

bendlabs

One Axis Sensor

Getting Started Guide

ONE AXIS SENSOR

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Precautions

One axis angular displacement sensor is NOT 5 V tolerant. Requires 1.62 - 3.6 V regulated supply for proper operation.

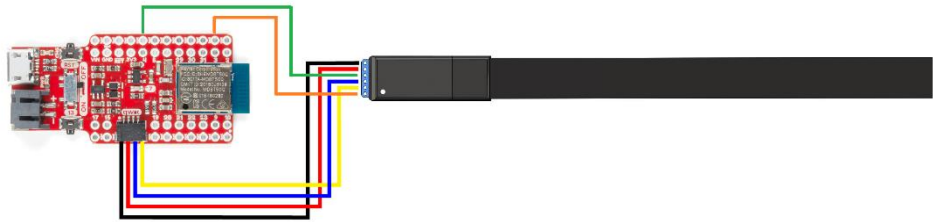
Don't pull the sensor by the wires

Don't strain the sensor more than 75%

Active region of the sensor starts 0.5" from the tip of the sensor

Device Setup

1: Connect the One Axis sensor to the SparkFun Pro nRF52840 Mini via Qwiic Cable Breadboard Jumper and wires as shown below:



2: Set up SparkFun Pro nRF52840 Mini in the Arduino IDE

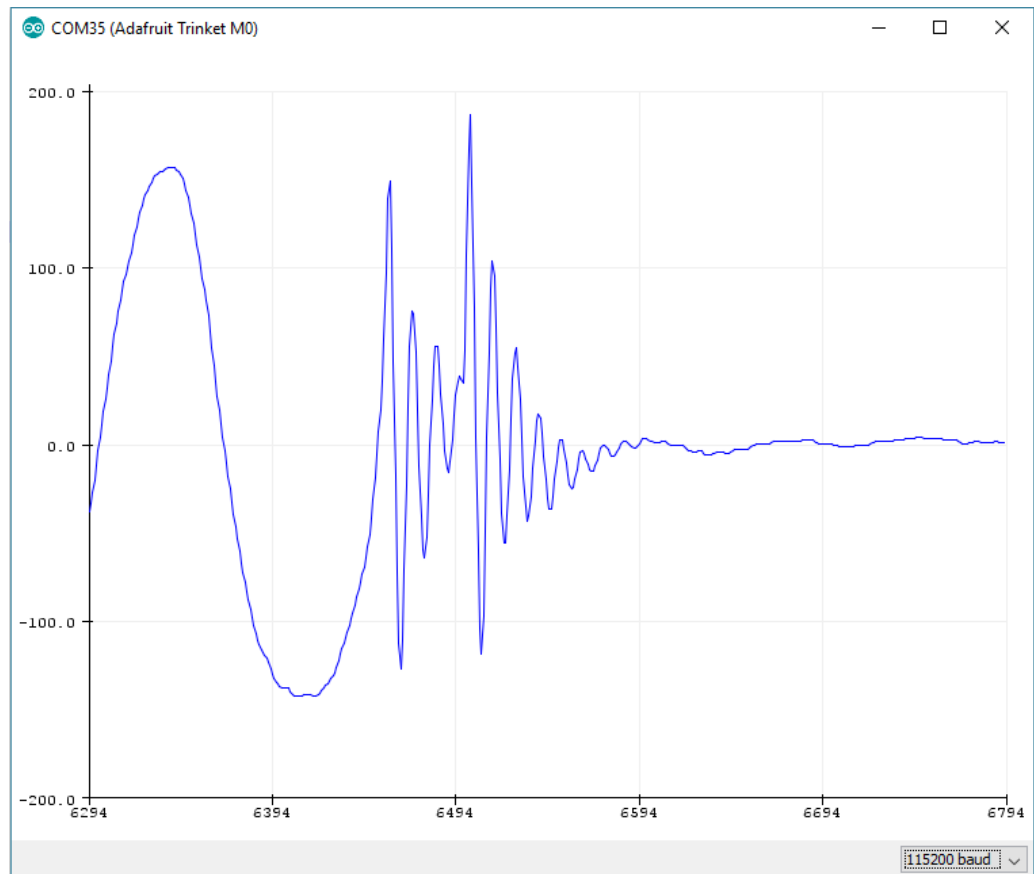
- Follow Sparkfun's guide found at <https://learn.sparkfun.com/tutorials/nrf52840-development-with-arduino-and-circuitpython> to get the nRF52840 Pro Mini up and running in the Arduino IDE.

3: Integrate Sensor and Sparkfun Pro nRF52840 Mini

- Download example sketches and ads Arduino driver at ([github link](#))
- Copy *one_axis_ads_demo* sketch into your Arduino folder
- Copy folder *ads_driver* into Arduino/Libraries folder
- Connect the nRF52840 Pro Mini to a USB port and reset the Pro Mini into bootloader mode
- Select Sparkfun Pro nRF52840 Mini from the Arduino board manager and the associated COM port
- Flash *one_axis_ads_demo* sketch onto nRF52840 Pro Mini

Expected Output

1: Click on tools and then Serial Plotter in the Arduino IDE or CTRL+SHIFT+L to verify that angular data coming from the One Axis sensor is correct. (Note that touching the sensor while coupled to AC power can cause 60 Hz line noise).



2: Click on tools and then Serial Monitor in the Arduino IDE or CTRL+SHIFT+M to interface with the One Axis Sensor through the serial port. A list of serial commands can be found in the `parse_com_port` function in the `one_axis_demo` sketch.

Additional References

Pin Diagram:

