

ABOUT THIS PROJECT

In this example, you will read the sensor analog output voltage and when the smoke reaches a certain level, it will make sound a buzzer and a red LED will turn on.

When the output voltage is below that level, a green LED will be on.

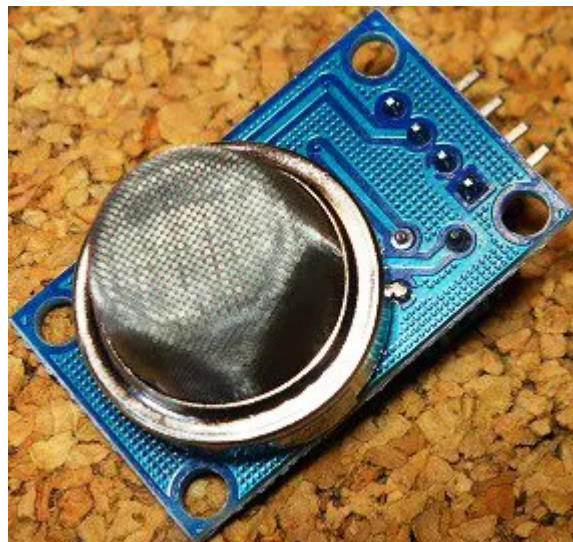
What is an MQ-2 Smoke Sensor?

The MQ-2 smoke sensor is sensitive to smoke and to the following flammable gases:

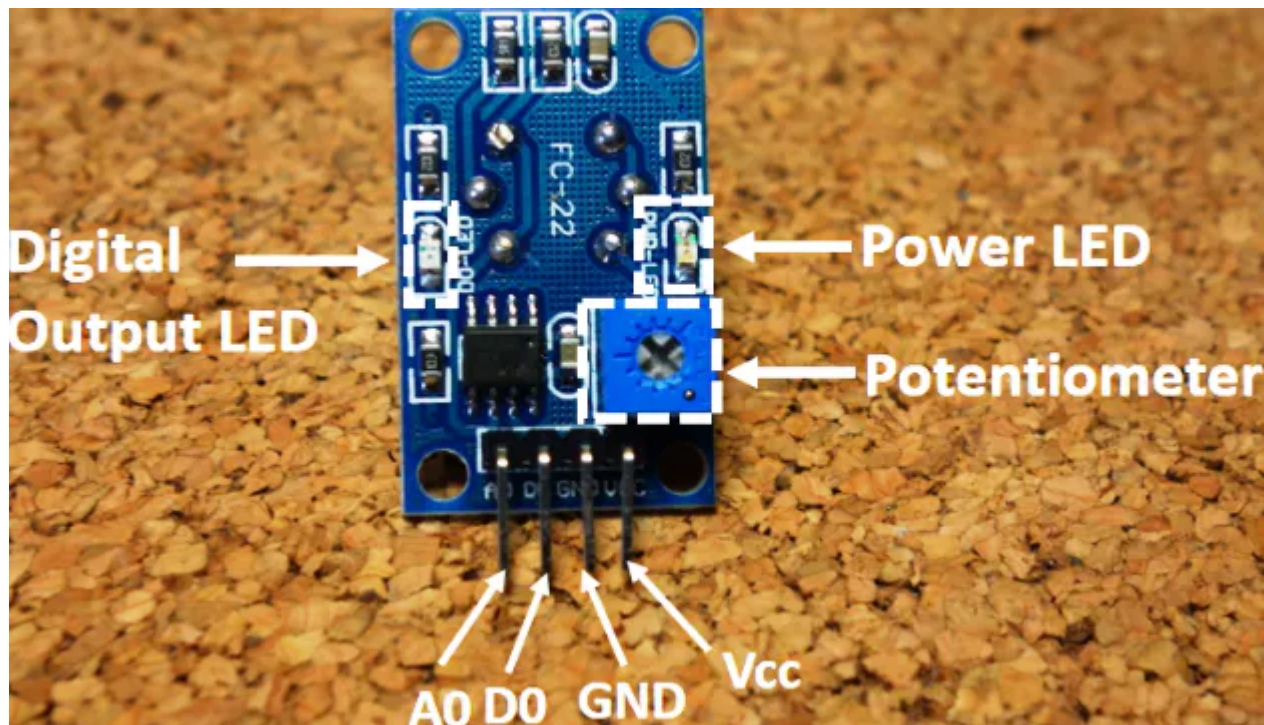
- LPG
- Butane
- Propane
- Methane
- Alcohol
- Hydrogen

The resistance of the sensor is different depending on the type of the gas.

The smoke sensor has a built-in potentiometer that allows you to adjust the sensor sensitivity according to how accurate you want to detect gas.



MQ-2 sensor



Sensor Pin-out details

How does it Work?

The voltage that the sensor outputs changes accordingly to the smoke/gas level that exists in the atmosphere. The sensor outputs a voltage that is proportional to the concentration of smoke/gas.

In other words, the relationship between voltage and gas concentration is the following:

- **The greater** the gas concentration, **the greater** the output voltage
- **The lower** the gas concentration, **the lower** the output voltage



The output can be an analog signal (A0) that can be read with an analog input of the Arduino or a digital output (D0) that can be read with a digital input of the Arduino.

Pin Wiring

The MQ-2 sensor has 4 pins.

Pin-----Wiring to Arduino Uno

A0-----Analog pins

D0-----Digital pins

GND-----GND

VCC-----5V

So, before jumping into the coding part, let's check whether we've assembled all the necessary hardware components.