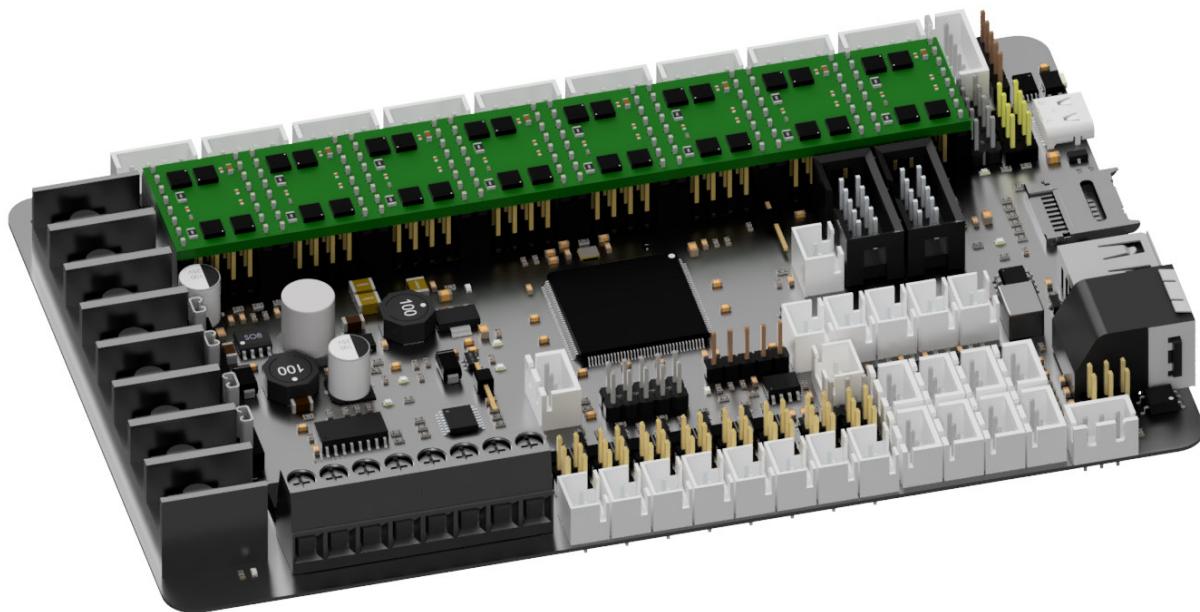


CONTROLLER BOARD



CONTROLLER BOARD

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CONTROLLER BOARD

The assembly manual will outline the wiring for a Bigtreetech Octopus V1.1 board. You can find additional documentation and alternative configurations on docs.vorondesign.com.

JUMPERS

Several jumpers need to be configured on the controller board. We will begin by **removing all the JUMPERS** from the controller board (MCU).

1) Remove the jumpers in the “driver sockets”.

2) Remove all the jumpers in the “DIAG” header when using microswitch or Hall Effect endstops.

3) Remove the “USB 5V power supply” jumper to avoid the interaction between the USB 5V of Raspberry Pi and the 5V of the MCU.

4) Remove all the jumpers on the “Fan Voltage Selection” headers so that you can set the correct supply voltage.

5) Remove the jumper in “Probe Voltage Selection” header so that you can set it to the correct supply voltage.

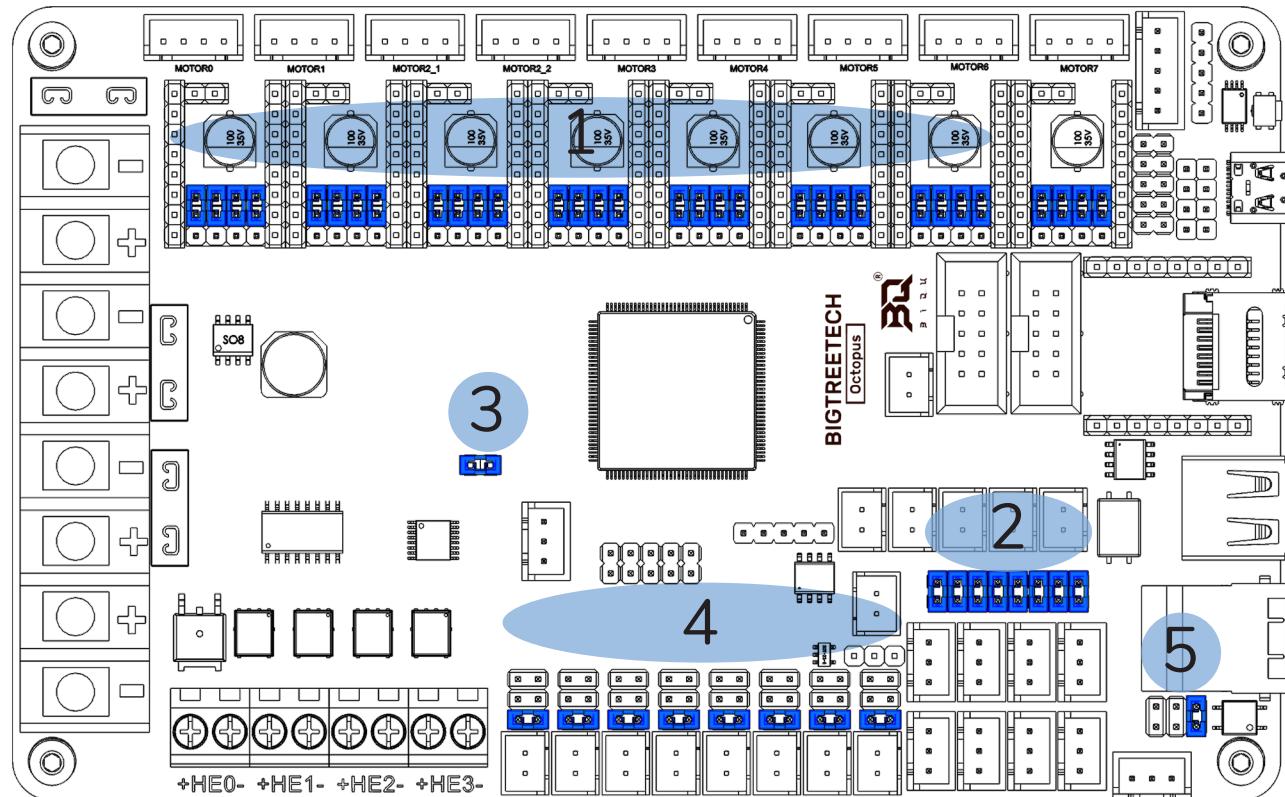


Diagram courtesy of @GadgetAngel

CONTROLLER BOARD

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JUMPERS

Several jumpers need to be set on the MCU.

Add the following JUMPERS to the controller board (MCU).

- 1) Set the jumpers in the "driver sockets" as shown to set TMC2209 UART mode.
- 2) Ensure all the jumpers in the "DIAG" header are removed.
- 3) Ensure the Power Selection header is empty.
- 4) Set the Jumpers for the "Fan Voltage Selection" header so they match your fan's voltage. Shown here are the settings for 24VDC.

- 5) Set the jumper in "Probe Voltage Selection" header to 24VDC.

