

MQ-3 Gas Sensor User Manual

1. Features

| | |
|----------------------|---------------|
| Sensitive gas | Alcohol gas |
| Boost converter chip | PT1301 |
| Operating voltage | 2.5V-5.0V |
| Dimensions | 40.0mm*21.0mm |
| Fixing hole size | 2.0mm |

Operating principle:

MQ-3 gas sensor applies SnO₂ which has a lower conductivity in the clear air as a gas-sensing material. In an atmosphere where there may be alcohol gas, the conductivity of the gas sensor raises along with the concentration of the alcohol gas increases.

2. Applications

This module can be applied to vehicle alcohol gas alarm, portable alcohol gas detection device and etc.

3. Interfaces

| Pin No. | Symbol | Descriptions |
|---------|--------|-----------------------------------|
| 1 | DOUT | Digital output |
| 2 | AOUT | Analog output |
| 3 | GND | Power ground |
| 4 | VCC | Positive power supply (2.5V-5.0V) |

4. How to use

We will illustrate the usage of the module with an example of alcohol gas detection by connecting a development board.

- ① Download the relative codes to the development board.
- ② Connect the development board to a PC via a serial wire and the module to the development board. Then, power up the development board and start the serial debugging software.

Here is the configuration of the connection between the module and the development board..

| Port | STM32 MUC pin |
|------|---------------|
| DOUT | GPIOA.4 |
| AOUT | GPIOA.6 |
| GND | GND |
| VCC | 3.3V |

| Port | Arduino pin |
|------|-------------|
| DOUT | D2 |
| AOUT | A0 |
| GND | GND |
| VCC | 5V |

- ③ Warn-up the sensor for a minute.
- ④ The detected result can be checked by the LED indicator on the module. Put the sensor into a container filled with alcohol gas, you will find the indicator turns on. While take the sensor out of the container, you can see the indicator turns off.