# Electronic Brick of Gas Sensor

Overview

What is an electronic brick? An electronic brick is an electronic module which can be assembled like Lego bricks simply by plugging in and pulling out. Compared to traditional universal boards and circuit modules assembled with various electronic components, electronic brick has standardized interfaces, plug and play, simplifying construction of prototype circuit on one's own. There are many types of electronic bricks, and we provide more than twenty types with different functions including buttons, sensors, Bluetooth modules, etc, whose functions cover from sensor to motor drive, from Ethernet to wireless communication via Bluetooth, and so on. We will continue to add more types to meet the various needs of different projects.

The electronic brick of gas sensor can be used in fire protection systems to detect hydrogen, isobutane, liquefied petroleum gas, methane, carbon monoxide, alcohol, smoke, propane and other harmful gases.

Features

1. Plug and play, easy to use. Compatible with the mainstream 2.54 interfaces and 4-Pin Grove interfaces in the market.
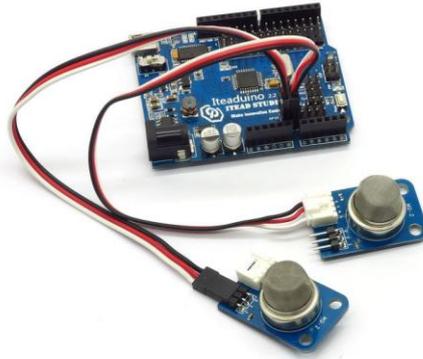
2. With use of M4 standard fixed holes, compatible with M4-standard kits such as Lego and Makeblock.


Specifications

PCB size	33.0mm X 14.0mm X 1.6mm
Working voltage	5V DC
Operating voltage	5V DC
Compatible interfaces	2.54 3-pin interface and 4-pin Grove interface[1]

Note 1 :   S for analog output port, V and G for voltage at the common collector and ground respectively

Electrical characteristics

Parameter	Min.	Typical	Max.	Unit
Working voltage	4.5	5	5.5	VDC
Analog output voltage (VCC=5V)	0	-	5	V
Working current (VCC=5V)	-	122	-	mA
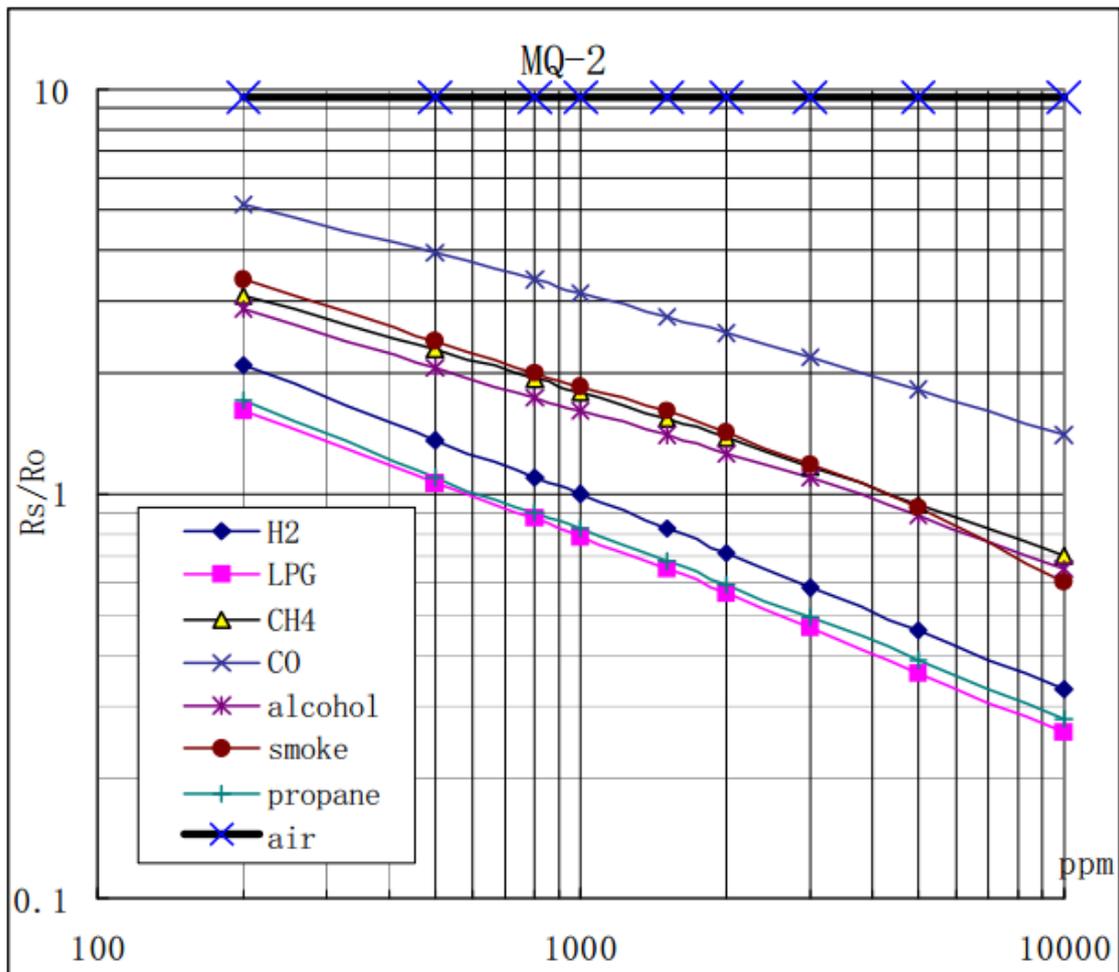
The sensitive characteristics of MQ-2 to various gases

DEMO

Connect S port of electronic brick of gas sensor to A0 port of Arduino board, and we will use the following program to read the analog value. When the analog value exceeds the threshold, LED lamp will flash.

```
const int ledPin =   13;         // the number of the LED pin
const int thresholdvalue=400; //The threshold to turn the led on
void setup() {
     pinMode(ledPin, OUTPUT);
}
void loop() {
   int sensorValue = analogRead(A0); //use A0 to read the electrical signal
   if(sensorValue>thresholdvalue)
   digitalWrite(ledPin,HIGH); //if the value read from A0 is larger than 400,then light the LED
   delay(200);
   digitalWrite(ledPin,LOW);
}
```

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Revision record

Version	Description	Date	Written by
v1.0	Initial edition	12th, April, 2013	Stan Lee