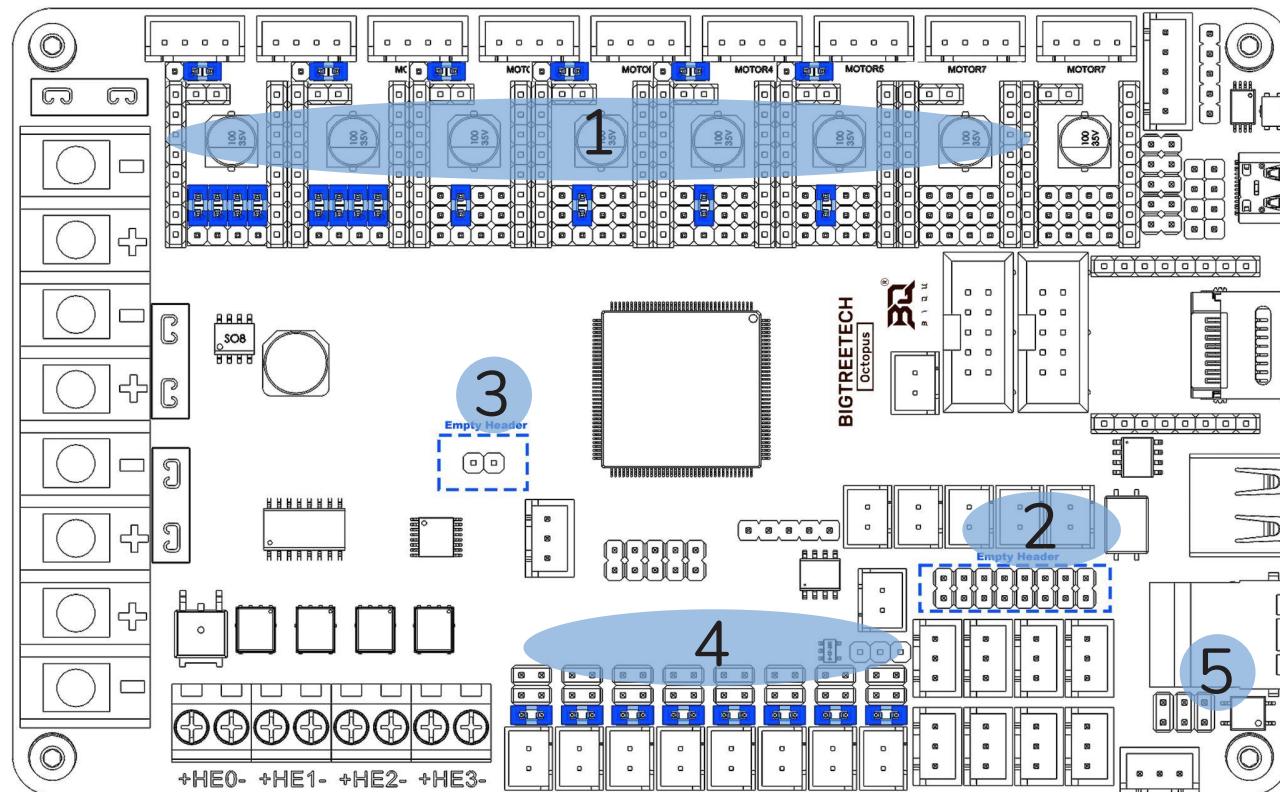
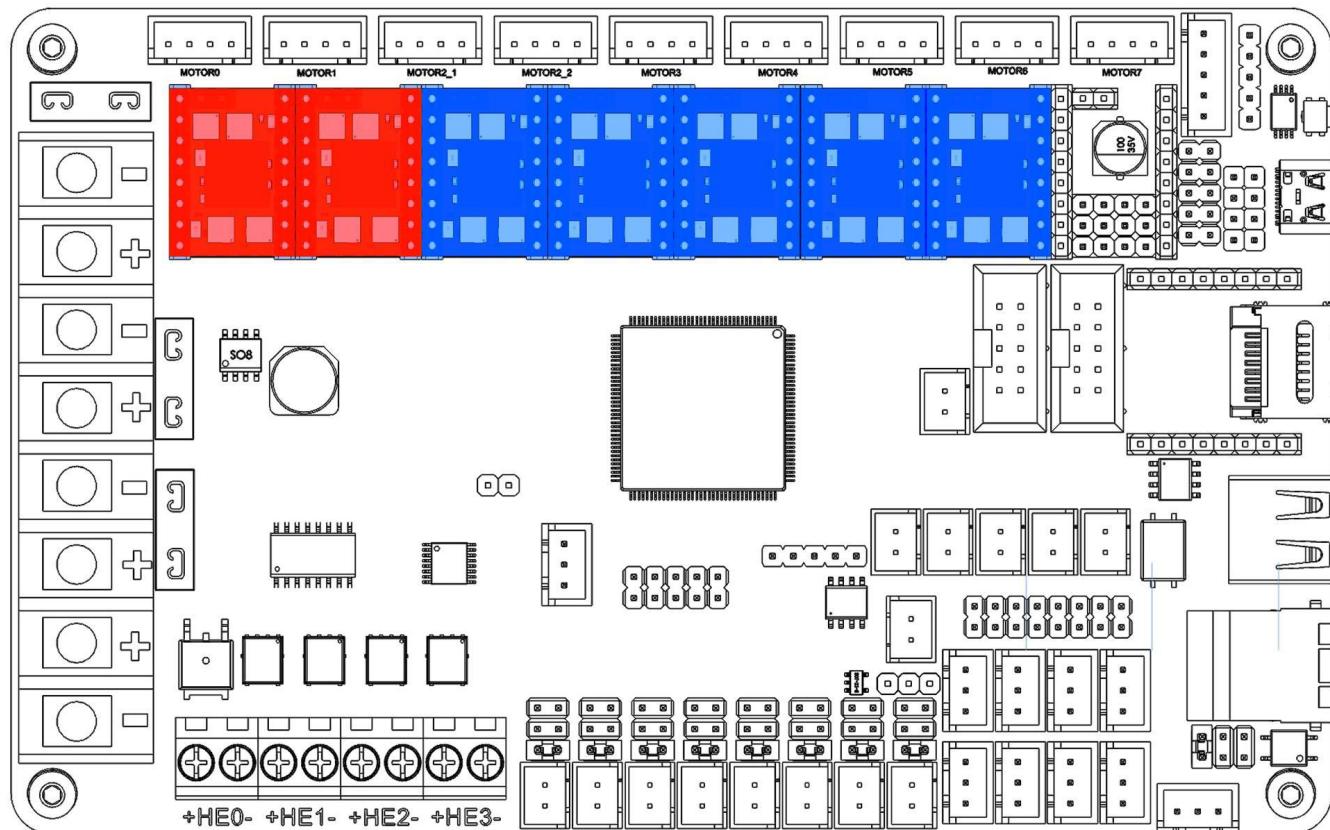


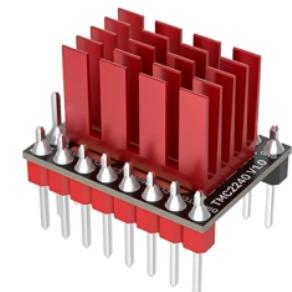
Diagram courtesy of @GadgetAngel

STEPPER DRIVERS

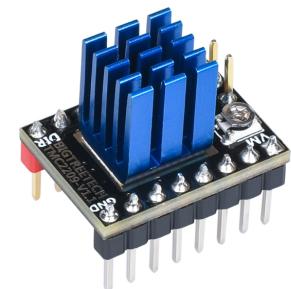
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Red section : TMC2240



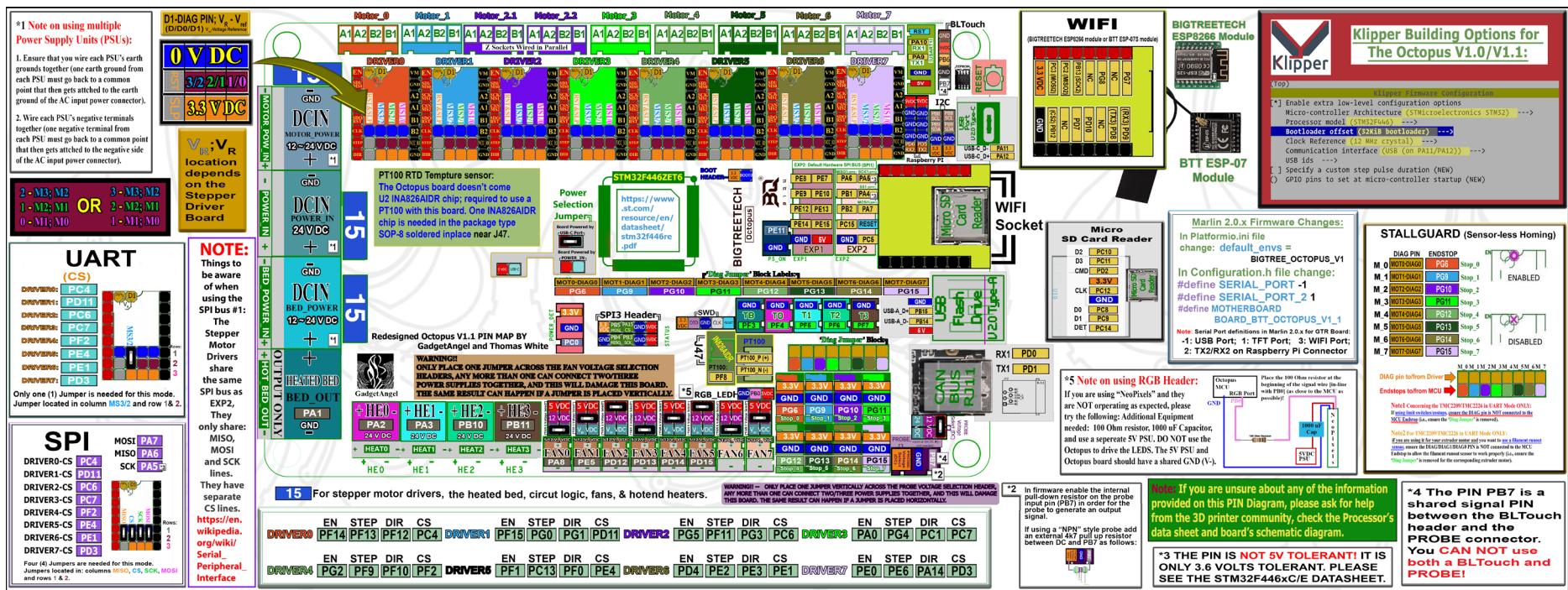
Blue section : TMC2209



CONTROLLER BOARD

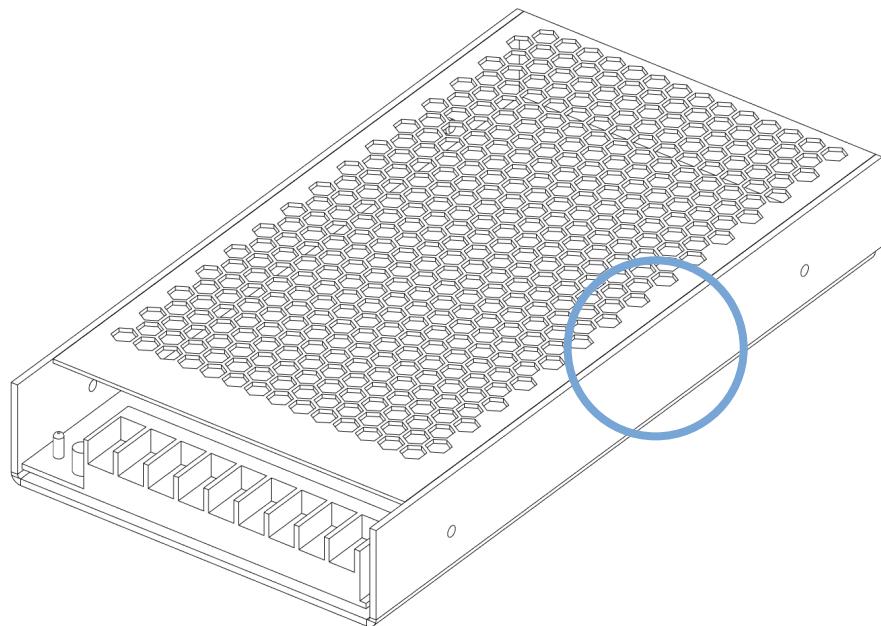
OCTOPUS PINOUT REFERENCE

This [Coloured PIN diagram](#) can be found on GadgetAngel's GitHub repository for the Octopus V1.1



