

**GAS SENSOR MQXXX**

## MQ-5 Sensor Pinout

- Power
- GND
- Analog Output
- Digital Output



**MQ-5 Natural Gas Sensor**  
PINOUT



**VCC** To +ve of power supply

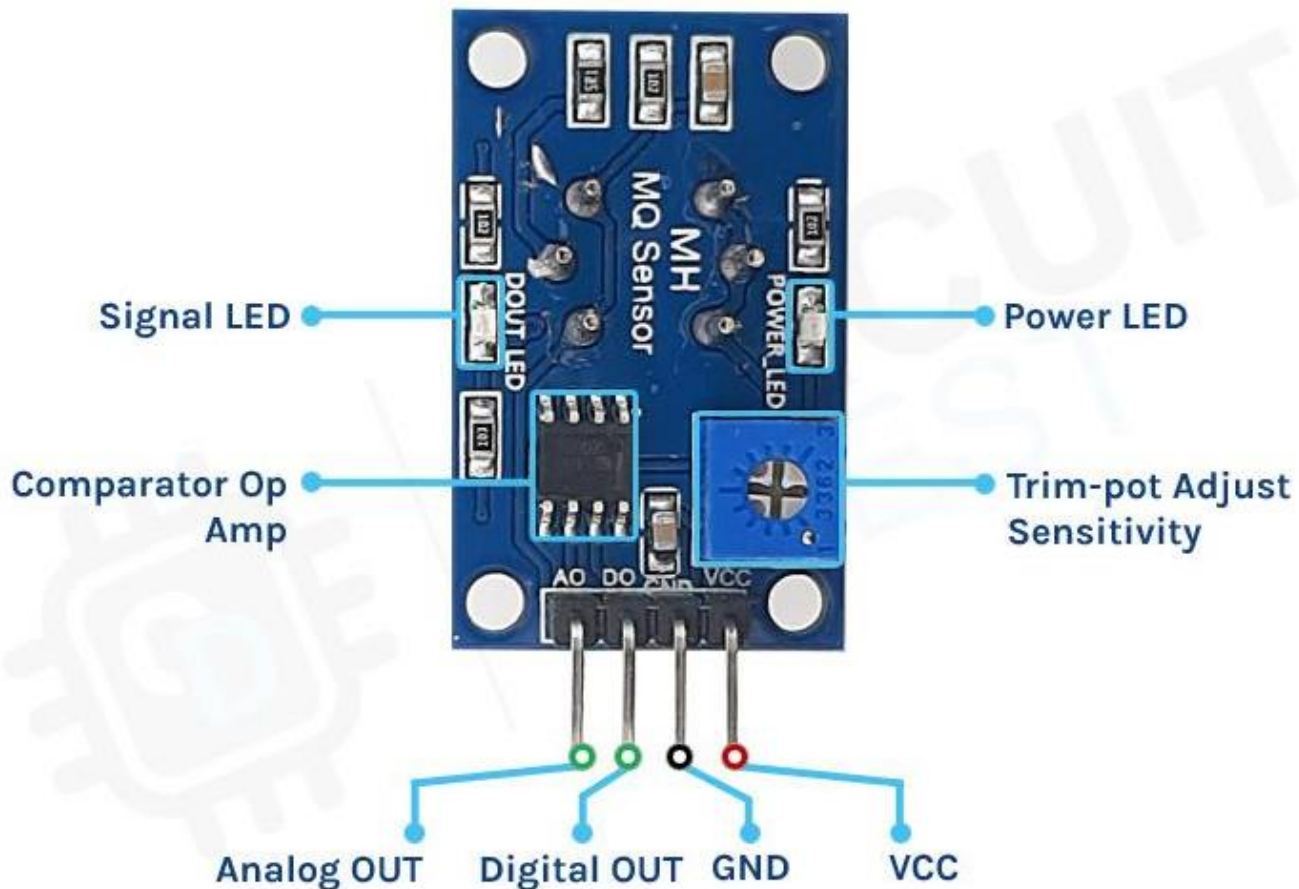
**GND** To -ve of power supply

**DOUT** Sensor data output in digital form

**AOUT** Sensor data output in analog form

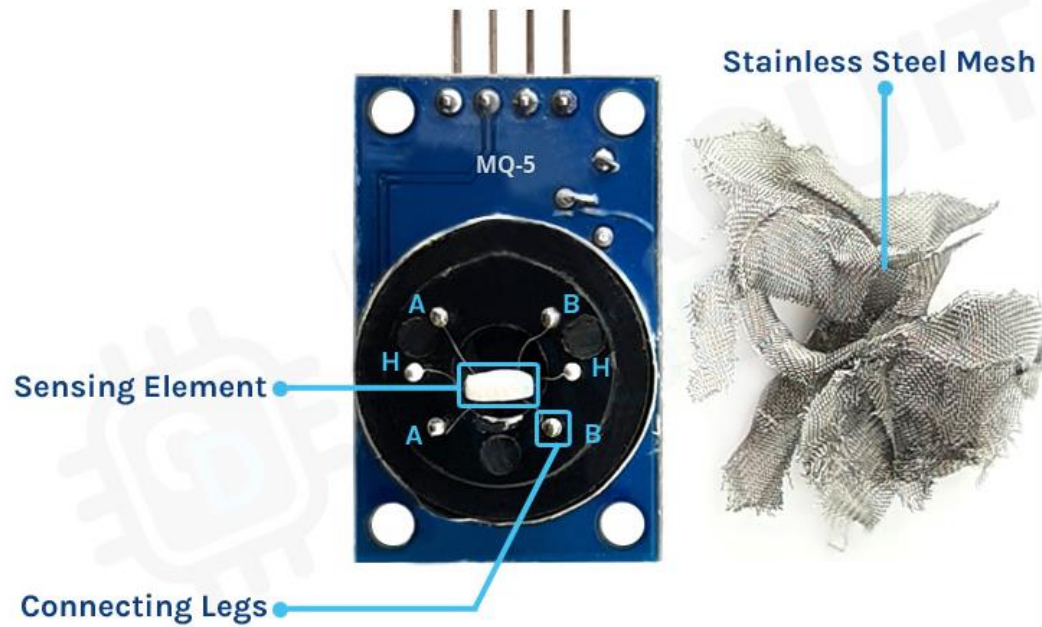
## MQ-5 Sensor Module – Parts

The MQ-5 Sensor is popular among beginners since it detects combustible gases in most Arduino projects. Likewise, these are low-cost, easy-to-use sensors with a wide detection range that may be reduced to modify sensitivity. The component markings for the MQ-5 Sensor are given below.

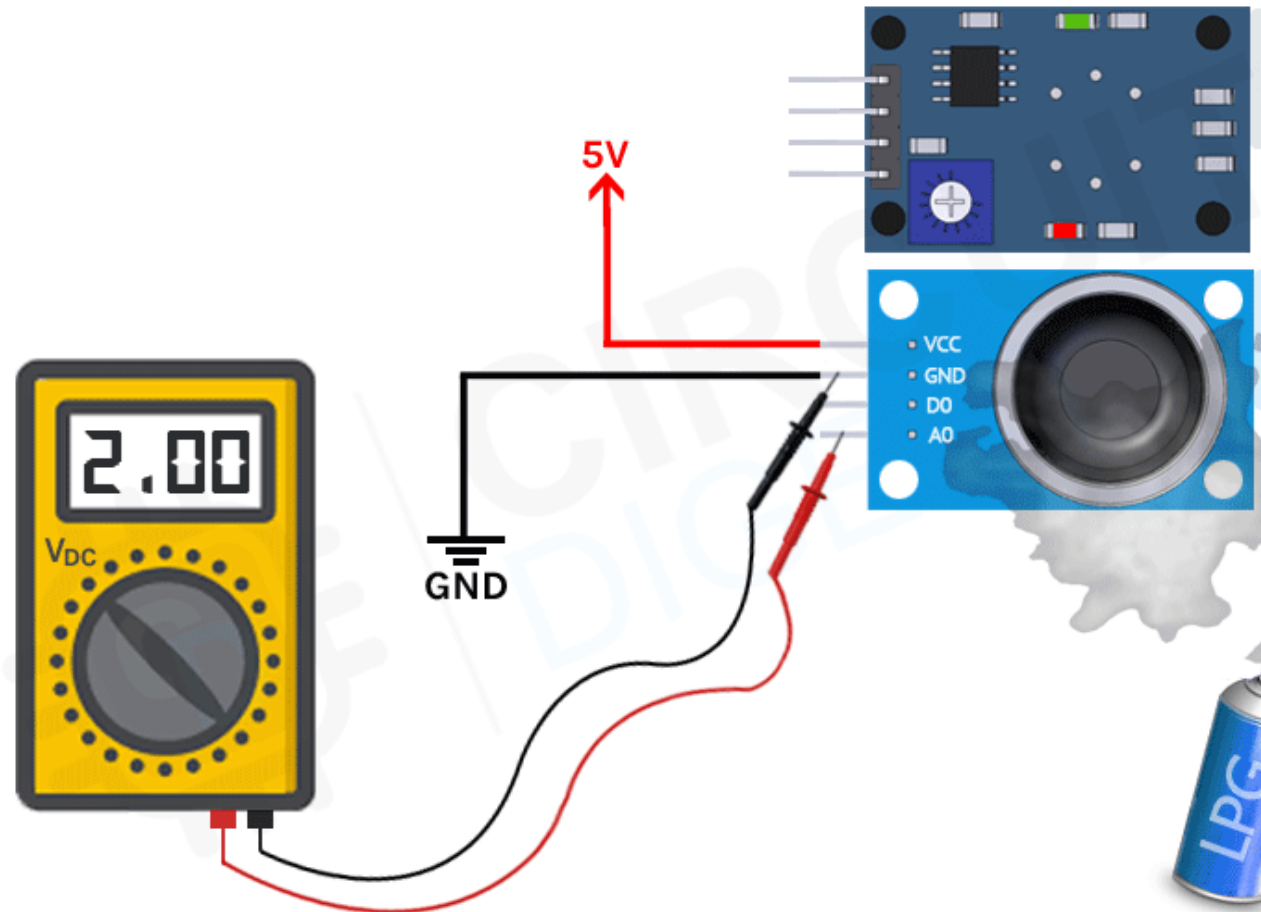


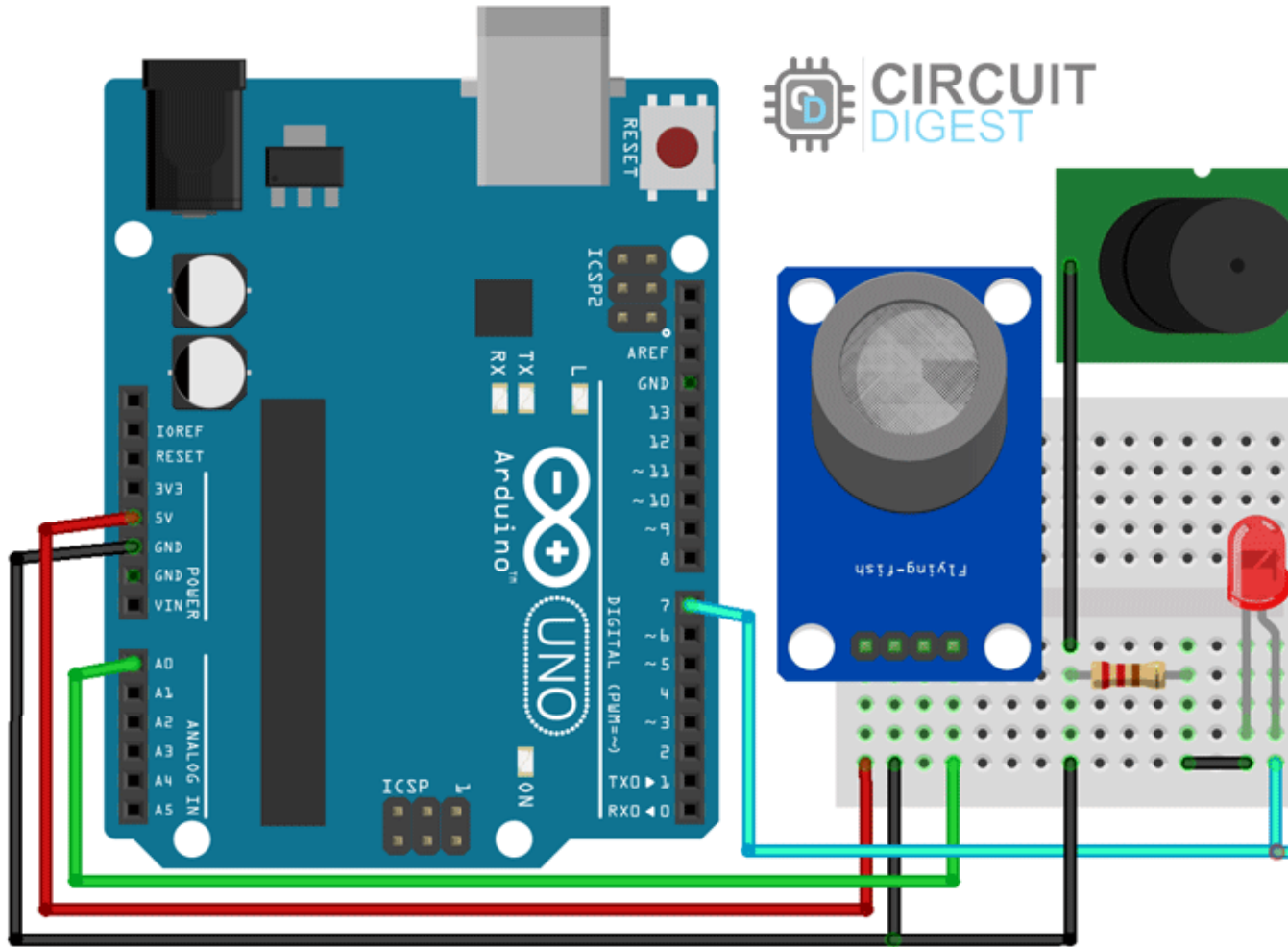
As in the illustration below, a heating element is included in this stainless steel mesh.



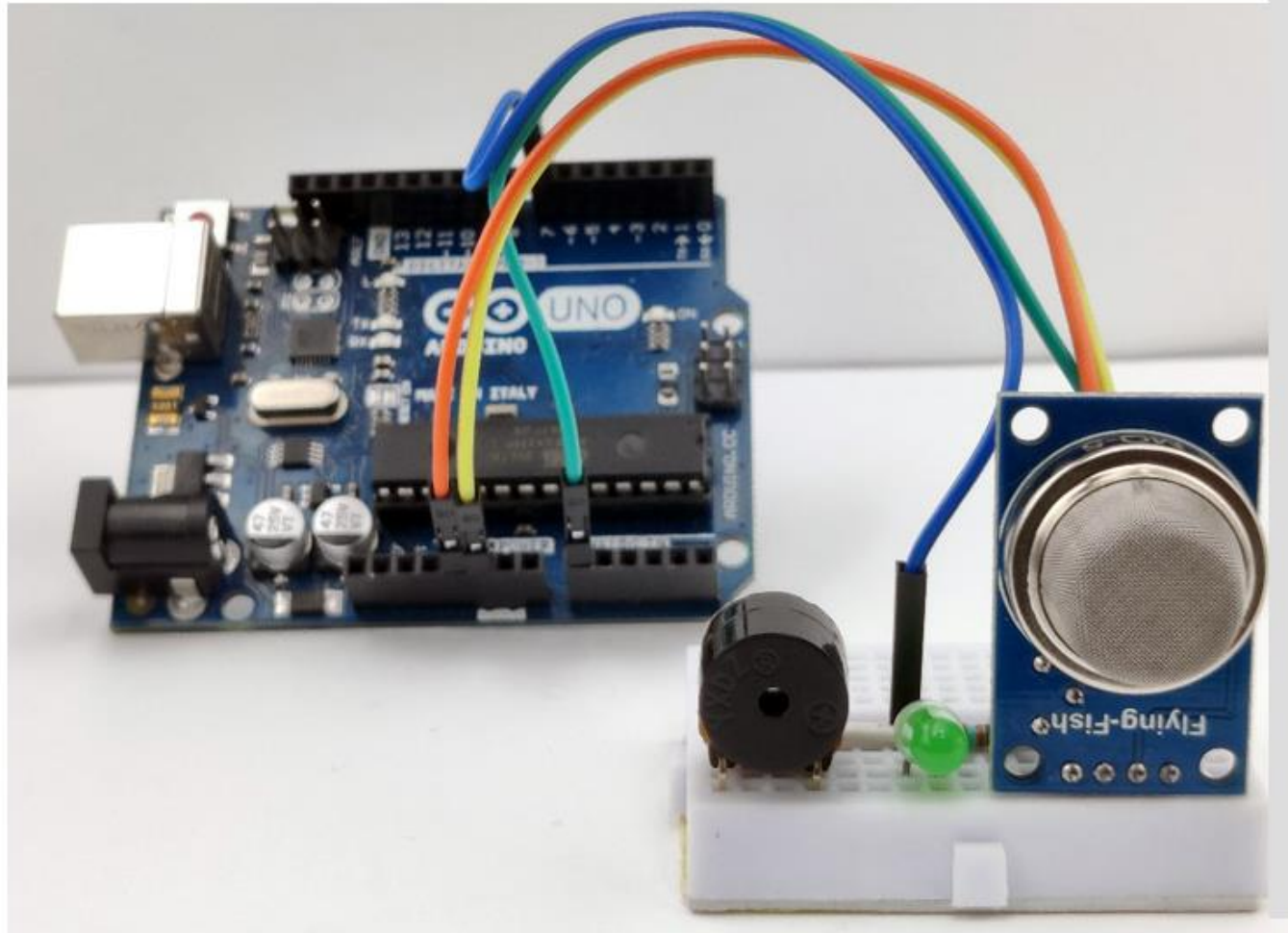


## How to use MQ-5 Sensor to Detect Combustible Gas?











## Arduino Code for Interfacing MQ-5 Gas Sensor Module

The Arduino MQ-5 gas sensor module's coding is straightforward. We're simply reading the Sensor's analog data and turning the LED and Buzzer ON or OFF. Please bear in mind that we are just processing analog data from the Sensor; the module's inbuilt LED will light up to indicate digital data.

We define two macros: the first one is for the output pin 7 and the second one is sensors analog input pin A0.

```
#define ledPin 7  
#define Sensor A0
```

We set the pins to take input from the Sensor and the output from the Arduino to drive the LED and Buzzer via Arduino's pin 7.

```
{  
  pinMode(sensor, INPUT);  
  pinMode(ledPin, OUTPUT);  
  Serial.begin(9600);  
}
```

As mentioned before, the MQ-5 needs to heat up for a while before giving a precise measurement of the Gas. This section of the code halts everything and for 20 seconds heats up the Sensor.

```
Serial.println("MQ5 Heating Up!");  
delay(20000); // allow the MQ5 to warm up
```

This section of the code reads the data from the analog pin from the sensor module and prints the value on the serial monitor.

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Serial.println("MQ5 Heating Up!");  
delay(20000); // allow the MQ5 to warm up
```

This section of the code reads the data from the analog pin from the sensor module and prints the value on the serial monitor.

```
gas_value = analogRead(sensor);  
Serial.print("Sensor Value:");  
Serial.println(gas_value);
```

If the sensor value goes above 250, the Led and Buzzer will turn on and notify both audibly and visibly that Gas is present in the environment.

```
if (gas_value > 250) {  
    digitalWrite(ledPin, HIGH);  
}  
else{  
    digitalWrite(ledPin, LOW);  
}
```