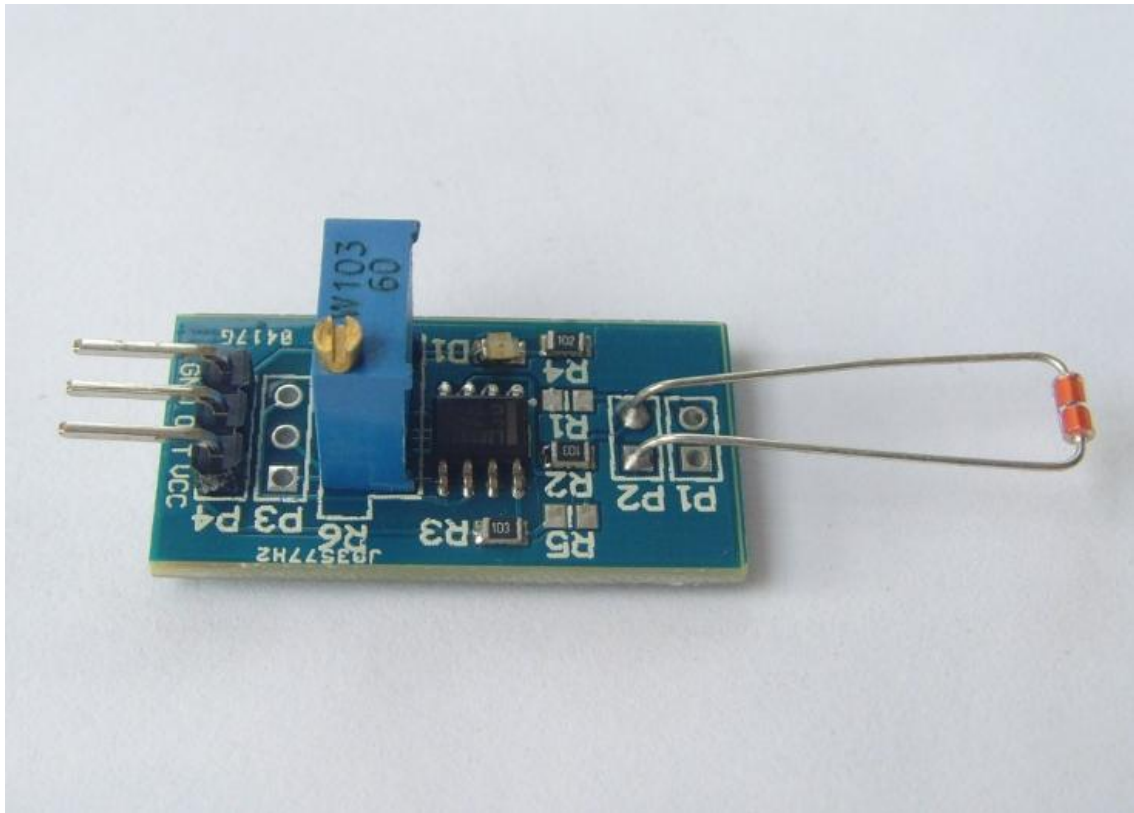


## Thermal Sensor Module



### General Description:

Temperature is the most-measured process variable in industrial automation. Temperature sensors are devices used to measure the temperature of a medium. Most commonly, a temperature sensor is used to convert temperature value to an electrical value. Temperature Sensors are the key to read temperatures correctly and to control temperature in industrial applications.

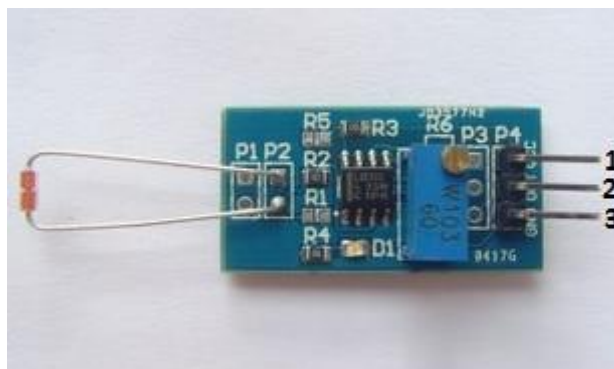
A microprocessor controls the evaluation of the electrical signal. The microprocessor and the display make process adjustment much easier. The user can set the values for the switch points, hysteresis and measuring range by means of programming buttons even without the system temperature being applied.

