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› Creality Ender 3 V2 Filament Runout Sensor Instruction Manual

Creality Ender 3/V2/Pro/Max

Creality Ender 3 V2 Filament Runout Sensor Instruction Manual

1. PRODUCT OVERVIEW

The Creality Filament Runout Sensor is designed to detect when your 3D printer runs out of filament or when the filament breaks during a print. This smart detection system helps prevent failed prints, saving time and material.

Key Features:

- **High Compatibility:** Suitable for Ender 3, Ender 3 V2, Ender 3 Pro, Ender 3 MAX, Ender 5 Plus, CR-10S PRO, CR-10 V2, and CR-10 V3 with 32-bit V4.2.2/V4.2.7 Motherboards. Note: Ender 3 series printers may require an extruder bracket replacement.
- **Smooth Filament Travel:** Features a built-in metal filament guider with a smooth surface to reduce friction and ensure consistent filament feeding.
- **Precise Detection:** A blue LED indicates normal filament feed-in. The LED turns off when filament runs out, signaling the printer to pause.
- **Upgraded Design:** Redesigned inner structure with a frosted outer cover for enhanced durability and aesthetics.

Simple Structure Easy Installation



Image: The filament runout sensor showcasing its simple structure and design for easy installation.

2. PACKAGE CONTENTS

Before proceeding with installation, please verify that all components are present in your package:

- Filament Detection Sensor x1
- Mounting Plate x1
- Filament Detection Wire x1

Parts List

Suitable for Ender-3/Ender-3 V2



Filament detection*1
Mounting plate*1
Filament detection wire*1

Image: A visual representation of the components included in the filament runout sensor kit.

3. INSTALLATION GUIDE

The installation process involves mechanical mounting and a firmware update. Please follow the steps carefully.

3.1 Mechanical Installation (Ender 3 Series)

For Ender 3 series printers, an extruder bracket replacement is typically required. Refer to the following visual guide and video for detailed steps:

