

TECHNICAL DATA

MQ-216 GAS SENSOR

FEATURES

- Wide detecting scope
- Stable and long life
- Fast response and High sensitivity
- Simple drive circuit

APPLICATION

They are used in gas leakage detecting equipment in family and industry, are suitable for detecting of LPG, i-butane, propane, methane ,alcohol, smoke.

SPECIFICATIONS

A. Standard work condition

Symbol	Parameter name	Technical condition	Remarks
Vc	Circuit voltage	6V±0.1	AC OR DC
RL	Load resistance	50	
PH	Heating consumption	less than 100mw	@20mA

B. Environment condition

Symbol	Parameter name	Technical condition	Remarks
Tao	Using Tem	0 -50	
Tas	Storage Tem	0 -70	
RH	Related humidity	less than 95% Rh	
O ₂	Oxygen concentration	21%(standard condition)Oxygen concentration can affect sensitivity	Minimum value is over 2%

C. Sensitivity characteristic

Symbol	Parameter name	Technical parameter	Remark 2
Rs	Sensing Resistance	30 -200 (1000ppm isobutane)	Detecting concentration scope : 500ppm-10000ppm LPG and propane 500ppm-10000ppm butane 3000ppm-20000ppm methane 300ppm-3000ppm Alcohol
(3000/1000) isobutane	Concentration Slope rate	0.6	
Standard Detecting Condition	Temp: 20 ± 2 Humidity: 65%± 5%	Vc:6V±0.1 RL=50	
Preheat time	Over 24 hour		

D. Structure and configuration, basic measuring circuit

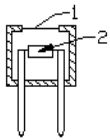


Fig.1

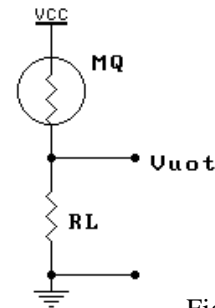


Fig.2

Structure and configuration of MQ-216 gas sensor is shown as Fig. 1, micro Tin Dioxide (SnO₂) sensitive bead with measuring electrode are fixed into a crust composed of plastic and stainless steel gauze, Without the heater providing necessary working conditions for sensitive components. The enveloped MQ-216 have 2 pin , they are used to fetch signals.

Electric parameter measurement circuit is shown as Fig.2

E. Sensitivity characteristic curve

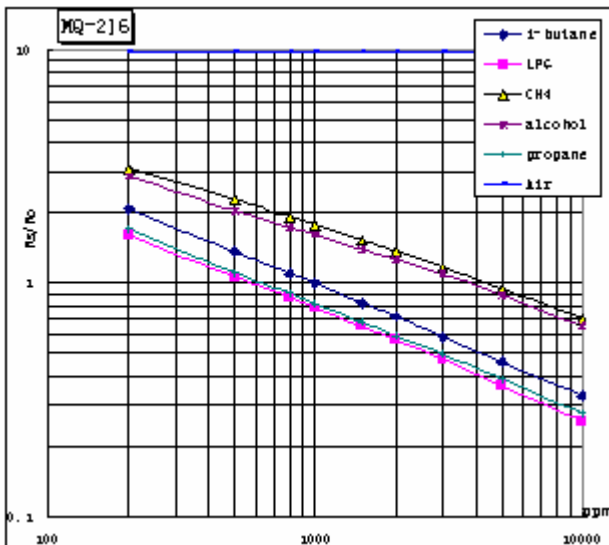


Fig.2 sensitivity characteristics of the MQ-216

Fig.3 is shows the typical sensitivity characteristics of the MQ-216 for several gases.

in their: Temp: 20 °C
 Humidity: 65%
 O₂ concentration 21%
 RL=50

Ro: sensor resistance at 1000ppm of i-butane in the clean air.
 Rs: sensor resistance at various concentrations of gases.

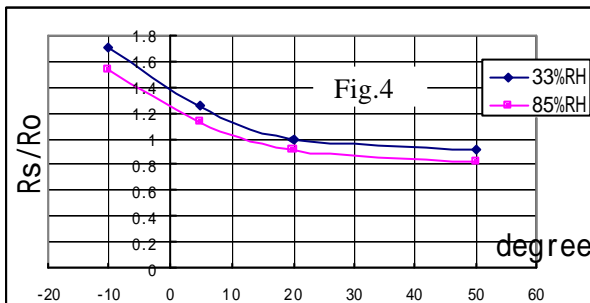


Fig.4 is shows the typical dependence of the MQ-216 on temperature and humidity.

Ro: sensor resistance at 1000ppm of i-butane in air at 33%RH and 20 degree.
 Rs: sensor resistance at 1000ppm of i-butane at different temperatures and humidities.

SENSITIVITY ADJUSTMENT

Resistance volume of MQ-216 is difference to various kinds and various concentration gases. So, When using this components, sensitivity adjustment is very necessary. we recommend that you calibrate the detector for 1000ppm iso-butane*<i>i-C₄H₁₀</i>* concentration in air .

When accurately measuring, the proper alarm point for the gas detector should be determined after considering the temperature and humidity influence.

Basic application circuit

