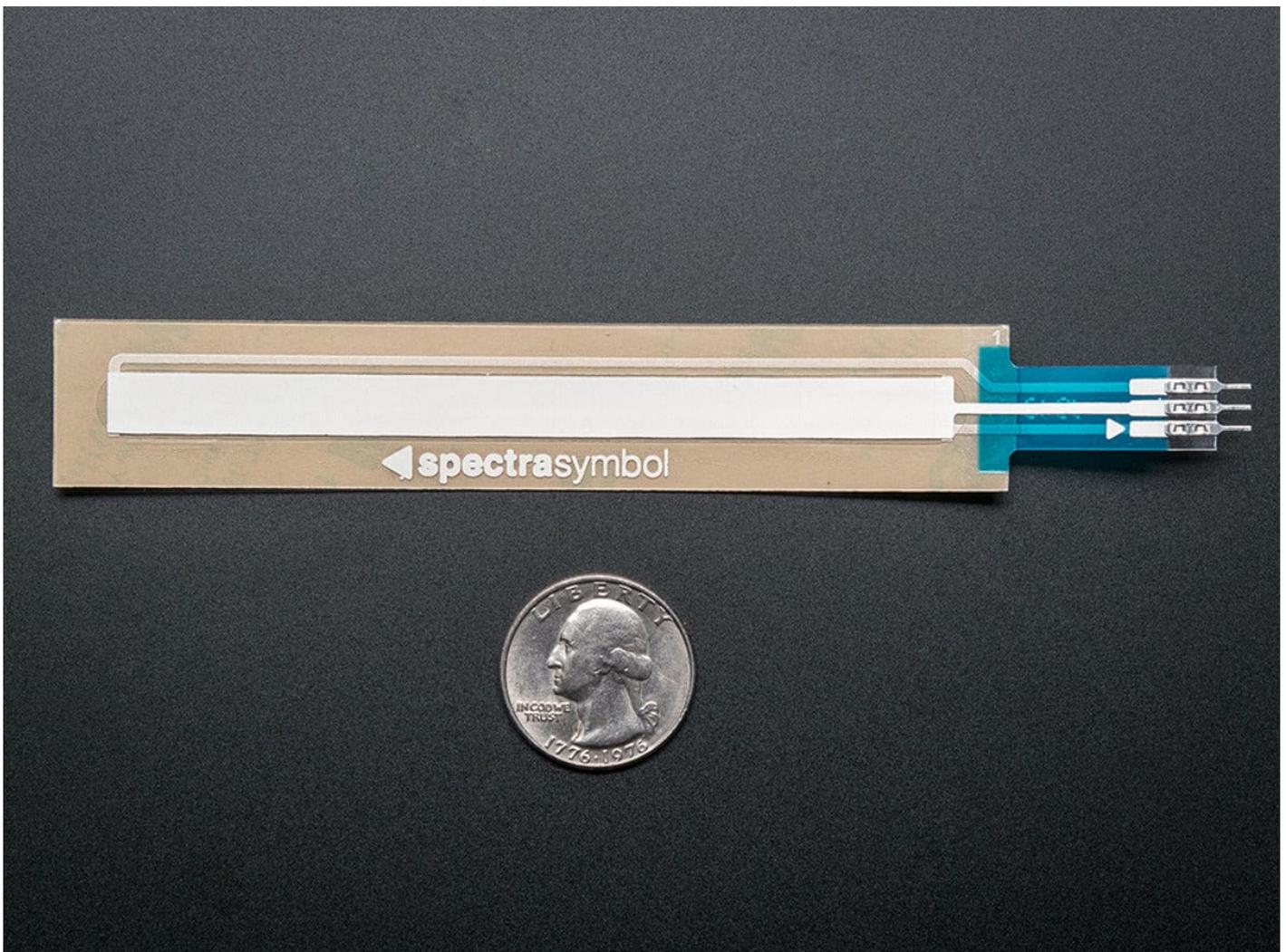


Using a Membrane Potentiometer (SoftPot)

What is a Membrane Potentiometer?

A Membrane Potentiometer is a type of position sensor that measures displacement or angle by detecting changes in electrical resistance. It consists of a flexible membrane with resistive and conductive layers that slide against each other when pressure is applied. This alters the resistance and provides an output voltage proportional to the position.



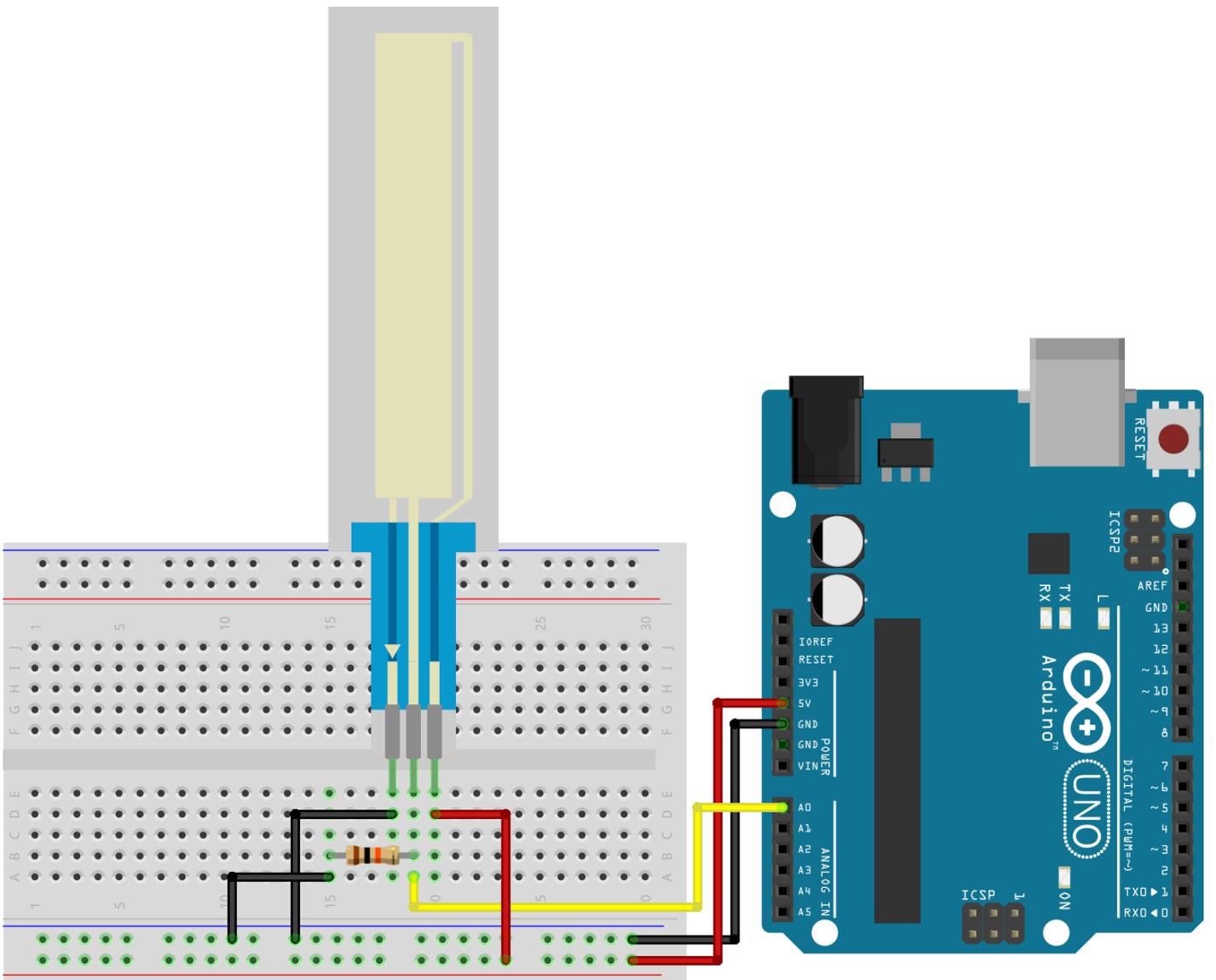


1. **Thin and Flexible:** Made from polymer films, they are compact and adaptable.
2. **Contact-Based Operation:** A wiper or finger presses the membrane to register position.
3. **Linear or Rotary Versions:** Available for linear displacement or rotational measurement.
4. **Durability:** No mechanical wear like traditional potentiometers with sliding contacts.
5. **Application:** Touch-sensitive controls

Wiring

Wiring up the sensor is simple, the sensor is unpolarized so it's doesn't matter which pin to 5V or GND.

1. Pin1 (the one on the side of the thinner strip) to 5V
2. Pin2 (middle pin) to A0 & via 10k resistor to GND
3. Pin3 (the one with a small arrow) to GND



fritzing

Getting started

This example turns on the built-in LED when touched lightly.

```
int SOFT_POT_PIN = A0;

void setup()
{
  Serial.begin(9600);
  pinMode(SOFT_POT_PIN, INPUT);
}

void loop()
{
  int softPotPosition = analogRead(SOFT_POT_PIN);
```

```
Serial.println(softPotPosition);  
delay(100);  
}
```

Revision #3

Created 17 March 2025 13:46:11 by Joanne Leung

Updated 17 March 2025 14:53:42 by Joanne Leung