Zonestar

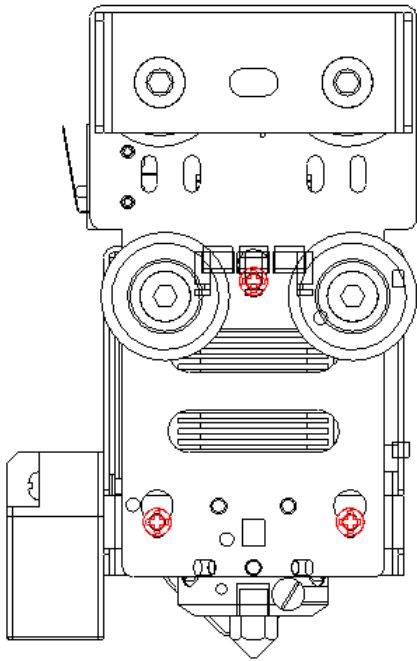# Direct Drive Extruder Installation and User Guide
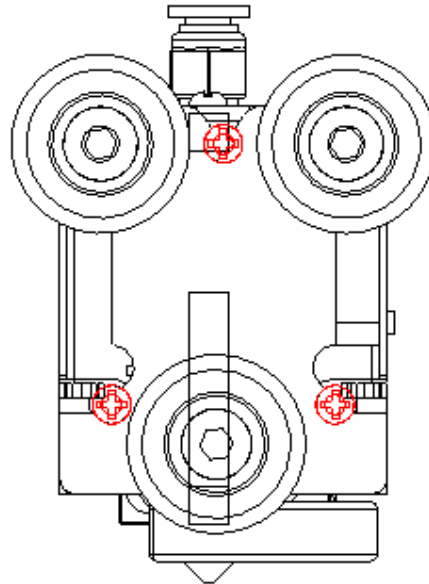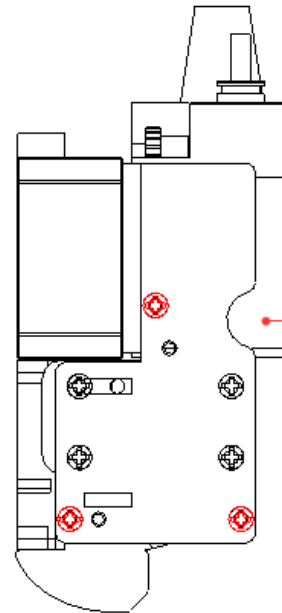
Ver: 1.0

- 1. Take down the orignal hotend from the x carrier

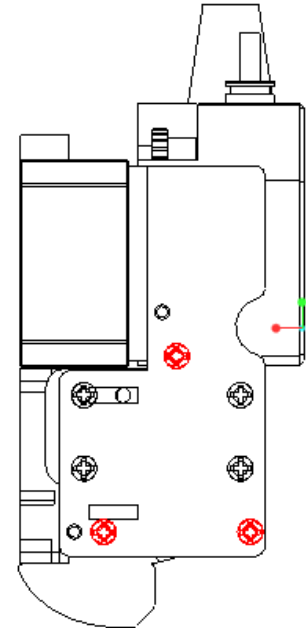- 2. Install the direct drive extruder (DDE) to the same position of the carrier

