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# Seat Occupancy (Pressure) Sensor

This sensor work as seat or chair occupancy sensor. When someone is sitting on a chair or car seat, the seat surface is subjected to a pressure. This pressure makes the upper and lower circuit layers of the seat sensor contact each other, Thus, the circuit loop is turned on conductive to generate a signal to other devices, showing someone is sitting on the chair or car seat (the seat is occupied). Other systems in the car will use this signal to work. For example, the seatbelt warning system will detect if the person on the car seat whether put a seat belt on himself.

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Features

Wire length: approx.40 cm

Single point working weight: 150g

Working voltage: 5VDC

Working current: <100mA

Response time: 10 ms

Insulation impedance: 20MΩ

Trigger resistance: 0-150Ω

Size: 17.6 x 15.4 cm

Wire length: approx.40 cm

Working temperature: -30~80℃

Durability: >1000K times

Seat Occupancy Sensor Arduino Tutorial

The seat occupancy (pressure) sensor acts like a simple switch. If enough weight applied on it to close the contact, the switch is closed. That is, the two wires on the connector are shorted together. Otherwise, the switch is normally open.
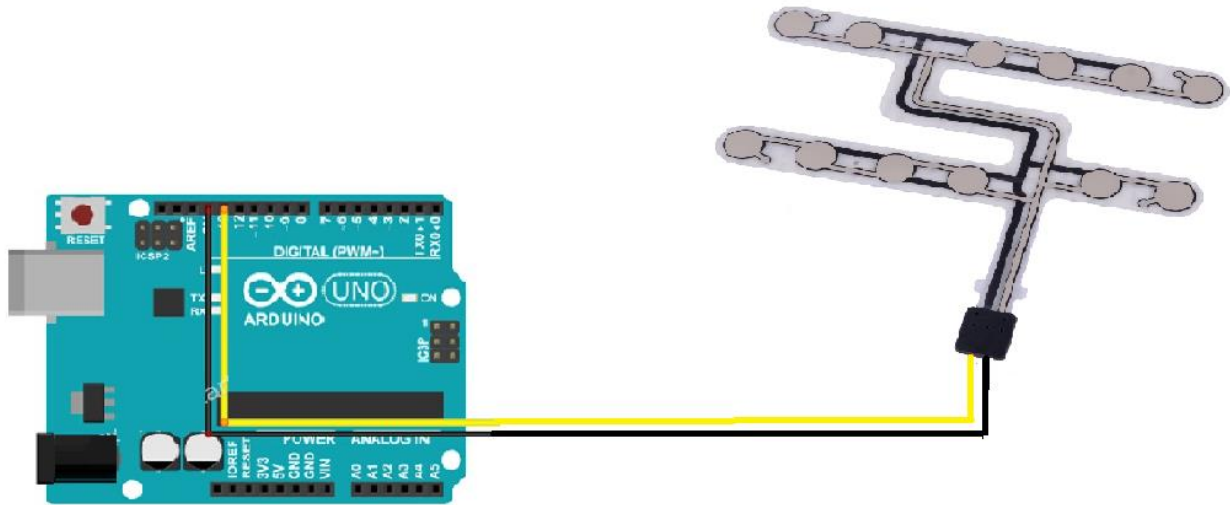
Procedures

Connect ground of the sensor to Arduino ground

Connect the other wire of sensor to Arduino pin A13

Copy the below code and open with Arduino IDE

Click Upload button on Arduino IDE to upload code to Arduino

See the result on Serial Monitor

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Arduino Code

```
/*
 * Created by ArduinoGetStarted.com
 *
 * This example code is in the public domain
*/

const int SEAT_SENSOR_PIN = 13; // Arduino pin connected to
SEAT sensor's pin

int SEATState;

void setup() {
  Serial.begin(9600);                    // initialize serial
  pinMode(SEAT_SENSOR_PIN INPUT_PULLUP); // set arduino pin
to input pull-up mode
}

void loop() {
  SEATState = digitalRead(SEAT_SENSOR_PIN); // read state

  if (SEATState == HIGH) {
    Serial.println("The door is unloaded");
  } else {
    Serial.println("The seat is occupied");
  }
}
```