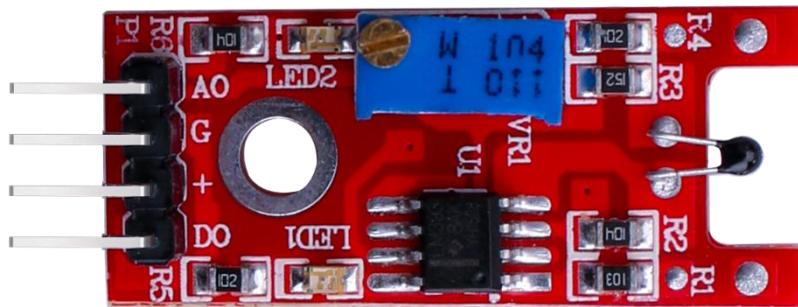


digital temperature sensor module

DESCRIPTION:

This module has both analog signal output pin and digital signal output pin, which is different from analog temperature sensor and other temperature sensor module.

A thermistor is a type of resistor whose resistance is dependent on temperature, more so than in standard resistors. The word is a portmanteau of thermal and resistor. Thermistors are widely used as inrush current limiter, temperature sensors (NTC type typically), self-resetting overcurrent protectors, and self-regulating heating elements.



Specification:

Model No:NTC-MF52 3950

Temperature Range:-55°C~+125°C

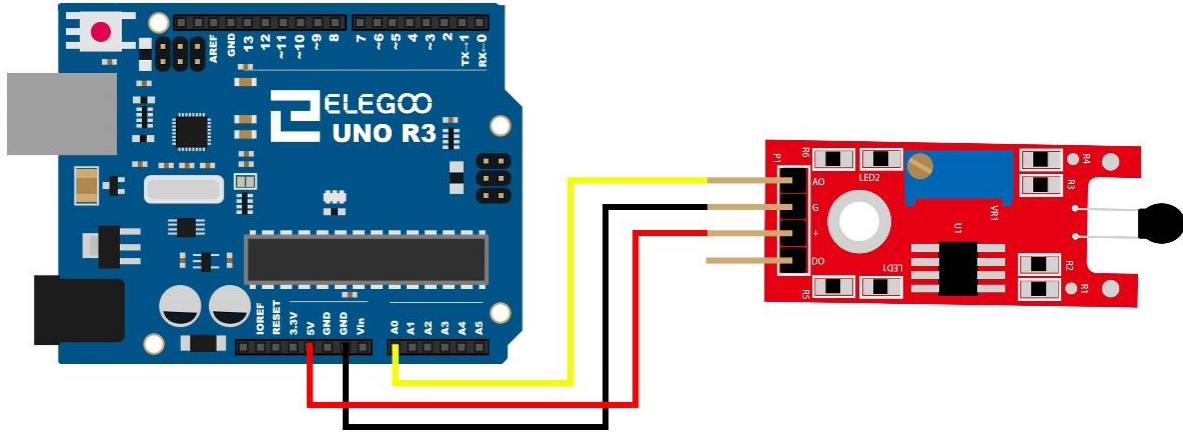
Accuracy:+/- 0.5°C

PIN CONFIGURATION:

- 1、 "AO": Analog signal output pin
- 2、 "G" : Ground
- 3、 "+" : Vcc(reference voltage :5V DC)
- 4、 "DO":Digital signal output pin

Example:

This is a simple code for the NTC thermistor module, Connection as below:



Code:

```
byte NTCPin = A0;

#define SERIESRESISTOR 10000

#define NOMINAL_RESISTANCE 10000

#define NOMINAL_TEMPERATURE 25

#define BCOEFFICIENT 3950

void setup()
{
  Serial.begin(9600);
}

void loop()
{
  float ADCvalue;

  float Resistance;

  ADCvalue = analogRead(NTCPin);

  Serial.print("Analogue ");
```

```
Serial.print(ADCvalue);

Serial.print(" = ");

//convert value to resistance

Resistance = (1023 / ADCvalue) - 1;

Resistance = SERIESRESISTOR / Resistance;

Serial.print(Resistance);

Serial.println(" Ohm");


float steinhart;

steinhart = Resistance / NOMINAL_RESISTANCE; // (R/Ro)

steinhart = log(steinhart); // ln(R/Ro)

steinhart /= BCOEFFICIENT; // 1/B * ln(R/Ro)

steinhart += 1.0 / (NOMINAL_TEMPERATURE + 273.15); // + (1/To)

steinhart = 1.0 / steinhart; // Invert

steinhart -= 273.15; // convert to C


Serial.print(steinhart);

Serial.println(" oC");

delay(1000);

}
```