

# **SSN-GEC-H2 40000**

**Electrochemical hydrogen sensor**

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## Electrochemical hydrogen sensor H2 – 40000ppm

This sensor is designed for the measurement of Hydrogen concentration in gas phase. It can be used as the pin-to-pin replacement of the standard electrochemical Hydrogen sensors which made by the other manufacturers.

### Performance Characteristics:

Table 1.

Parameters	Value
Nominal range	0~40000ppm
Maximum overload	40000ppm
Sensitivity (20°C)	0.007±0.002µA/ppm
Response Time (T90)	≤60s
Zero signal (20°C)	<±0.2µA
Baseline shift (-20°C~50°C)	<20ppm
Resolution	50ppm
Linearity	Linear up to 40000ppm
Bias voltage	0mV
<b>Environmental</b>	
Temperature range	-20°C~50°C
Pressure range	1±0.1 atm
Humidity range	15%~90%RH non-condensing
<b>Life time</b>	
Long time output drift	<2%signal/month
Recommended storage temp.	10°C~30°C
Expected operating life	2 years in clean air
Storage life	6 moths in original packing
Warranty	12 month
<b>Intrinsic Safety Data</b>	
Max. current at 40000ppm H2	<0.5mA
Max. O/C Voltage	1.3V
Max S/C Current	<1.0A
<b>Physical characteristics</b>	
Housing material	ABS
Weight (nominal)	5g

Table 2. Cross-sensitivity data

Gas	Concentration	Output signal (ppm H2 equivalent)
Hydrogen Sulfide	15	0.0
Sulfur Dioxide	5	0.0
Carbon Monoxide	50	200.0
Nitric Oxide	35	< 10.0
Nitrogen Dioxide	5	0.0
Ethylene	100	< 30.0
Chlorine	10	0.0

**Note:** The cross sensitivities include but not limited to the above gases. It may also respond to other gases. The data in the table above may vary from different batches of sensors and the changes of test environment. Calibration using the gases that have the cross sensitivities to this sensor is not recommended.

### Mechanical dimension

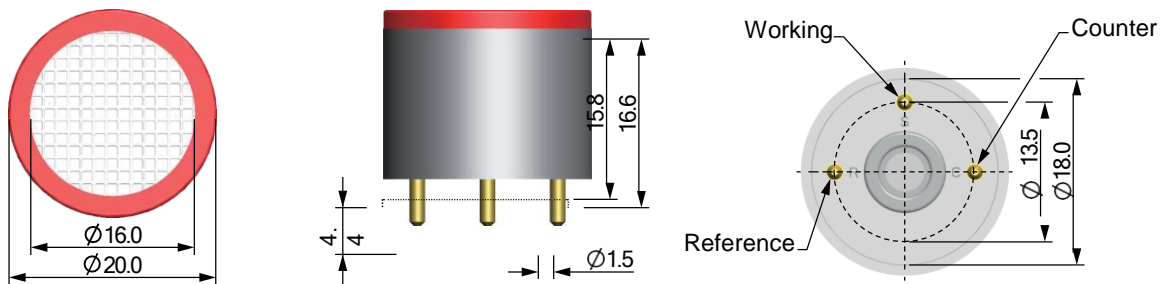


Figure 1. Product dimensions in mm. All tolerances  $\pm 0.10\text{mm}$  unless otherwise stated

### Temperature data

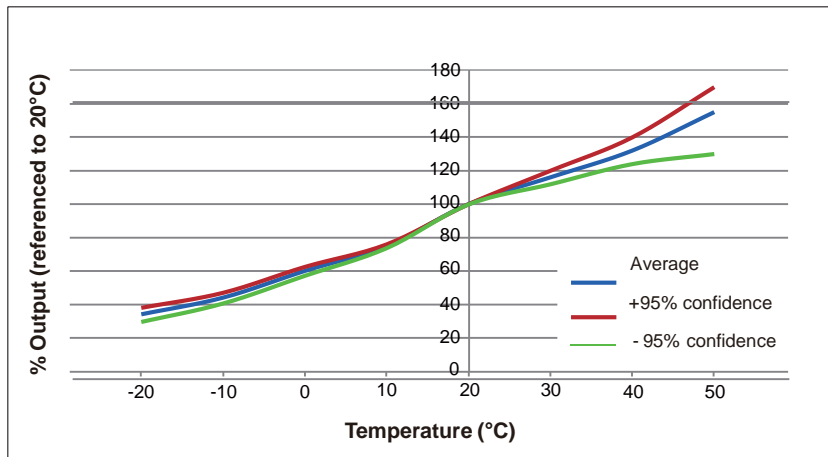


Figure 2. Temperature performance of SSN-GEC-H2 40000

## Installation

Output signals from the sensor pins are different. Inappropriate use of the pins in product design will affect the sensor functionality. Exposure to high concentrations of solvent vapors should be avoided under any condition. Mechanical overstress may cause deformation or cracks of the plastic enclosure of the sensor. If the sensor is used in extreme environmental conditions, please contact us for more details.

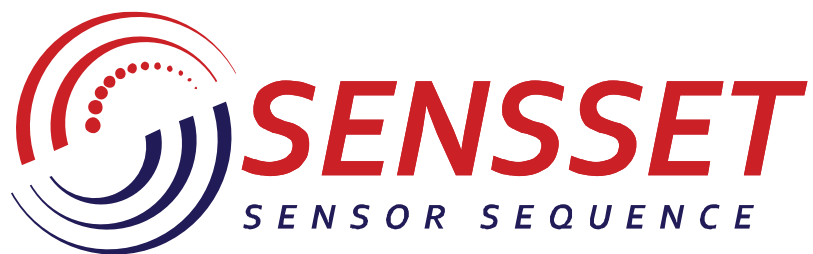
## Note

The performance data in this document are conducted by using recommended test circuitry and test environment at 20°C, 50%RH and 1 atm. Sensor performance varies under different environmental conditions.

## Safety Note

This sensor is designed to be used in certain instruments for life critical applications. To ensure the sensor functions per its specifications inside the instrument, it is required to read the instrument user's guide carefully and comply with the calibration procedures by using certified target calibration gas before each use. Failure to do so may cause serious injury and fatality. Please do not open the sensor plastic enclosure because the electrolyte and other chemicals stored inside are harmful. It is highly recommended for customers to validate the sensor performance using this document as a reference for their product designs or applications.

This product data sheet is used for reference only.



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Development, production and supply of high-tech sensors