

## **Summary:**

Currently have:

- Vibration Sensor
- Air Speed Sensor
- Temperature Sensor
- Humidity Sensor
- AC Current Sensor
- WiFi/Bluetooth Module
- Development Board

Missing:

- Voltage Sensor -
  - Possibility:
  - [https://www.digikey.com/en/products/detail/seeed-technology-co.,-ltd/101991032/17775331?utm\\_adgroup=&utm\\_source=google&utm\\_medium=cp&utm\\_campaign=PMax%20Shopping\\_Product\\_Low%20ROAS%20Categories&utm\\_term=&utm\\_content=&utm\\_id=go\\_cmp-20243063506\\_ad-ad-dev-c\\_ext-prd-17775331\\_sig-Cj0KCQiAoeGuBhCBARIsAGfKY7yv7aBLkZQnFc6VsCAPAaFQurQmpnzqfXy18GjYqZAYIA02DxYtlwcaAoy3EAALw\\_wcB&qad\\_source=1&gclid=Cj0KCQiAoeGuBhCBARIsAGfKY7yv7aBLkZQnFc6VsCAPAaFQurQmpnzqfXy18GjYqZAYIA02DxYtlwcaAoy3EAALw\\_wcB](https://www.digikey.com/en/products/detail/seeed-technology-co.-ltd/101991032/17775331?utm_adgroup=&utm_source=google&utm_medium=cp&utm_campaign=PMax%20Shopping_Product_Low%20ROAS%20Categories&utm_term=&utm_content=&utm_id=go_cmp-20243063506_ad-ad-dev-c_ext-prd-17775331_sig-Cj0KCQiAoeGuBhCBARIsAGfKY7yv7aBLkZQnFc6VsCAPAaFQurQmpnzqfXy18GjYqZAYIA02DxYtlwcaAoy3EAALw_wcB&qad_source=1&gclid=Cj0KCQiAoeGuBhCBARIsAGfKY7yv7aBLkZQnFc6VsCAPAaFQurQmpnzqfXy18GjYqZAYIA02DxYtlwcaAoy3EAALw_wcB)
- Cord for Development Board -  
<https://www.amazon.com/AmazonBasics-USB-2-0-Cable-Male/dp/B00NH13S44?th=1>

**Current construction is not very good, and will probably need to be rebuilt.**

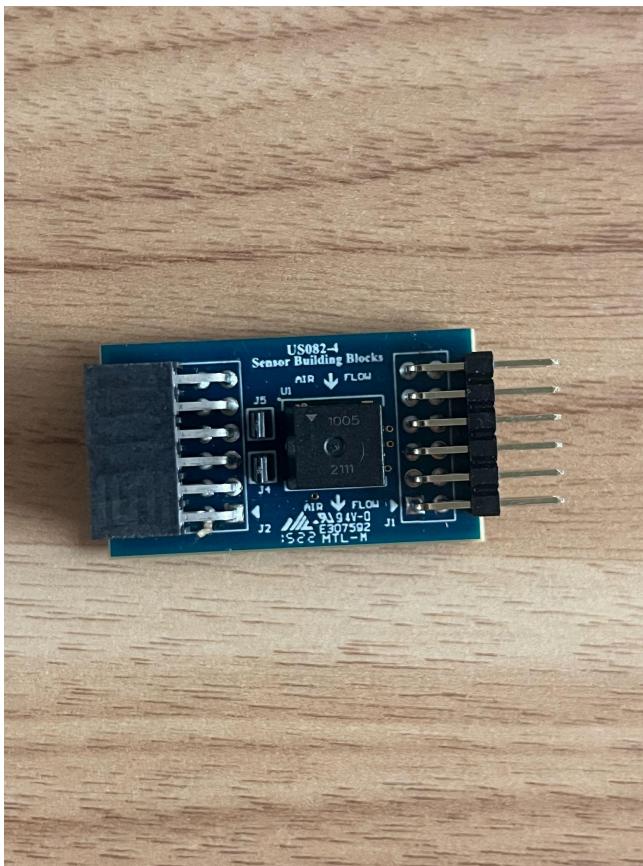
**Vibration Sensor Module** - MakerHawk 4pcs Analog Ceramic Piezo Vibration Sensor Module 3.3V/5V for Arduino DIY Kit

- Purchase Link:  
<https://www.amazon.com/MakerHawk-Analog-Ceramic-Vibration-Arduino/dp/B07KS5NV4V>
- Documentation:  
[https://wiki.keyestudio.com/Ks0272\\_keyestudio\\_Analog\\_Piezoelectric\\_Ceramic\\_Vibration\\_Sensor](https://wiki.keyestudio.com/Ks0272_keyestudio_Analog_Piezoelectric_Ceramic_Vibration_Sensor)



## Air Velocity Sensor - Air Velocity Sensor Pmod™ Board (Renesas Quick-Connect IoT)

- Website:  
<https://www.renesas.com/us/en/products/sensor-products/flow-sensors/us082-fs3000evz-air-velocity-sensor-pmod-board-renesas-quick-connect-iot>
- Documentation: REN\_US082-FS3000EVZ\_MAT\_20220713.pdf



