DYNAMIC SOLUTIONS

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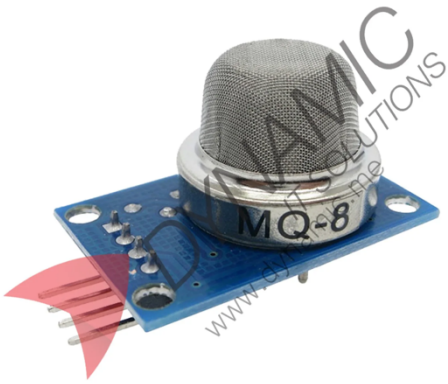
MQ-8 Hydrogen Gas Sensor



Features:

The MQ-8 is a semiconductor sensor specifically designed for detecting hydrogen gas (H_2). It utilizes a SnO2 sensing layer that increases conductivity in the presence of hydrogen, and outputs a signal that can be processed with a simple circuit. With high selectivity for hydrogen and strong anti-interference properties against other gases, the MQ-8 is a low-cost, reliable solution for both residential and industrial hydrogen gas detection systems.

Specifications	
Model	MQ-8
Sensor Type	Semiconductor
Encapsulation	Bakelite with metal cap
Detection Gas	Hydrogen (H2)
Concentration Range	100–10000 ppm (H2 gas)
Loop Voltage (Vc)	<= 24 V DC
Heater Voltage (Vh)	5.0 V +/- 0.1 V (AC or DC)
Load Resistance (RL)	Adjustable
Heater Resistance (Rh)	29 Ohm +/- 3 Ohm at room temperature
Heater Power Consumption	<= 900 mW
Sensitivity	Rs (in air) / Rs (in 1000 ppm H2) >= 5
Output Voltage (Vs)	2.5 V – 4.0 V (in 1000 ppm H2)
Concentration Slope (alpha)	<= 0.6 (R1000ppm / R400ppm H2)
Standard Operating Temp	20 +/- 2 °C
Standard Humidity	55% +/- 5% RH
Standard Test Voltages	Vc: 5.0 V +/- 0.1 V, Vh: 5.0 V +/- 0.1 V
Preheat Time	Over 48 hours
Use Cases	Hydrogen leak detection, city gas safety systems, industrial flammable gas alarms, portable hydrogen testers

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Pinouts:

Pin Name	Type	Description
VCC	Power Input	Power supply input (5 V recommended)
GND	Power Ground	Common ground
AO	Analog Output	Analog voltage output proportional to hydrogen concentration
DO	Digital Output	Digital signal output when H2 level exceeds threshold (if comparator is present)