The [original PIN diagram](#) can be found on Bigtreetech's GitHub repository for Octopus V1.1

PSU VOLTAGE CHECK

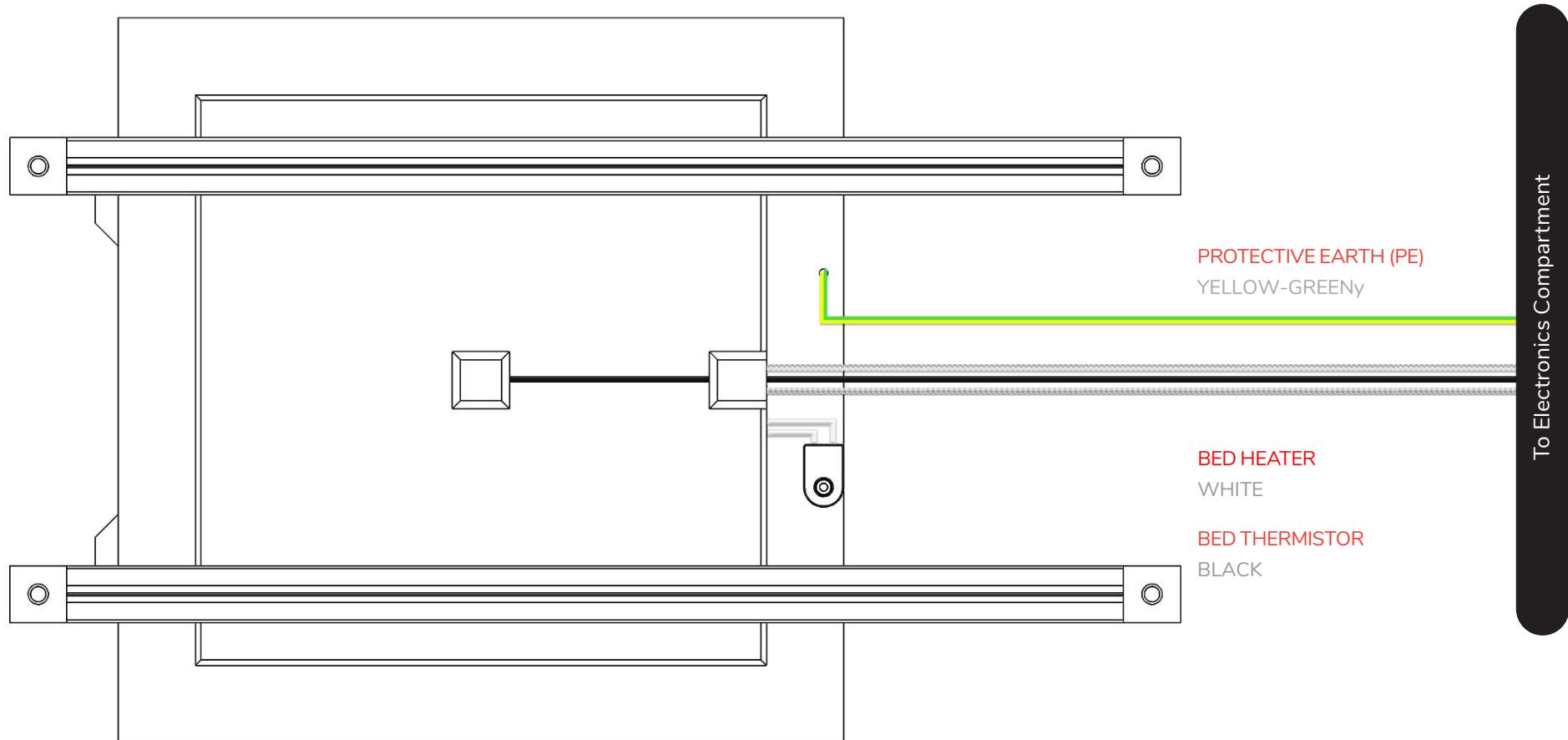


INPUT VOLTAGE SWITCH

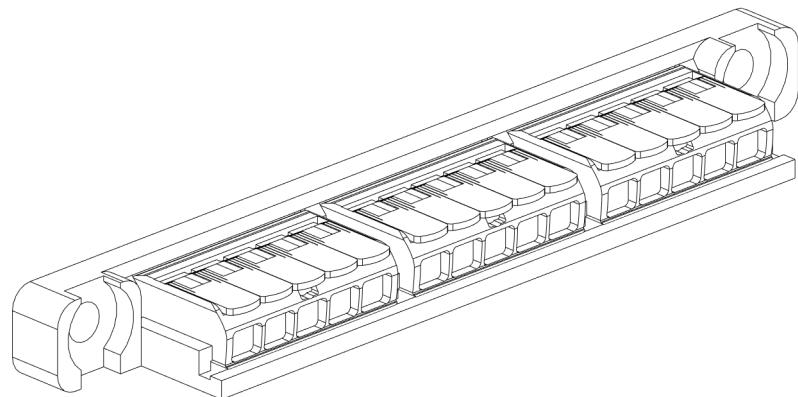
Check the input voltage switch of the power supply. It is located in the highlighted area.

Make sure the selection matches your local mains voltage. Refer to the Mean Well LRS-200 datasheet for possible settings (voron.link/e0szdyh).

