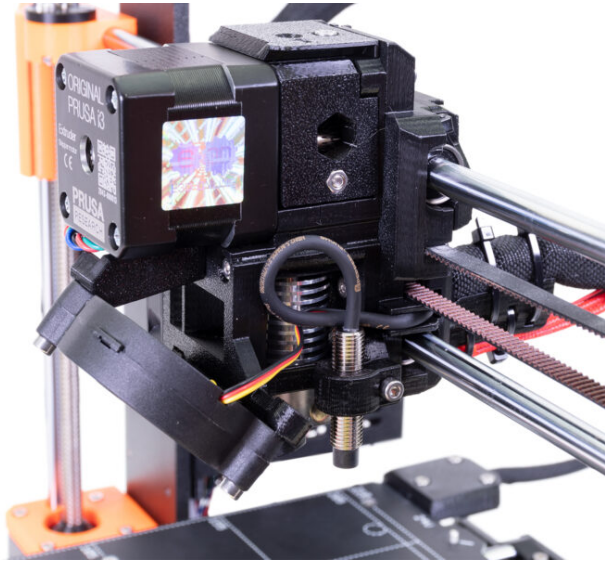


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# How to replace SuperPINDA (MK3S/MK3S+)



[help.prusa3d.com/g179920](https://help.prusa3d.com/g179920)

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



## STEP 1 Introduction



- i** This guide will take you through the replacement of the **SuperPINDA sensor** on the **Original Prusa i3 MK3S** and **MK3S+**.
- ◆ All necessary parts are available in our eshop [shop.prusa3d.com](http://shop.prusa3d.com)
- i** The following instructions are the same for the MK3S and MK3S+. However, it may differ in the appearance of some parts.
- i** This guide can be used for replacing both P.I.N.D.A. and SuperPINDA sensors.

## STEP 2 Tools necessary for this guide



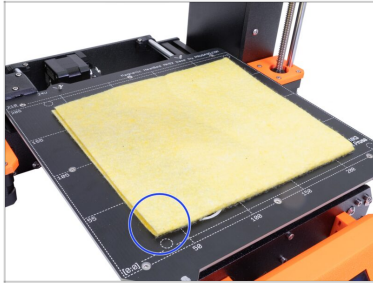
● **For the following steps, please prepare:**

● 2.5mm Allen key

● Needle-nose pliers

● Cloth or piece of fabric 15x15cm

## STEP 3 Preparing the printer

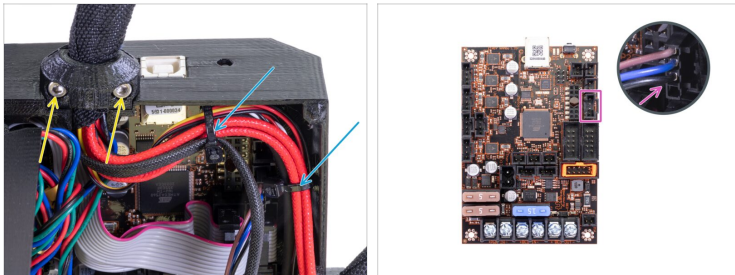


**⚠ Turn the printer off and unplug it!**

**i Before you proceed, it is recommended to protect the heatbed.**

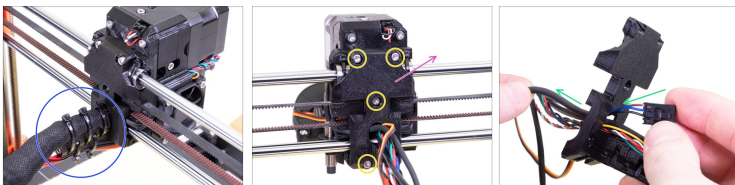
- ◆ Take off the flexible steel sheet.
- ◆ Use any cloth or piece of fabric, which is thick enough and cover the heatbed. This will ensure you won't damage (scratch) the surface during the disassembly.

