output Test

- Measure voltage at right-side green terminal on control board.
- If 48V detected → Fault in board-to-aviation-plug wiring or desoldered plug. **Replace the aviation plug and wire**.
- If 0V detected → Proceed to next step.



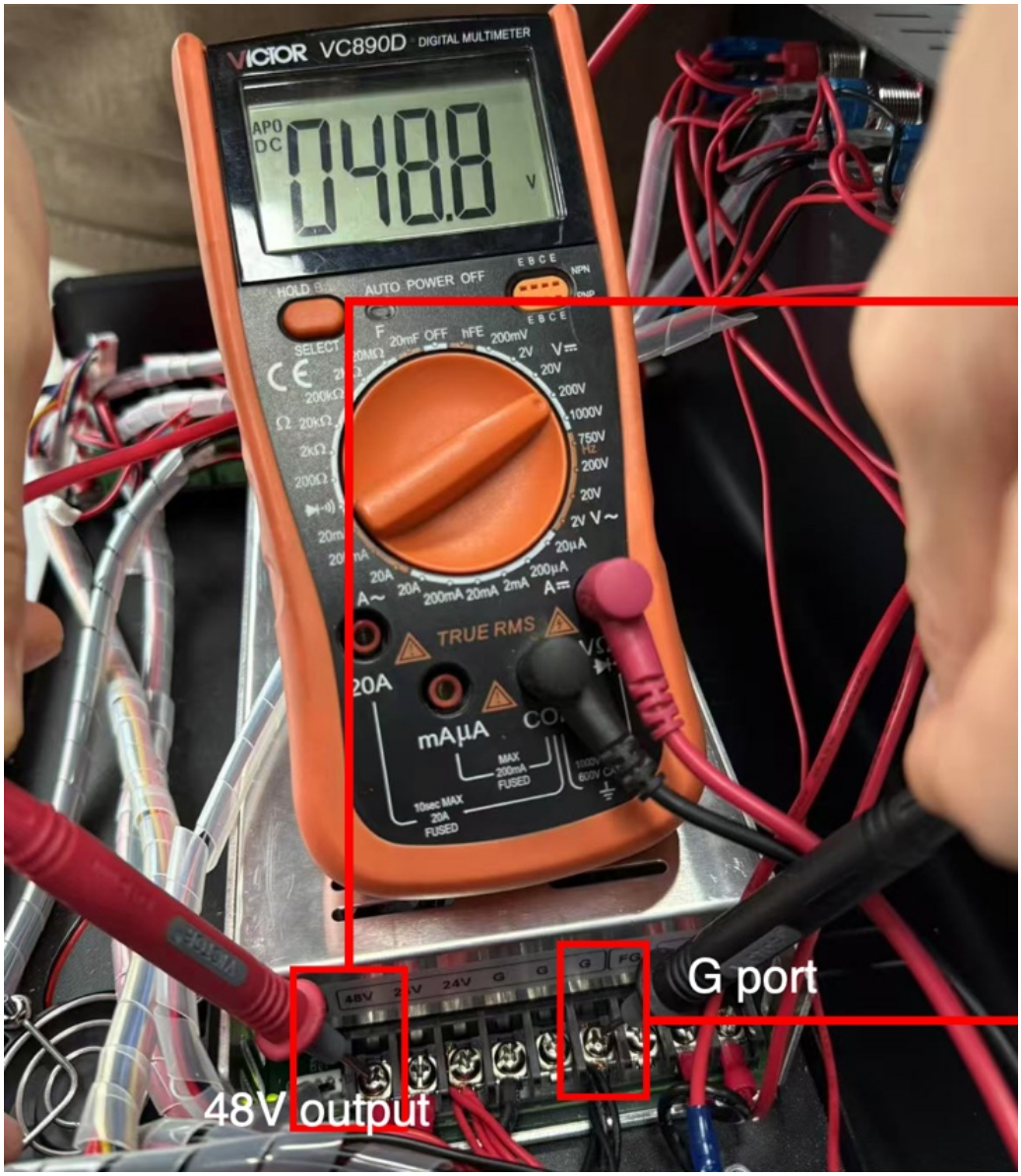
5. Control Board Input Test

- Measure voltage at left-side green terminal on control board.
- If 48V detected → Control board damaged. **Replace control board.**
- If 0V detected → Proceed to next step.



