MQ-135 Gas Sensor User Manual

1. Features

Sensitive gas	Ammonia, nitrogen oxide, alcohols, aromatic compounds, sulfide and smoke
Boost converter chip	PT1301
Operating voltage	2.5V-5.0V
Dimensions	40.0mm*21.0mm
Fixing hole size	2.0mm

Operating principle:

MQ-135 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 polluting gas, the conductivity of the gas sensor raises along with the concentration of the polluting gas increases. MQ-135 performs a good detection to smoke and other harmful gas, especially sensitive to ammonia, sulfide and benzene steam. Its ability to detect various harmful gas and lower cost make MQ-135 an ideal choice of different applications of gas detection.

2. Applications

This module can be applied to harmful gas detecting devices.

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 sensitive 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 sensitive gas, you will find the indicator turns on. While take the sensor out of the container, you can see the indicator turns off.