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How to replace the door sensor (CORE One)

help.prusa3d.com/g458290

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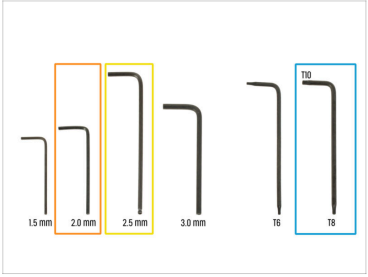
STEP 1 Introduction

- This guide will take you through the Door 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.

Warning: You will be handling metal sheets in this guide. Be careful!

STEP 2 Tools necessary for this guide

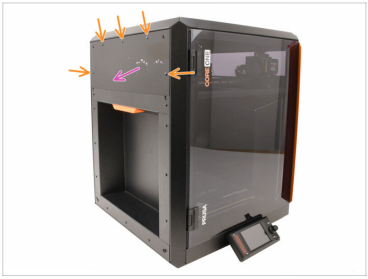


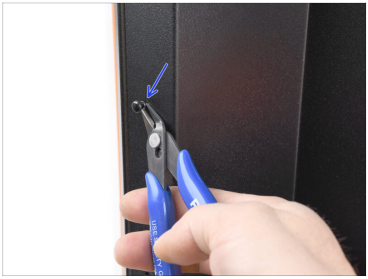
- **Please prepare tools for this guide:**
  - 2mm Allen key
  - 2.5mm Allen key
  - T10 Torx key
  - Flush cutters are recommended as an optional tool.

STEP 3 Printer Preparation

- On the printer, visit the menu **Control** and trigger the **Auto Home**.
- Turn the printer off using the switch on the back.
- Disconnect the printer from power.

STEP 4 Side Cover Removal



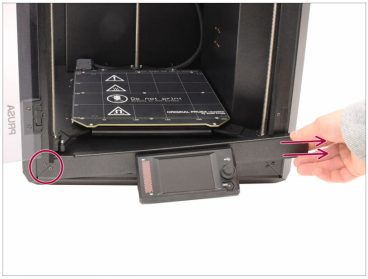


- Remove the five Nylon rivets holding the plastic side cover.
  - We recommend using flush cutters to lift the top part of the rivet, unlocking it. Then, remove the bottom part of the rivet.
- Remove the plastic side cover.

STEP 5 Side Panel Removal

- Remove the marked Nylon rivets holding the Side Sheet Metal Panel.
- Remove the panel.

STEP 6 Front Panel Disengage



- Lift the front sheet metal panel with the LCD upward on the right side to unhook it from the corner profile.

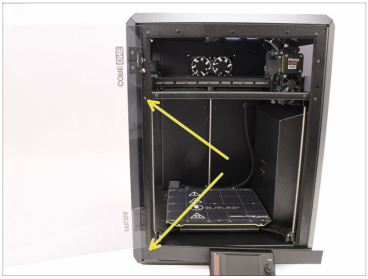
  ⓘ The panel is held by magnets.

- Once unhooked from the corner profile, pull the panel forward slightly to keep it unhooked.

⚠ Be very careful when moving the front panel assembly, as there are cables connected to the LCD. Ensure you do not disconnect or damage them!

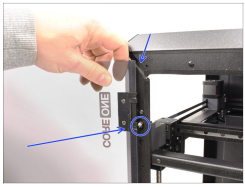
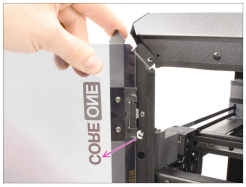
- Move the front panel assembly to the right. Move it just so that you gain access to the two screws on the left.

STEP 7 Corner Profile Removal (Part 1)



- On the side of the printer, remove the three screws holding the corner profile.
- From the front of the printer, **remove only the two marked screws** securing the corner profile.

STEP 8 Corner Profile Removal (Part 2)

- Leave the top screw holding the corner profile in place for now.
- Notice the door switch lever poking through an opening in the profile.
- Hold the printer's door with one hand while removing the top screw holding the profile. After removing the screw, carefully unhook the corner profile from the top part, **ensuring the door switch is not damaged during the process.**
- Then, remove the corner profile along with the door, ensuring the lever of the door switch is not damaged.

STEP 9 Back Cover Removal (Part 1)

- On the inside of the printer, remove the two screws holding the back cover.
- On the back of the printer, slide the center cover downwards.

  If it's difficult to move, use a screwdriver as a lever through the opening to assist.
- Ensure the four hooks on top of the cover are disengaged from the metal chassis.

STEP 10 Back Cover Removal (Part 2)

- Move the cover slightly towards the back.
- Pull the bottom part of the cover outward while tilting the top toward the printer. This will unhook it from the cable bundle behind.

