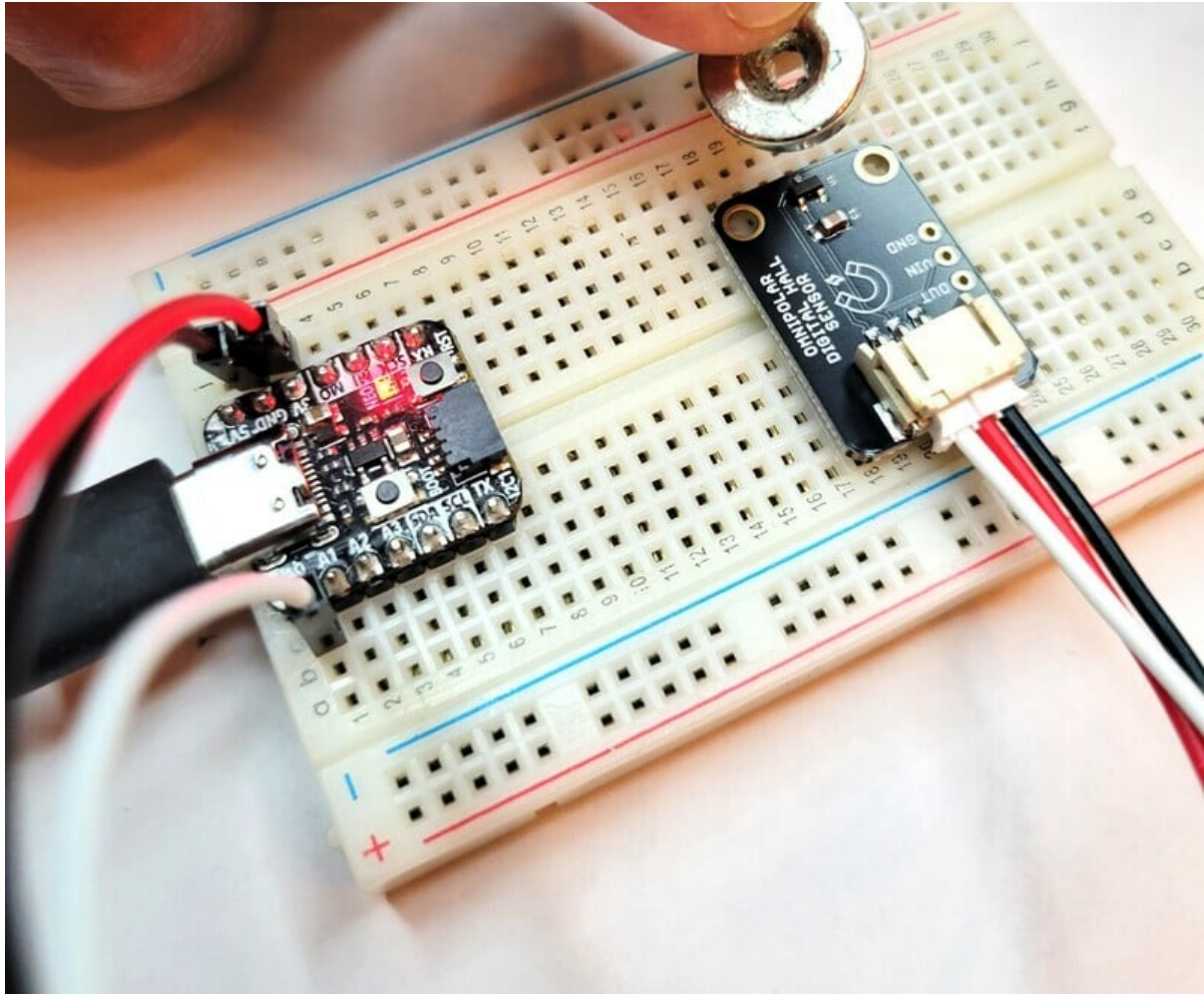




ScoutMakes DRV5032 Hall Sensor

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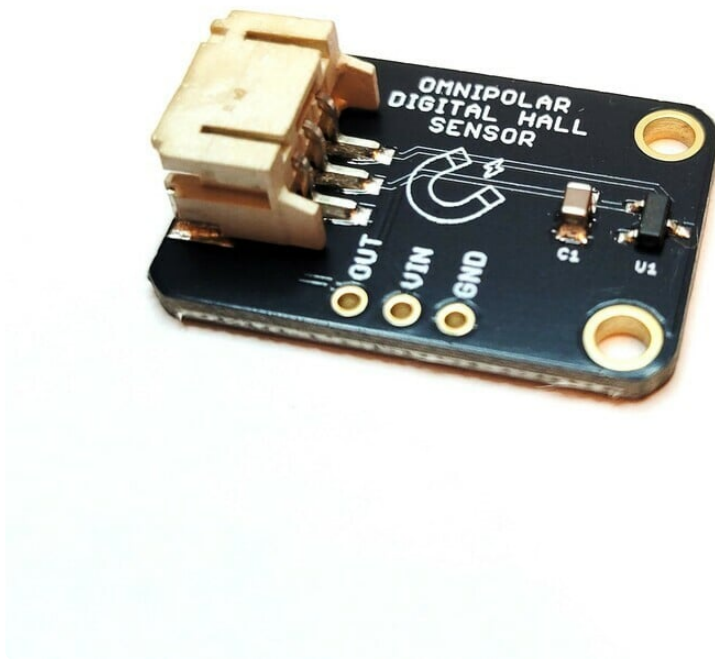
<https://learn.adafruit.com/scoutmakes-drv5032-hall-sensor>

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Overview



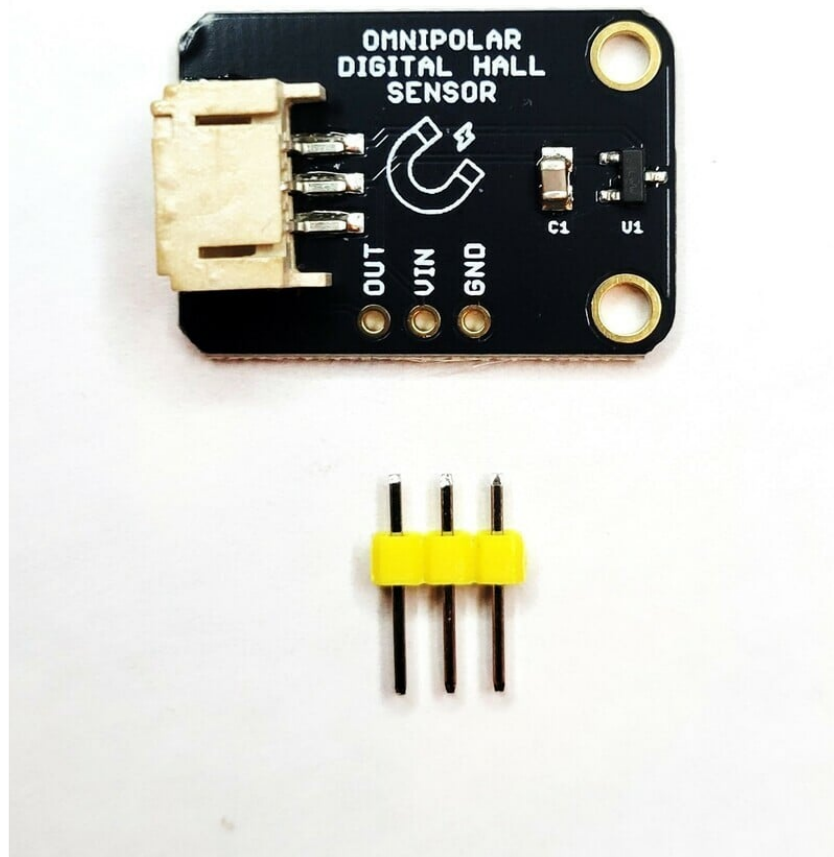
This is a breakout for the Texas Instruments DRV5032 Digital Magnetic Hall Effect Sensor. It is the perfect way to add proximity sensing to your project. The sensor has a digital output that indicates when the magnetic flux density threshold has been crossed. The device integrates a Hall effect element, analog signal conditioning, and a low-frequency oscillator that enables ultra-low average power consumption. By operating from a 1.65-V to 5.5-V supply, the device periodically measures magnetic flux density, updates the output, and enters a low-power sleep state.

