Nano Environmental Technology

SIL2

The Reliable Alternative in Gas Sensing Elements

Premium Line

NT-H2S-PL20-HT

Electrochemical Hydrogen Sulfide Sensor

Description

The NT-H2S-PL20-HT is a Premium Line electrochemical gas sensor with 3 electrodes for the detection of Hydrogen Sulfide especially developed to endure high temperature conditions, such as desert environments. Exhibiting high performance with excellent selectivity, this compact sensor (20.4 mm diameter) is suitable both for portable and fixed gas detection instruments.

The porous electrode technology enables accurate gas detection with high sensitivity. The mechanical design of the sensor gives optimum gas diffusion characteristics, and the hermetically sealed enclosure prevents costly electrolyte leakage.

Technical Specifications

Detectable Gas:	Hydrogen Sulfide
Detection Range:	0 – 20 ppm
Maximum Overload:	100 ppm
Output Signal:	1500± 300 nA/ppm
Resolution:	0.05 ppm
Repeatability:	± 2 %
Typical Baseline Range: (pure air)	-0.1 ppm
Typical Response Time (t_{90}):	< 30 sec
Baseline Shift: (- 20 ~ 65 °C)	< 0.3 ppm (typical)
Long Term Output Drift:	< 2%/month
Expected Life Time:	>2 years
Weight:	Approximately 4.5 g

Operating conditions

Operating Temperature:	-40 °C to + 65 °C
Operating Humidity:	15 to 90% RH
Operating Pressure Range:	1 atm ± 10 %
Recommended Load Resistor:	10 Ohm
Bias Voltage:	Not required
Position Sensitivity:	None
Recommended Storage Temp.:	0-20 °C
Storage Life:	Less than 6 months

Performance data conditions: 20 °C, 50% RH and 1013 mBar

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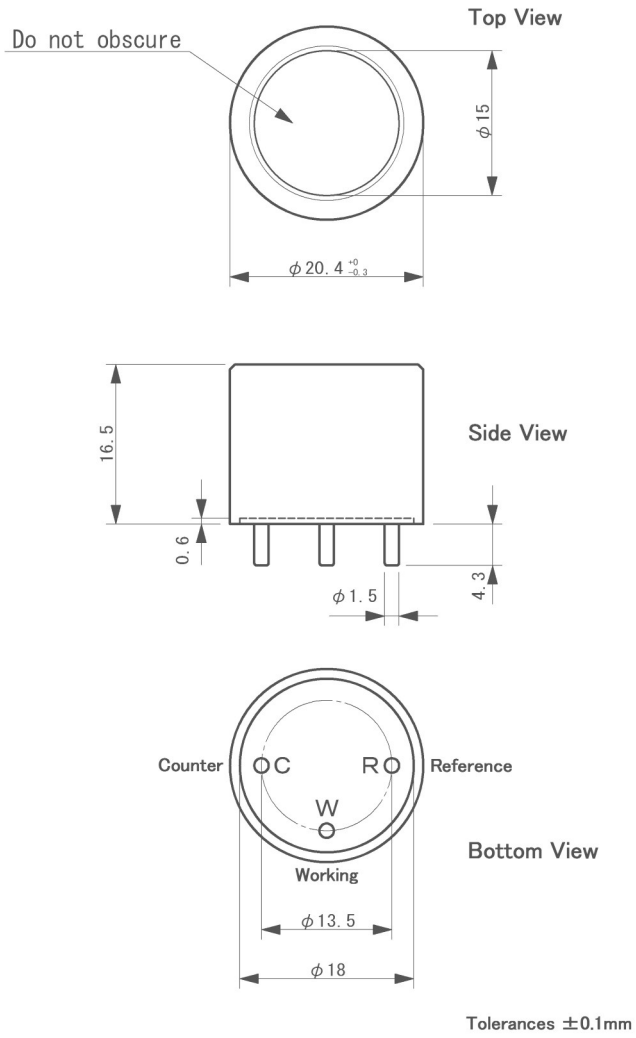
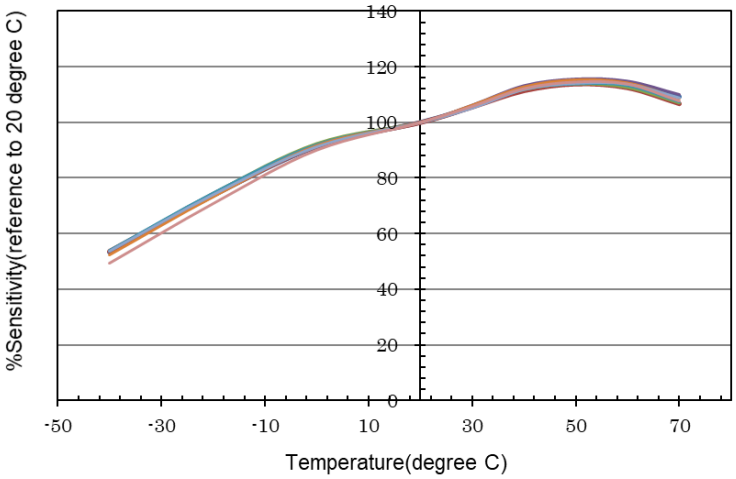
Typical cross sensitivities