## Resistance Temperature Detector - ??

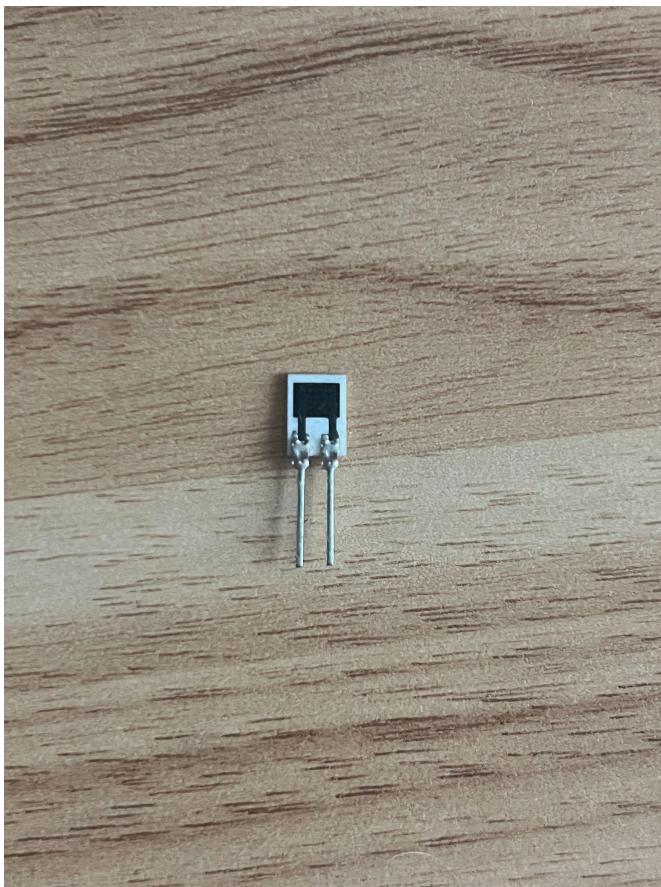
- <https://www.te.com/usa-en/products/sensors/temperature-sensors/resources/understanding-rtds.html>



## Resistive Humidity Sensor - ??

- About resistive humidity sensors:

<https://www.electricity-magnetism.org/resistive-humidity-sensor/>



## **AC Current Sensor** - AC Current Sensor Transformer, Core Current Transformer Coil Sensor for 400A Amp Energy Meter

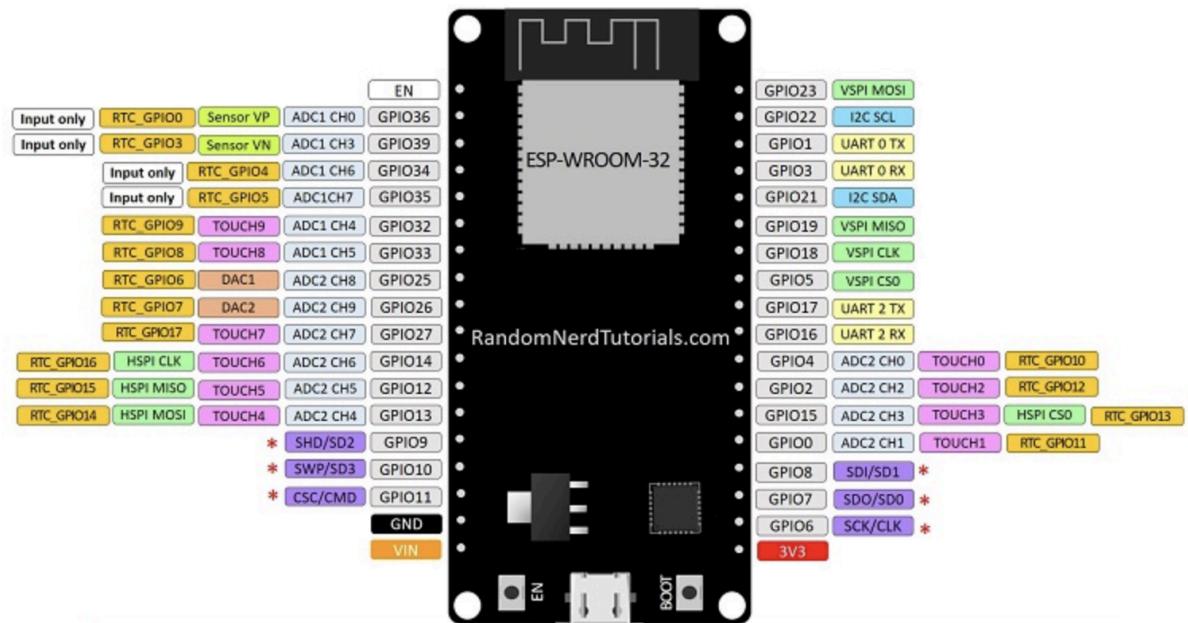
- Website:

[https://www.amazon.com/Current-Sensor-Transformer-Energy-Meter/dp/B0B92DMKPD?  
source=ps-sl-shoppingads-lpcontext&ref\\_=fplfs&psc=1&smid=A14MI7V12ETBJQ](https://www.amazon.com/Current-Sensor-Transformer-Energy-Meter/dp/B0B92DMKPD?source=ps-sl-shoppingads-lpcontext&ref_=fplfs&psc=1&smid=A14MI7V12ETBJQ)



## WIFI/Bluetooth Module: ESP32 Development Kit

- Tutorial - <https://randomnerdtutorials.com/getting-started-with-esp32/>
- Pinout:



## Development Board: - FRDM-KL46Z

- Website:  
<https://www.nxp.com/design/design-center/development-boards/general-purpose-mcus/FRDM-KL46Z>
- Documentation:
  - FRDM-KL46Z\_Setup.pdf
  - FRDM-KL46Z\_Schematic.pdf
  - FRDM-KL46Z\_User\_Manual.pdf
  - KL46\_Reference\_Manual.pdf
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