

NTC Temperature Sensor Module

This sensor uses a NTC resistor to measure the ambient temperature.

The sensor is very sensitive but outputs a temperature in Kelvin that needs to be converted by mathematics to produce a reading in Celsius or Fahrenheit.

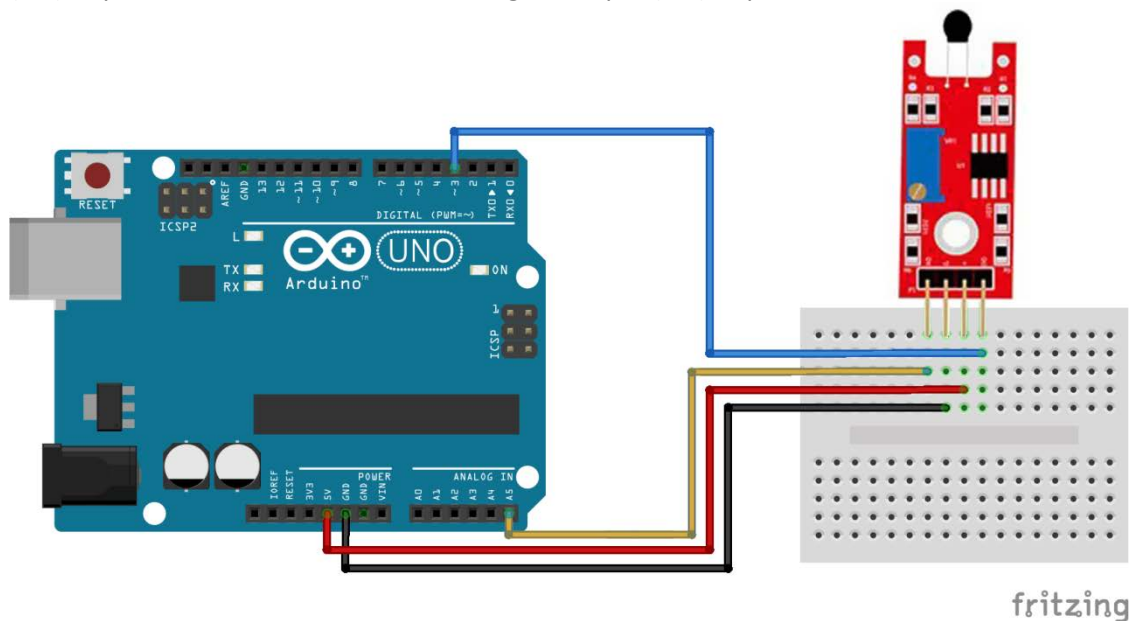
The module has one analog output (AO) and one digital (DO). The analog output will increase voltage with ambient temperature. The digital output will switch when temperature is above a set level.

The threshold for the digital output can be adjusted with the potentiometer.



Pinout and Connection to Arduino

Connect the Power line (middle) and ground (-) to +5 and GND respectively. Connect analog output (AO) to pin A5 on the Arduino. Connect digital output (DO) to pin 3.



Arduino Example Sketch

The following example sketch will light up the LED on pin 13 when the temperature is above set level.

```
int led = 13; //LED pin
int sensor = 3; //sensor pin
int val; //numeric variable

void setup()
{
    pinMode(led, OUTPUT); //set LED pin as output
    pinMode(sensor, INPUT); //set sensor pin as input
}

void loop()
{
    val = digitalRead(sensor); //Read the sensor
    if(val == HIGH)
    {
        digitalWrite(Led, HIGH);
    }
    else
    {
        digitalWrite(Led, LOW);
    }
}
```

The following Arduino Sketch will output the value from the analog output via serial monitor and blink the LED according to the temperature.

```
int sensorPin = A5; // select the input pin for A0
int ledPin = 13; // select the pin for the LED
int sensorValue = 0; // variable to store the value coming from the sensor

void setup ()
{
    pinMode (ledPin, OUTPUT);
    Serial.begin (9600);
}

void loop ()
{
    sensorValue = analogRead (sensorPin);
    digitalWrite (ledPin, HIGH);
    delay (sensorValue);
    digitalWrite (ledPin, LOW);
    delay (sensorValue);
    Serial.println (sensorValue, DEC);
}
```