STEP 11 xBuddy Cover Removal

- Remove the six screws holding the xBuddy cover.
- Remove the cover by sliding it out.

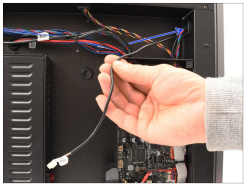
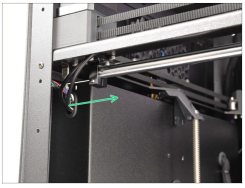
STEP 12 Cable Disconnecting

- Locate the door switch cable connected to the A_TEMP connector on the xBuddy board.
  - Disconnect the cable from the connector.

  ⚠ Note that the connector has a safety latch that must be pressed to disconnect it.
- Carefully cut the zip ties securing the cable bundle where the door switch connector cable is located.

  ⚠ Proceed with extreme caution to avoid damaging any cables.

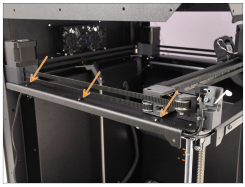
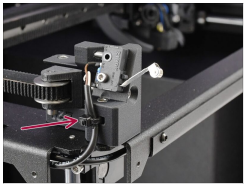
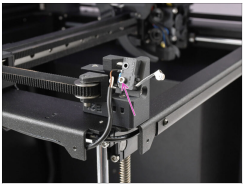
STEP 13 Cable Removal

- Guide the connector through the opening on top of the xBuddy cover.
- Guide the cable through the opening to the inside of the printer.
- From the inside of the printer, pull the cable until it goes through.

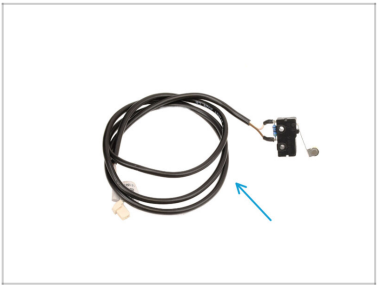
⚠ Be careful. Do not damage the connector!

STEP 14 Sensor Removal

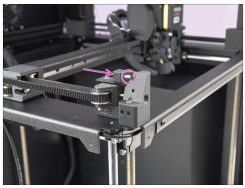
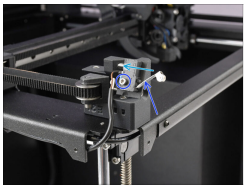
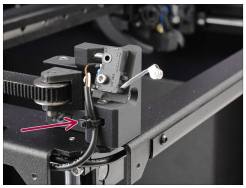
- Cut off the three zip-ties holding the cables to the Core XY assembly.
- Cut off the zip-tie holding the cable just below the door sensor.
- Using the 2mm Allen key, remove the M2.5x10 screw. Then remove the sensor.

STEP 15 Parts Preparation: Door Sensor



- **For the following steps, please prepare:**
  - New Door Sensor (1x)

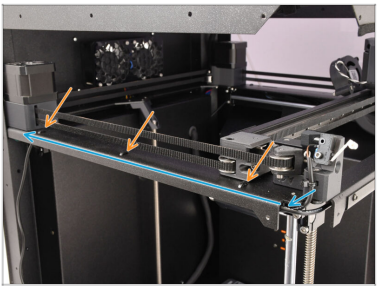
STEP 16 Sensor Installation

- Slightly **loosen** the marked sensor calibration bolt. Two turns should be enough.
- Attach the new door sensor to the marked location, ensuring the lever is pointing upward. Fix the sensor in place using the **M2.5x10 screw** in the bottom opening only.
  - **While tightening** the screw, push the sensor slightly towards the calibration screw in the back.
- Secure the sensor cable to the printed part with a zip-tie, then trim the excess zip-tie.

  ⓘ Make sure to leave some slack in the cable near the sensor body.

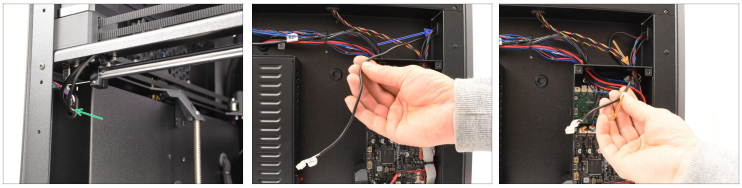
STEP 17 Cable Attachment



- Guide the sensor cable together with the WLED cable under the Core XY metal profile.
- Secure the cable bundle under the metal profile using zip-ties in the marked spots. Trim any excess zip-tie.

⚠ Proceed carefully to prevent damaging the cables!

STEP 18 Cable Guidance



- Guide the cable through the opening toward the back of the printer.
- Gently pull the cable out on the other side.
- Guide the cable into the xBuddy box.

STEP 19 Cable Connection



- Secure the cable bundle to the hooks inside the xBuddy box using two zip-ties.