BED CABLE HOOKUP



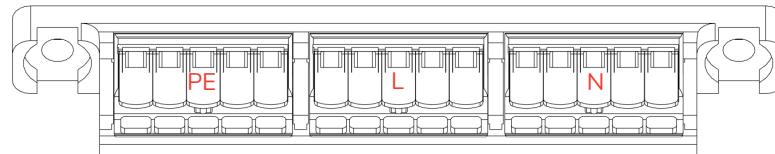
ALTERNATE MAINS WIRING - WAGO CLAMPS



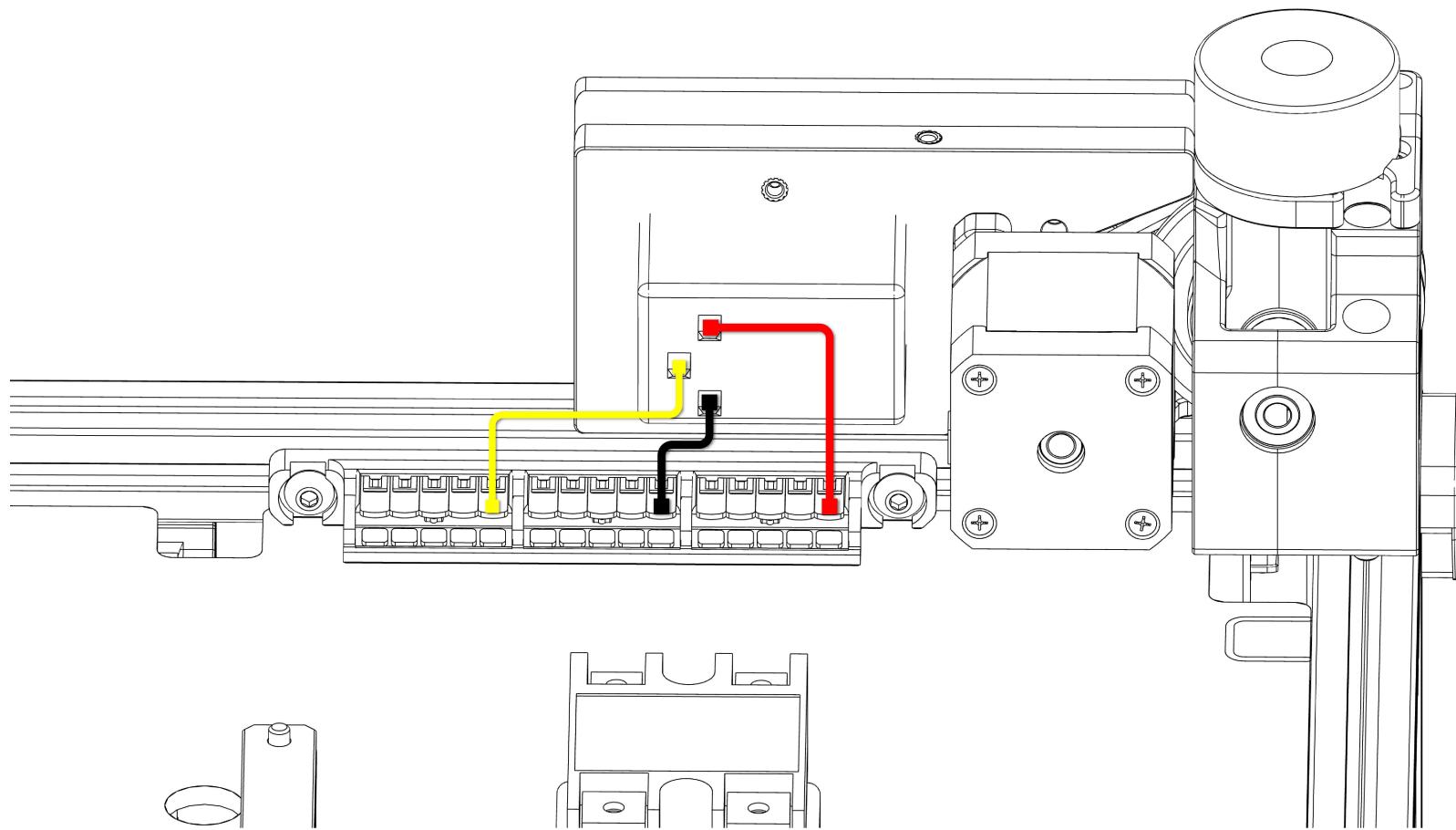
OPTION: WAGO CLAMPS FOR MAINS

WAGO wire clamps allow for a clean and easy wiring of the mains side.

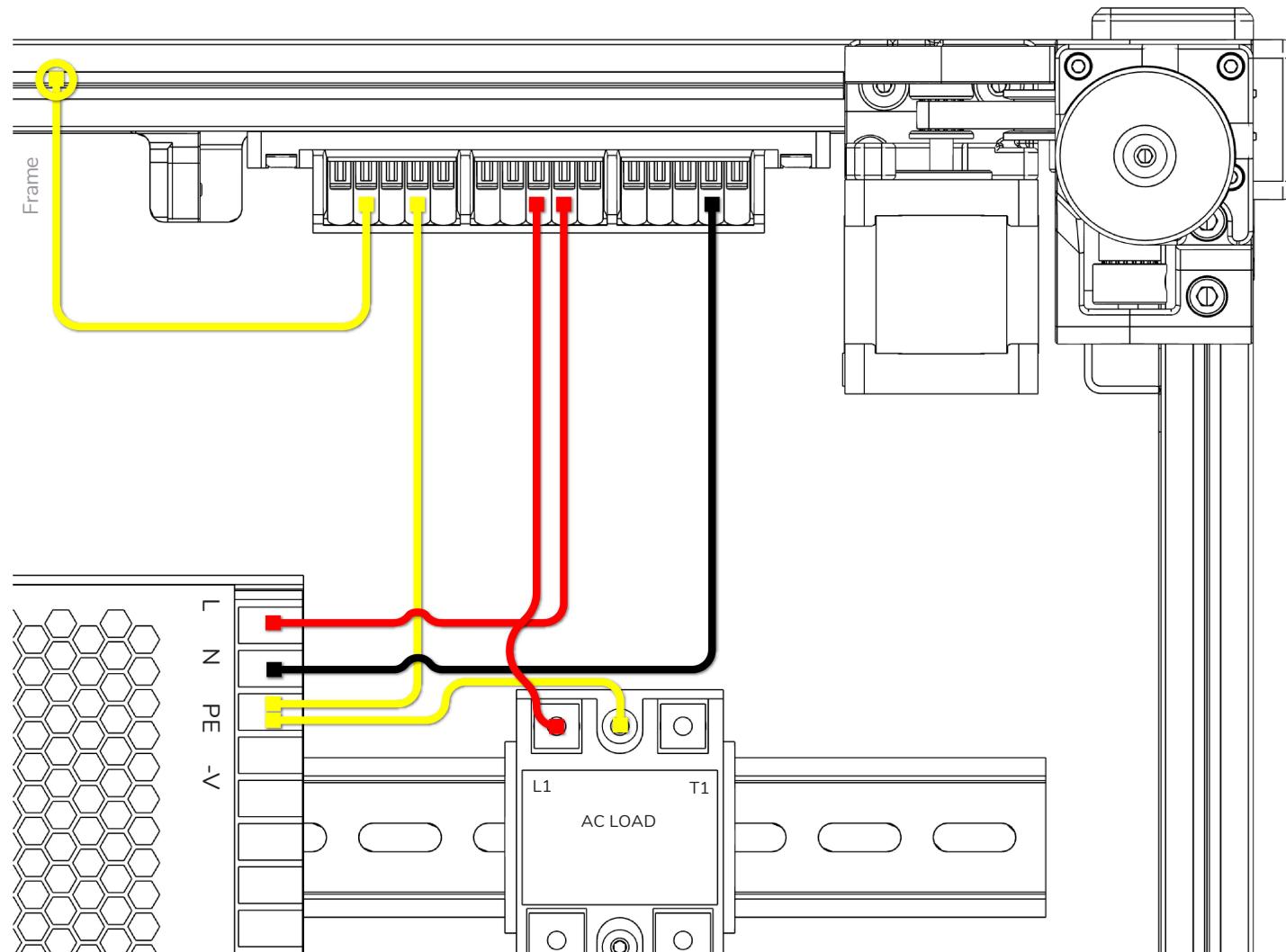
You may want to label your clamps as shown below.