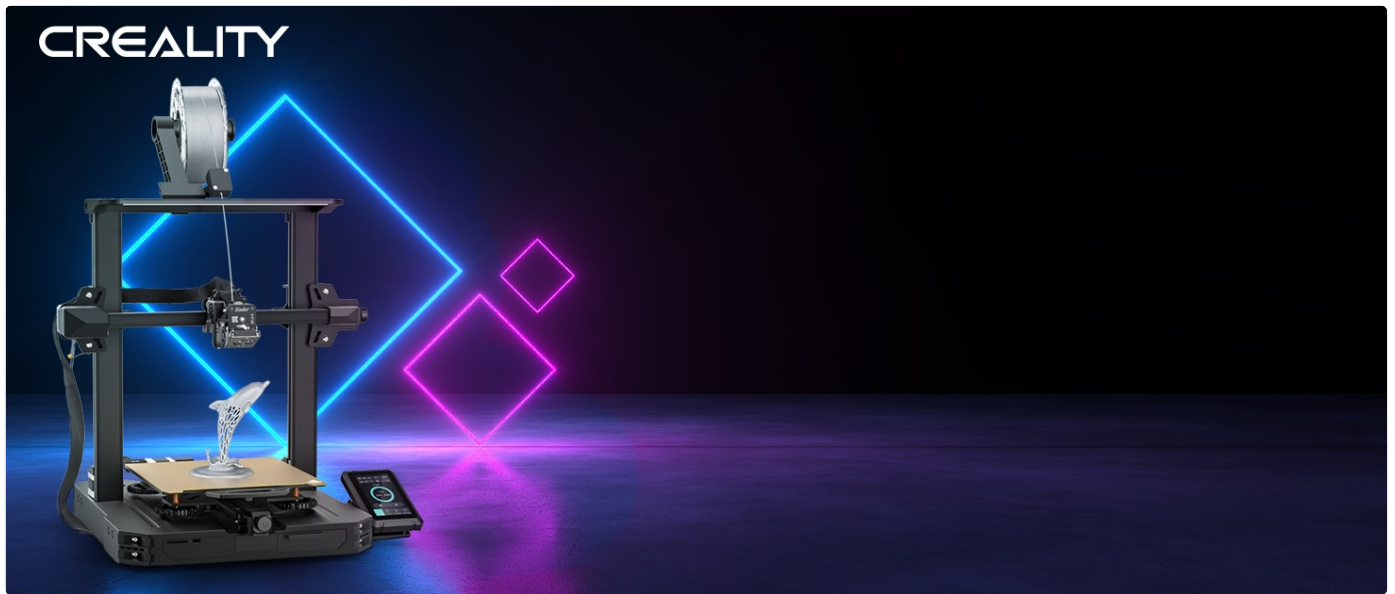


Image: Detailed installation steps for the filament runout sensor on Ender 3, Ender 3 V2, and Ender 3 Pro printers.



Image: The filament runout sensor mounted on an Ender 3 series 3D printer.

3.2 Electrical Connection

Connect the filament detection wire to the designated port on your printer's motherboard. Ensure the printer is powered off before making any connections.

