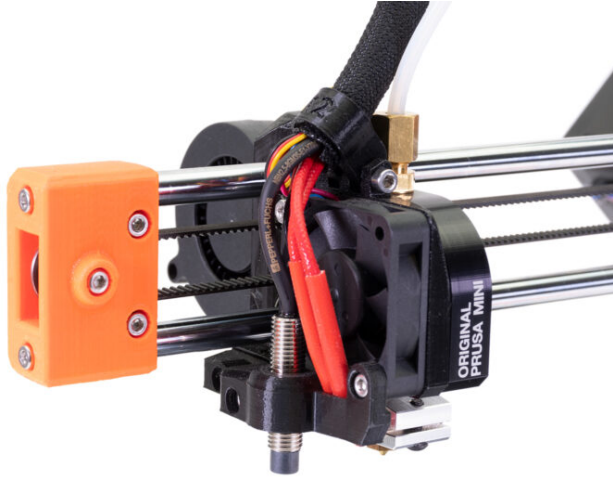


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# How to replace SuperPINDA (MINI/MINI+)



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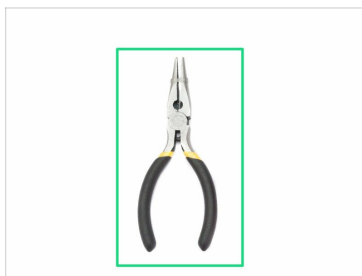
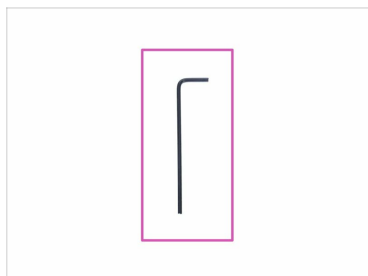


### STEP 1 Introduction



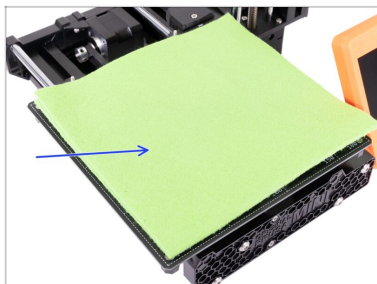
- i** This guide will take you through the replacement of your current sensor for the **SuperPINDA** on the **Original Prusa MINI** and **MINI+**.
- ◆** All necessary parts are available in our eshop [shop.prusa3d.com](http://shop.prusa3d.com)
- i** This guide can be used for replacing both M.I.N.D.A. and SuperPINDA sensors.

## STEP 2 Tools necessary for this guide



- ◆ 2.5mm Allen key
- ◆ Needle-nose pliers for zip ties
  - ⓘ Will be used later on. Zip ties are included with the SuperPINDA replacement set.
- ◆ Cloth or piece of fabric 15x15 cm
  - ⓘ The cloth will be used to protect the heatbed. You can use any similar material.

## STEP 3 Additional heatbed protection



**⚠ Make sure the printer parts - print head and heatbed are cooled down at room temperature.**

**⚠ Turn the printer off and unplug it from the socket!**

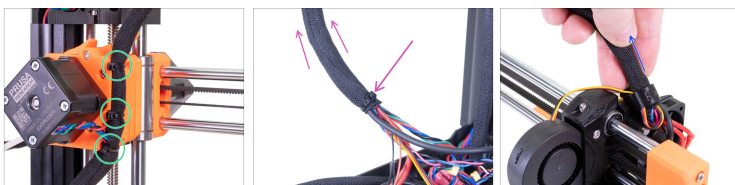
- ◆ **Before these steps, it is recommended to protect the heatbed!**
- ◆ Take off the flexible steel sheet.
- ◆ Use any cloth or piece of fabric, which is thick enough and cover the heatbed. This will ensure you won't damage (scratch) the surface during the disassembly.

## STEP 4 Opening the box with the electronics



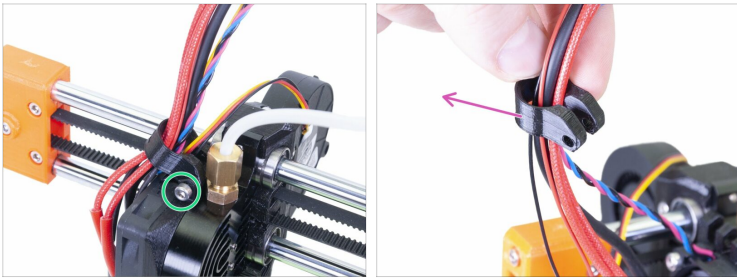
- Release and remove the M3x12 screw on the box with the electronics.
- Remove the printed cable cover.
- Lift the second electronics cover slightly. Before you remove it completely, pull it first towards the aluminium extrusion to release both pins from the holes.

