

Current Sensing in Washing Machine

Team Pentagon

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3-D Model

- A 3-D Model was made for the device in Tinkercad. The Model helps in making the device look compact.
- The Model has been made such that the only thing required to get the device to work is to plug any device(for eg Washing Machine) and turn on the switch.
- The Current consumed by the device will be sent to the cloud(Thingspeak). These are then displayed on a webpage along with on-off status of the device.

3-D Model

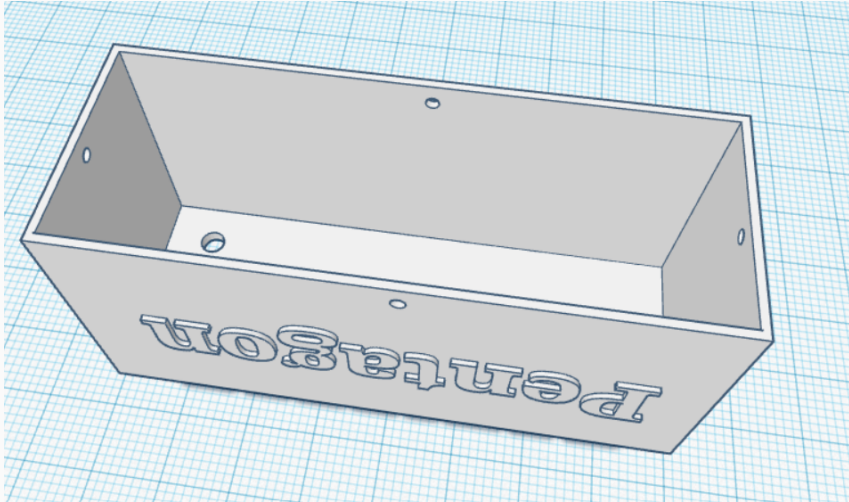


Figure 1: 3D Model

Deployable Device

- Using the 3D printed model, a deployable device has been made. In order to power the Arduino, SMPS Step Down Converter is used. It converts 220V AC power supply to 5V DC.
- Circuit has been shifted from Breadboard to PCB and soldering has been done.
- Finally, the switch board has been screwed to the box to make the device compact.

Deployable Device



Deployable Device



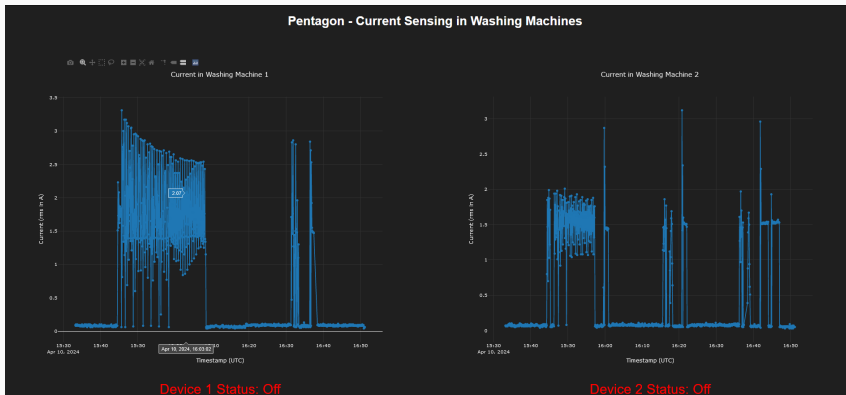


Figure 4: Website

What we have completed?

- Making a compact deployable device.
- Sending the data collected to Thingspeak.
- Displaying graph and on-off status on website with data fetched from Thingspeak via read API key.

Future Plans

- Deploying the device and collecting data - 16 April
- Analysing the data to detect in which stage the washing machine is in - 18 April
- If time allows, adding other functionalities like energy consumption, variation of current with laundry load.etc.