Fusion3

EDGE 3D Printer

ACCESSORY:
FILAMENT BAY DEHUMIDIFIER

Revision 10/5/2022

INSTALLING & USING THE FILAMENT BAY DEHUMIDIFIER ON EDGE

WHAT IT DOES

The filament bay dehumidifier lowers the relative atmospheric moisture in the filament bay. This reduces the rate at which your filament will absorb moisture out of the air as you're printing with it. It does this by heating the filament bay, which drives down the relative humidity.

The dehumidifier consists of 3 components:

- A heater that generates heat
- A thermostat that controls the heater
- A temperature and humidity sensor that reports this information to the printer.

The heater and thermostat are DIN rail-mounted devices.

NOTE: The filament bay on EDGE is not sealed. This is intentional, as air and heat exchange are a core part of how this type of system reduces relative humidity. Please do not attempt to seal the filament bay better on your own.

NOTE: The dehumidifier is NOT a substitute for proper filament storage and handling out of the printer. This device can slow down the rate of absorption, but it cannot draw moisture out of filament once it's been absorbed. To do that you need a dedicated device such as a gravity oven.

INSTALLING THE FILAMENT BAY DEHUMIDIFIER

If you ordered this accessory at the same time you ordered your printer, it will come installed from the factory. You don't need to do anything.

If you ordered the dehumidifier as an after-point-of-sale item, follow these instructions to install it.
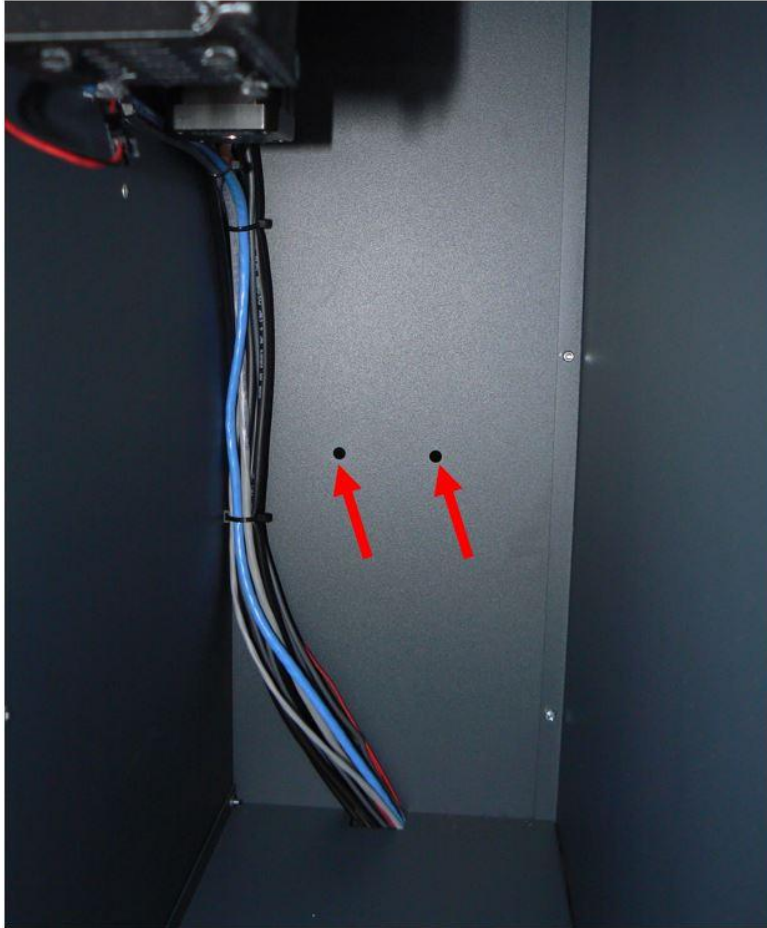
1. Power EDGE off, unplug it from the wall, and open the electronics bay.