Z9 print head

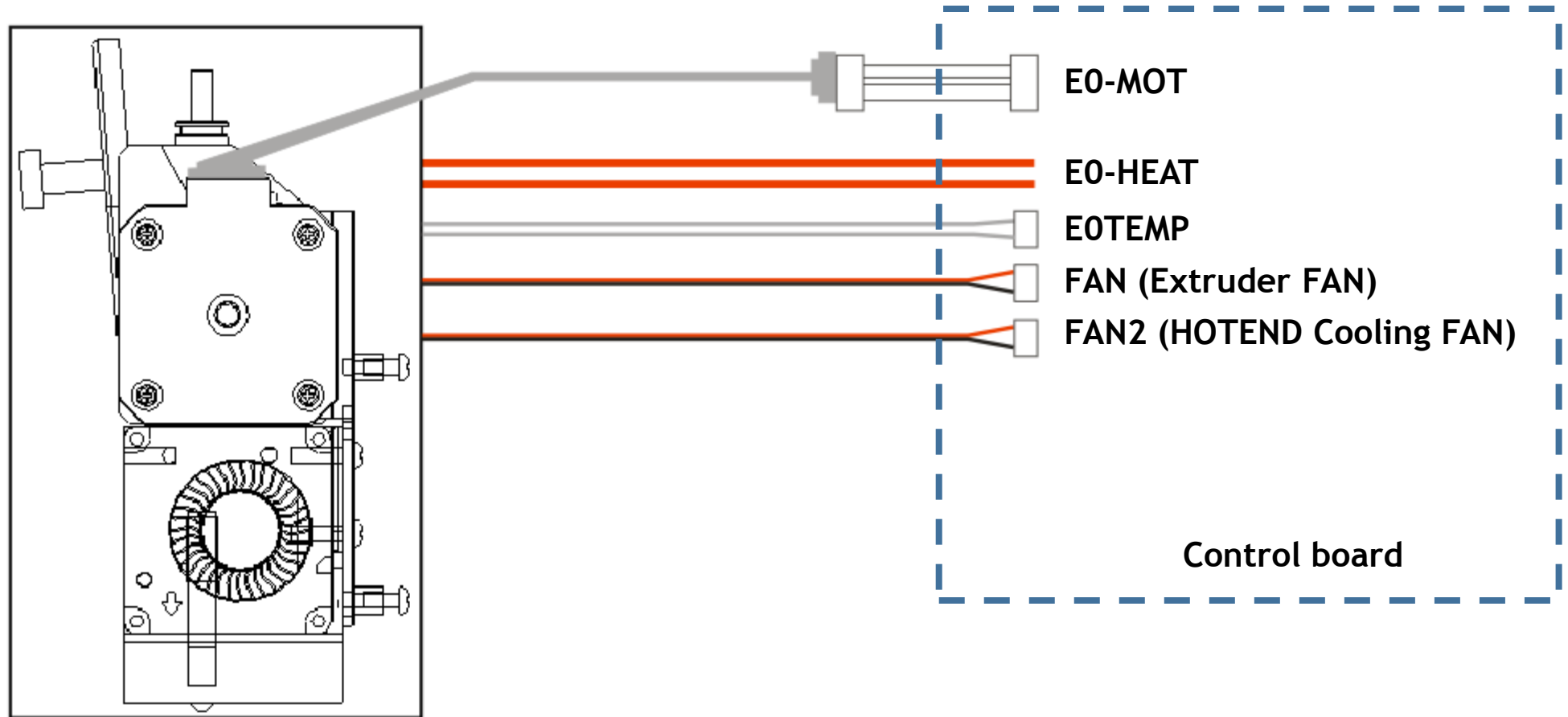**Z6 print head**

Fixing Screws for Z5/Z8/Z9/Z10

Fixing screws for Z6/Z5X

Loosen or remove 3 screws to take down the hotend from X carrier

Install the DDE to the x carrier,
note the Z6 and Z5X is different with other 3d printer model s

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Wiring

E0-MOT

E0-HEAT

E0TEMP

FAN (Extruder FAN)

FAN2 (HOTEND Cooling FAN)

Control board

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Wiring

You may need to change the stepper motor working direction, please refer to the below picture simply to exchange PIN1 and PIN3 of the motor cable, the motor working direction will be reversed:

exchange PIN1 and PIN3
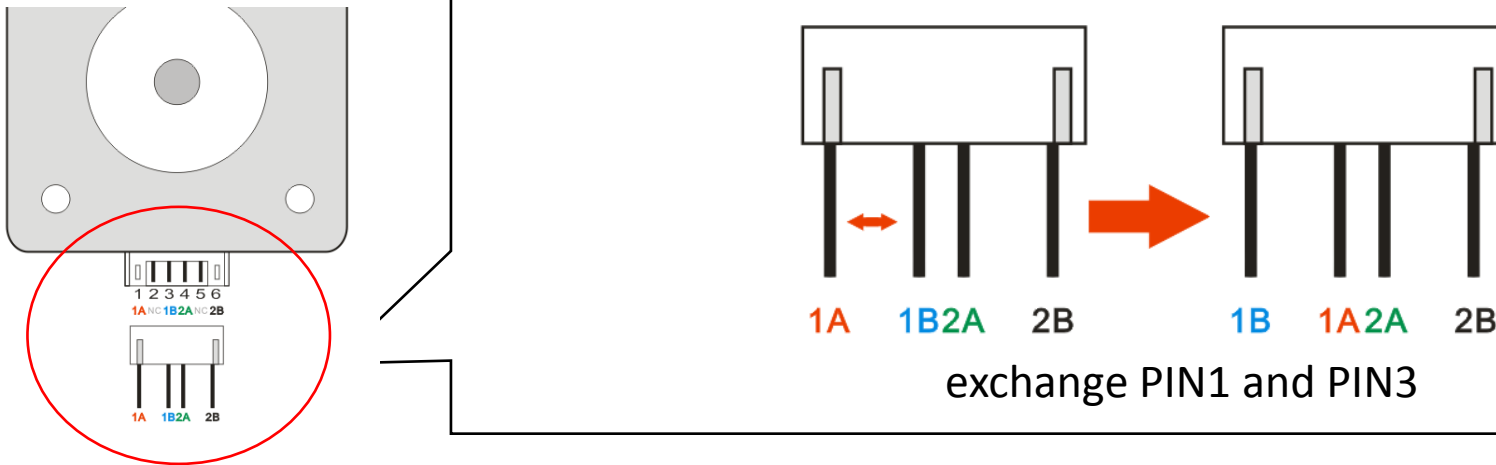
TIPS: Use a knife to turn up the clip of the terminal and then pull out the wiring

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Set steps/mm parameter of extruder

You may need to change the steps/mm parameter of the extruder, there are two method to set the steps/mm parameter:

NOTE: 400 steps / mm is for the driving circuit with micro step setting 16:1. if your motor drive controllers are different, please set according to the following parameters:

E Steps/mm = 200 * microsteps / 8

1. Add "M92 E400" command in the "start gcode" of slicing software:

You can add a "M92 E400" command in the "start gcode" of slicing software, when printing from SD card, it will change the steps/mm to 400.

PS: The parameter won't be stored to the printer.

2. Set on LCD screen:

- For LCD128x64:

Configuration>>Advanced settings>>Steps/mm>>Estpe/mm: 400 (change to 400)
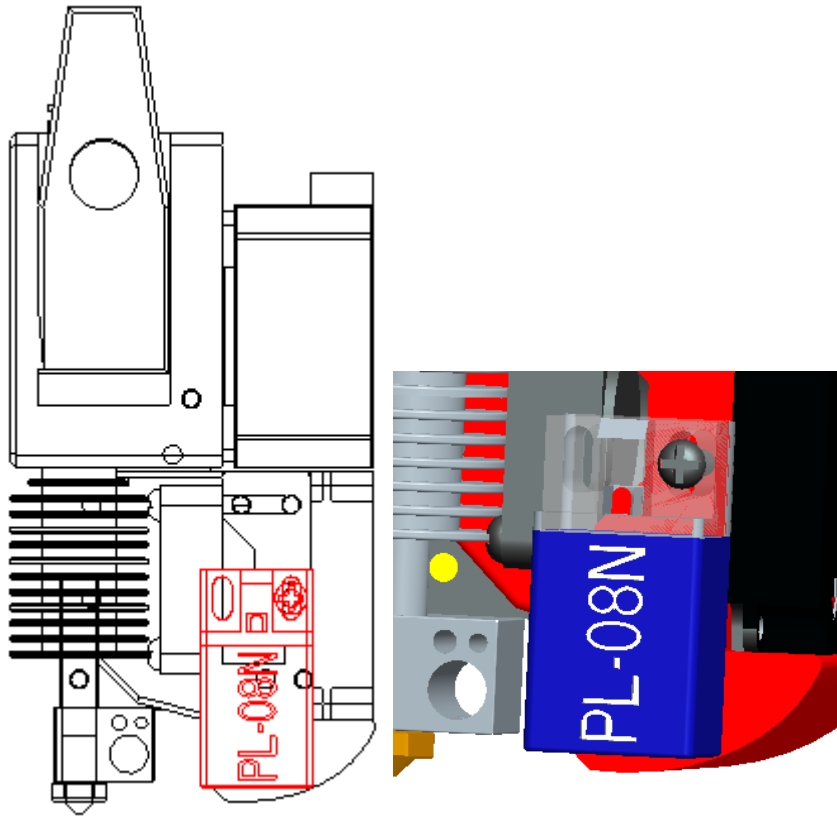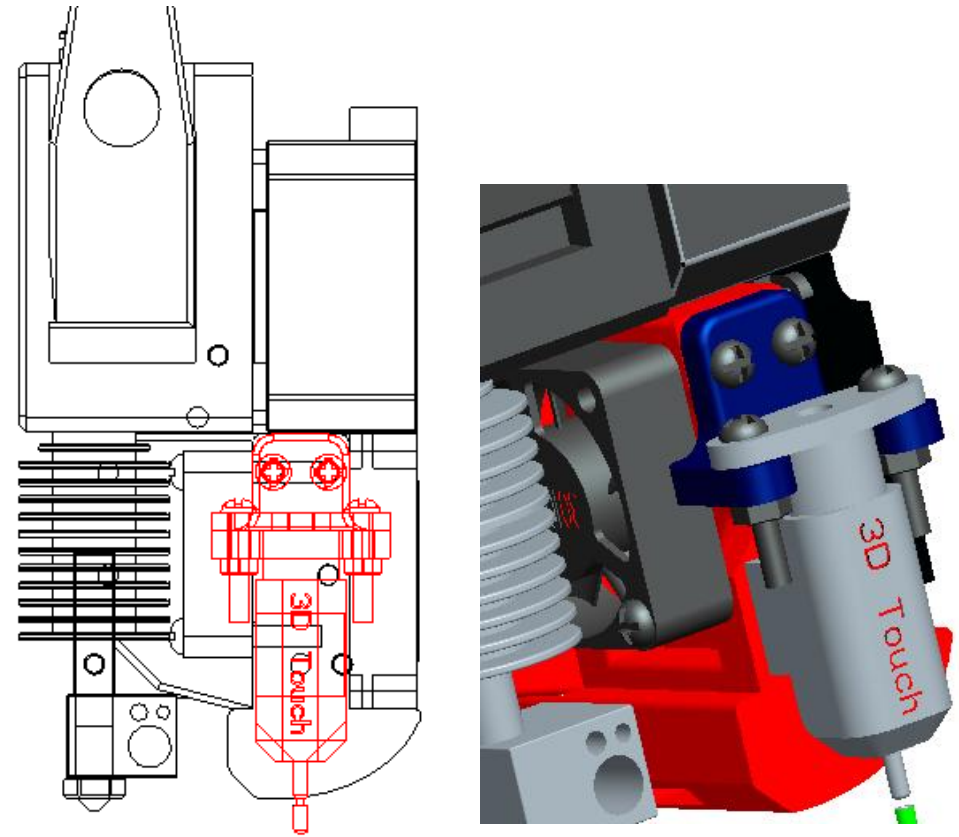
Configuration>>Store settings

