



Electrochemical gas-sensitive element instructions

Model: MQ2-CO- ϕ 14*14

Version: 1.0

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Taiyuan Tengxing sensor technology Co., Ltd

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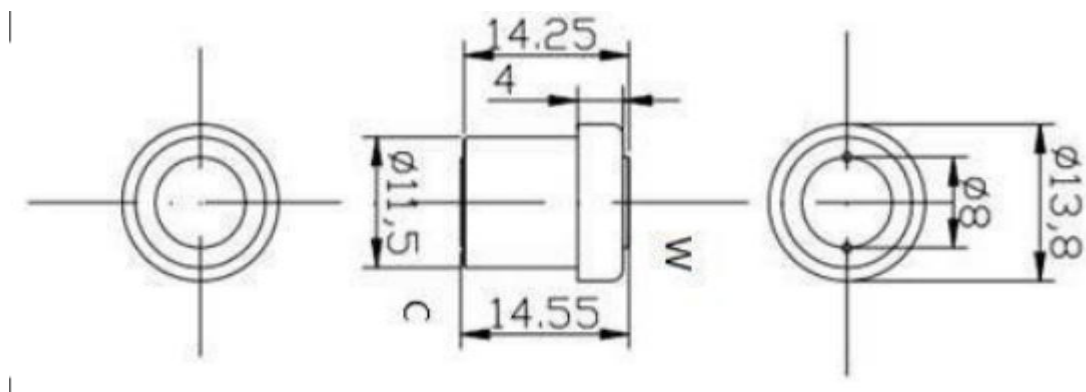
1. Description

MQ2-CO- ϕ 14*14 is the sensor of fuel battery type. By redox reaction, CO and O₂ release charge and form the current. The value of current is proportional to the concentration of CO, and follow Faraday's Law. By testing the value of current, the concentration of CO is known.

2. Characteristics

- (1) Low power consumption.
- (2) High accuracy.
- (3) High sensitivity.
- (4) Be stable.
- (5) Quick response and recovery.
- (6) Wide linear range.
- (7) Excellent repeatability.
- (8) Anti-jamming.

3. Appearance and dimension

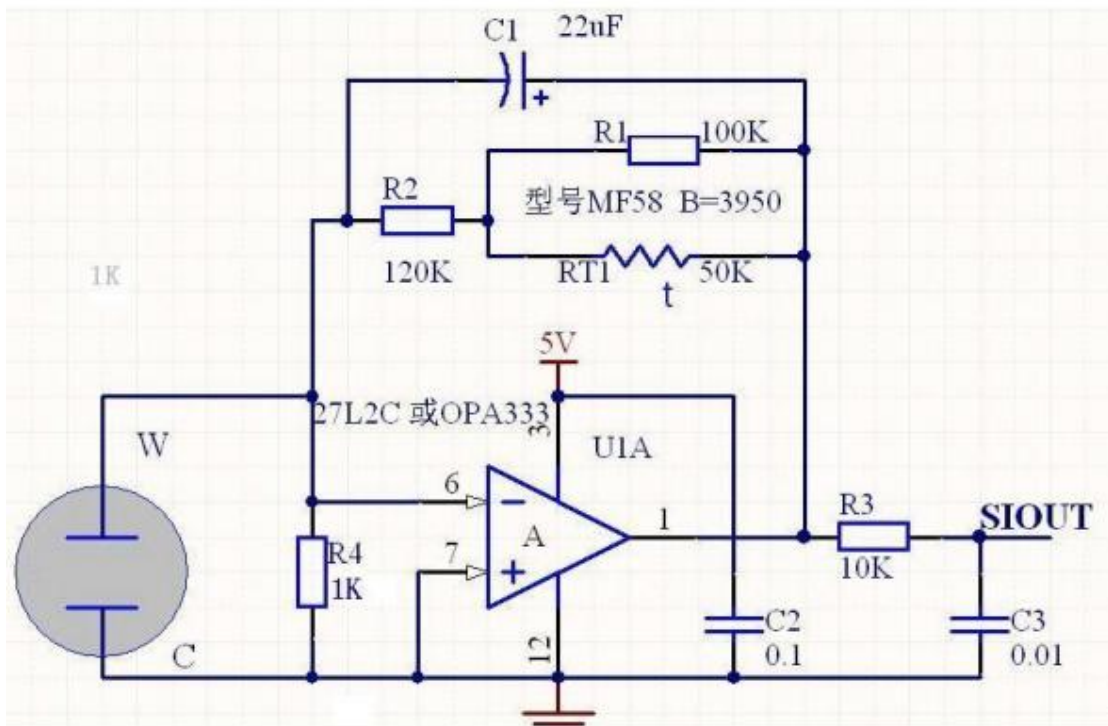


4. Technical specifications

- (1) Media: CO.

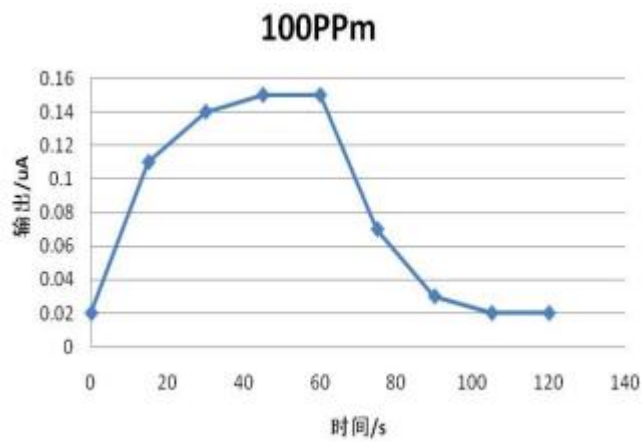
- (2) Testing range: 0-1000ppm(Max. 2000ppm)
- (3) Sensitivity: $>0.8\text{nA/ppm}$
- (4) Resolution ratio: 1ppm
- (5) Load resistor: (500/1K/2K) Ω
- (6) Repeatability: $<3\%$ output value
- (7) Output linearity: linearity
- (8) Zero drift($-20^{\circ}\text{C}\sim+40^{\circ}\text{C}$): $\leq 10\text{ppm}$
- (9) Temperature: $-20^{\circ}\text{C}\sim+50^{\circ}\text{C}$
- (10) Humidity: 15%-90%RH
- (11) Response time: $<30\text{s}$
- (12) Pressure: standard air pressure $\pm 10\%$

