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Last Updated February 21, 2022

Information for the Davis 6410 Anemometer

Introduction

- The Davis 6410 is a low-cost anemometer that measures wind speed and wind direction at a relatively low cost of \$170 (as of 2022).
- The wind vane portion of the device uses a linear potentiometer to determine the direction of a wind source.
- Each rotation of the wind cups emits a pulse.
- Converting from the number of pulses to wind speed is performed with the following formula:

$$V = P \left(\frac{2.25}{T} \right) / 2.237$$

Where:

V = speed (meters per second)

P = number of pulses per sample period

T = sample period (seconds)

Specifications

Model	6410
Brand	Davis
Range of Direction	1 to 360 °
Range of Speed	0.5 to 89 m/s
Accuracy of Direction	± 3°
Accuracy of Speed	±1 m/s or ± 5%

Links

- Product Link:
<https://www.davisinstruments.com/products/anemometer-for-vantage-pro2-vantage-pro>
- Product Info
<http://cactus.io/sensors/weather/anemometer/davis-anemometer>
- Original Hookup Guide
<http://cactus.io/hookups/weather/anemometer/davis/hookup-arduino-to-davis-anemometer>
- Arduino Code
https://github.com/RiceAllDay22/CSR_Arduino_Collection/tree/main/Individual_Modules/Davis



Figure 1. Image of the anemometer.

Wiring

- An RJ-11 port is used for connecting the Davis anemometer to an Arduino Uno
- The Davis anemometer has a 6-pin connector that inserts into the RJ-11 port.
- There is a 4.7 k Ω resistor between the power pin and the wind speed pin.
- There is no specific input voltage required for the anemometer.
- Either 3.3V or 5.0 V for power will work
- If 3.3 V is used, then a slight change in the code is needed. The associated Arduino code will mention this.

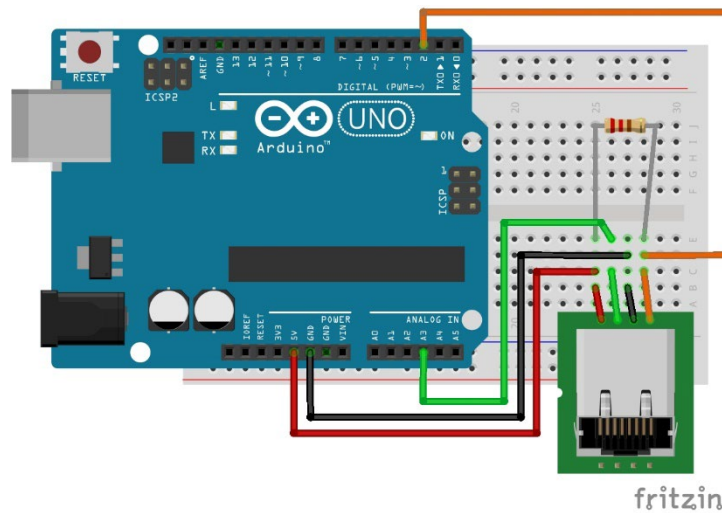


Figure 1. Wiring Diagram for the RJ-11 pin connector to the Arduino.

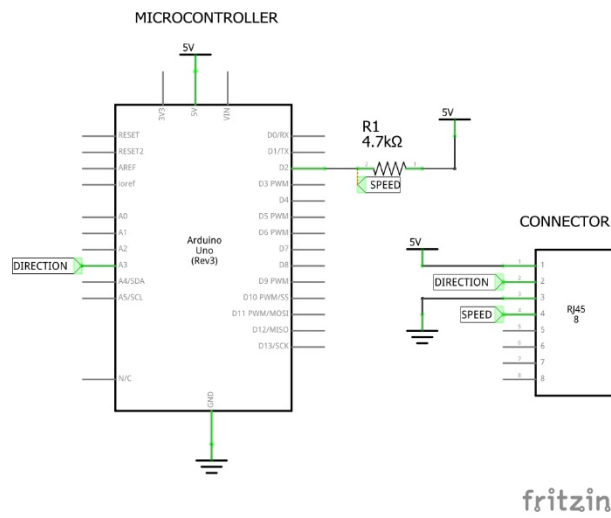


Figure 2. Schematic Diagram for the RJ-11 pin connector to the Arduino.

Contact

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