ME3-O_3-E4
Electrochemical Sensor

Manual

（Model：ME4-O_3-E4）

Zhengzhou Winsen Electronic Technology Co., Ltd

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ME4-O_3-E4 Ozone Gas sensor

Product description



ME4-O_3-E4 ozone gas sensor is constant potential electrolysis type. Oxidation-reduction with ozone and oxygen take place respectively on the working electrode and on the counter electrode. The process releases electric charge to current that is in direct proportion to the ozone concentration. The fourth auxiliary electrodes is used to compensate the zero current, characteristic of strong signal level and low zero current.

Features

High precision, high sensitivity, wide linear range, good anti-interference ability, strong resolution.

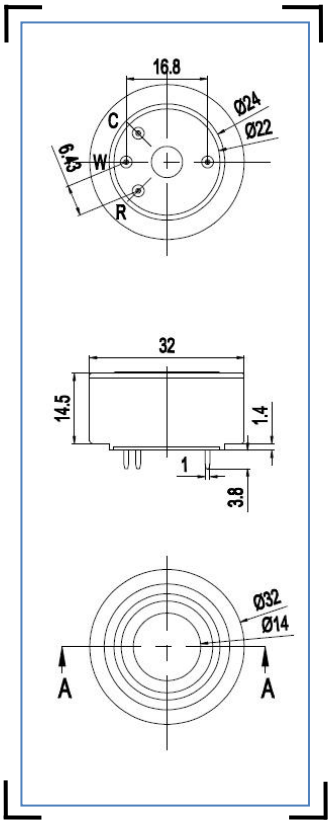
Main applications

It widely used in urban atmospheric environmental detection, enterprise environmental detection, factory pollution gas detection, emergency environmental assessment detection.

Technical Parameters **table1.**

Item	Parameters
Detection Gas	O_3
Detection Range	0-20ppm
Max range	50ppm
Sensitivity	-0.225～-0.525 uA/ppm
Resolution	0.05ppm
Response Time(T_{90})	≤60s
Load Resistance	33-100Ω
Stability(/month)	<-20%～-40%
Output Linearity	Linear
Zero drift	≤0.2ppm
Temp range	-30℃-40℃
Humidity range	15％-85％RH
Pressure range	80-120kPa
Lifespan	2 years (in air)

Sensor diagram



Cross Interference

ME4-O_3-E4 sensor also can respond to other gases besides target gas O_3. Following data are the response characteristics of the sensor to interfere gases at certain concentration for your reference.

Table Cross Interference

Gas	Concentration/ppm	ME4-O_3-E4/ppm
H_2S	5	<170
Cl_2	5	<90
CO	5	<0.1
NO	5	<3
SO_2	5	<-7
H_2	100	<0.1
C_2H_4	100	<0.1
CO_2	5%	0.1
NH_3	20	<0.1
C2HBrClF3	100	<0.1

Cautions

- Tin soldering is prohibited.
- Before using, power on to aging for more than 48 hours is necessary.
- Pins can't be broke off or bent.
- Don't disassemble the sensor to avoid the damage caused by electrolyte leakage.
- Avoid contacting organic solvent (including Silicone rubber and other adhesive), coatings, medicine, oil and high concentration gases.
- All the electrochemical 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 electrochemical sensors shall not be applied in corrosive gas environment, or the sensor will be damaged
- Zero calibration should be finished in clean air.
- During test and usage, sensors should avoid the gas inflow vertically
- The side for inflow can't be choked and polluted.
- The laminating film above the sensor surface can't be uncovered and damage.
- Excessive impact or vibration should be avoided

- It takes some time for the sensor to return to normal state after it is applied in high concentration gas
- Working electrode and reference electrode of the sensor shall be in open circuit when stored
- Prohibit to use the hot cement or sealant of which the curing temperature is higher than 80℃ to make the capsulation for the sensor.
- Prohibit storage and usage for long time in alkaline gases with high concentration.
- Do not use the sensor when the shell is damaged

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