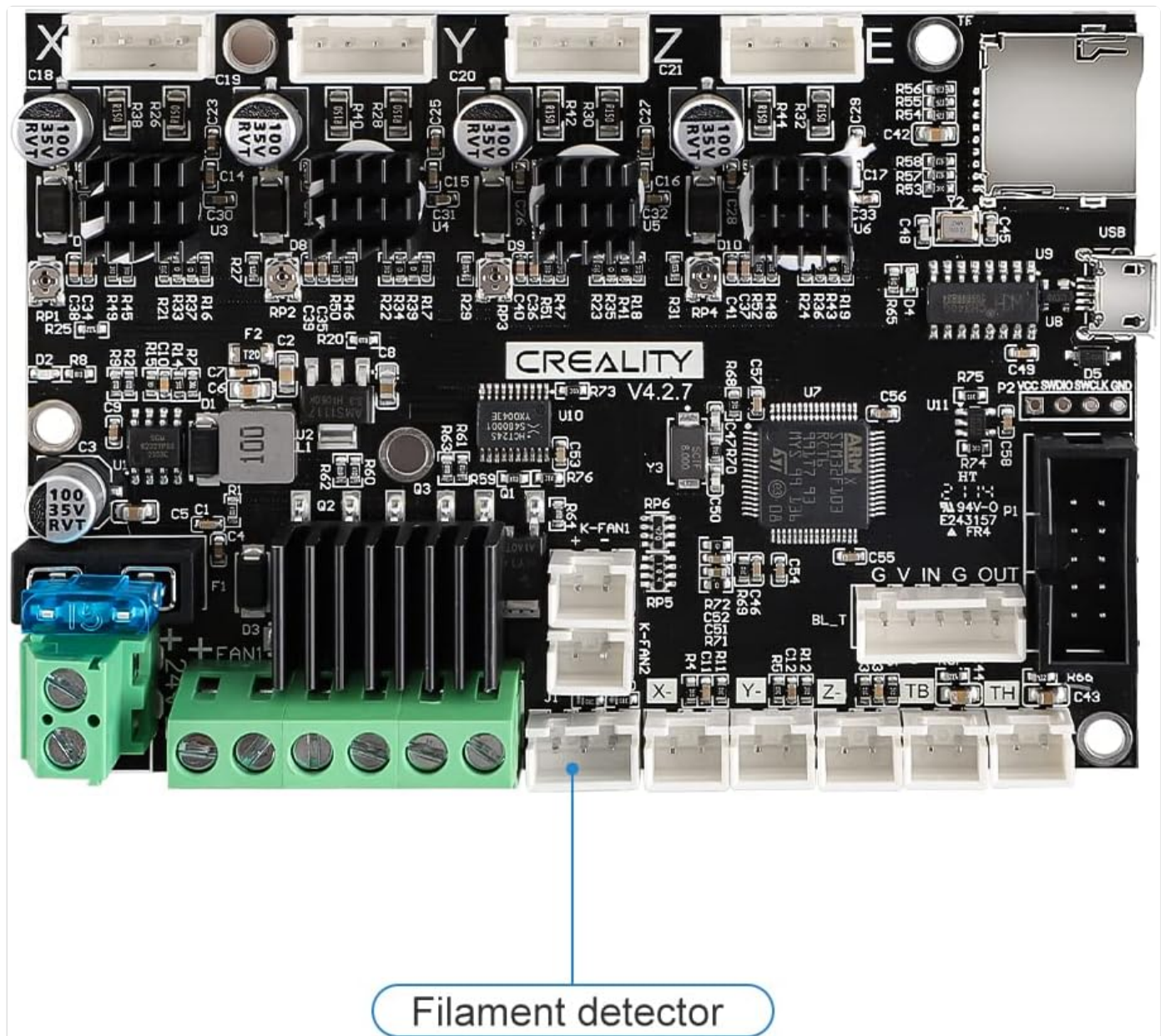


Image: The filament detector connection point highlighted on a Creality V4.2.7 motherboard.

3.3 Firmware Update

A firmware update is essential for the filament runout sensor to function correctly. Download the appropriate firmware package from the official Creality website or Creality Cloud. Format your TF card (SD card) and copy the .bin file to it. Insert the TF card into the printer's card slot, then power on the printer. The firmware update will proceed automatically.

Your browser does not support the video tag.

Video: This video demonstrates the installation process of the filament runout sensor on an Ender 3 3D printer, including mechanical setup and wiring.

Your browser does not support the video tag.

Video: This video provides a tutorial on flashing the firmware for an Ender 3 with CR Touch and filament runout sensor, detailing the steps

for a successful update.

4. OPERATING INSTRUCTIONS

Once installed and the firmware is updated, the filament runout sensor operates automatically.

4.1 Filament Detection

During printing, the sensor continuously monitors the presence of filament. A blue LED on the sensor indicates that filament is being fed normally. If the filament runs out or breaks, the blue LED will turn off, and the printer will automatically pause the print, allowing you to load new filament.

