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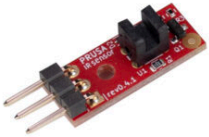
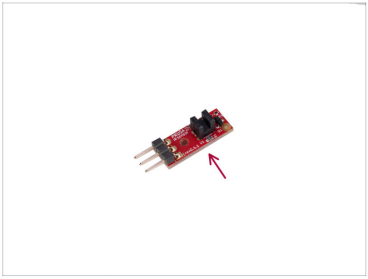
# How to replace the side filament sensor (CORE One)



help.prusa3d.com/g408981

**Scan the QR code to display the latest version of this chapter.**

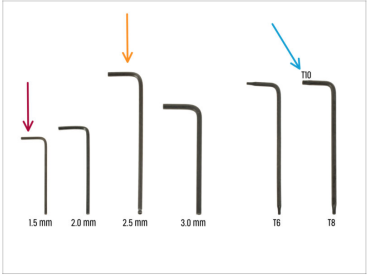
# STEP 1 Introduction



- This guide will take you through the **Side Filament Sensor** replacement on your **Prusa CORE One**.
- All necessary parts are available in our eshop prusa3d.com.

  Note that you have to be logged in to have access to the spare parts section.

# STEP 2 Tools necessary for this guide




- **Please prepare tools for this guide:**
  - 2.5mm Allen key
  - 1.5mm Allen key
  - T10 Torx key
  - Flush cutters are recommended as an optional tool.

## STEP 3 Printer Preparation (Part 1)



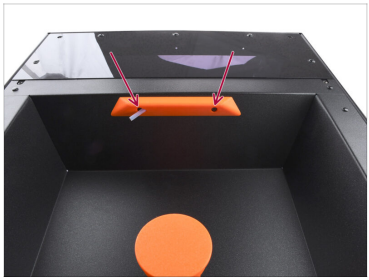
- Close the printer's door.
- Unload the filament. Visit the menu **Filament** and select **Unload filament**.
- Unload the filament from the printer.
- Remove the filament spool from the printer.
- ⚠ Ensure the printer has completely cooled down.
  - On the printer screen, navigate to Preheat -> COOLDOWN and wait for the temperatures to drop to ambient levels. This may take several minutes.

## STEP 4 Printer Preparation (Part 2)



- Open the menu **Control > Move Axis > Move Z** and set it to 100mm or more.
- Wait until the heatbed moves down.
- Turn the printer off using the switch on the back.
- Disconnect the printer from power.

# STEP 5 Handle Removal

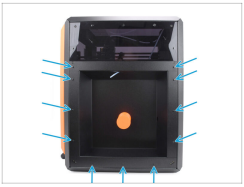


- Let's move onto the right side of the printer.
- Using the T10 Torx key, remove both screws from the handle.

  ⚠ Note that one screw is hidden behind the filament entry PTFE tube. It might be tricky to remove.

  ⓘ Carefully move the tube aside to access the screw. Avoid bending the tube excessively to prevent damage.
- Move the handle off the PTFE tube and away from the printer.

# STEP 6 Side Panel Removal

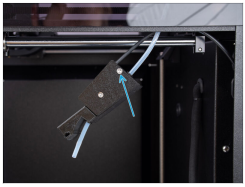
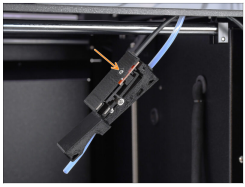
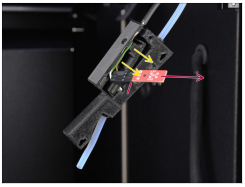


- Remove 11 Nylon rivets holding the sheet metal side panel.
  - We recommend using flush cutters to lift the top part of the rivet, unlocking it. Then, remove the bottom part of the rivet.

  ⚠ Proceed carefully to avoid cutting the rivet into pieces.
- Move the side panel away from the printer.

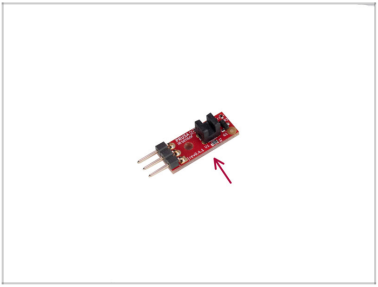
  ⓘ Note that the PTFE tube on top extends from the filament sensor assembly, which hangs freely on the tube and a cable. Proceed carefully to avoid damaging the cable.