## STEP 4 Disconnecting the SuperPINDA sensor



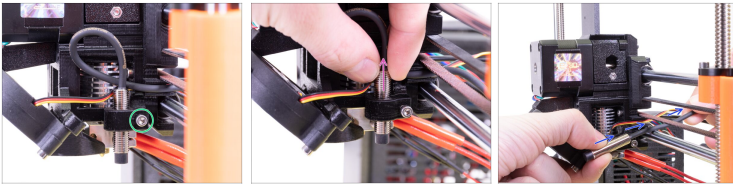
- ◆ Open the Einsy case and cut the two zip ties on the cable bundle. **Avoid cutting the cables!**
- ◆ Release two screws on the cable clip and remove the clip.
- ◆ Disconnect the SuperPINDA sensor cable from the EINSY board.

## STEP 5 Removing the x-carriage-back



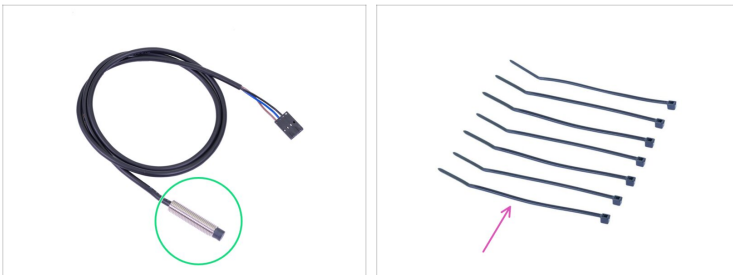
- ◆ Cut the zip ties on the cable-holder and remove them.
- ◆ Remove the textile sleeve from the cable bundle.
- ◆ Release four screws on the x-carriage-back part.
- ◆ Remove the x-carriage-back from the extruder.
- ◆ Push the SuperPINDA sensor cable through the opening in the x-carriage-back.

## STEP 6 Removing the SuperPINDA sensor



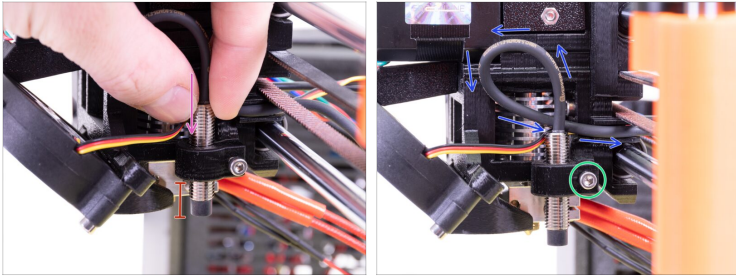
- Loosen the screw on the SuperPINDA holder. No need to remove the screw.
- Remove the SuperPINDA sensor from the extruder.
- Push the SuperPINDA cable out of the printer between the X-belt and the smooth rod.

## STEP 7 New SuperPINDA sensor - parts preparation



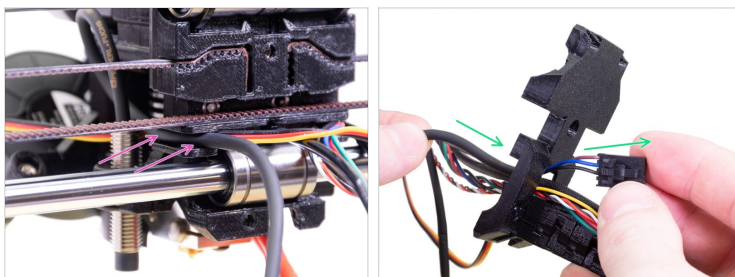
- For the following steps, please prepare:**
- New SuperPINDA sensor (1x)
- Zip tie (7x)

## STEP 8 Installing the new SuperPINDA sensor



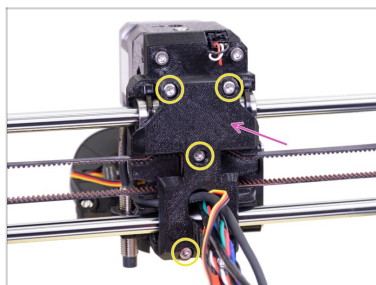
- ◆ Insert the new SuperPINDA sensor into the holder.
- ◆ Slide-in about half of the sensor. *Exact position doesn't matter, we will adjust it later.*
- ◆ Create a loop on the cable from the sensor.
- ◆ Slightly tighten the screw. Do not tighten fully. We will adjust the height of the SuperPINDA sensor later.

