

MQ5 LPG smoke detector belongs to the MQ gas sensor family. MQ5 is a sensitive gas sensor that can detect or sense liquefied gas, propane, butane, natural, and other combustible gases in the environment. And, is thus used in gas leakage detectors, other industrial gas detectors, or monitoring devices. The output voltage of the sensor increases when the concentration of gases or a gas increases. The sensitivity of the sensor is adjustable by using the onboard potentiometer.

The sensitive material of the MQ5 gas sensor is SnO₂, which with lower conductivity in clean air. When the target flammable gas exists, the sensor's conductivity gets higher along with the gas concentration rising. MQ5 gas sensor has a high sensitivity to Methane, Propane, and Butane, and could be used to detect both Methane and Propane. The sensor could be used to detect different combustible gas, especially Methane, it is low cost and suitable for a vast array of application



MQ5 LPG Gas Sensor

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Sensitive for LPG, natural gas, coal gas

Output voltage boosts along with the concentration of the measured gases increases

Fast response and recovery

Adjustable sensitivity

Signal output indicator

Indication of the signal output.

Dual signal output (analog output, and TTL level output)

The TTL output signal is low. (When low output signal light, and can be connected directly to the microcontroller)

Has a long life and reliable stability

MQ5 Gas Sensor Pinout



Pin Name	Pin No.	Description
Vcc	1	This pin powers the module, typically the operating voltage is +5V
GND	2	Used to connect the module to the system ground
Digital Out	3	You can also use this sensor to get digital output from this pin, by setting a threshold value using the potentiometer
Analog Out	4	This pin outputs 0-5V analog voltage based on the intensity of the gas

Specifications

Model: MQ-5

Sensor Type: Semiconductor

Standard Encapsulation: Bakelite, Metal Cap

Target Gas: LPG, CH4

Detection range: 300 ~ 10000ppm

Loop Voltage Vc: 24V DC

Output Voltage Vs: 2.5V ~ 4.0V (in 2000ppm C3H8)

Preheat time: Over 48 Hours

Concentration Slope: $<0.6(R3000\text{ppm}/R1000\text{ppm C}_3\text{H}_8)$

Applications

They are used in gas leakage detecting equipment in family and industry and are suitable for detecting LPG, natural gas, and town gas, avoiding the noise of alcohol and cooking fumes and cigarette smoke.