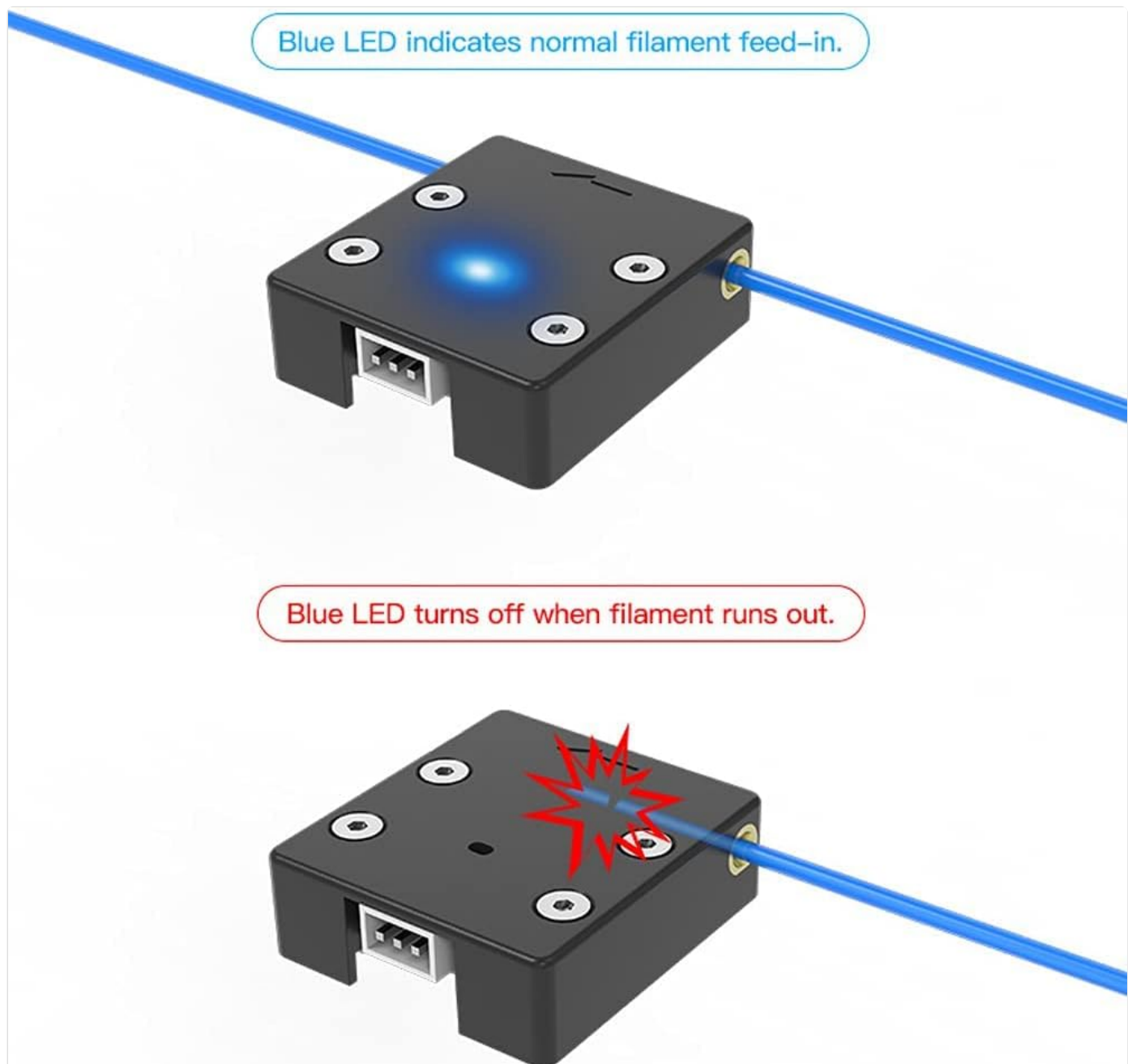


Image: Visual representation of the blue LED indicator for normal filament feeding and its state when filament runs out.

4.2 Resuming Print After Filament Change

When the printer pauses due to filament runout, follow these steps:

1. Remove any remaining filament from the extruder.
2. Load new filament into the extruder until it is detected by the sensor.
3. Confirm the filament change on your printer's display to resume the print.

5. MAINTENANCE

To ensure optimal performance and longevity of your filament runout sensor, consider the following maintenance tips:

- **Keep Clean:** Periodically inspect the filament path through the sensor for any dust or debris that might obstruct filament movement or sensor operation. Use a soft brush or compressed air to clean if necessary.
- **Check Connections:** Ensure all electrical connections remain secure. Loose connections can lead to intermittent detection issues.
- **Filament Quality:** Using good quality filament can reduce the likelihood of filament breaks and clogs, contributing to smoother operation of the sensor.

6. TROUBLESHOOTING

If you encounter issues with your filament runout sensor, refer to the following common problems and solutions:

6.1 Sensor Not Detecting Filament

- **Check Firmware:** Ensure you have installed the correct firmware version that supports the filament runout sensor. Refer to the [Firmware Update](#) section.
- **Verify Connection:** Confirm that the sensor cable is securely connected to both the sensor and the motherboard. Refer to the [Electrical Connection](#) section.
- **Inspect Sensor:** Check for any physical damage or obstructions within the sensor's filament path.

6.2 Printer Not Pausing on Filament Runout

- **Firmware Configuration:** Double-check that the filament runout detection feature is enabled in your printer's firmware settings. This might require recompiling custom firmware if not available through standard menus.
- **Sensor Functionality:** Manually test the sensor by feeding and removing filament while the printer is idle. Observe if the blue LED changes state correctly.

7. SPECIFICATIONS

Feature	Detail
Brand	Creality
Model Number	Creality Filament Sensor
Material Type	Thermoplastic
Color	Black

Item Weight	7 ounces
Item Diameter	1.75 Millimeters (Filament)
Special Feature	Filament Runout Detection

8. WARRANTY AND SUPPORT

Creality is committed to providing a positive user experience. If you encounter any issues during installation or use that you cannot resolve, please contact Creality's after-sales technical team. They aim to provide detailed solutions within 24 hours.

For further assistance, please visit the official Creality support website:[Creality Support](#)

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question