

Thermal Runaway

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#1

What is a Thermal Runaway?

A Thermal Runaway is an error that occurs when the temperature on your hotend or heated bed has dropped below the expected temperature for over a certain amount of time. If this error occurs, that means there is a problem with either the Thermistor, Heater Cartridge, or improper wire connections (Ribbon Cable, Hotend power wire, etc).



What are the parameters needed to trigger a thermal runaway?

Thermal runaways need to hit certain circumstances in order to trigger. These are embedded in the Marlin Software as a safety feature and cannot be edited.

For the Extruder: The Hotend has to drop below 6°C of the target temperature in order to trigger the "thermal runaway counter". If the temperature doesn't rise back up to the target temperature (within a 6°C tolerance) within 40 seconds, the printer will prompt an E1 Thermal Runaway.

Where is the Thermal Runaway occurring:

E1 Thermal Runaway= Extruder 1
E2 Thermal Runaway = Extruder 2

Bed Thermal Runaway = Heated Bed

Possible Quick Fixes:

- You can try preheating your gMax to PLA temperatures and wiggle the ribbon cables while it is temping up. If you notice a sudden loss of temperature increase due to the wiggling, then your ribbon cable needs replacing.
- You could replace the hotend power wire. (It is the wire that goes from the electronics box to the hotend, and powers the heater cartridge)
- You can purchase a new Heater Cartridge from our website:
https://shop.gcreate.com/products/e3d-hotend-heater-cartridge?_pos=1&_sid=f0f41c904&_ss=r
- You can purchase a new Hotend Power Wire from our website:
<https://shop.gcreate.com/products/gmax-extruder-power-wire>


If you'd like to find out more information, you can use the link below to go to Marlin's troubleshooting website:

<https://marlinfw.org/docs/basics/troubleshooting.html>

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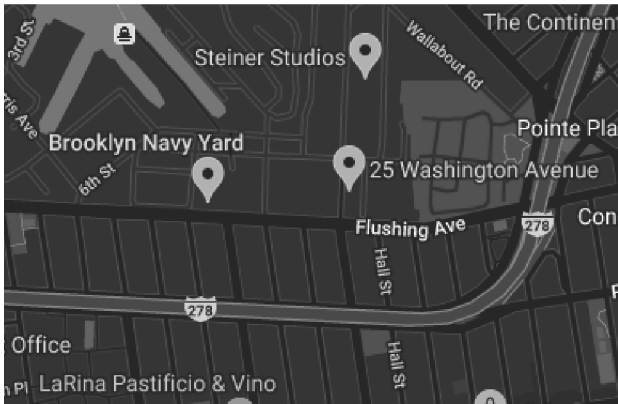
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