# PIR Motion Sensor

This [PIR Sensor Switch Module](#) detects the Infrared Rays released by human body motion within the detection area 7 Meters.

For many basic projects or products that need to detect when a person has left or entered the area, or has approached, PIR sensors are great. They are low power and low cost, pretty rugged, have a wide lens range, and are easy to interface with. Note that PIRs won't tell you how many people are around or how close they are to the sensor, the lens is often fixed to a certain sweep and distance (although it can be hacked somewhere) and they are also sometimes set off by house pets.

Technical Data

Each PIR module has buckled port with 3 pin connection VCC, GND and Output Signal, as shown in the figure below:
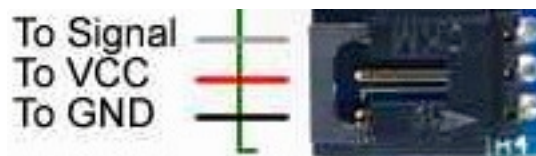
Output (applied to output signal pin)**:** Digital pulse high (3V) when triggered (motion detected) digital low when idle (no motion detected). The signal duration can be adjusted from 0.3s-18s by the yellow potentiometer.

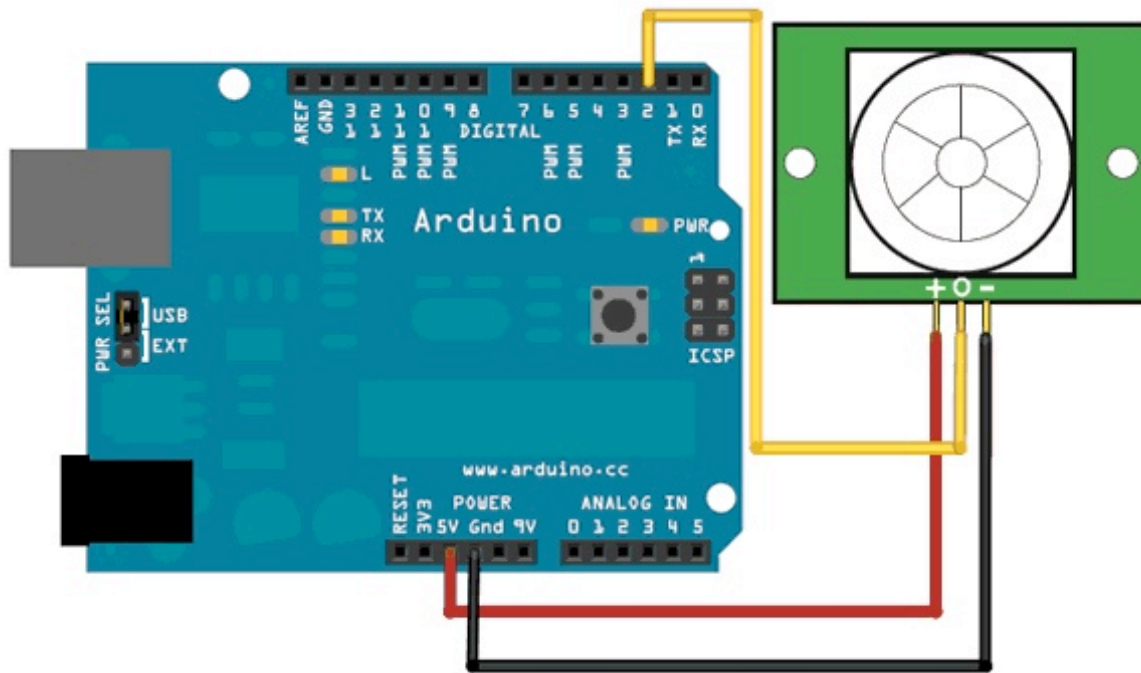**Input voltage** (applied to VCC pin)**:** 3.3V - 5V

Sensitivity range: up to 7 meters 110 degrees x 70 degrees detection range.

Connecting to Microcontrollers and [Arduino](#)

Connecting PIR sensors to a microcontroller is really simple. The PIR acts as a digital output so all you need to do is listen for the signal pin to flip high (detected) or low (not detected) (see figure below).

Software (code for Arduino)

the corresponding Arduino code is :

```
int ledPin = 13;
int switchPin = 2;
int value = 0;

void setup() {
  pinMode(ledPin, OUTPUT);
  pinMode(switchPin, INPUT);
}

void loop() {
  value = digitalRead(switchPin);
  if (HIGH == value) {
    digitalWrite(ledPin, HIGH);
  } else {
    digitalWrite(ledPin, LOW);
  }
}
```