2. Slide the heater (large black component) onto the DIN rail from the end.
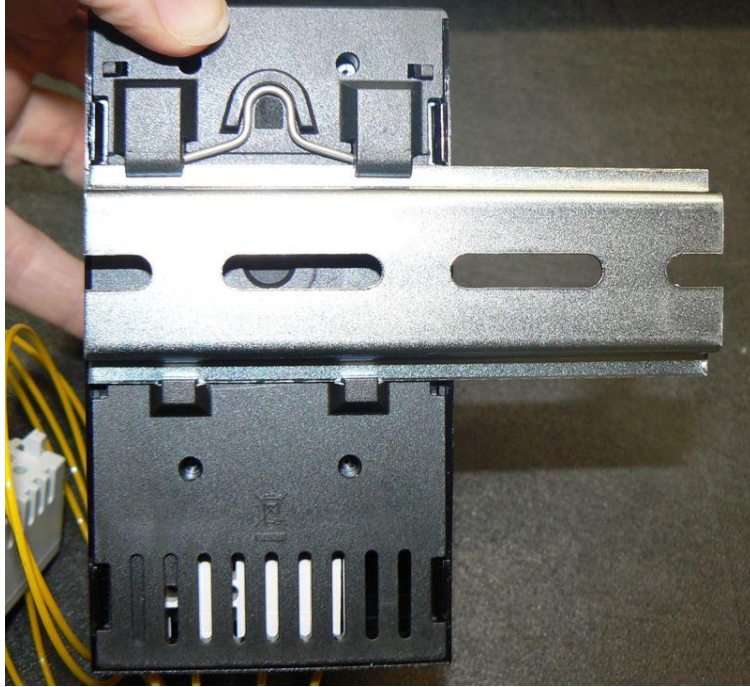
3. Insert 1 of the 2 screws through the DIN rail.
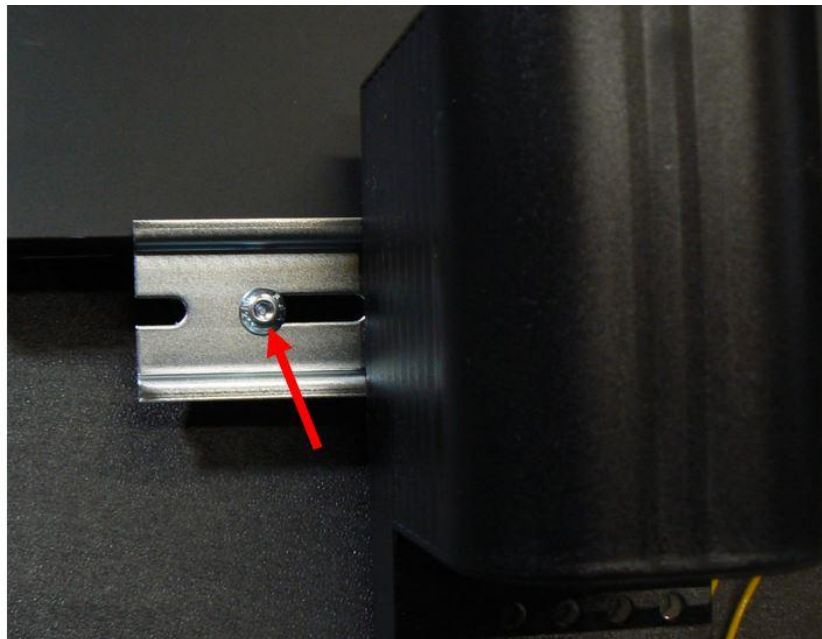
4. In the back wall of the filament bay you will see 2 holes in the sheet metal. Insert the screw through the hole and put a washer and nut on the back. Get it finger tight.


5. Slide the heater over on the DIN rail to access the other hole. Install the other screw.

6. Tighten both screws. If you have **BLUE** thread locker, it's a good idea to put a little dab on the screws before you tighten them. These don't need to be crazy tight.