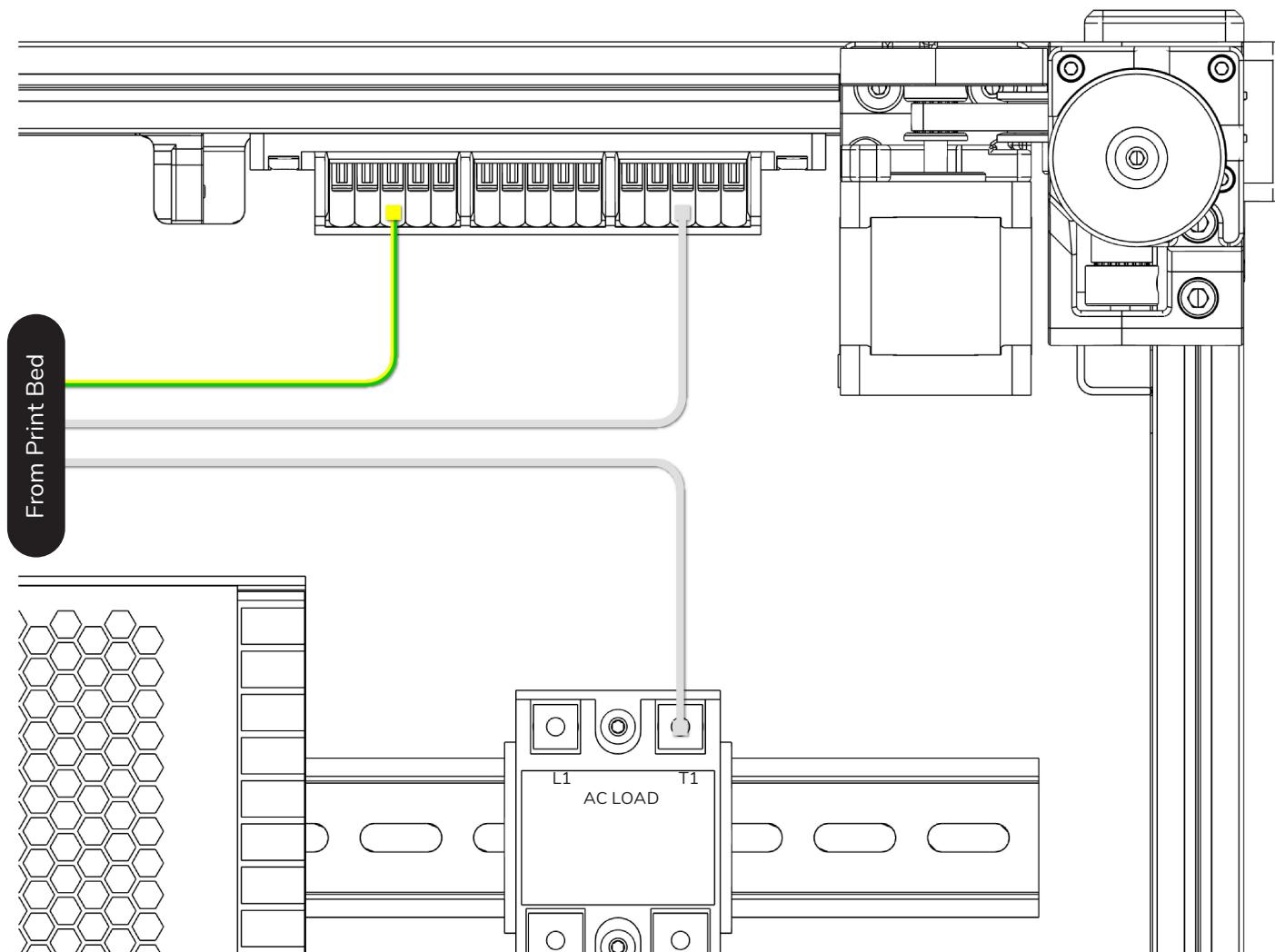
ALTERNATE MAINS WIRING - WAGO CLAMPS



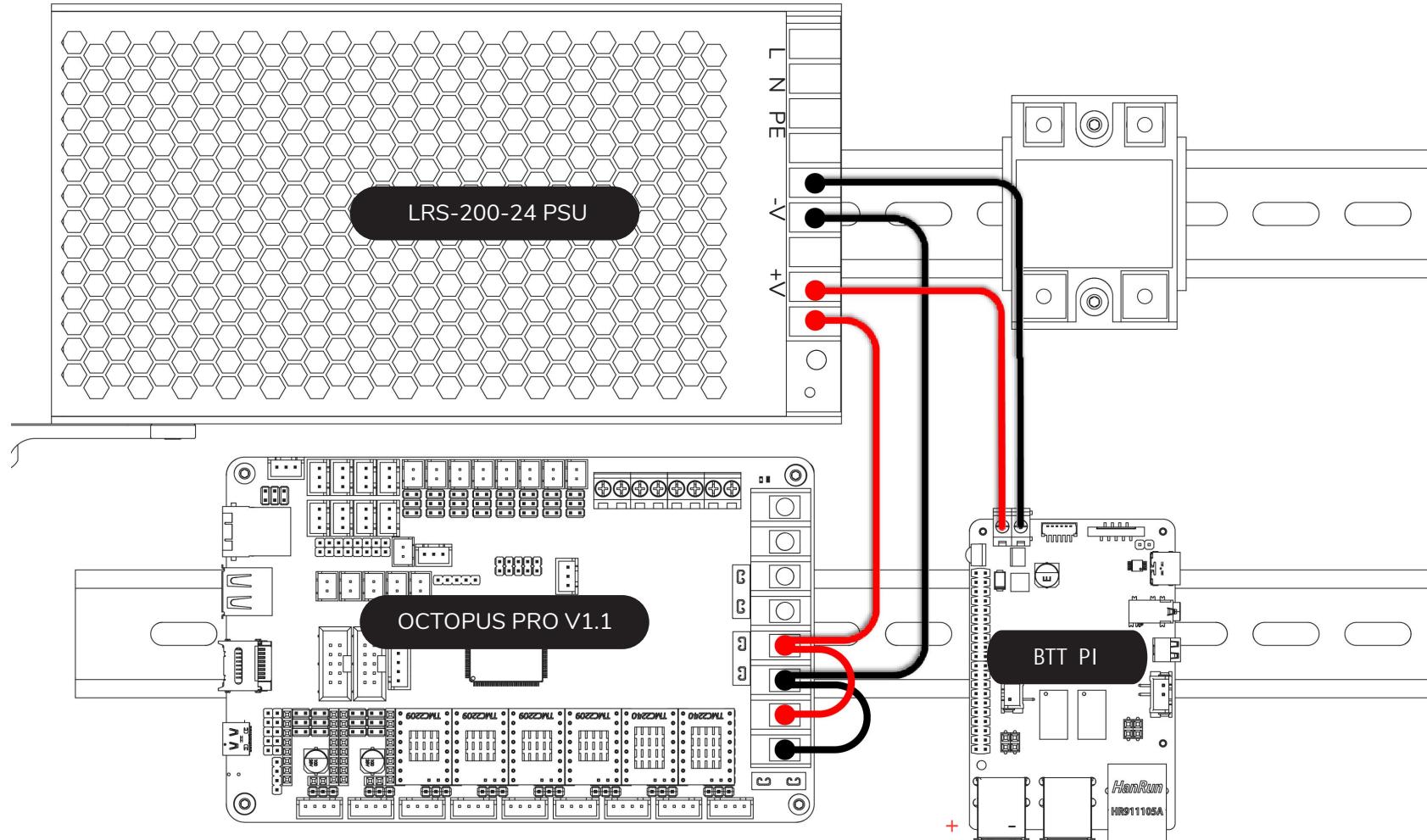
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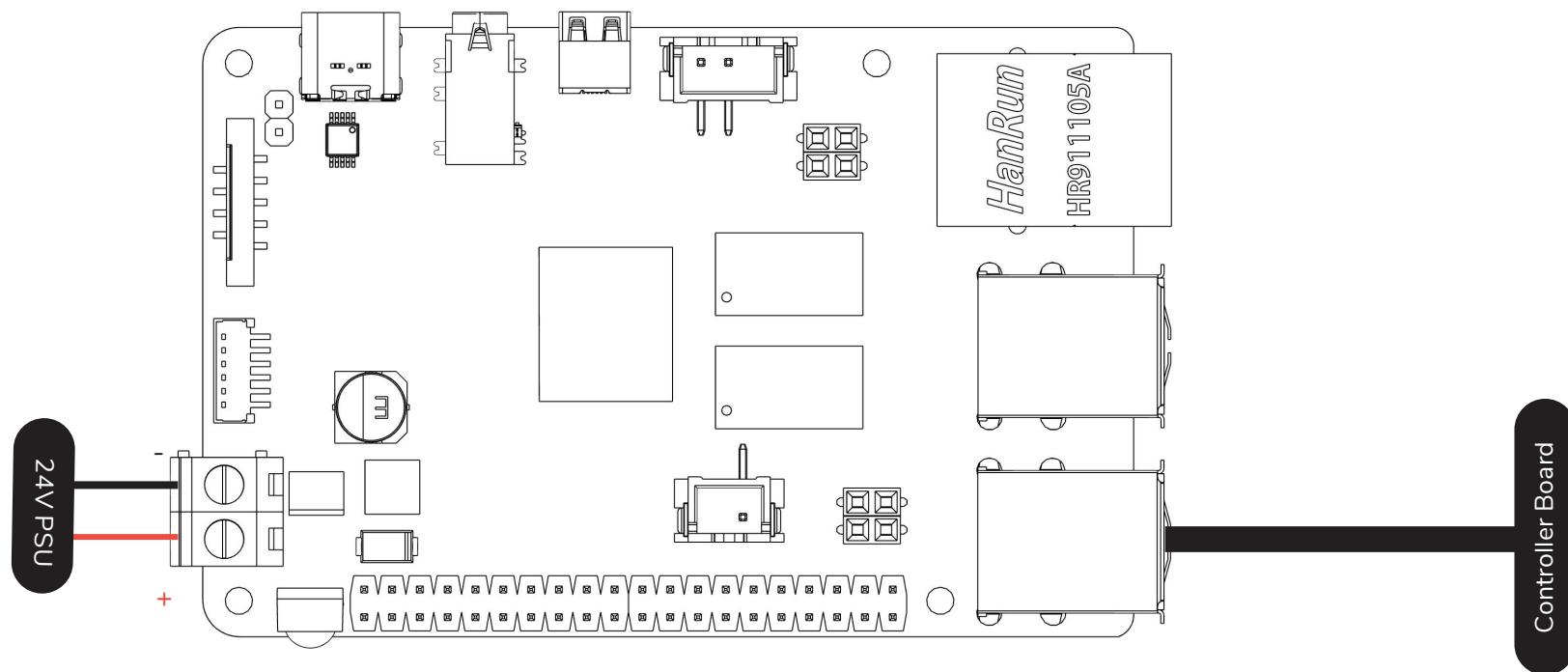
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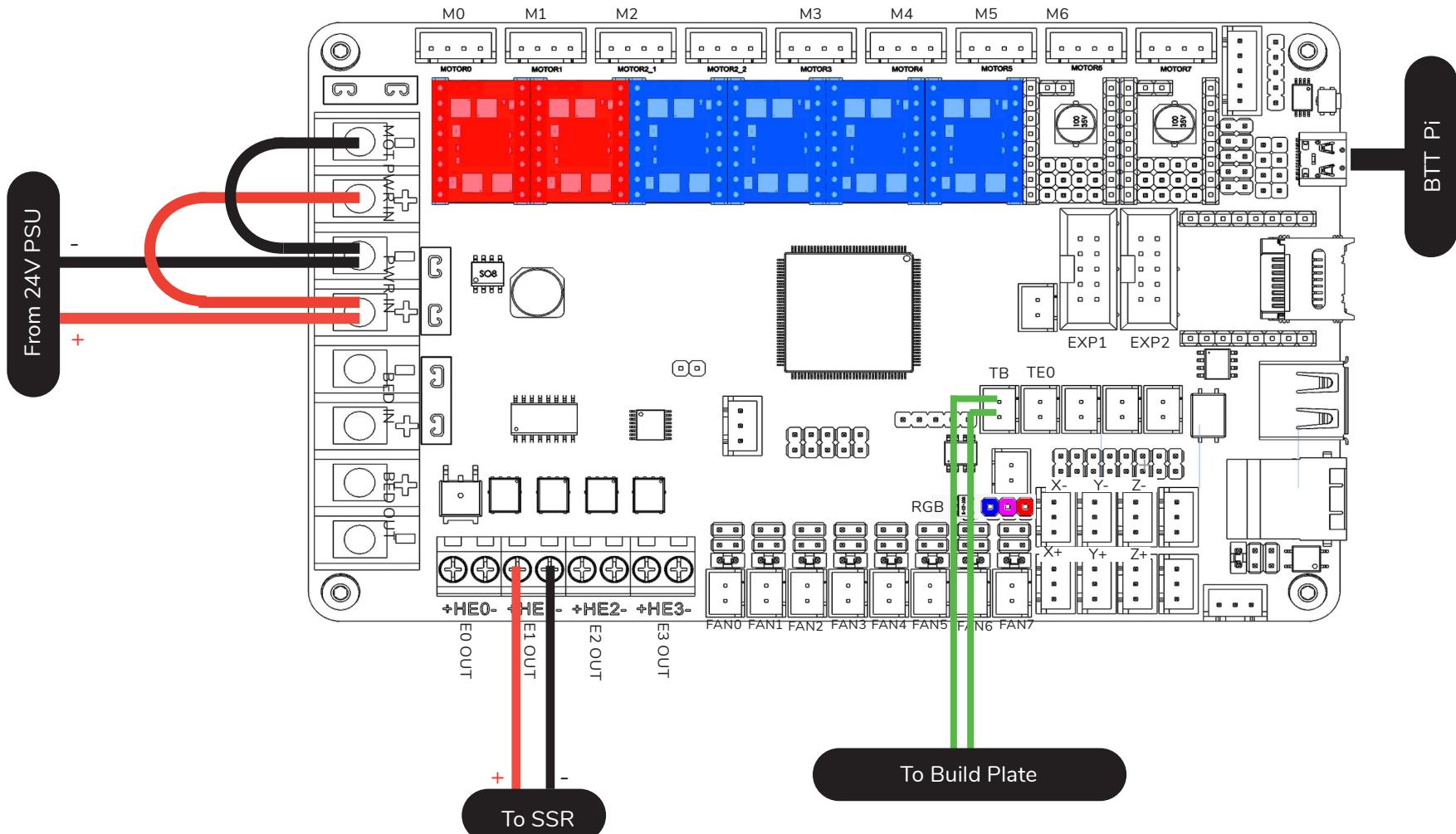
DC POWER



