



TECHNICAL INFORMATION SHEET

NE4-HCHO-S Electrochemical Formaldehyde (CH₂O) Gas Sensor

Nemoto Sensor
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JAPAN

General Description

The NE4-HCHO-S is a new electrochemical gas sensor with 3 electrodes for the detection of Formaldehyde (CH₂O) in a variety of gas detection applications. Exhibiting high performance with long-term stability, this compact (20.4mm dia) sensor is suitable for portable Gas Detection Instruments or Fixed Gas Detection heads.

Nemoto's 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.



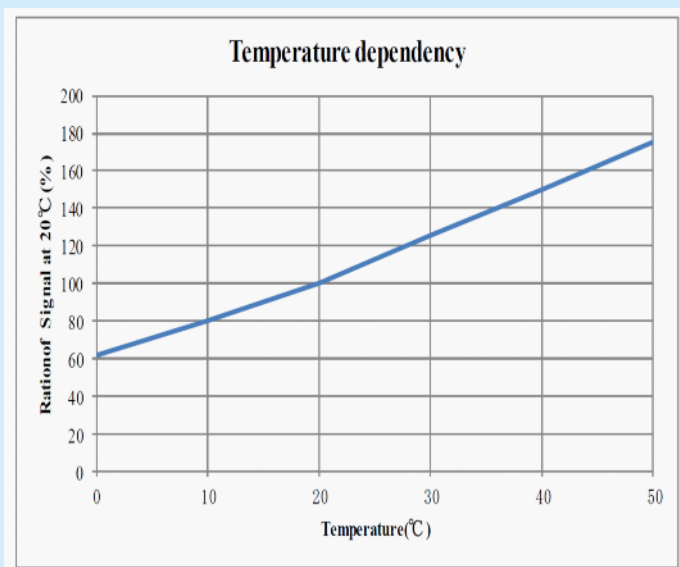
Specifications:

Detectable Gas	Formaldehyde (CH ₂ O)
Detection Range	0-10 ppm
Maximum overload	50 ppm
Output Current	500 +/- 150 nA/ppm
Reproducibility (same day)	+/- 5%
Zero in clean air	< +/- 0.05 ppm equivalent
Long term Span Drift:	< 20% Signal / year *
Response time (T _{90%})	< 120 seconds
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)	

* Measured in clean air, at 20 deg C and 60% RH

** Must be stored in original packaging

Temperature response



Test data on drift, temperature performance, linearity etc 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

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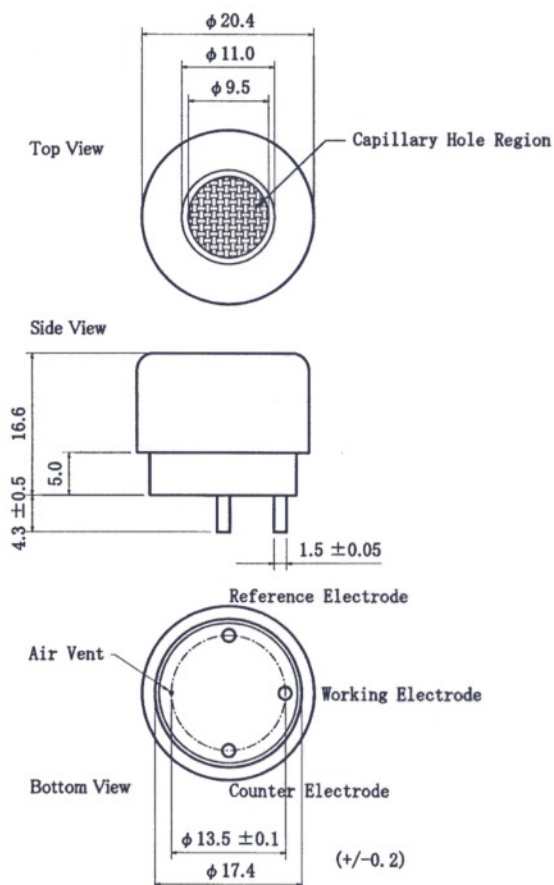
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Dimensions:



Typical Cross-Sensitivities:

Gas	Test Gas Used (ppm in Air)	Test result (ppm equivalent)	% Cross-sensitivity
Formaldehyde	10	10	100
Hydrogen sulphide	1	4	400
Hydrogen	1000	< 10	< 1
Carbon Monoxide	100	<6	<6
Methane	5000	0	0
Carbon dioxide	5000	0	0
Sulphur dioxide	10	<8	< 80
Ethanol	100	10-15	<15
Nitric oxide	10	< 0.5	< 5
Nitrogen dioxide	10	< -7	< - 70
Ammonia	100	0	0
Toluene	100	0	0
Chlorine	10	< -8	< -80

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