ME2-CO-Φ14-C
Electrochemical
Carbon Monoxide sensor

Manual

（Model：ME2-CO-Φ14-C）

Zhengzhou Winsen Electronics Technology Co., Ltd

ME2-CO-Φ14-C Carbon Monoxide sensor

ME2-CO-Φ14-C electrochemical sensor detect gas concentration by measuring current based on the electrochemical principle, which utilizes the electrochemical oxidation process of target gas on the working electrode inside the electrolytic cell, the current produced in electrochemical reaction of the target gas are in direct proportion with its concentration while following Faraday law, then concentration of the gas could be get by measuring value of current.

1.Features

* Low consumption
* High precision
* High sensitivity
* Wide linear range
* Good anti-interference ability
* Excellent repeatability and stability

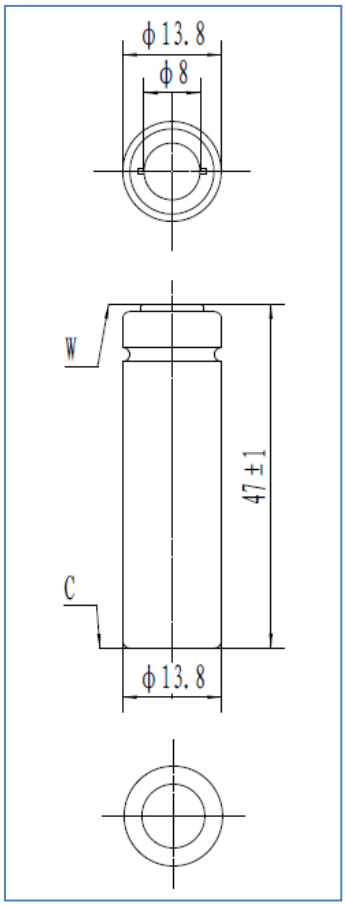
2 Application

Widely used in civilian area to detect CO concentration.

3. Technical Parameter

Item	Parameter
Detection gas	CO
Measurement Range	0～1000ppm
Max detecting concentration	2000ppm
Sensitivity	（3～12）nA/ppm
Resolution ratio	1ppm
Response time（T_{90}）	≤30S
Load resistance （recommend）	1000Ω
Repeatability	＜3％output value
Stability（／month）	＜10％
Output Linearity	linear
Zero drift（-20℃～40℃）	≤10ppm

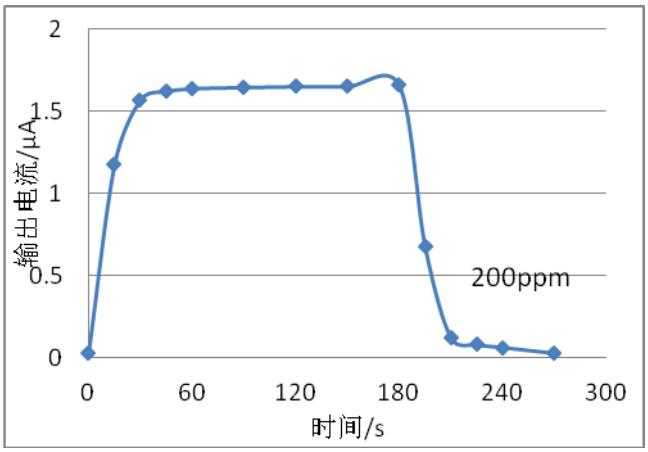
4. External dimension



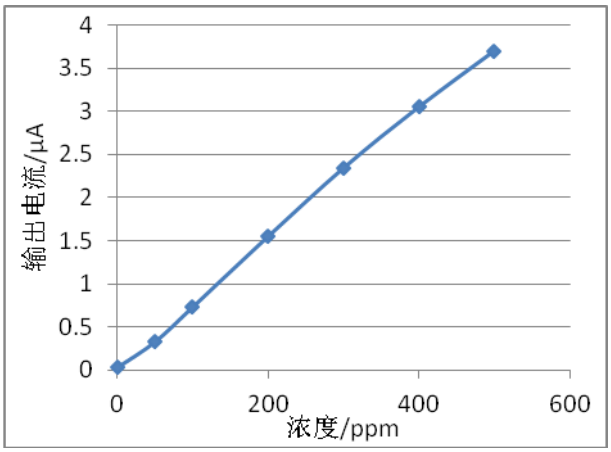
Storage temperature	-20℃～50℃
Storage Humidity	15％～90％RH
Pressure range（kPa）	90-110
Anticipated using life	5 years

5.Characterization

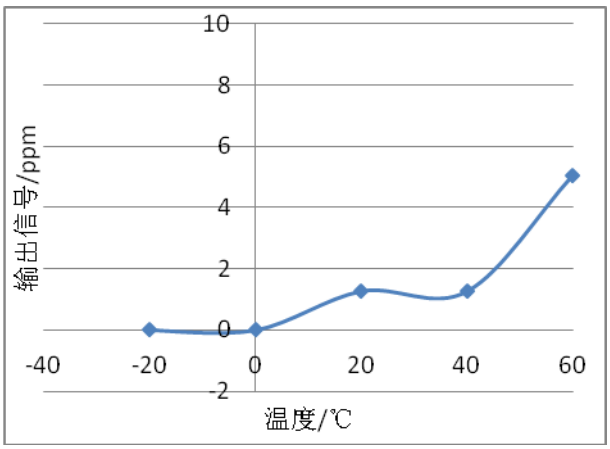
Features of Sensitivity, response and output signal



