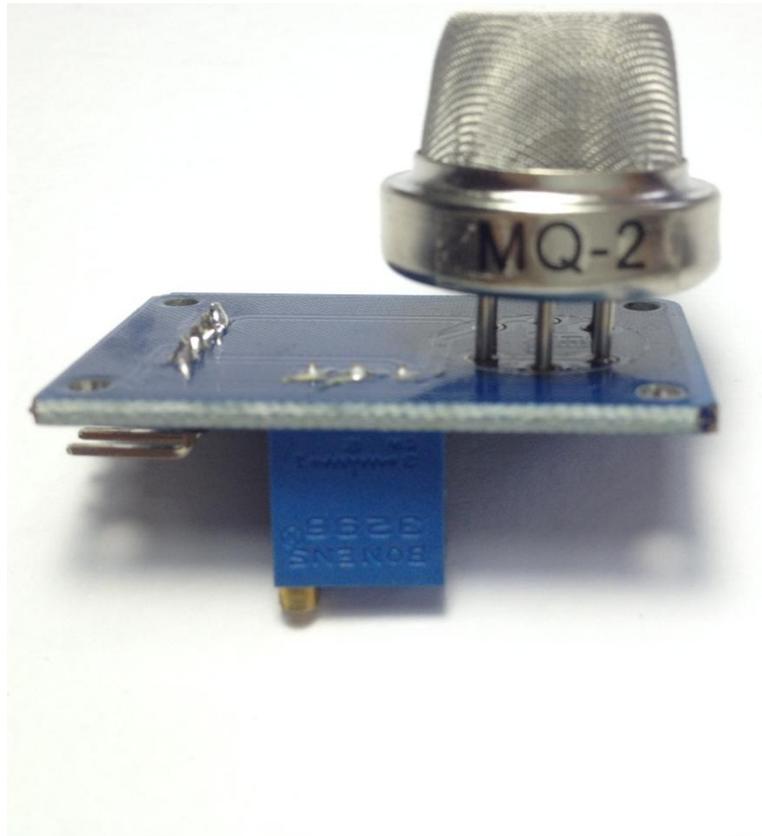


Smoke Sensor Module



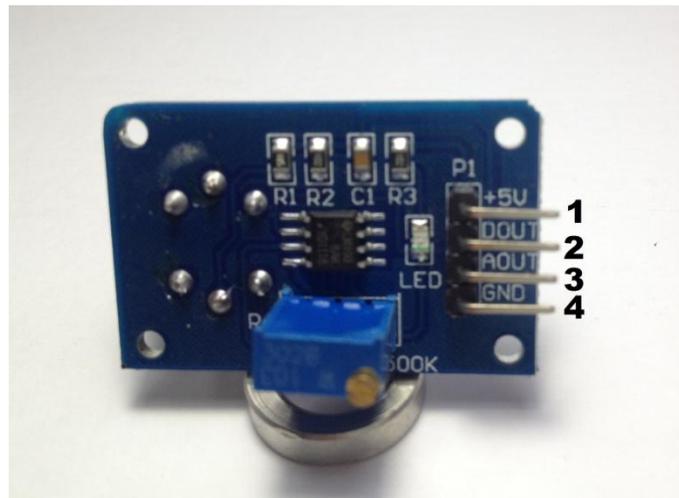
General Description:

A smoke sensor is a device that senses smoke, typically as an indicator of fire. Commercial and residential security devices issue a signal to a fire alarm control panel as part of a fire alarm system, while household detectors, known as smoke alarms, generally issue a local audible or visual alarm from the detector itself.

The Analog Smoke/LPG/CO Gas Sensor (MQ2) module utilizes an MQ-2 as the sensitive component and has a protection resistor and an adjustable resistor on board. The MQ-2 gas sensor is sensitive to LPG, i-butane, propane, methane, alcohol, Hydrogen and smoke. It could be used in gas leakage detecting equipments in family and industry. The resistance of the sensitive component changes as the concentration of the target gas changes.

Specifications:

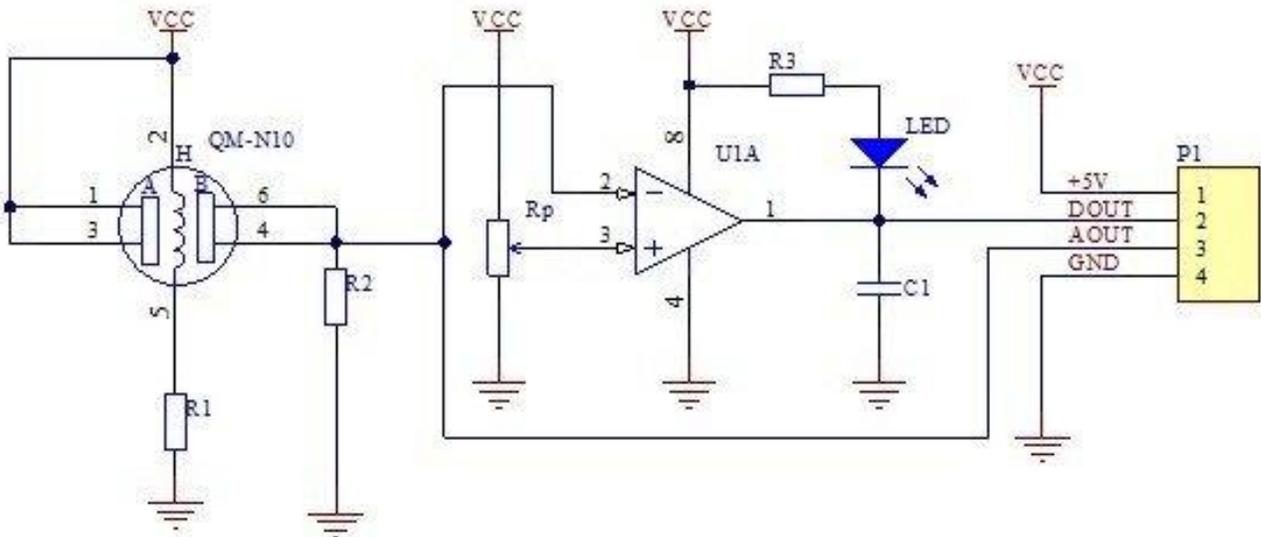
- Dimension: 32mm x 22mm x 30mm Specification:
- Operating voltage: 5v
- Detection Zone: 300 - 10000ppmm
- Characteristic Gas: 1000ppmm
- Sensitivity: R in air/ R in typical gas > 5
- Response Time: $< 10s$
- Recovery time: $< 30s$
- Heating Resistance: 31ohm
- Heating Current: $< 181mA$
- Heating Power: $< 900mW$
- Measuring Voltage: < 24
- Ambient Temperature: $-20C - 55C$
- Humidity: $< 95\%$
- Oxygen Content: 21%



Pin Configuration:

1. VCC
2. D0 pin
3. A0 pin
4. Ground

Schematic Diagram:



How to test:

1. Connect your Arduino microcontroller to the computer.
2. Connect the VCC pin of your module 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 your Arduino.
5. Enter this program to your Arduino Integrated Development Environment (IDE):

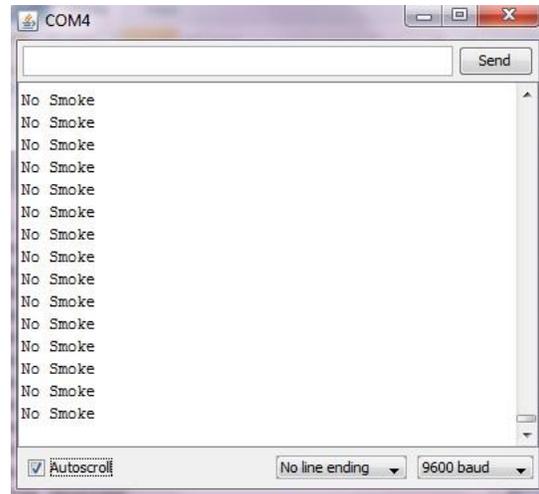
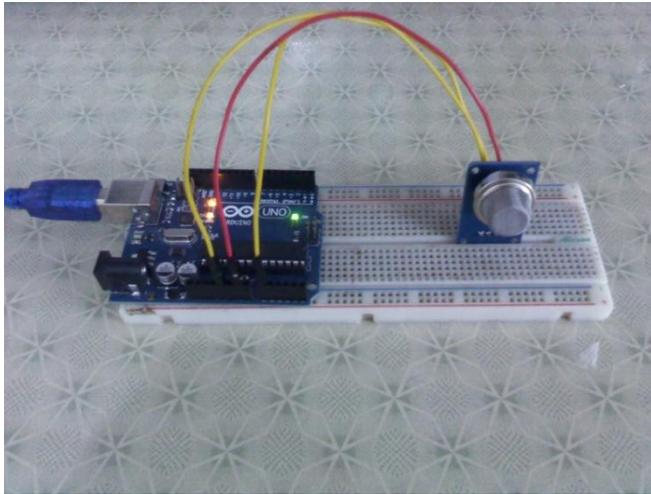
```
void setup()
{
  Serial.begin(9600);
}

void loop()
{
  if (analogRead(A0) < 100) Serial.println("No Smoke");
  else Serial.println("Smoke Detected!");
  delay(100);
}
```

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

Testing Results:

When there is no smoke exposure:



When exposed to a burning paper:

