# Voltage Detection Sensor Module 25V

Basics

The Arduino analog input is limited to a 5 VDC input.   If you wish to measure higher voltages, you will need to resort to another means. One way is to use a voltage divider.   The one discussed here is found all over Amazon and eBay.

It is fundamentally a 5:1 voltage divider using a 30K and a 7.5K Ohm resistor.

Keep in mind, you are restricted to voltages that are less than 25 volts.   More than that and you will exceed the voltage limit of your Arduino input.

Basic Connection
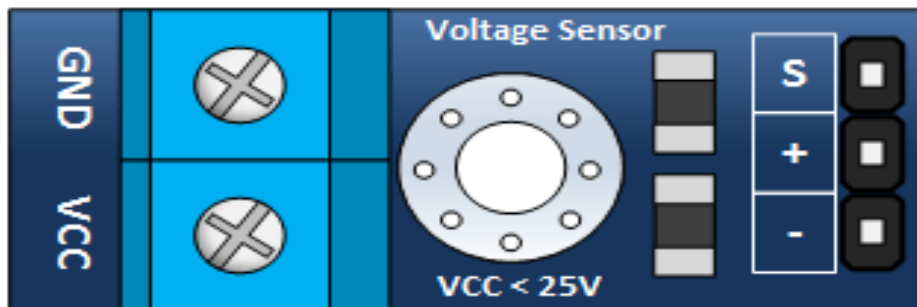
Inputs

* **GND –** This is where you connect the low side of the voltage you are measuring.   Caution! : This is the same electrical point as your Arduino ground.
* **VCC:** The is where you connect the high side of the voltage you are measuring

Outputs

* **S:** This connects to your Arduino analog input.
* **– (or minus):** This connects to your Arduino ground.
* **+:** This is not connected. It does absolutely nothing… zilch… nada… jack diddly doo doo.
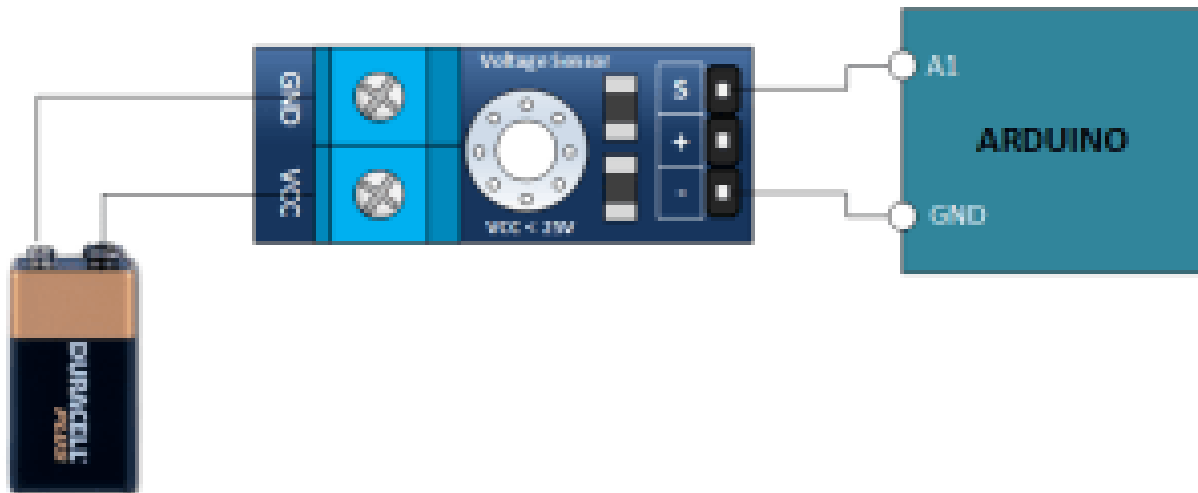
Schematic

The schematic for this is pretty straight forward. As previously mentioned, its just a couple of resistors.   In fact, you could build your own in a pinch.
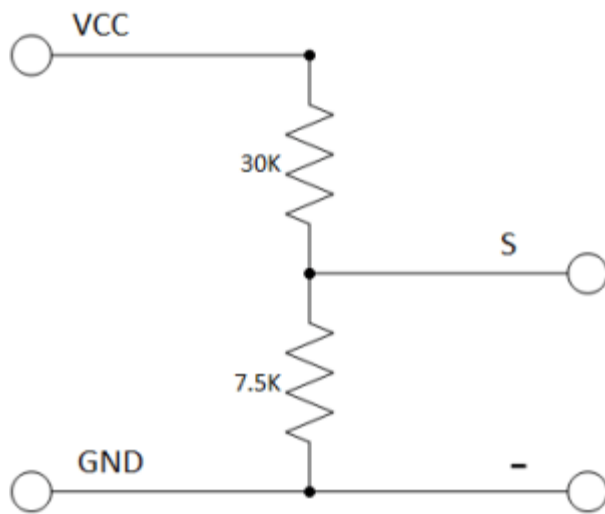
Tutorial

The Connections

Find yourself a 9 volt battery and connect it, your voltage sensor module and Arduino as shown below.

The Sketch

Enter the following sketch, upload it and go to town.   If you open your Arduino serial monitor you will be able to see the voltage.

```
//Robu.in

int analogInput = A1;

float vout = 0.0;

float vin = 0.0;

float R1 = 30000.0; //

float R2 = 7500.0; //

int value = 0;

void setup(){

   pinMode(analogInput, INPUT);

   Serial.begin(9600);

   Serial.print("DC VOLTMETER");

}

void loop(){

   // read the value at analog input

   value = analogRead(analogInput);

   vout = (value * 5.0) / 1024.0; // see text

   vin = vout / (R2/(R1+R2));


Serial.print("INPUT V= ");

Serial.println(vin,2);

delay(500);
}
```