- For LCDDWIN(4.3INCH-TFT):

Config>>Motion>>Steps/mm>>Steps/mm E:

Config>>Store settings

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PL-08N proximity sensor

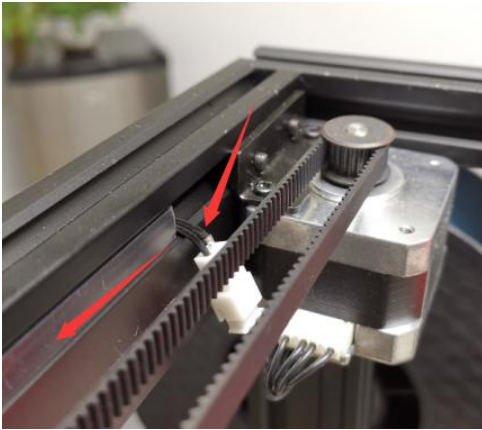**Bltouch(3DTouch) sensor**

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Slicing settings

Slice settings are usually related to the shape of the printed model, the filament type and the printer, etc. The main parameter you need to pay attention to is about the retraction settings. The following settings are for your reference:

Filament type	Retraction length	Retraction speed	Print speed
PLA/PLA+/PETG/ABS	6~16mm	20~30mm/s	80 mm/s Max
Silk-PLA	12~16mm	25~30mm/s	60 mm/s Max
TPU(95A)	1~8mm	20~30mm/s	50 mm/s Max
TPU(87A)	1~5mm	0~20mm/s	30 mm/s Max
TPU(83A)	0~3mm	0~10mm/s	25mm/s Max

For Z9V5, you may need to install the X ENDSTOP (that one on the FRONT-LEFT coner) from the bottom to the TOP, please refero to the below picture

| Move the wire front | Pull out the wire more | Cut unused pin of limit switch | Install the limit switch to the top |