## STEP 7 Filament Sensor Disassembly

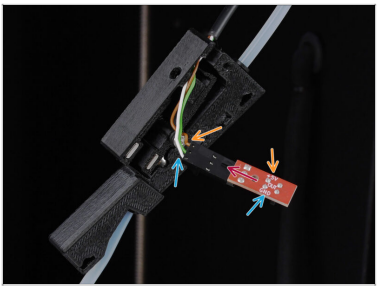
- Let's move onto the side filament sensor assembly.
- Using the 2.5mm Allen key, remove the M3x10 screw on the right.
- Using the 1.5mm Allen key, remove the M2x8 screw holding the filament sensor.
- Remove the filament sensor PCB by moving it to a side.
- Disconnect the filament sensor PCB from the connector.

## STEP 8 Parts Preparation: Filament Sensor



- **For the following steps, please prepare:**
  - New IR Filament sensor (1x)

## STEP 9 Filament Sensor Connection

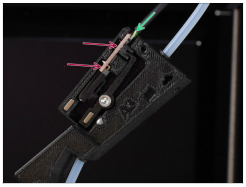


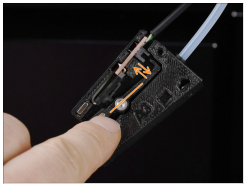
- Plug the new IR filament sensor to the connector.

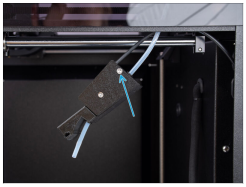
  ⚠ Ensure the connector is oriented correctly before plugging it in!

  - On CORE One, the brown cable must connect to the +5V pin.
  - The white cable connects to the GND pin.

## STEP 10 Filament Sensor Assembly

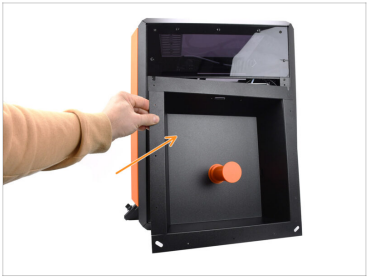


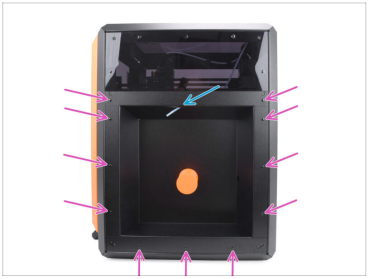




- First, place the cable into the groove.
- Then, insert the IR filament sensor.
- Test if the sensor lever moves freely and properly fits into the optical gate part of the sensor.
- Cover the filament sensor assembly and secure the cover in place with the M3x10 screw.

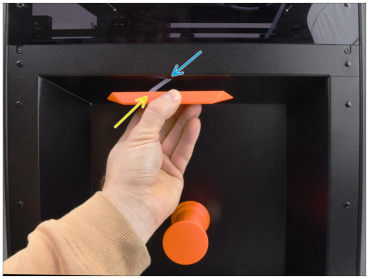
## STEP 11 Side Cover Assembly

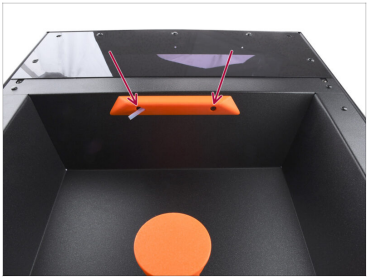




- Reattach the sheet metal side cover.
- Push the filament sensor PTFE tube through the opening in the side cover.
- Fix the side cover in place using 11 Nylon rivets.

## STEP 12 Side Handle Assembly





- Slide the side handle onto the PTFE tube.

⚠ Use your other hand to reach into the printer and hold the filament sensor assembly in place.

- Using the T10 Torx key, attach the handle with two M3x10rT screws.

## STEP 13 Sensor Test (Part 1)



- Connect the printer to electricity.
- Turn the printer on.
- Close the printer's door.
- On the LCD, navigate to *Info -> Sensor Info* and find the **Side Filament Sensor** item.

## STEP 14 Sensor Test (Part 2)




- When **no filament** is inserted, the *Side Filament Sensor* item should display: **NINS / 1**.
- Now, insert a filament into the PTFE tube so that it goes through the side filament sensor.
- After a **filament is inserted**, the *Side Filament Sensor* item should indicate: **INS / 2**

ⓘ *NINS* stands for Not Inserted, while *INS* stands for Inserted.

## STEP 15 Done

- Congratulations. Your printer is ready to roll!
- Happy printing.

**Notes:**

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