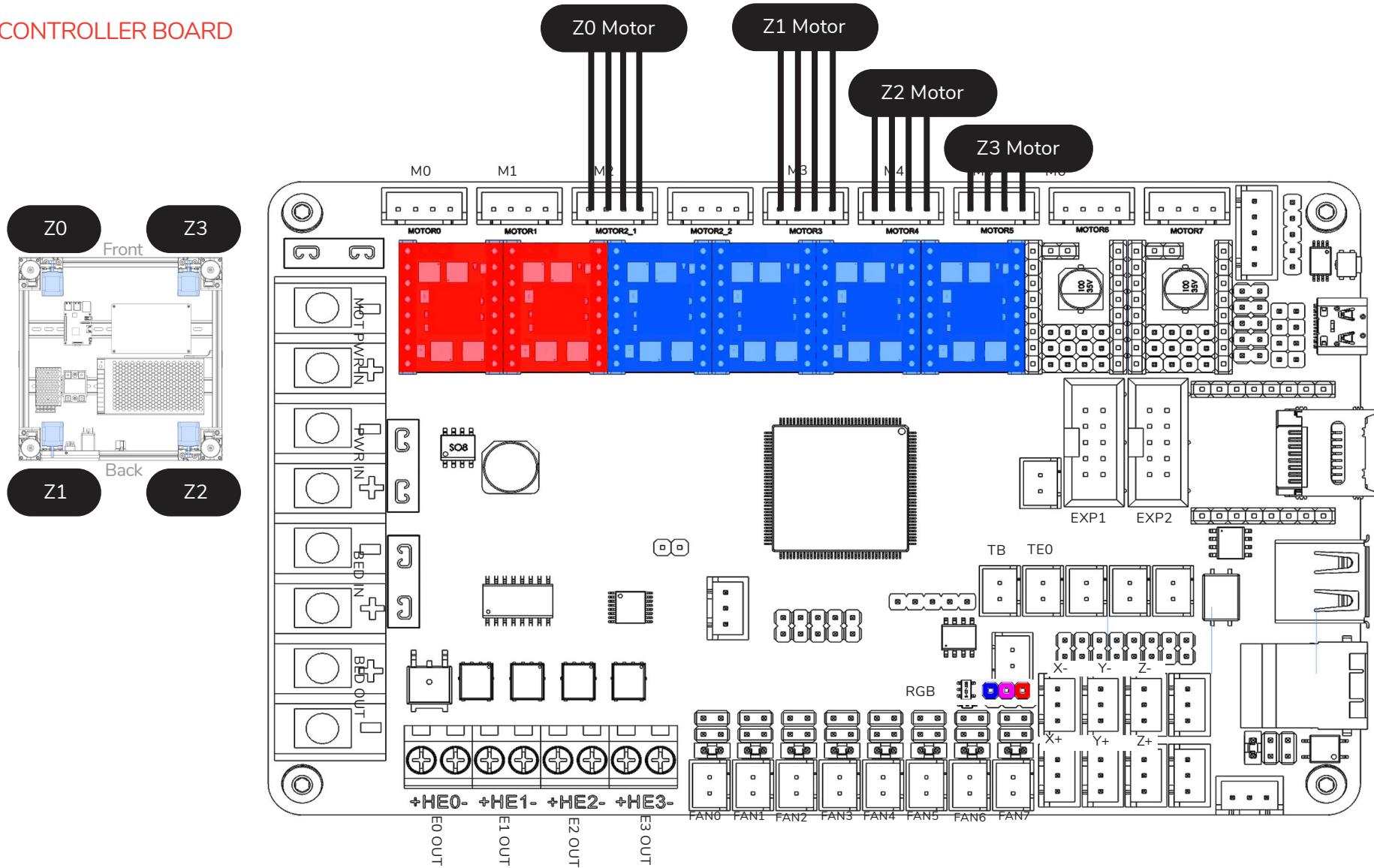
BTT PI



CONTROLLER BOARD

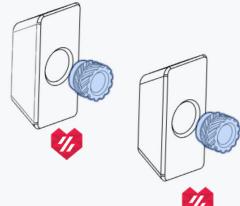


CONTROLLER BOARD

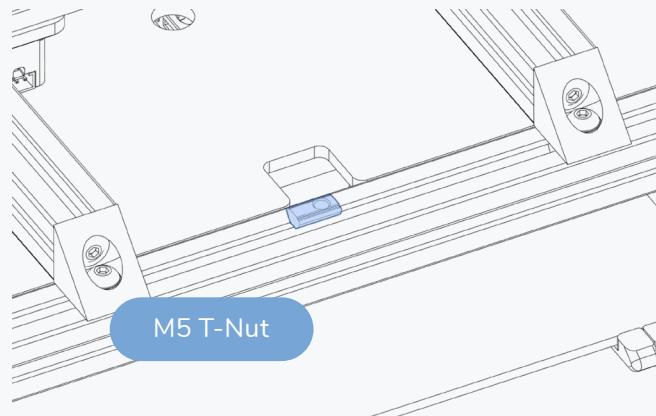


Z CABLE CHAIN

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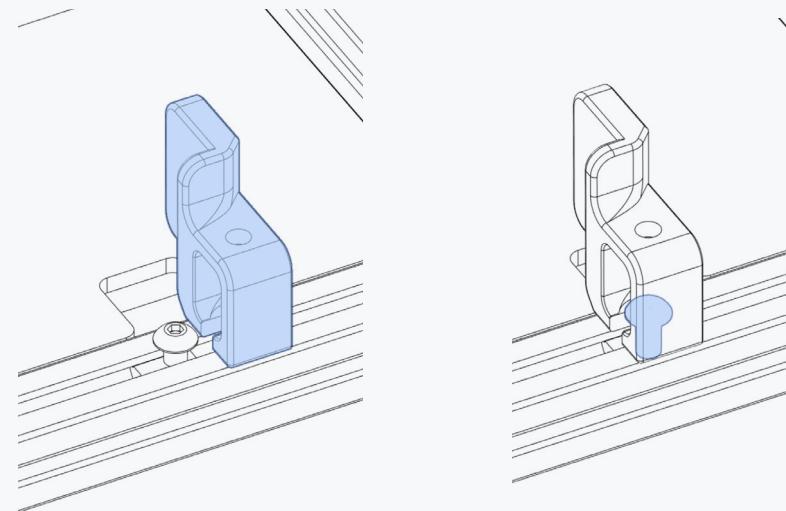
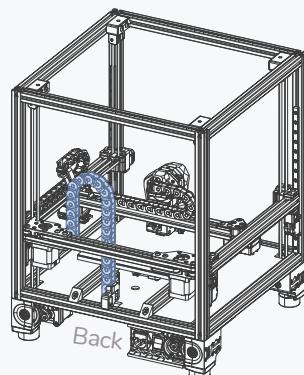
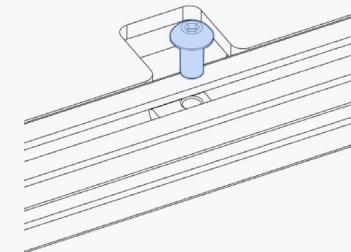