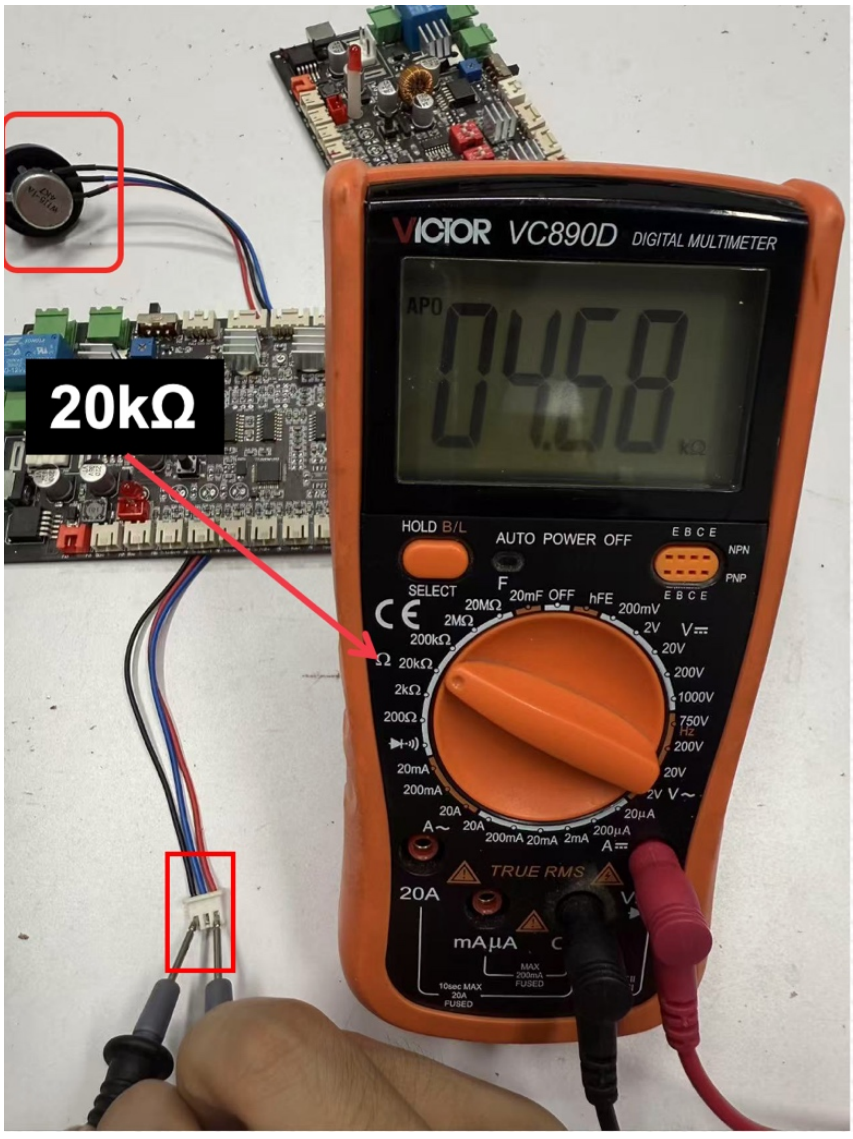
6. Power Supply Output Test

- Measure voltage directly at power supply's 48V output port.
- If 48V detected → Damaged PSU-to-board cable. **Replace cable.**
- If 0V detected → Check potentiometer (the speed knob).



7. Potentiometer Test (Multimeter: 20kΩ range)

- Measure resistance between red/black wires:
- Knob at MAX → Normal: 0Ω
- Knob at MIN → Normal: ≈4.7kΩ
- Fixed 4.7kΩ at all positions → Potentiometer damaged. **Replace speed knob**.



**** Critical Notes**

1. Safety First: Always power off before inspections (except voltage tests).
2. Tools: Digital multimeter required.
3. Sequential Diagnosis: Follow steps strictly to avoid misdiagnosis.