## STEP 5 Removing the textile sleeve



- Cut the zip ties attached to the extruder.
- **Start carefully removing the textile sleeve from the entire cable bundle.** Note that on some units the sleeve might be fixed using a zip tie, cut it carefully. **Avoid pulling the cables!**
- Remove the textile sleeve from the MINI-fan-spacer-clip.

## STEP 6 Removing the textile sleeve



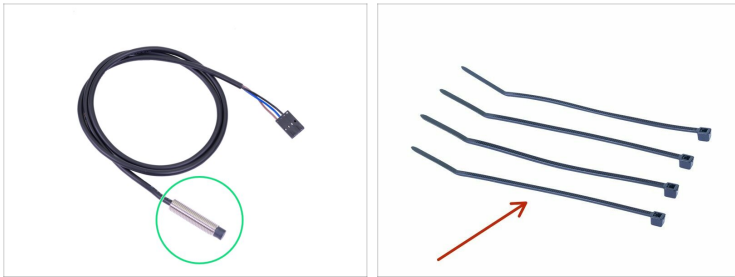
- ◆ Release the M3x20 screw.
- ◆ Remove the MINI-fan-spacer-clip from the cable bundle.

## STEP 7 Removing the SuperPINDA sensor



- ◆ **Press the safety pin** on the connector and disconnect the SuperPINDA sensor from the board. **Do not pull out the connector without pressing the pin**, it may damage the connector or the board.
- ◆ Release slightly the screw on the minda-clip.
- ◆ Grab the SuperPINDA sensor by the metal part and pull it out from the minda-holder.
- ⓘ If you feel resistance while pulling the sensor, stop and loosen the screw more.
- ⚠ **Keep all the removed screws and nuts for the reassembly.**

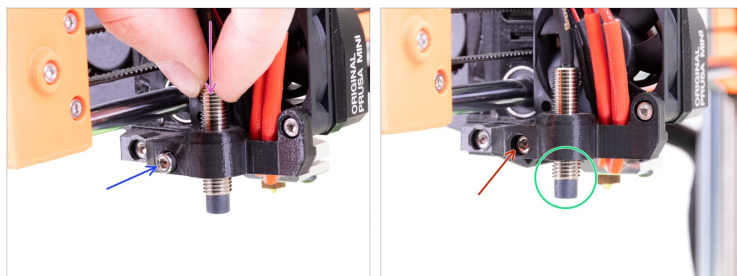
## STEP 8 SuperPINDA sensor - parts preparation



◆ **For the following steps, please prepare:**

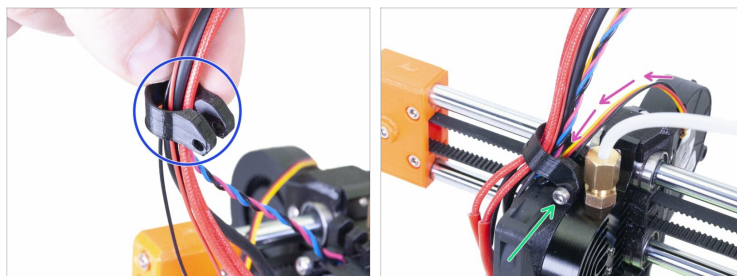
- ◆ New SuperPINDA sensor (1x)
  - ◆ Zip tie (4x)
  - ◆ Old credit card (1x) *new might be demagnetised*
- ⓘ In case you don't have an old inactive credit card, you can use a tip of the zip tie, which has a similar thickness.

## STEP 9 SuperPINDA sensor installation



- ◆ Insert the new SuperPINDA sensor into the MINI-minda-holder.
- ◆ Screw in the M3x12 screw by 2-3 threads. We'll tighten it later.
- ◆ Adjust the SuperPINDA sensor position, there should be about 4-5 threads below the MINI-minda-holder. *This a temporary position for now. We will set the proper one later on.*
- ◆ Tighten the screw on the minda-holder. **Do not use excessive force, you can damage the minda-holder!**

## STEP 10 Guiding the cable bundle

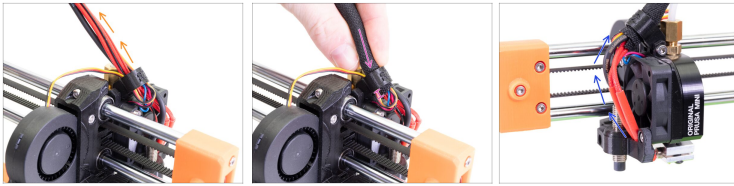


- ◆ Push all the cables from the print head into the MINI-fan-spacer-clip. Orient the clip as shown in the picture, the beveled side is up.
- ◆ Guide the print fan cable through MINI-fan-spacer-clip groove.
- ◆ Slide down the MINI-fan-spacer-clip and mount it on the spacer with the M3x20 screw. Tighten the screw, then release it slightly by 1/4 of turn (90 °).  
*No nut is needed here.needed here.*



