



TECHNICAL INFORMATION SHEET

NAP-523 Special Low-Range Hydrogen Sulphide Gas Sensor

Nemoto Sensor
Engineering Co., Ltd.
4-10-9, Takaido-higashi,
Suginami-ku, Tokyo,
JAPAN

General Description

The NAP-523 is an Electrochemical gas sensor with 3 electrodes for the detection of Hydrogen Sulphide (H₂S).

The sensor has been specially designed to give a very high output signal, resulting a very low detection range of 0 to 0.5ppm, and a resolution (with high quality circuitry) of +/- 0.05ppm. The sensor is also insensitive to humidity changes and alcohol vapours, making it ideally suitable for measuring low levels of H₂S on breath for health monitoring.

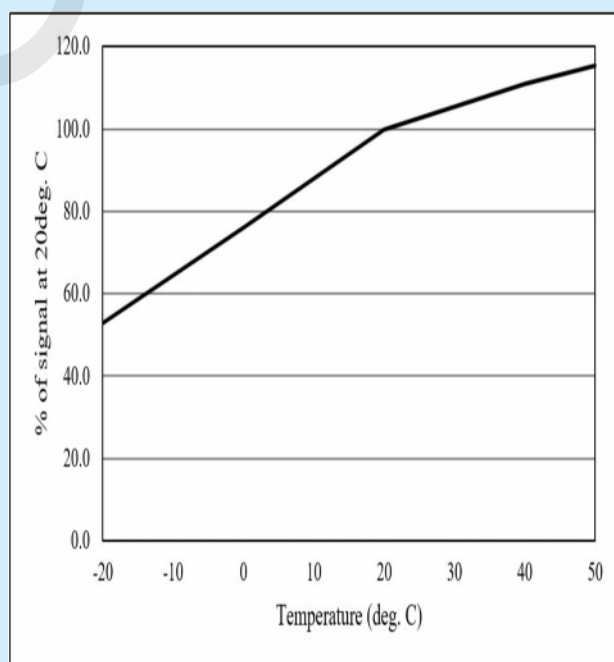
The Sensor can also be used in any application where very low Environmental levels of H₂S need to be detected or monitored.



Specifications:

Detectable Gas	Hydrogen Sulphide (H ₂ S)
Detection Range	0-0.5 ppm
Maximum overload	1 ppm
Output Current	550 +/- 150 nA/ppm
Reproducibility (same day)	+/- 5%
Zero in clean air	<+/- 0.1 ppm equivalent)
Long term drift:	
Zero	< +/- 1 ppm / year
Span	<2% signal/ Month
Response time (T _{90%})	< 60 seconds
Temperature drift (zero)	<0.5 ppm (-20°C to +50°C)
Expected lifetime	> 2 years
Temperature Range:	-20°C to +50°C
Humidity range (constant)	15-90% RH
Humidity range intermittent)	0-99% RH
Pressure	0.9 - 1.1 atm
Recommended load resistor	10 Ω
Storage time	6 months
(Without compromising lifetime)	

Temperature response



Test data on drift, poisoning, temperature performance, linearity are available on the Characterisation Document.

Nemoto 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

NAP-523P.ppp, issue 1, Mar 2018

Contact Information:

