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› [Comgrow Creality 3D Printer NTC Thermistor 100K \(Model 3D-RMDZ-5PCS\) Instruction Manual](#)

Comgrow 3D-RMDZ-5PCS

Comgrow Creality 3D Printer NTC Thermistor 100K Instruction Manual

Model: 3D-RMDZ-5PCS

1. INTRODUCTION

This manual provides essential information for the installation, operation, and maintenance of the Comgrow 5PCS Creality 3D Printer NTC Thermistor 100K. This component is designed to accurately measure temperature in 3D printer hot ends and heated beds, ensuring stable printing conditions. Please read these instructions carefully before use to ensure proper function and longevity of the product.

2. PRODUCT SPECIFICATIONS

Specification	Detail
Model Number	3D-RMDZ-5PCS
Thermistor Type	NTC 3950 100K ohm
Wire Length	1.3 meters (51.1 inches)
Connector Type	2-pin XH2.54 female connector
Quantity	5 pieces per package
Item Weight	2.11 ounces (approx. 60g for 5 pieces)
Package Dimensions	5.71 x 5.04 x 0.63 inches
Manufacturer	Comgrow
UPC	649910034431

3. COMPATIBILITY

The Comgrow NTC Thermistor 100K is compatible with a wide range of 3D printers, including:

- Creality Ender 3
- Creality Ender 3 Pro
- Creality Ender 3 Neo
- Creality Ender 3 Max
- Voxelab Aquila
- Most 3D printers utilizing NTC 3950 100K ohm thermistors for heated beds or hot ends.

Important Compatibility Note:

This thermistor is **not** suitable for the following models:

- Ender 3 V2
- Ender 3S
- CR-10S Pro V2
- CR-10S Pro
- Ender 2 Pro
- Ender 6
- Prusa i3 3D Printer

Always measure the length and connector type of your existing 3D printer's thermistor to confirm compatibility before purchasing or installing.

4. SETUP AND INSTALLATION

This section outlines the general procedure for replacing a thermistor. Specific steps may vary slightly depending on your 3D printer model. Always refer to your printer's specific service manual for detailed instructions.

1. **Power Off and Disconnect:** Ensure your 3D printer is completely powered off and unplugged from the mains electricity supply before beginning any installation or maintenance.
2. **Locate the Thermistor:** Identify the thermistor on your hot end or heated bed. It is typically a small glass bead or metal cartridge connected by two thin wires.
3. **Remove Old Thermistor:** Carefully loosen any screws or clips holding the old thermistor in place. Gently pull the thermistor out of its housing. Note the routing of the wires.
4. **Disconnect Wires:** Trace the thermistor wires back to the mainboard or connector. Disconnect the 2-pin XH2.54 connector.
5. **Install New Thermistor:** Insert the new Comgrow NTC Thermistor into the designated hole on the hot end or heated bed. Ensure it is seated correctly and securely, but do not overtighten any retaining screws, as this can damage the thermistor.
6. **Connect Wires:** Route the new thermistor wires along the same path as the old ones to prevent interference with moving parts. Connect the 2-pin XH2.54 connector to the appropriate port on your printer's mainboard.
7. **Secure Wires:** Use cable ties or clips to secure the wires, preventing them from snagging or interfering with printer operation.
8. **Verify Connection:** Before powering on, double-check all connections to ensure they are firm and correctly seated.

