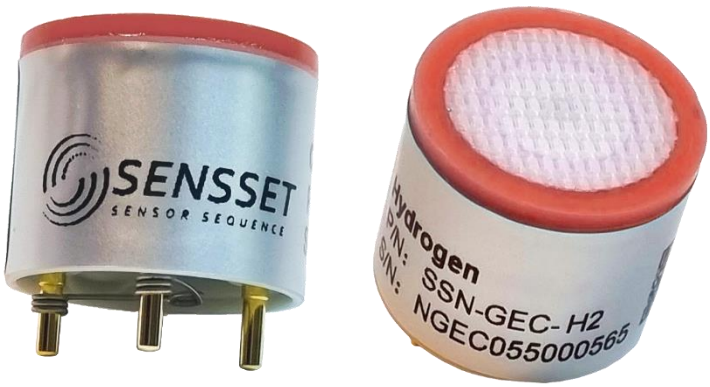
SENSSET
SENSOR SEQUENCE

SSN-GEC-H2

Hydrogen sensor



PRODUCTS FEATURES

- High precision, long life
- Fast response speed, back to zero quickly
- Low power consumption, high sensitivity
- Wide linearity range and high interference immunity
- Excellent repeatability and stability

1. Technical parameter

Table 1. characteristics

Parameter	Condition
Model	H2
Detection range	0-1000PPM
Maximum load concentration	2000PPM
Sensitivity	20±10 nA/PPM
Zero drift	±5PPM
Resolution	1PPM
Response time	< 60s
Bias voltage	0
Load resistance	5~30Ω
Temperature range	-30°C~50°C
Humidity range	15%~90%RH (non-condensing)
Repeatability	<±2% of output signal
Long-term stability	< 5% signal / year
Linearity	Linearity to 2000PPM
Working pressure	90-110kPa
Shelf life	Delivery after 12 months
Life	2 years

The SSN-GEC-H2 sensor also responds to gases other than the target gas. The response characteristics of the sensor for several common interfering gases are listed in the table below for reference. The data in the table are typical responses for the interfering gases at a given concentration.

Table 2.

Interfering gas	The use of gas concentration (ppm)	Display the value of (ppm H2)
CO	50	150
SO2	20	0
H2S	100	0
CL2	10	0.5
NO	50	10
NO2	30	1

2. Mechanical Dimension

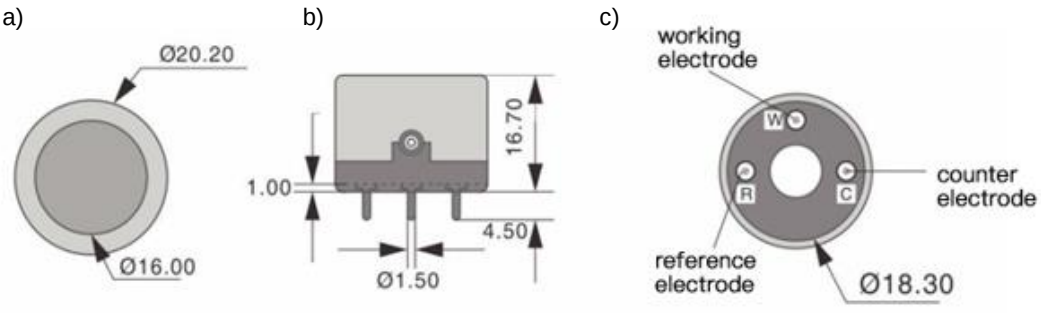


Figure 2.1. Mechanical dimensions in mm a) top view b) projection view c) bottom view

3. Basic circuits

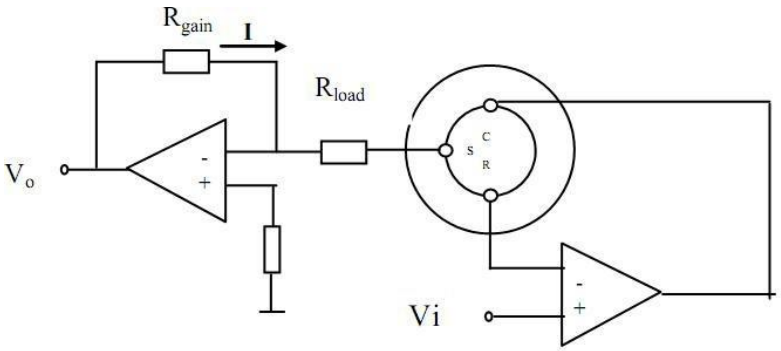


Figure 3.1. Basic circuits

4. Description of sensor characteristics

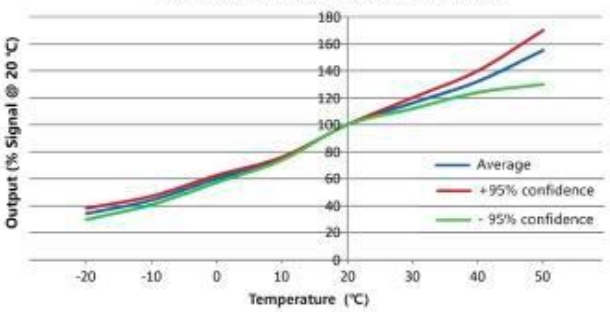


Figure 4.1. Sensor sensitivity temperature dependence

5. Notes

1.The sensor pins must be connected through a PCB socket. Welding will damage the sensor and bending of the pins is prohibited.

2.When the sensor is stored, there should be a short circuit between the working electrode and the reference electrode.

3.The sensor should avoid contact with organic solvents, alcohol, coatings, oils and high-concentration gases, including silicone and other adhesives

4.Electrochemical sensors with positive output current (such as CO, H2S, SO2, NH3, etc.) require oxygen to participate in the reaction when working.

Yes, the standard gas with air as the background gas should be used for calibration and testing, otherwise it will destroy the performance of the sensor.

5.The sensor cannot be used in an environment containing corrosive gases for a long time, and corrosive gases will damage the sensor.

6.If the circuit board is not working properly, for example, due to circuit design problems, quality problems of components such as OP amps, short circuits, or circuit breaks, poor pin contact, moisture, corrosion, leakage of the circuit board, noise interference from the power supply, noise feedback, electromagnetic interference, may cause the alarm to be unresponsive, drift, digital instability, etc., and may even cause the sensor to react electrolytically.

7.When calibrating or testing the sensor, the correct method should be carried out in a clean atmosphere and maintain a stable ventilation flow rate gentle, thereby simulating a state of gas diffusion; on the contrary, the air is strongly blown facing the sensor, or the air flow is suddenly large and sudden when venting.

Small instability, will not get satisfactory calibration results and test accuracy and reproducibility ;

8.It is recommended to use the target gas for calibration; the cross-sensitivity will have a range of +30%. If the cross-sensitive gas is used for calibration, the cross-sensitivity will have a range of +30%.

The accuracy of its calibration and measurement is not guaranteed ;

9.It is not recommended to use non-standard methods to test the sensor, such as directly placing the sensor on concentrated ammonia and spraying cigarettes on the sensor.、

After the lighter is ignited, approach the sensor, exhale towards the sensor, approach the sensor to alcohol, etc., because the liquid ammonia or alcohol.

The concentration in the volatile time zone can be as high as tens of thousands of ppm, and the concentration of carbon dioxide in human exhalation can also be as high as 40,000 ppm, which can damage the sensor.

The correct test method is to pass the target gas with air as the background gas.

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Development, production and supply of high-tech sensors