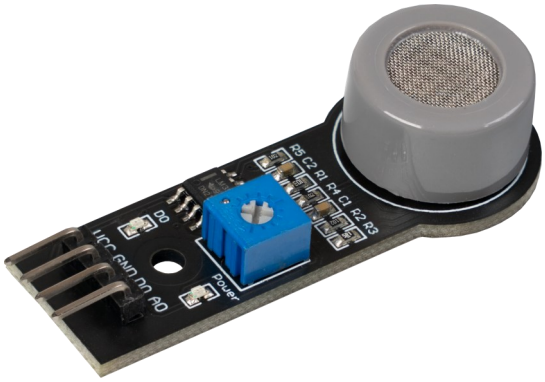
SEN-MQ7

Analog carbon monoxide sensor on module



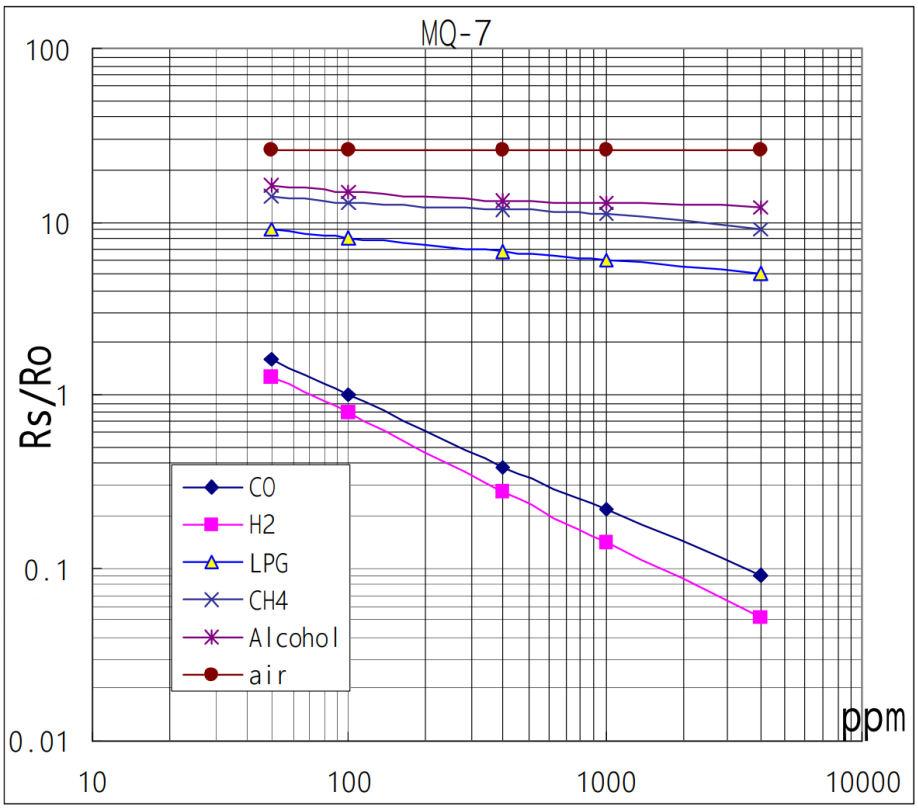
This analog gas sensor has a small heating part with an electronical chemical sensor. It is suitable for indoor usage. The sensor can output exact values only after warm-up phase.
The heating element must be operated with two different voltages (5 V / 1,4 V).

MAIN FEATURES	
Measurement range	300 - 10'000 ppm
Measurable substances	Carbon monoxide (CO)
Application areas	Detecting household gas leaks, industrial gas alarm, robotic, microcontroller projects
Compatible with	Raspberry Pi (with AD-converter), Arduino. etc.
Special features	High sensitivity, which can be adjusted by potentiometer, low temperature detection
Dimensions	52 x 20 x 13 mm
Items delivered	SEN-MQ7

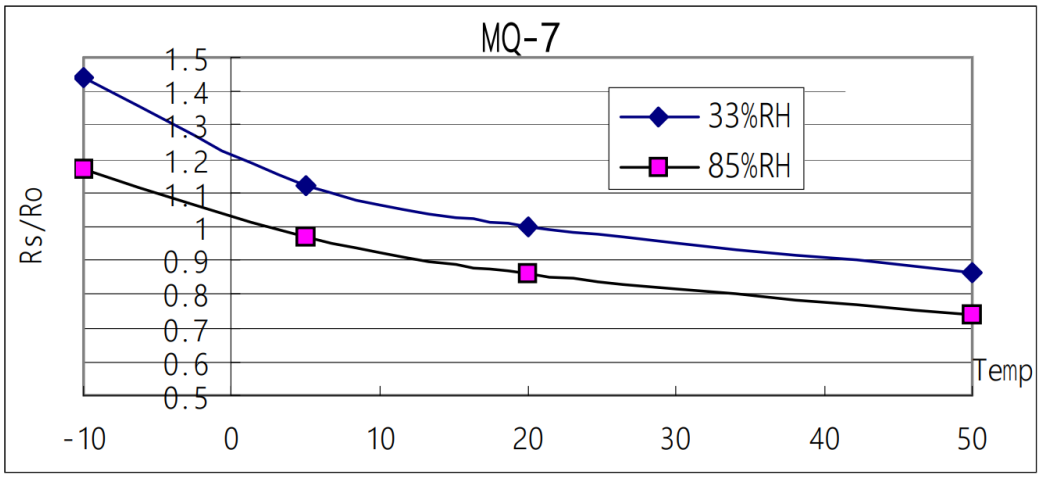
FURTHER SPECIFICATIONS	
Analog Output	values will be processed by microcontroller
Digital Output	thresholds can be set
Preheating times Less than 1 month storage For 1-6 months storage For over 6 months storage	 >= 48 hours >= 72 hours >= 168 hours
Heating voltage	V_{HH} = 5.0 V ± 0.2 V V_{HL} = 1.4 V ± 0.2 V
Heating time	90 sec. ± 1 sec. (V_{HL}) 60 sec. ± 1 sec. (V_{HH})
Heating resistance	31 Ω ±3Ω (room temp.)
Heating power	≤ 350 mW
Sensitivity	2-20 KΩ in 100ppm CO
Operation temperature	-20 - 50 °C

FURTHER DETAILS	
Article No.	SEN-MQ7
EAN:	4250236819983
Customs Tariff No.	90269000

Published: 2025.08.25



This shows the typical sensitivity characteristics of the MQ-7. Rs means resistance of the sensor in different gases, Ro means resistance of sensor in



Correlation between sensor resistance(Rs) and ambient temperature and humidity

The resistance of the sensor can be calculated with the following formula:

$$Rs=(Vc/VRL-1)\times RL$$

Published: 2025.08.25