  ⚠ Avoid overtightening the zip-ties to prevent damage to the cables.

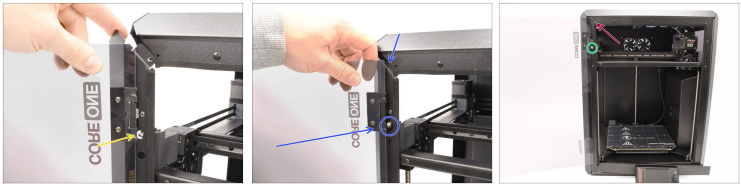
- Plug the door sensor cable to the connector labeled A_TEMP on the xBuddy board.
- Attach the xBuddy box cover using the 6 M3x4rT screws.

STEP 20 Back Cover Installation



- Cover the cables with the sheet metal part, making sure none of the cables is getting pinched.
- Push the cover up, so that the four tabs engage into the recesses.
- While pushing the cover up, fix it in place using two M3x4bT screws from the inside of the printer.

STEP 21 Corner Profile Installaton

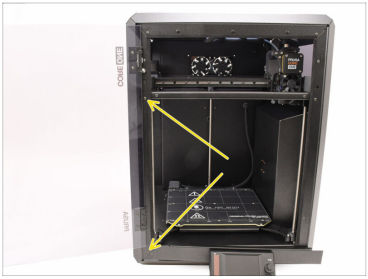


- Now, reattach the corner profile with the door.

  ⚠ We need to align the profile without damaging the door sensor lever.

- First, position the tabs with the threaded openings **behind** the top profiles on both the front as well as on the side. While moving the profile, keep a close eye on the door switch!!
- Fix the profile using the top M3x4bT screw only, for now.
- Push the switch lever to verify if it fits the opening and clicks correctly, when pressed.

STEP 22 Corner Profile Attachment



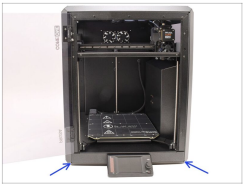
- Fix the corner profile in place using the three M3x4bT screws on the left side.

  ⚠ Ensure the tab on top of the corner profile is positioned behind the top part of the printer's frame, as seen in the picture.

- Fix the corner profile using two M3x4bT screws on the front.

STEP 23 Front Panel Attachment



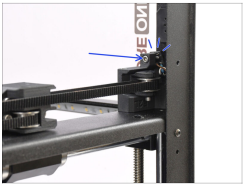
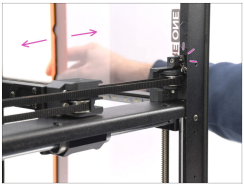


- Move the front panel to the left, until it engages into the corner profile.

⚠ There are cables connected to the LCD. Ensure you do not disconnect or damage them!

- With the right side of the panel lifted, push it toward the printer until it is flush with the front of the printer.
- Then, move the right side of the panel down to engage it into the corner profile on the right side.
- Align the front panel with the printer's frame.

STEP 24 Sensor Initial Calibration

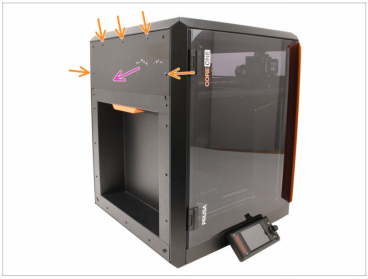




- Close the printer's door.

  ⚠ When closing the door, the sensor should make an audible click, indicating it has been activated.

  - If the sensor does not click, start tightening the calibration screw slowly, until the sensor clicks.
- Test the sensor by opening and closing the door. It should click each time the door closes.

STEP 25 Side Cover Installation

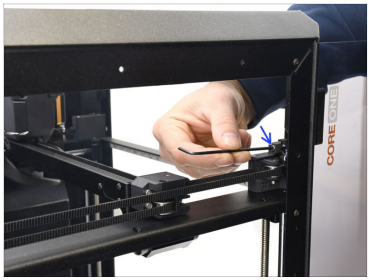


- Add the side sheet metal panel to the printer and align it with the opening.
- Secure the panel in place with 11 Nylon rivets in the marked spots.
- Add the plastic cover onto the top part and align it with the opening.
- Fix it in place using 5 Nylon rivets.

STEP 26 Sensor Test


- Connect the printer to power.
- Turn the printer on using the switch on the back.
- On the printer's display, navigate to the menu **Info > Sensor Info > Door Sensor**
  - Repeatedly open and close the printer's door and check if the reading on the display changes accordingly between the **open** and **closed** states.

STEP 27 Finish

- Congratulations. Your door sensor has been successfully replaced.
  - If further adjustment is needed, you can access the door sensor calibration screw from inside the printer.

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