7. Snap the thermostat onto the rail next to the heater.

8. Clean a location on the side wall with rubbing alcohol. Let it dry.

9. Peel the backing off the adhesive on the sensor and stick it onto the wall. Position it in the approximate location shown. You don't want it above the heater because it will report very high temperatures.

10. Run the ribbon cable through the wire penetration in the bottom of the filament bay. Run the yellow power wires from the heater through the same hole.
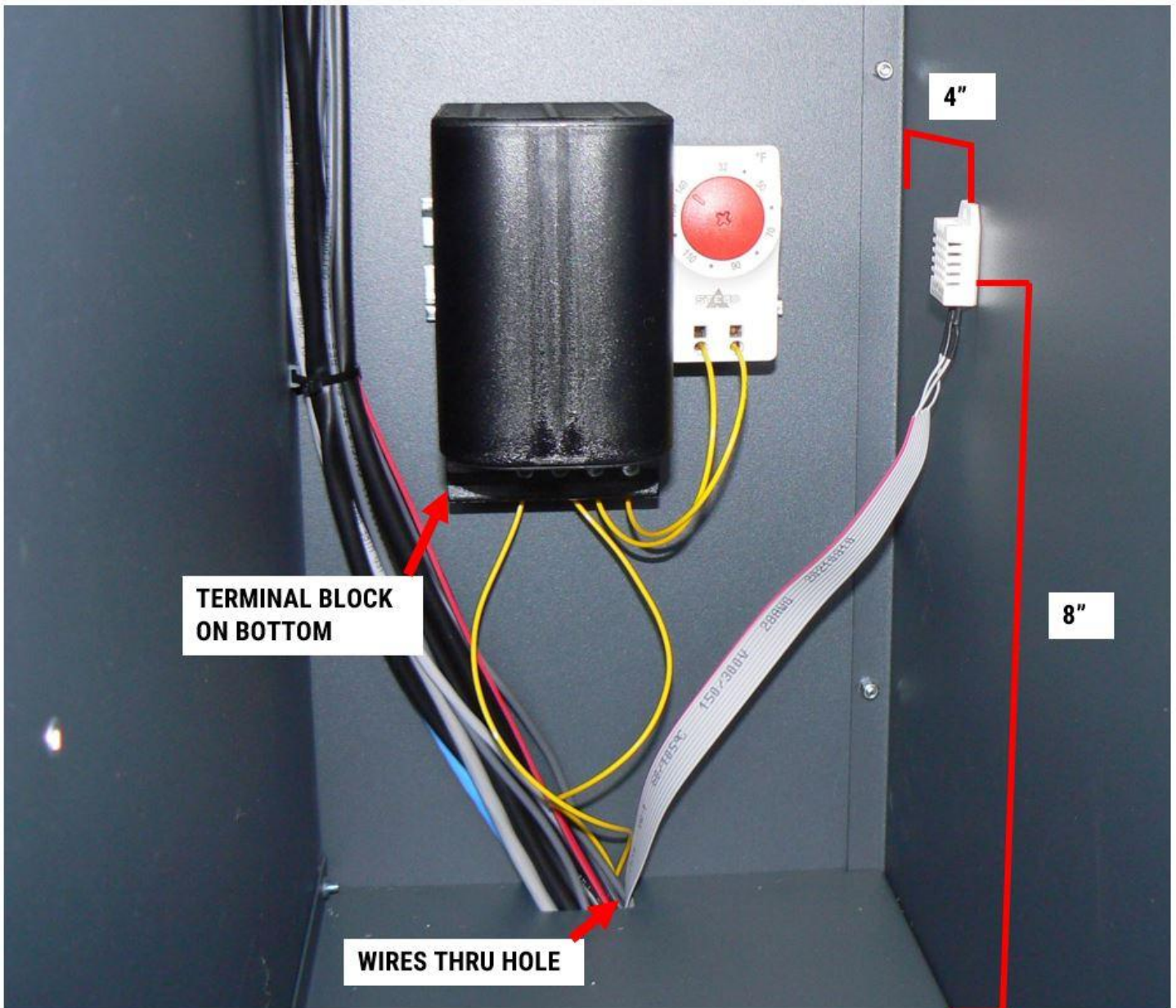
11. In the electronics bay, locate the matching yellow wires and connector. Remove the blank connector if it's present. Plug the connector in.