Heat Set Insert



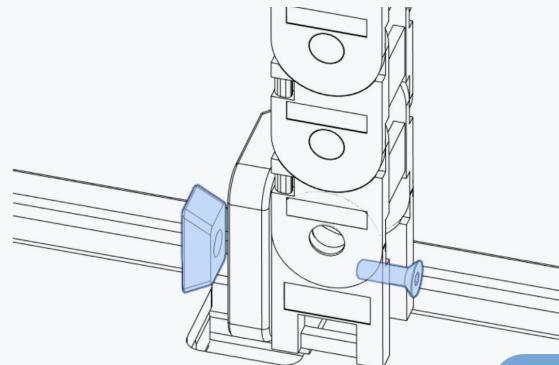
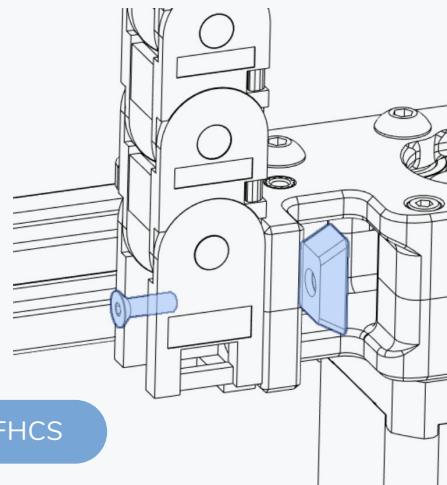
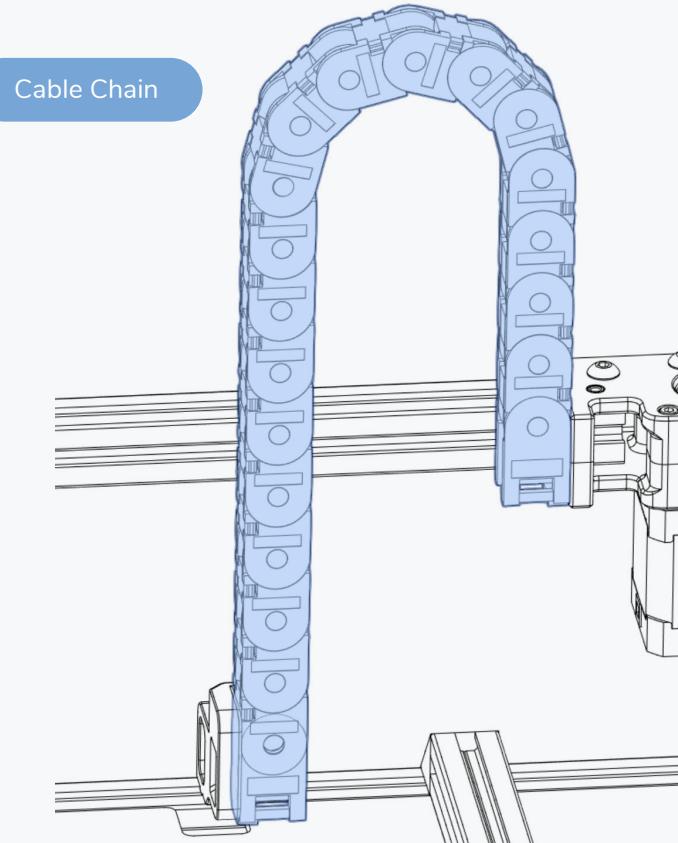
M5 T-Nut

M5x10 BHCS



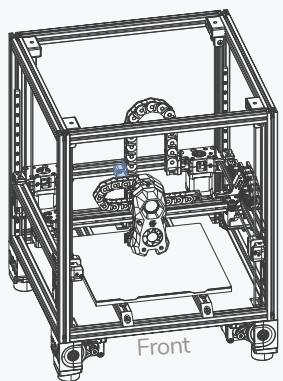
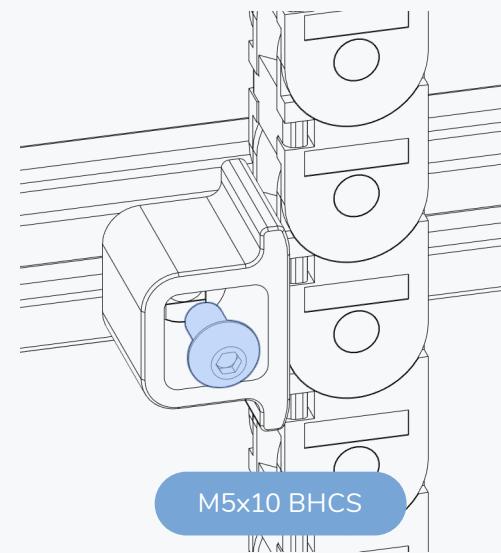
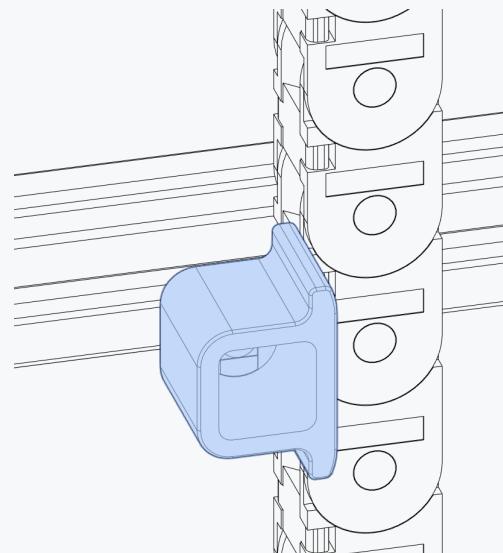
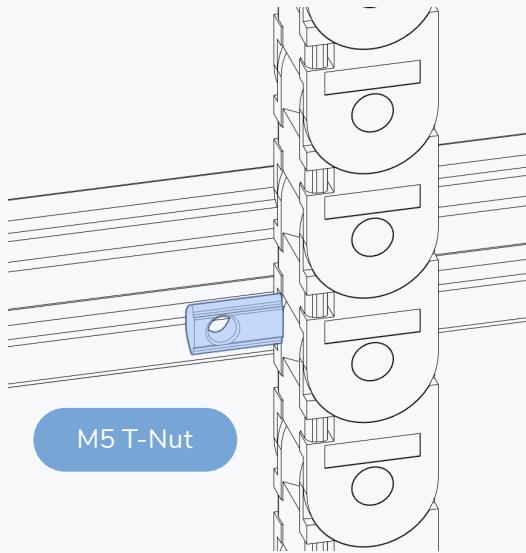
Z CABLE CHAIN

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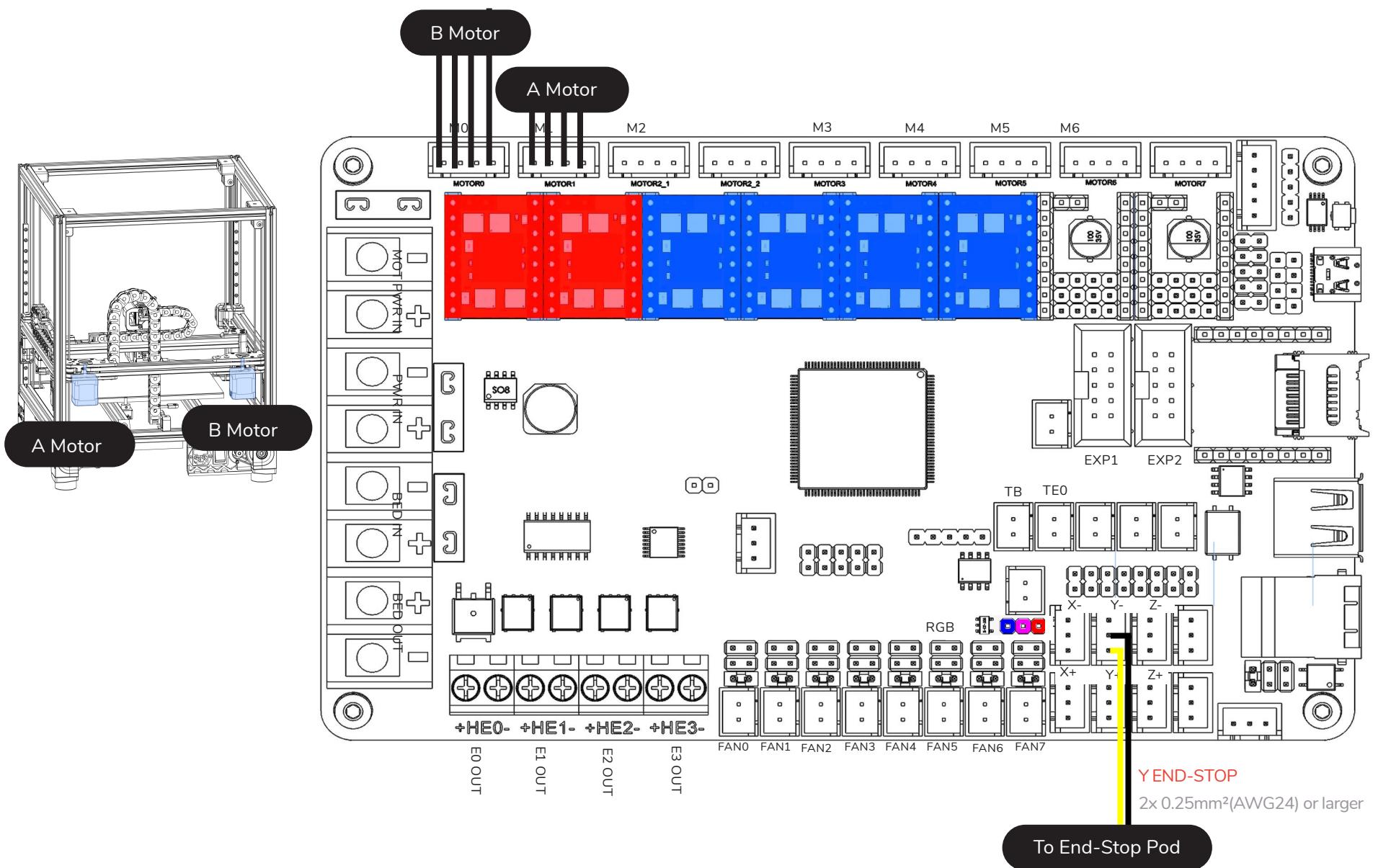