## STEP 9 Cable management



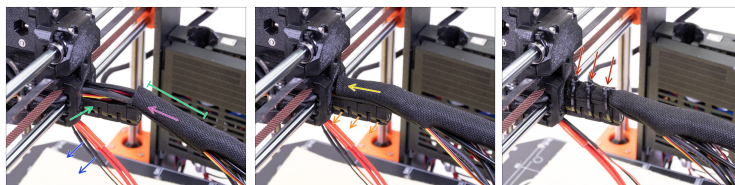
- ◆ Place the cables on the SuperPINDA sensor side over the lower smooth rod and push them back in the channel.
- ◆ Push the SuperPINDA sensor cable through the opening in the x-carriage-back.

## STEP 10 Mounting the x-carriage-back



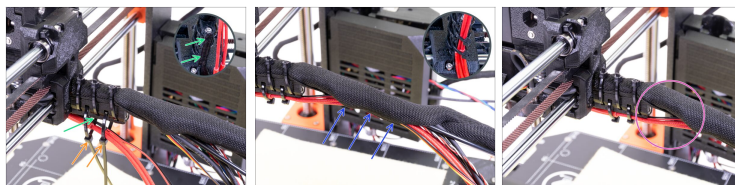
- ◆ Place the x-carriage-back on the extruder.
- ◆ Secure it using four M3x10 screws.

## STEP 11 Tightening the textile sleeve



- ◆ Open one end of the textile sleeve and slide it on the cable bundle leading from the extruder.
  - ◆ Leave the cables from the hotend out for now.
  - ◆ Length of the first wrap should be slightly longer than the cable-holder part, about 5 cm is enough.
  - ◆ Gently twist the sleeve to make it smaller and tighter around the cables, orient the sleeve's seam downwards, then slide the sleeve towards the extruder.
  - ◆ **Take 3 zip ties** and insert them into the **lower row** of holes on the cable-holder.
  - ◆ Twist the sleeve again (without twisting the cables inside) and tighten the zip ties.
- ⚠ **IMPORTANT:** Cut the remaining part of each zip tie using pliers as closest to its head as possible. Note the correct position of each zip ties's head (slightly off-centre to the left).

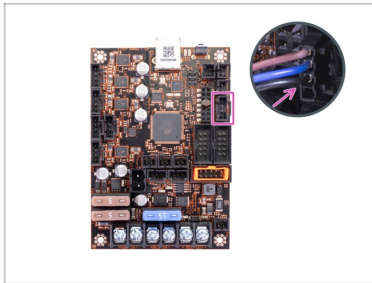
## STEP 12 Tightening the textile sleeve



- ◆ Use two zip ties and push them through the upper slots on the cable-holder.
- ◆ **ATTENTION!** Before tightening the zip ties add the cables from the hotend. Use the channel in the printed part to arrange them properly.
- ◆ Once the hotend cables are included, tighten the zip ties and cut the remaining parts.
- ◆ Open the textile sleeve and insert the cables from the hotend.
- ◆ Compare the look of the cable management with the last picture.

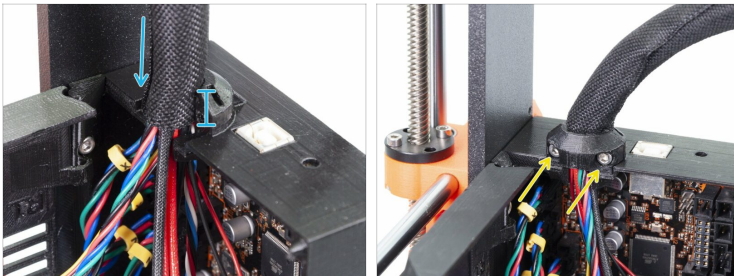
⚠ The zip tie arrangement was tested with the injection molded double spool holder (provided in the kit and assembled later on). If you intend to use any other frame mounted type holder, make sure the zip ties won't crash into it, which might result in a print failure.