POWER WIRES FOR HEATER

POWER WIRES FOR HEATER
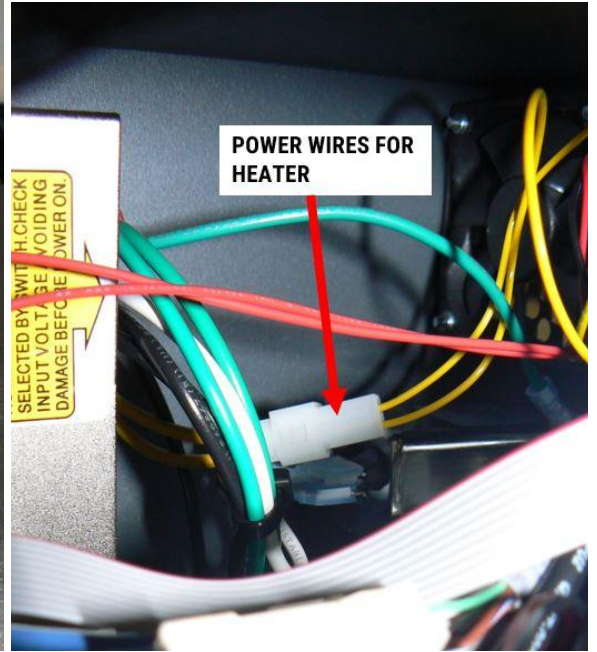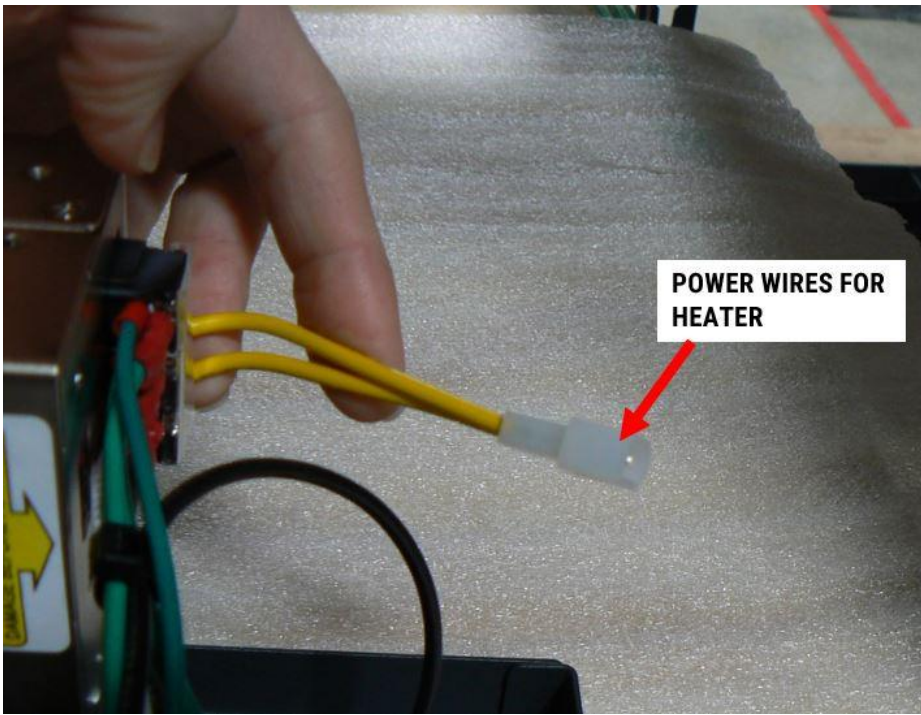
12. Connect the ribbon cable to the spot shown on the board. The orientation of the cable matters, so pay attention to the wire with the red stripe on it. Your connector may face the opposite direction but the wires should be oriented the same.

