

MC105

Catalytic Combustible Gas Sensor

MC105 gas sensor works with catalytic combustible principle, two legs of a bridge are made up of detecting and compensating element in pair, the resistance of testing one will be rising against combustible gas, the output voltage of bridge is changed, so its voltage variable is increased in direct proportion to gas concentration. The compensating acts with reference and one humidity-temperature.

Feature

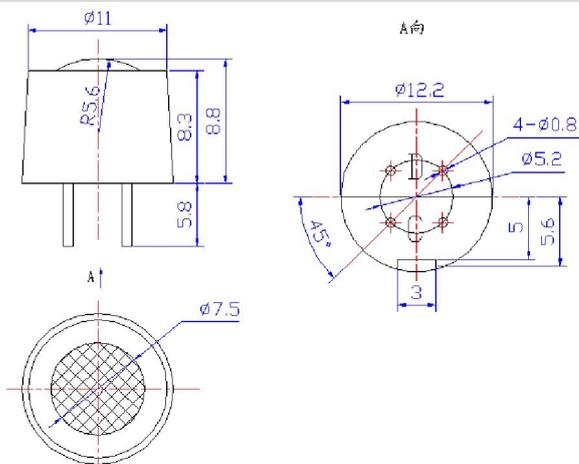
- Bridge output voltage in linear
- Fast response
- Good repeatability and selectivity
- Steady and reliable
- Resist H2S poisoning



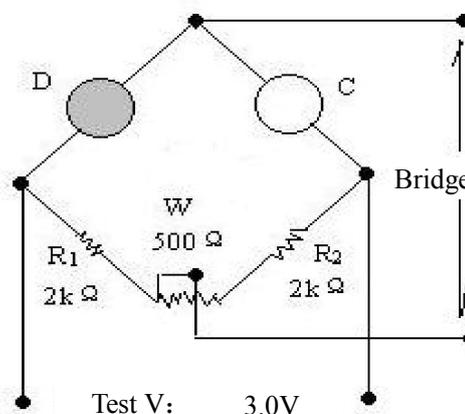
Application

- Detecting concentration of CH₄,LPG,Coal gas,alkyl
- ect combustible gas and gasline,mellow, benzene ketone VOC in industrial place.
- Combustible gas leaking alarm
- Combustible gas detector
- Gas concentration concentration meter

Structure



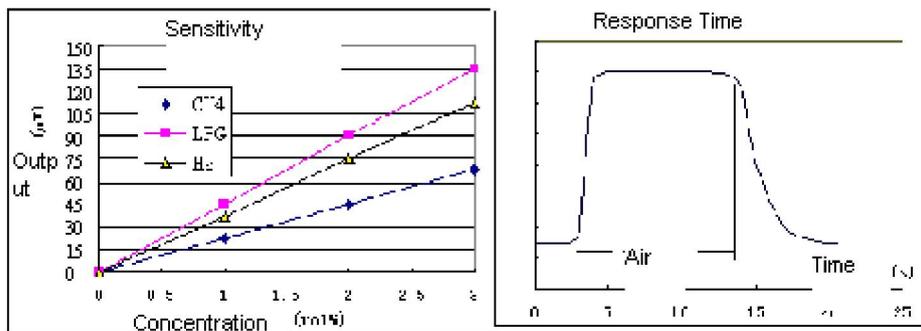
Testing Circuit



Specification

Work Voltage(V)		2.5 ± 0.1	
Work Current(mA)		110 ± 10	
Sensitivity (mV)	1% CH ₄	25~50	
	1% C ₄ H ₁₀	30~50	
	1% H ₂	25~45	
Linear (%)		≤ 5	
Measure Range (%LEL)		0~100	
Response Time (90%)		Less than 10S	
Recover Time (90%)		Less than 30S	
Using Temperature		-40—+70℃ <95%RH	
Storage Temperature		-20—+70℃ <95%RH	
Outside Size		Φ 12mm× 8mm	