Europe & Africa Area

Asia Area

Americas Area

Website

www.nemoto.eu

www.nemoto.co.jp

www.nemoto.eu

email

eusensor@nemoto.co.jp

sensor2@nemoto.co.jp

nasensor@nemoto.co.jp

Telephone

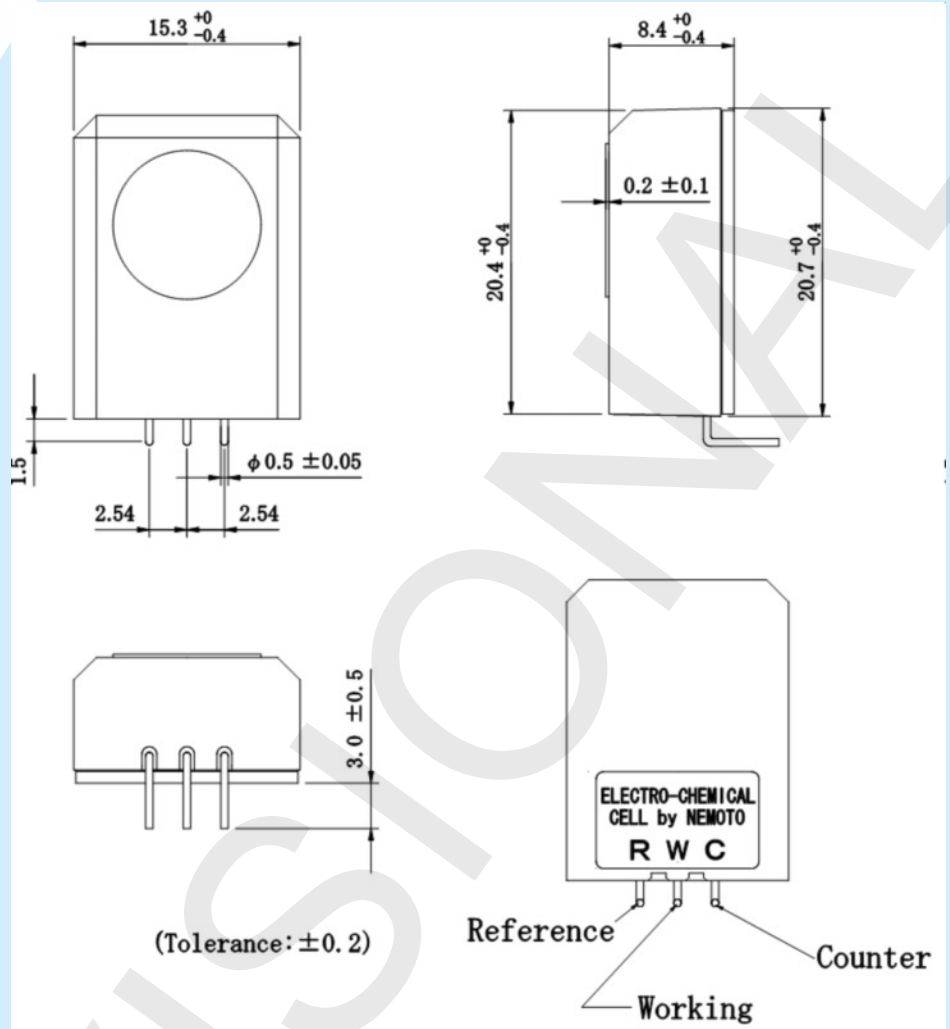
+44 (0)1799 543968

+81 3 3333 2760

+1 604 761 7363



Dimensions:



Typical Cross-Sensitivities:

Gas	% Cross-sensitivity
Hydrogen Sulphide	100
Carbon Monoxide	< -0.1
Hydrogen	< -0.1
Ethanol	< 0.005
Acetone	< -0.005
Methane	0
Carbon Dioxide	0
Sulphur Dioxide	< 0.25
Nitric Oxide	< -0.25
Nitrogen Dioxide	< -10
Ammonia	0
Ethylene	0
Chlorine	-40

Nemoto 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

NAP-523P.ppp, issue 1, Mar 2018

Test data on drift, temperature performance, linearity etc are available on the Characterisation Document / Manual for the device.

Contact Information:

Europe & Africa Area

Asia Area

Americas Area

Website

www.nemoto.eu

www.nemoto.co.jp

www.nemoto.eu

email

eusensor@nemoto.co.jp

sensor2@nemoto.co.jp

nasensor@nemoto.co.jp

Telephone

+44 (0)1799 543968

+81 3 3333 2760

+1 604 761 7363