The breakout comes with a 3-pin header for breadboard use. This board has a simple plug-and-play JST PH (2mm pitch) 3-pin input connector for solderless use. This cable is [sold separately \(http://adafru.it/3893\)](http://adafru.it/3893) and is not needed to use the board.

[Open Source Hardware Association Certified US002671 \(https://adafru.it/1a7w\)](https://adafru.it/1a7w)



Pinouts



The breakout can be used via the 3-pin JST-PH connector, or the 3 pin breadboard header.

JST-PH Connector

On the front of the board is the JST-PH connector with the three pins for providing power and a signal from the DRV5032 Digital Hall Sensor.

- **GND** - The left input on the JST-PH connector is common ground shared between the two CAN connections.
- **VIN** - It is connected to the middle pin on the JST-PH connector. This has to be a DC voltage 1.65V to 5.5V.

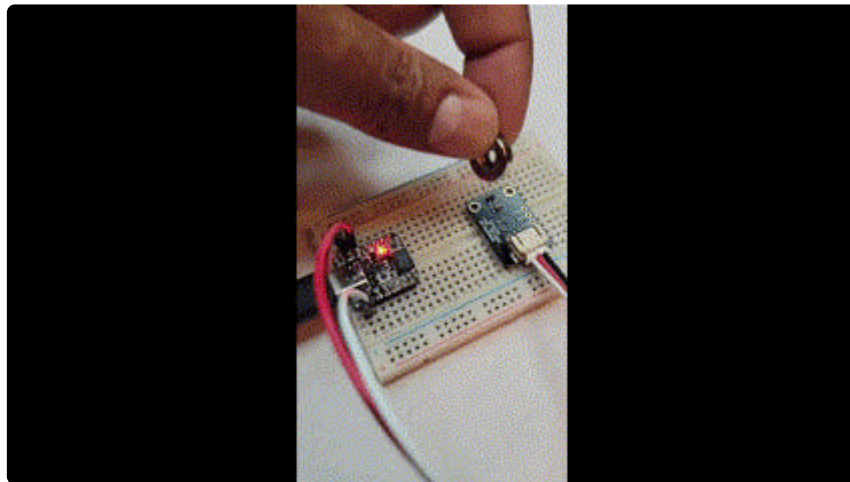
- **OUT** - the DRV5032 output signal pin changes between HIGH and LOW depending on the presence of a magnetic field. It is connected to the right input on the JST-PH connector.

CircuitPython

The ScoutMakes DRV5032 Hall Sensor can be easily used with CircuitPython. Since the signal pin from the breakout board drives HIGH or LOW based on the presence of a magnetic field, it can be easily connected to IO pins to a QT Py, for example, or other microcontroller.

```
"""CircuitPython ScoutMakes DRV5032 Digital Hall Sensor example"""
import time
import board
from digitalio import DigitalInOut, Direction, Pull
switch = DigitalInOut(board.A0)
switch.direction = Direction.INPUT
switch.pull = Pull.UP

while True:
    # We could also do "led.value = not switch.value"!
    if switch.value:
        print ("1")
    else:
        print ("0")
    time.sleep(0.1) # debounce delay
```



Downloads

- [ScoutMakes DRV5032 Digital Hall Sensor Design Files \(https://adafru.it/1a7x\)](https://adafru.it/1a7x)