Z CABLE CHAIN

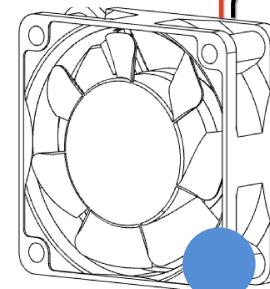
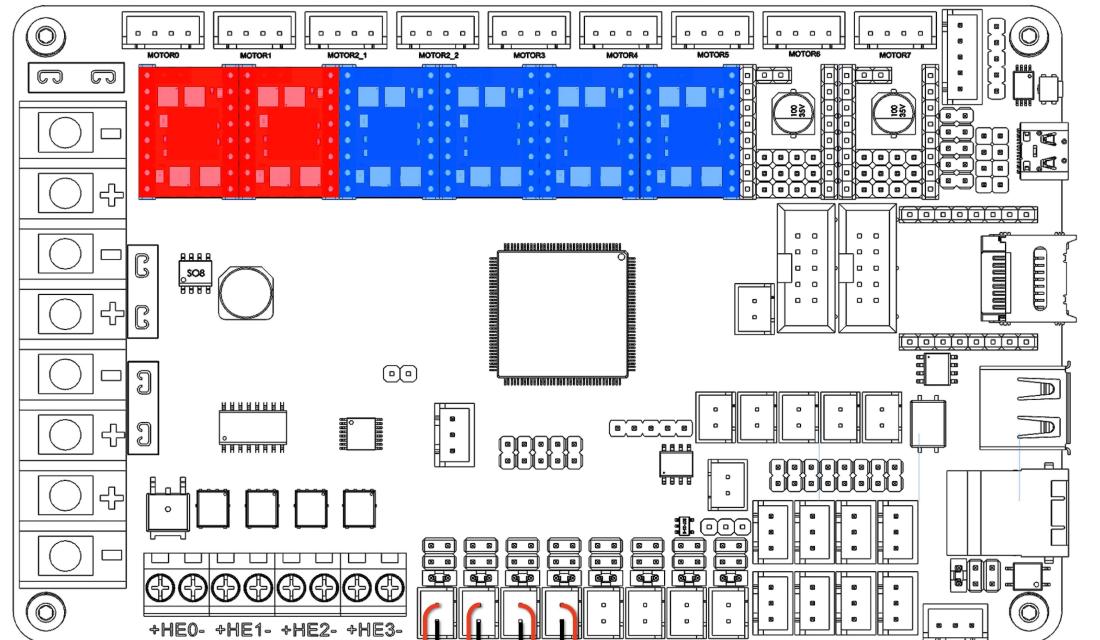
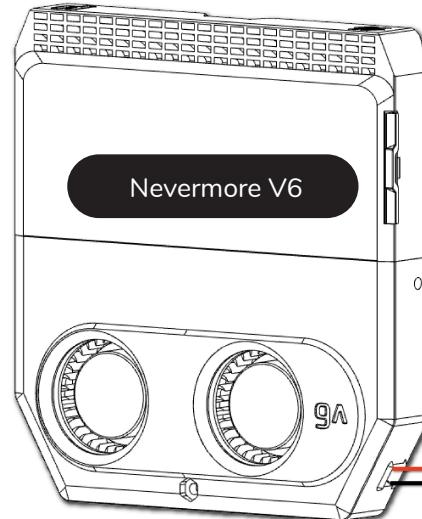
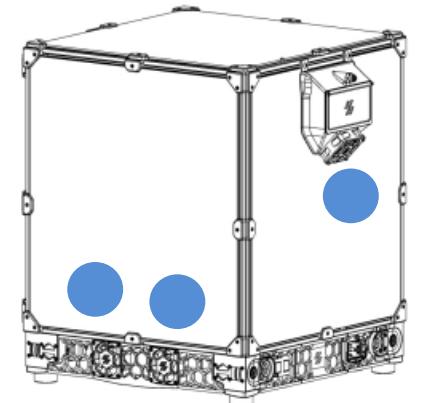
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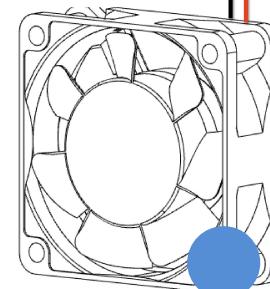
CONTROLLER WIRING



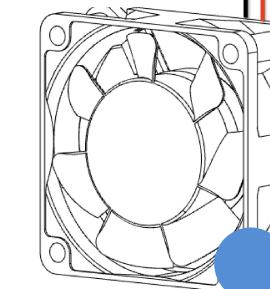
FAN VOLTAGE



Controller Fan1

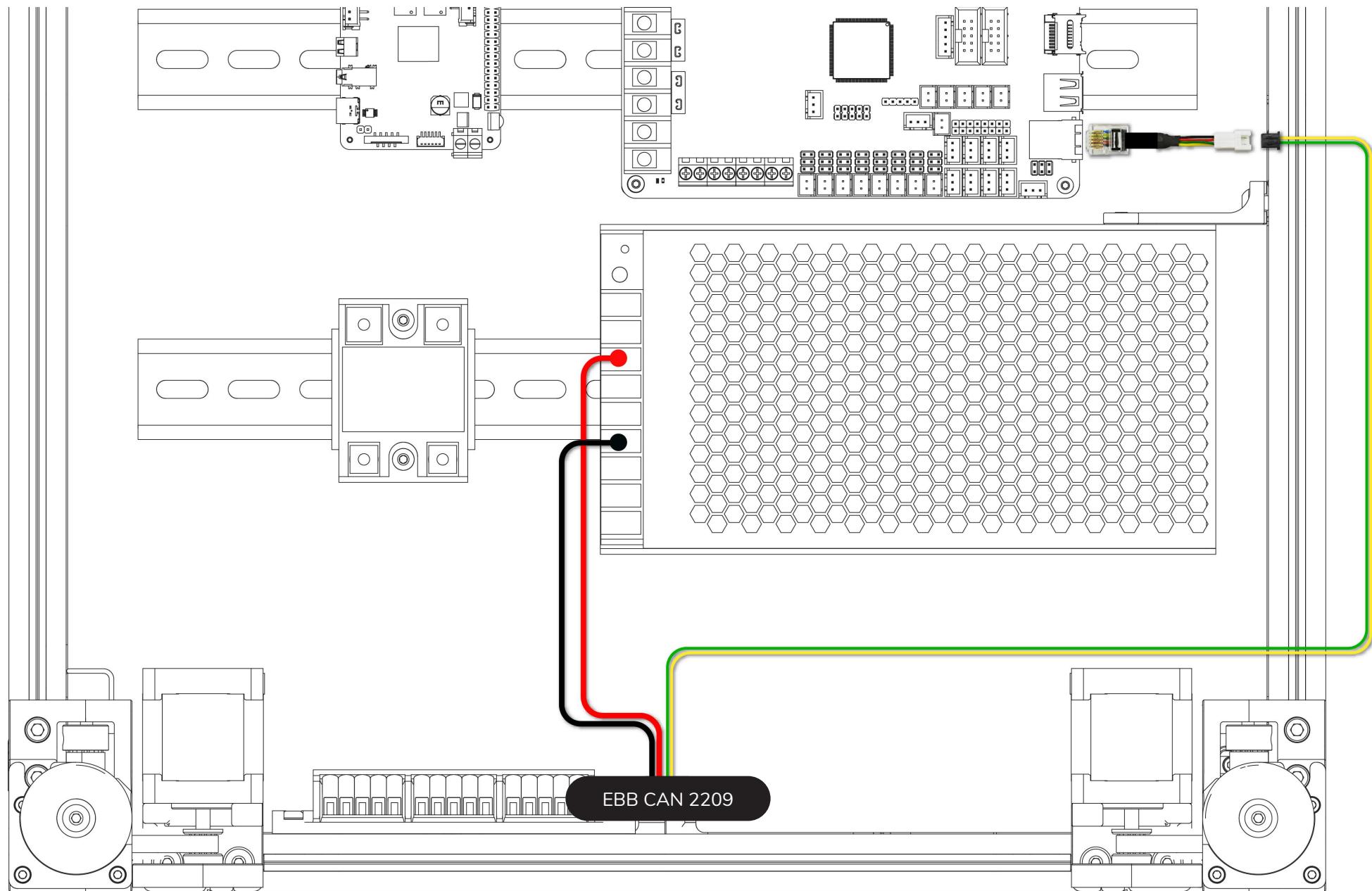


Controller Fan2



Exhaust Fan

EBB CAN



USB CABLE