SLED REMOVED FROM PRINTER FOR CLARITY

RED STRIPE ON THIS SIDE
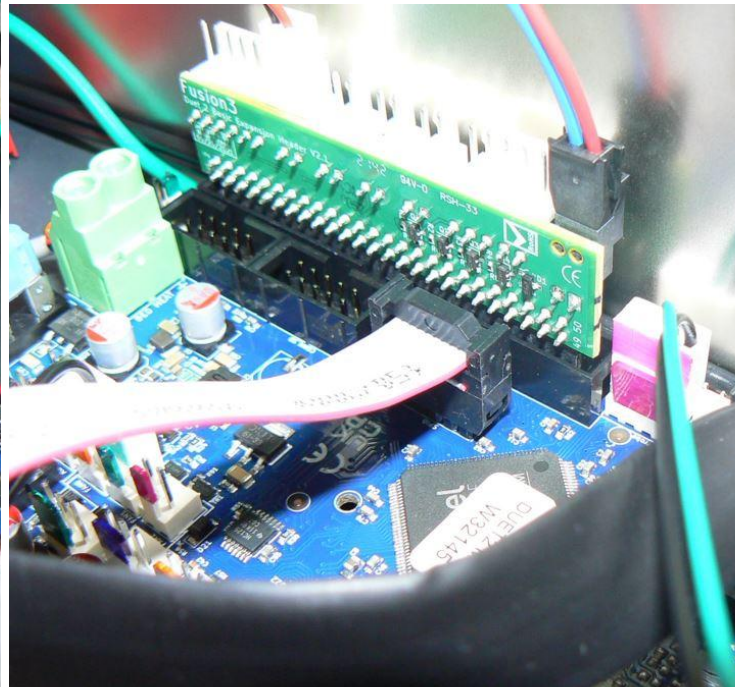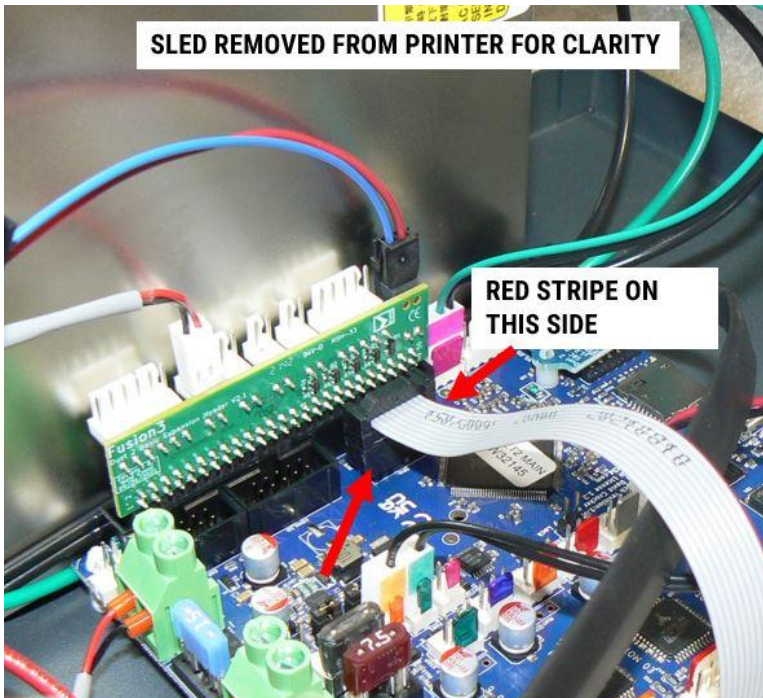
POWER ON & FUNCTION CHECK

1. Plug EDGE back into the wall. Power on.

2. Touch the chamber temperature indicator on the LCD. Select one of the other options. Make sure it's reading a reasonable value. If it's giving you nonsense, power off and reverse the ribbon cable on the board.

3. After 2-5 min, place your hand over the heater and make sure it's warm.