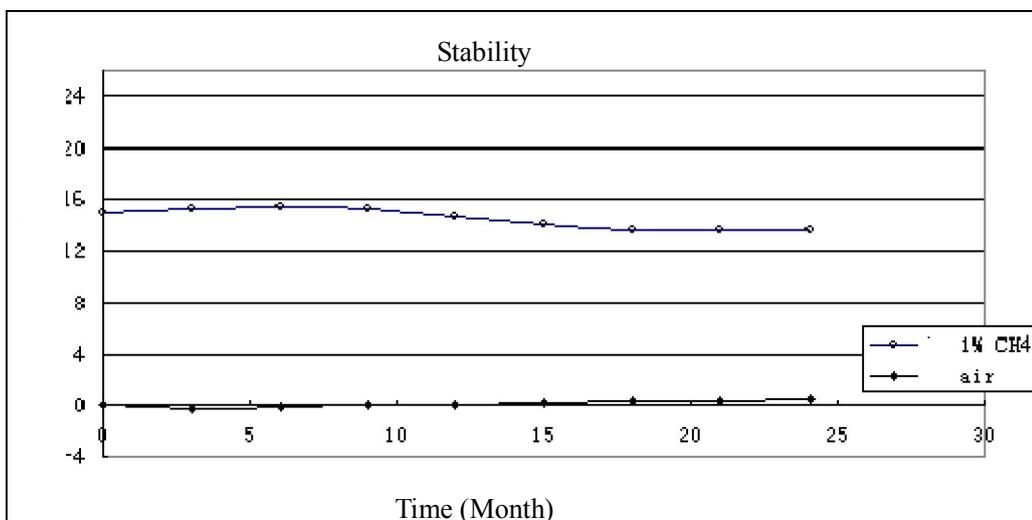
Sensitivity and Response Feature



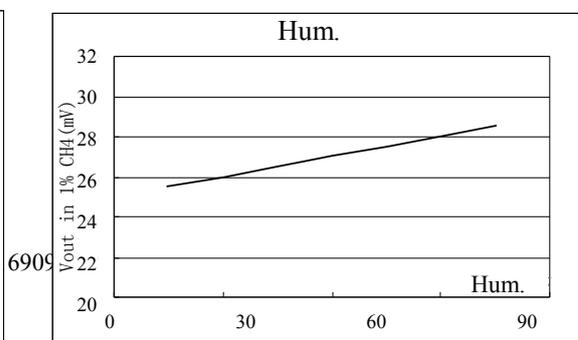
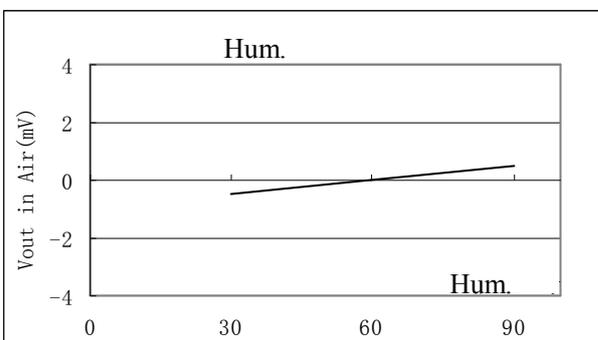
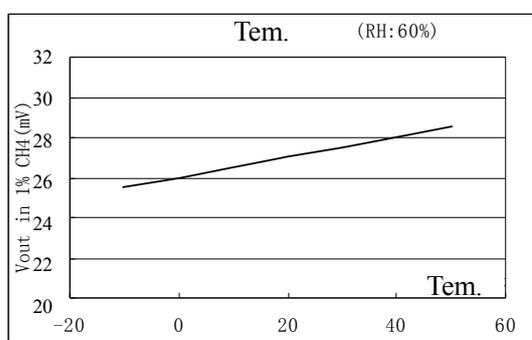
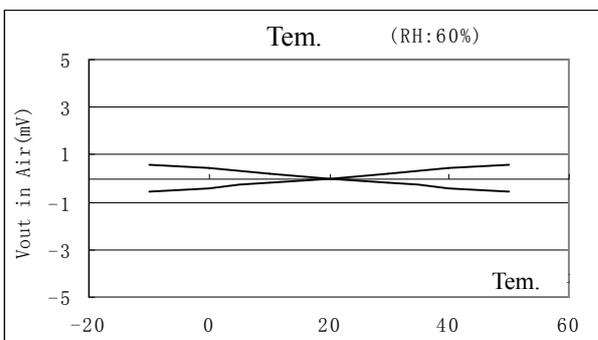
Long Term Stability

It drift less than ± 2 mV in air each year, and drift less than ± 2 mV in 1%CH₄ each year.

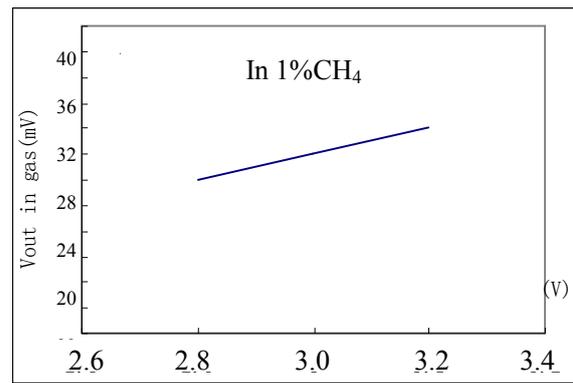
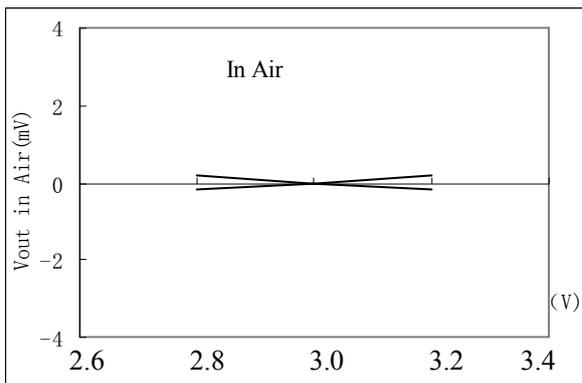
It is stable in 30 minutes of short storage(two weeks), but it must be aging 5 hours to be stable for long storage(one year).



MC101 output signal is changed by humidity and temperature



MC101 output signal is changed by working voltage



Note

- △ The sensor sensitivity need to calibrate termly.
- △ Try to avoid meeting the combustible gas up to 15% concentration. If happened accidentally, please recalibrate.
- △ When debugging, should strict to control the heating voltage or current, do not exceed rated voltage $\pm 0.1V$ to burn the sensor.
- △ For long period storage, do not put it in wet and corrosive environment.
- △ Shocking, falling, and mechanical destroying is prohibited
- △ Please read the manual carefully before using.