## STEP 13 Connecting the SuperPINDA sensor



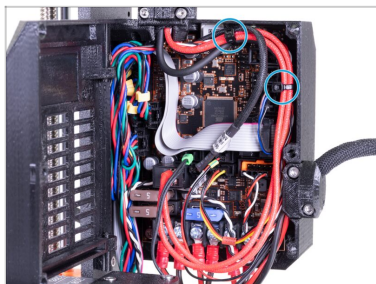
- ◆ Connect the SuperPINDA sensor cable to the Einsy board.

## STEP 14 Guiding the textile sleeve



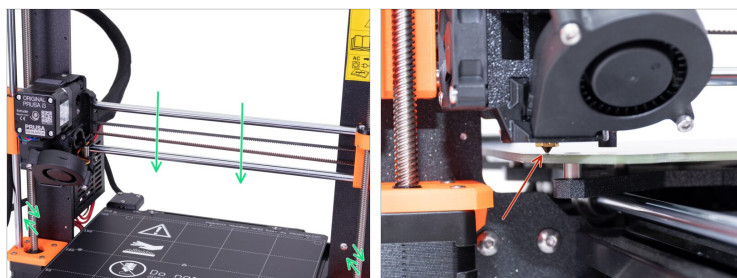
- ◆ Slide the sleeve in the holder on the Einsy base at least 3/4 of the holder's height.
- ⚠ Ensure the nylon filament isn't pushing the motor cables and if needed slightly unwrap the sleeve and push the filament up.
- ◆ Use the Extruder-cable-clip and two M3x10 screws to fix the cable bundle in place.

## STEP 15 Cable management in the Einsy base box



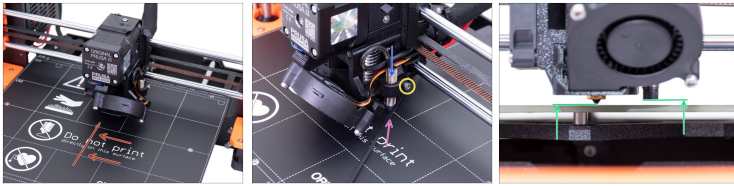
- Manage all cables in the Einsy base like in the picture.
- Secure the cable bundle with two zip ties.

## STEP 16 SuperPINDA adjustment



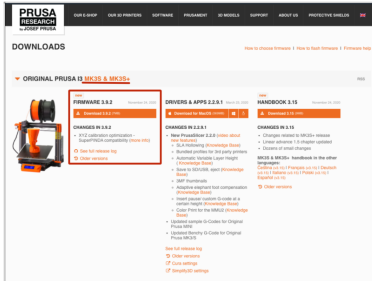
- Take off the cloth from the heatbed.
- By rotating BOTH threaded rods at the same time on the Z-axis move the nozzle until you reach the heatbed. Try rotating both the rods equally!
- ⚠ Check again from a different angle the nozzle is touching slightly the heatbed. Don't bend the heatbed!
- Don't place the steel sheet on the heatbed during the entire SuperPINDA sensor adjustment process. Wait for the XYZ calibration.

## STEP 17 SuperPINDA adjustment



- By rotating BOTH threaded rods at the same time on the Z-axis move the nozzle until you reach the heatbed. Try rotating both the rods equally!
- Move the extruder to the centre of the X-axis.
- Take a zip tie from the package and place it under the SuperPINDA sensor. Use the middle part of the zip tie, **not the tip**.
- Release the screw holding the SuperPINDA sensor and gently press it against the zip tie.
- Tighten the screw on the SuperPINDA holder again.
- The correct height of the SuperPINDA sensor compared to the nozzle should be similar to the last picture.

# STEP 18 Firmware upgrade and first layer calibration



**Attention:** Make sure you are running **firmware 3.9.2 or newer**. You can find them at [prusa3d.com/driver s](https://prusa3d.com/driver-s)



**Good job!** You just replaced the SuperPINDA sensor on your printer. Now, please follow the instructions for the First Layer Calibration (i3).



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