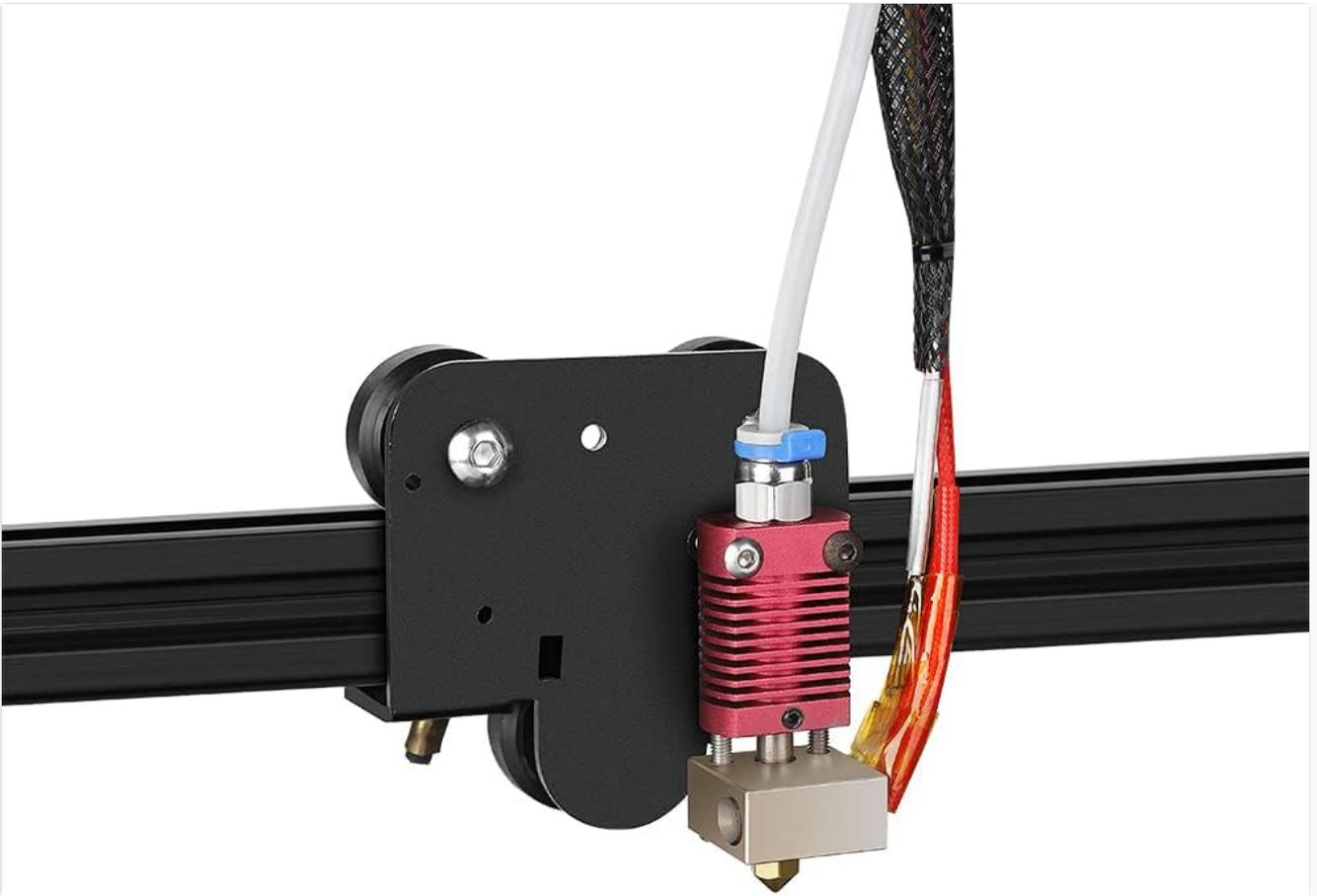


Image: A thermistor correctly installed within a 3D printer's hotend assembly, showing the wires routed away from moving parts.



Image: A detailed view of the thermistor's glass bead element inserted into the heating block of a 3D printer's hotend.

5. OPERATION

The NTC Thermistor functions as a temperature sensor. Once installed, it continuously monitors the temperature of the hot end or heated bed and sends this data to the 3D printer's control board. The control board uses this information to regulate the heating elements, maintaining the desired temperature for optimal printing.

Key operational characteristics:

- **High Precision:** Provides accurate temperature readings for consistent print quality.
- **High Sensitivity:** Detects subtle temperature changes quickly.
- **Fast Conduction:** Rapidly responds to temperature fluctuations.
- **High Temperature Resistance:** Designed to withstand the operating temperatures of 3D printer components.

6. MAINTENANCE

To ensure the continued accuracy and longevity of your thermistor, consider the following maintenance tips:

- **Gentle Handling:** Thermistors are delicate components. Avoid bending the wires sharply or applying excessive force to the sensor tip during installation or removal.
- **Keep Clean:** Periodically inspect the thermistor for any filament residue or debris that might accumulate around the sensor tip. Gently clean with a soft brush or cotton swab if necessary, ensuring the printer is off and cool.
- **Secure Connections:** Ensure the XH2.54 connector remains firmly seated on the mainboard. Loose connections can lead to intermittent readings or errors.
- **Wire Integrity:** Check the thermistor wires for any signs of wear, fraying, or damage, especially where they might rub against moving parts. Replace the thermistor if wire insulation is compromised.

7. TROUBLESHOOTING

If you encounter issues related to temperature sensing, the thermistor may be a contributing factor. Here are some common problems and troubleshooting steps:

- **Thermal Runaway Errors:** If your printer displays thermal runaway errors, it indicates that the hot end or heated bed temperature is not being maintained as expected. This can be caused by a faulty thermistor, loose wiring, or incorrect installation.
- **Inaccurate Temperature Readings:** If the displayed temperature is consistently too high or too low, or fluctuates erratically, the thermistor might be damaged or have a poor connection.
- **No Temperature Reading:** A complete lack of temperature reading usually points to a disconnected or completely failed thermistor.

Troubleshooting Steps:

1. **Inspect Connections:** Power off the printer and check that the thermistor's XH2.54 connector is securely plugged into the mainboard.
2. **Visual Inspection:** Examine the thermistor wires for any visible damage, cuts, or shorts. Check the sensor tip for physical damage or excessive residue.
3. **Test Resistance (Advanced):** With the printer powered off and the thermistor disconnected, you can use a multimeter to measure the resistance of the thermistor at room temperature. A 100K NTC thermistor should read approximately 100,000 ohms (100K Ω) at 25°C (77°F). Significant deviation indicates a faulty thermistor.



Image: A multimeter being used to measure the resistance of a thermistor, displaying a reading close to 100K ohms. If troubleshooting does not resolve the issue, consider replacing the thermistor with a new one from the package.

8. WARRANTY AND SUPPORT

Comgrow provides after-sales support for its products. If you encounter any unsolvable problems while using the NTC thermistor replacement, please contact the Comgrow technical support team. They are committed to providing detailed solutions within 24 hours.

For support, please refer to the contact information provided with your product packaging or visit the official Comgrow website.