5. Test circuit

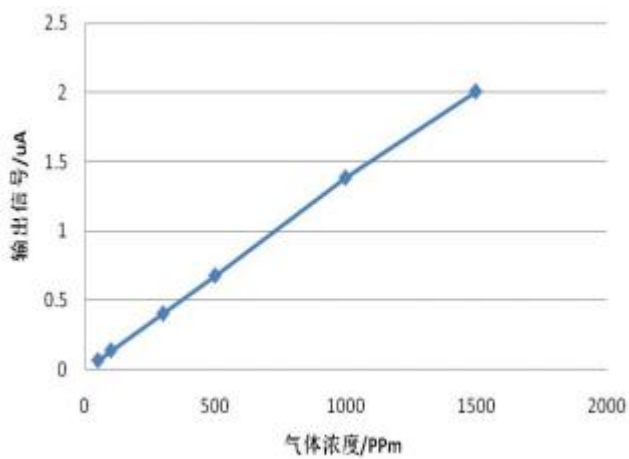


6.Characteristic curve of sensor

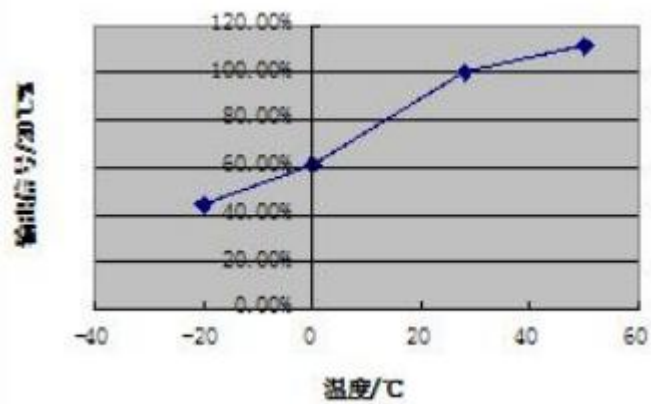
(1) Sensitive curve



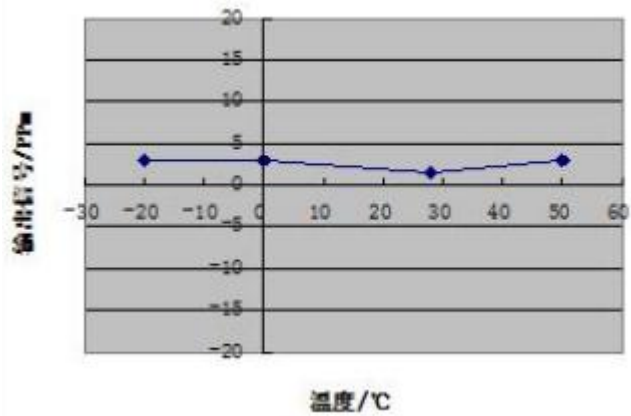
(2) Linearity curve



(3) Output signal in different temperature



(4) Zero point output in different temperature



7. Cross interference characteristics sheet

MQ2-CO- ϕ 14*14 sensor makes response to other gas besides target gas.

cross interference characteristics sheet		
gas	concentration	MQ2-CO- ϕ 14*14
H ₂ S	100ppm	0ppm
Ethylene	100ppm	80ppm
NO	35ppm	6ppm
NO ₂	5ppm	0ppm
C ₂ H ₅ OH	1000ppm	0ppm
Cl ₂	10ppm	1ppm
SO ₂	20ppm	0.6ppm
H ₂	500ppm	43ppm
NH ₄	50ppm	1ppm
CH ₃ Cl	5ppm	0ppm
C ₂ H ₄ O	10ppm	0ppm
Benzene	100ppm	1.5ppm

Acetone	100ppm	3.5ppm
Methanol	200ppm	0ppm

8. Attention

(1) Welding lead wire when installing is allowed, while soldering sensor is prohibited.

(2) Aging time before using should be more than 48 hours.

(3) Don't disassemble the sensor without permission.

(4) Don't let the sensor connected with organic solvent(including silicon rubber or other adhesive), coating material, medicament, fuel oil and high concentration gas.

(5) All electrochemical sensor cannot be fully sealed with resin material. Being exposed in the environment without oxygen will damage the sensor.

(6) Being exposed in the environment with corrosive gas will damage the sensor.

(7) Zero point should be tested in clean air.

(8) Front intake or vertical intake is prohibited when testing or working.

(9) The inlets shouldn't be polluted or clogged.

(10) Shaking or impacting is not allowed.

(11) Don't use if the shell is broken or out of shape.

(12) It's slow to recover to initial condition if used in the environment

with high concentration gas for a long time.

(13) The working electrode and counter electrode should be short-circuited when storing.

(14) Don't seal with melt adhesive or sealant whose curing temperature is higher than 80°C.

(15) Don't use or store in the environment with high concentration alkaline gas.

9. Quality-guarantee

(1) The products are supplied strictly in accordance with customers' requirement, any defective goods are available to change or refund.

(2) The working time of components will be more than 3 years.

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