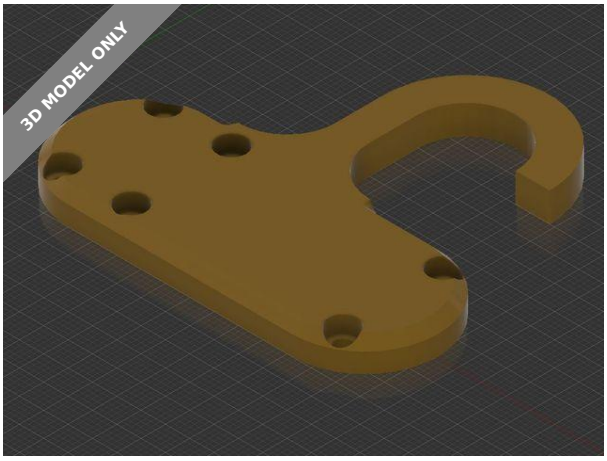

Holder for Smart Filament Sensor (by BigTreeTech) for top spool (e.g. Artillery Sidewinder)

T Thoughts On

VIEW IN BROWSER

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Summary

Holds the BigTreeTech Smart Filament Sensor on the top spool with a hook

3D Printers > 3D Printers - Upgrades

Tags: artillery artillerysidewinder bigtreetech sensor sidewinder smart x2

I did not find a good way to mount the BigTreeTech smart filament sensor on my Artillery Sidewinder X2, so I made my own holder.

The printed part replaces the original sensors lid that you can just unscrew and use the printed part instead.

The part just attaches to the guide roll of the spool holder with a hook. This may not look like much, but it has several advantages:

- It can easily be clipped on or off in a second without tools

- When you have a really high print, it can move/tilt a little when the extruder gets close. It neither collides with it nor breaks the filament as a stiffly mounted sensor might
- The sensor does not weigh down a moving direct extruder

One warning for everybody using the sensor: There is a number of guides out there that have wrong pin/cable descriptions, namely mistaking 3.3v for ground and vice versa. If you connect the sensor only once like this, it is immediately broken!!! The correct description is:

- **Long dashes along the cable is Ground**
- **Little close dashes perpendicular to the cable is 3.3V**
- **Round dots is the signal**

Use the official documentation on GitHub when mounting, not just any guide! I learned the hard way.

I used 100% infill, but I am sure it will hold up with basically any setting.

I use the Octoprint plugin “Smart Filament Sensor” which does exactly what you think it would (after you configure it of course). But be aware that you need to change Octoprint so that it moves away from the print during a pause, or it will ooze filament onto the print and melt a hole in it at the same time. This is done in the Octoprint settings under "GCODE Scripts", but I will not go into detail here as I am no expert. Find a tutorial on pause GCODE for Octoprint.

Also, because the sensor is removed from the extruder, there can be some slack in the filament between sensor and extruder. For example, the extruder may have moved to the side, pulling filament from the spool, and then goes back to the middle without having used it up. Therefore, the printer can print quite some time without the spool moving, when it is using up the slack. So I set the sensor **settings in the plugin to detection time 180s and detection distance 100mm**. Adapt to your own needs, and be aware that too low settings will lead to the print pausing and waiting for manual restart. You can change the settings during a print with immediate effect, which is great for testing.

Model files

smart_filament_sensor_haken.stl

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