**The MINI-fan-spacer-clip must move freely.**

## STEP 11 Guiding the cable bundle



- 🟠 Merge all cables leading from the hotend together and guide them up.
- 🟡 Place the textile sleeve on the cable bundle and slide it into the MINI-fan-spacer-clip so that 2-5 mm of the sleeve extends over on the other side.
- 🟢 **Don't pull the cables, leave some slack around the fan.**

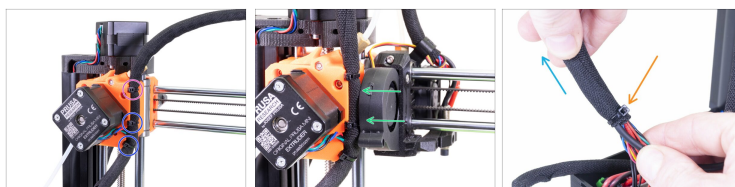
## STEP 12 Guiding the cable bundle



**⚠ WARNING:** Follow these instructions carefully! If you mount the cable bundle at an incorrect position, you will have issues while printing!

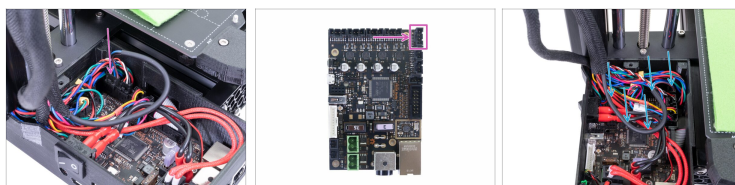
- ◆ Start by rotating the lead screw until the X-axis is all the way up.
- ◆ Move the print head all the way to the right and ensure it is touching the printed part.
- ◆ Bend the cable bundle slightly and use the upmost zip tie slot to partly tighten the entire bundle.
- ◆ Add the EXTRUDER motor cable to the bundle and use the textile sleeve to cover the cables all the way down to the electronics.
- ◆ Check whether the textile sleeve can reach the inner space of the electronics cover. If not, you left too much slack above the X-axis, readjust it.
- ◆ Go back to the X-axis and check once again, that the print head can move all the way to the right without being pulled back by the cable bundle.

## STEP 13 Guiding the cable bundle



- ◆ Tighten the zip tie, you've installed in the previous step, but use a reasonable force or you might break the cables. Rotate the zip tie's head to the left.
- ◆ Add a second and third zip tie. Again, tighten carefully and rotate the heads to the left.
- ◆ Move the print head all the way to the left to ensure there is no collision between the zip ties and the fan's casing.
- ◆ Secure the textile sleeve with a fourth zip-tie 1-2 mm before the end of the wiring harness. Tighten so that the textile sleeve doesn't move freely. Do not tighten too much, cables may get pinched.
- ◆ Try to pull the sleeve by hand and make sure it does not move.

## STEP 14 Connecting the new SuperPINDA sensor



- ◆ Connect the SuperPINDA sensor connector to the appropriate socket. See the picture for more detail.
- ◆ Gently push the cables inside the box.

## STEP 15 Covering the electronics



- ◆ Before covering the electronics, make sure the square nut is correctly positioned in the printed part. **The nut must not fall out!** This can cause fatal damage to the electronics.
- ◆ Insert the cover back in, make sure it is properly seated in the holes.
- ◆ **Place the second cover on the top and arrange the cables:**
  - ◆ **Extruder bundle**, ensure the textile sleeve is partially in. Also, it must be tilted away from the printer.
  - ◆ **Heatbed bundle**, ensure the textile sleeve is partially inside the box.
  - ◆ **Filament sensor cable** (optional), ensure that the textile sleeve wrapped around the cables is partially inside the box.
- ◆ Now, tighten the second cover. Check that no cable is pinched.

## STEP 16 SuperPINDA sensor height adjustment



- ◆ Using your fingers turn the lead screw and move the entire X-axis down. **Stop when the hotend touches the heatbed! Avoid bending the heatbed!**
- ◆ Release slightly the screw on the minda-holder so you are able to adjust position of the SuperPINDA sensor.
- ◆ Place a credit card under the SuperPINDA sensor or use a tip of the bundled zip tie.
- ⓘ In case you don't have an old inactive credit card, you can use a tip of the zip tie, which has a similar thickness.
- ◆ Gently press the SuperPINDA sensor down against the credit card.
- ◆ Tighten the screw on the minda-holder. **Do not use excessive force, you can break the printed part!**
- ◆ Rotate the lead screw manually in the opposite direction to move the axis at least 5 mm up.
- ◆ Now, place the steel sheet back on the heated. Turn the printer ON and run the **First Layer Calibration**. For more information, please follow this [article](#).



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