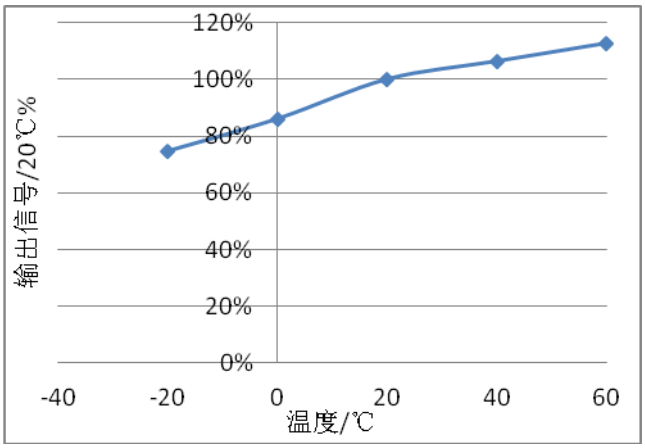
Data graph of concentration linearity features



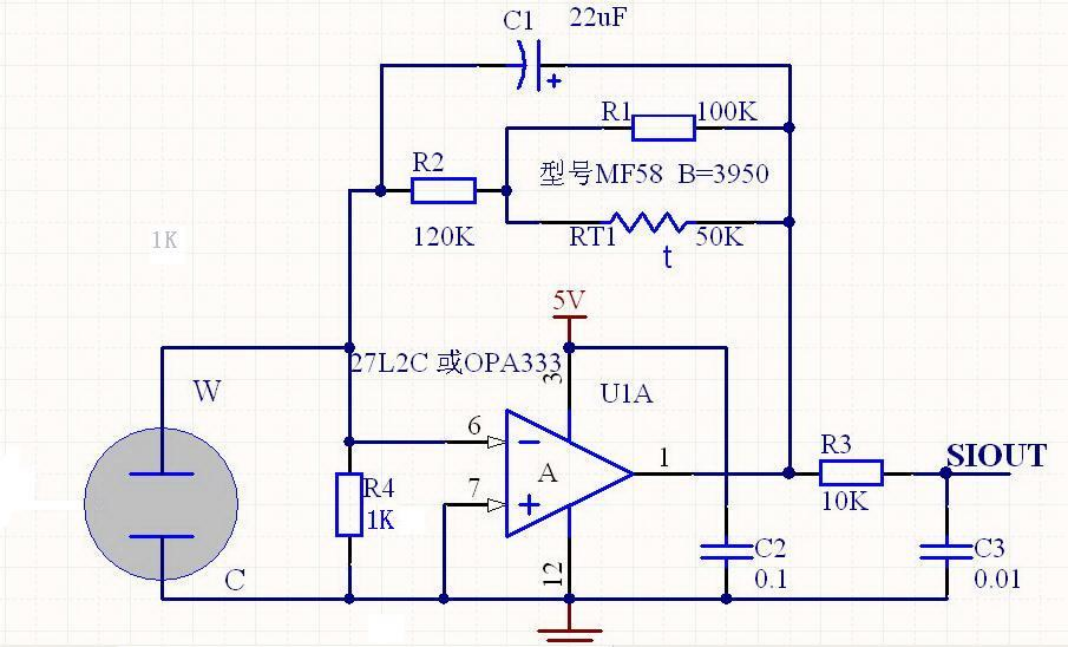
V0 Change upon Variable Temperature



Sensitivity upon variable temperature



6.Basic circuit



7.Anti-Interference:

ME2-CO-Φ14-C sensor also responds to other gases besides CO. Below are the response characteristics of interferential gases

Gas	Concentration	ME2-CO-Φ14-C
H2S	100ppm	0ppm
C2H4	100ppm	80ppm
NO	35ppm	6ppm
NO2	5ppm	0ppm
C2H5OH	1000ppm	0ppm
CL2	10ppm	1ppm
SO2	20ppm	0.6ppm
H2	500ppm	43ppm
NH3	50ppm	1ppm
CH3CL	5ppm	0ppm
ETO	10ppm	0ppm
C6H6	100ppm	1.5ppm
C3H6O	100ppm	3.5ppm
CH3OH	200ppm	0ppm

8.Application Notes:

- Sensor shall Avoid organic solvent, coatings, medicine, oil and high concentration gases；
- All ME Sensors shall not be encapsulated completely by resin materials, and shall not immerse in pure oxygen environment, otherwise, it will damage the function of sensor；
- All ME sensors shall not be applied in corrosive gas environment, or the sensor will be damaged；
- Please test the sensitivity of gas sensors in clean atmosphere；
- Sensors Shall be avoided to face the gas, which flow directly from front side；
- To avoid to bend and break of pins；
- Blowhole of the sensor should not be blocked and polluted, which will cause the sensitivity decrease;
- Excessive impact or vibration should be avoided；
- Do not use the sensor when the shell is damaged；
- It takes some time for the sensor to return to normal state After applied in high concentration gas；
- Do not take apart the sensor, otherwise electrolyte leakage can cause sensor damage;
- Working electrode and reference electrode of the sensor shall be in short circuit when stored.；
- To preheat over 48hs before using and soldering forbidden;

Note: To keep continual product development, we reserve right to change design features without prior notice！

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