Gas	Test Gas Concentration (ppm)	Typical Hydrogen Sulfide Concentration Equivalent (ppm)
Hydrogen Sulfide	10	10
Carbon Monoxide	300	1
Carbon Dioxide	5000	0
Hydrogen	1000	4
Sulphur Dioxide	5	0.4
Nitric Oxide	30	0.2
Nitrogen Dioxide	5	-1.5
Ammonia	100	0
Ethanol	1000	0.3

Dimensions



Temperature Dependency

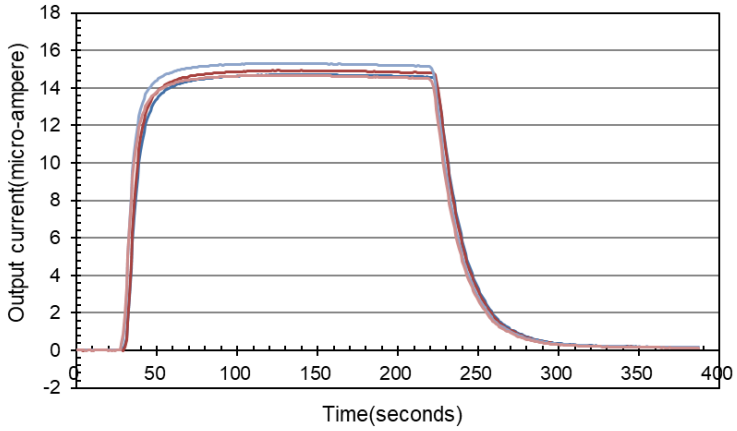


H_2S sensor Premium Line Benefits

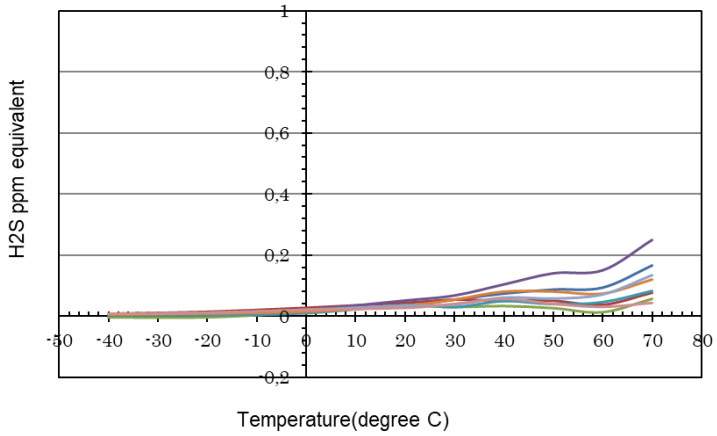
- The NT-H2S-PL20-HT sensor is of high quality and reliability.
- It has an excellent selectivity.
- Low sensitivity to CO, H_2, SO_2 and Ethanol.
- The sensor has an excellent mechanical durability. As a result, the sensors can maintain a long stability without the breaking down of wires or electrolyte leakage.

N.E.T. has a policy of continuous development and improvement of its products. As such the specification for the device outlined in the data sheet may be changed without notice.

Response and recovery



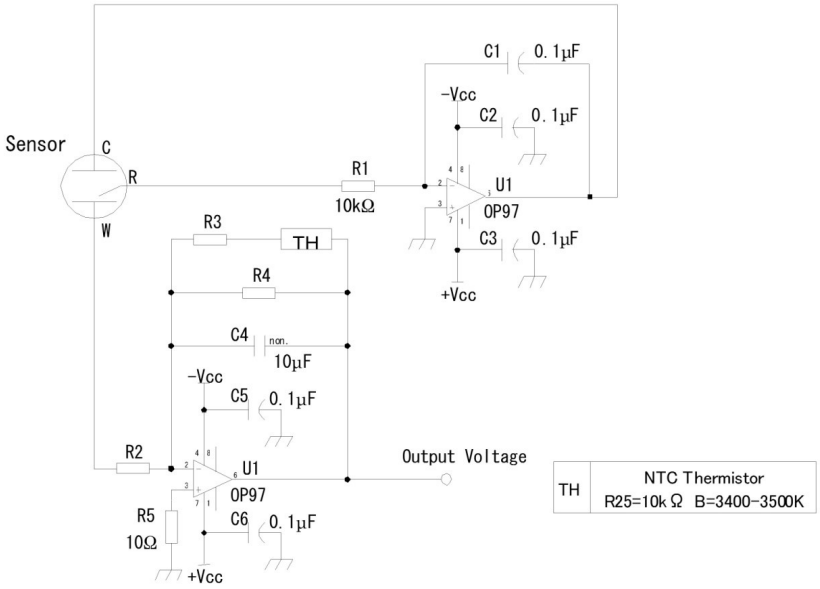
Baseline shift



Notes

- Use within specified conditions.
- Sensor characteristics must be measured in clean air without noise gases.
- Electrode pins must be correctly connected. Wrong connection does not allow correct functions.
- Do not apply voltage directly to electrode pins.
- Do not bend pins.
- Do not solder to electrode pins directly. -Use exclusive sockets.
- Do not use contact grease on electrode pins.
- Do not put excess strength on electrode pins.
- If sensor housing is damaged or scratched, do not use sensor.
- Do not blow organic solvents, paints, chemical agents, oils, or high concentration gases onto sensor.
- Do not disassemble or change any parts.
- If sensor is used under irregular atmosphere, contact us for assistance.

Basic circuit



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