## Specifications:

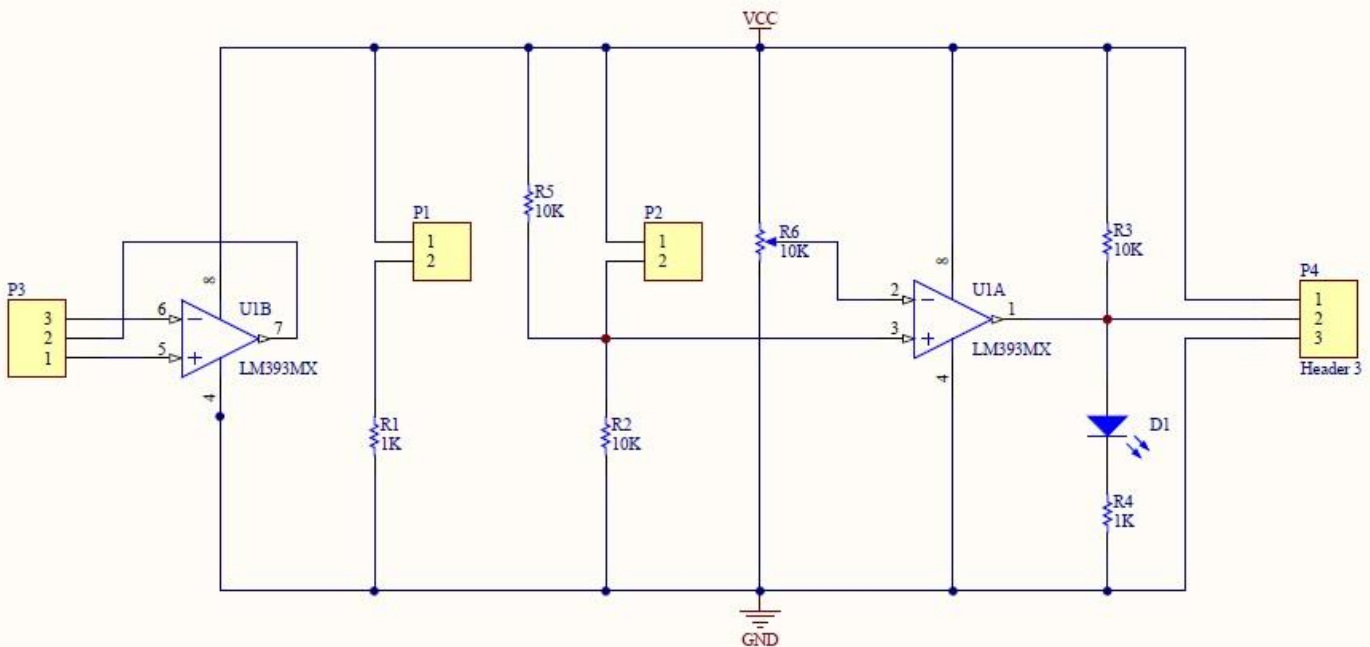
- Onboard LM393 voltage comparators and temperature sensor
- Supports 5V/3.3V input voltage
- On-board signal output indicator
- Sensitivity of signal detection can be adjusted
- Set aside a voltage comparison circuit (P3)
- PCB board size: 30 (mm) x15 (mm)

## Pin Configuration:

1. VCC
2. Output
3. Ground



## Schematic Diagram:



## How to test:

1. Connect your Arduino microcontroller to the computer.
2. Connect the VCC pin of your module to the to the 5V pin of your Arduino.
3. Connect the GND pin of your module to the GND pin of your Arduino.
4. Connect the Output pin of your module to the A0 pin of you Arduino.
5. Enter this program to your Arduino Integrated Development Environment (IDE):

```
boolean STATUS= true;
void setup()
{
  Serial.begin(9600);
}

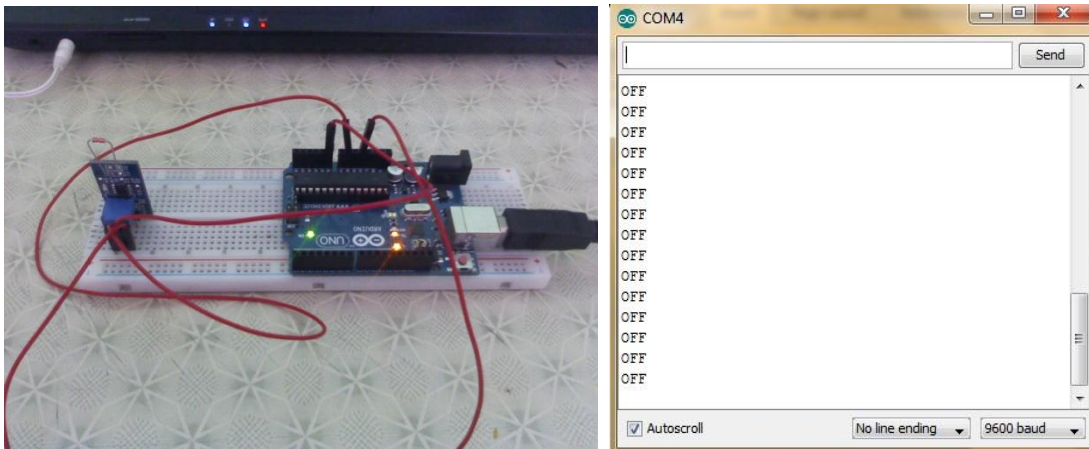
void loop()
{
  while (analogRead(A0)<100)
  {
    if (STATUS) Serial.println("OFF");
    else Serial.println("ON");
    delay(100);
  }
  STATUS = !STATUS;
  delay(500);
}
```

6. Click the Upload Button.
7. Lastly, click the Serial Monitor button.

## Testing Results:

In this example we use the thermal sensor module as a switch.

When there is no thermal interaction:



When exposed to body heat:

