TECHNICAL INFORMATION SHEET
NE4-NH3 Electrochemical Ammonia (NH_3)Gas Sensor

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

General Description

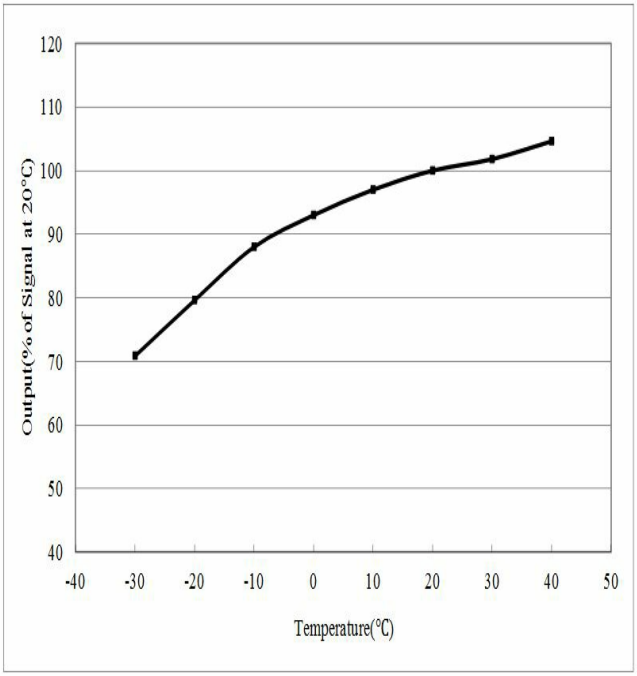
The NE4-NH3 is a new electrochemical gas sensor with 3 electrodes for the detection of Ammonia in a variety of gas detection applications. Exhibiting high performance with long-term stability, this compact (20.4mm dia) sensor is suitable for portable Gas Detection Instruments or Fixed Gas Detection heads.

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	Ammionia (NH_3)
Detection Range	0-100ppm
Maximum overload	200ppm
Output Current	40 +/- 12 nA/ppm
Reproducibility (same day)	+/- 10%
Zero in clean air	< +/- 10 ppm equivalent
Long term drift:	
Zero	< +/- 10 ppm / Year
Span	< 2% Signal / Month
Response time ($T_{90\%}$)	< 90 seconds
Temperature drift (zero)	<10 ppm (-30°C to +50°C)
Expected lifetime	2 years
Temperature Range:	-40°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 (Without compromising lifetime)	6 months

Temperature response



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

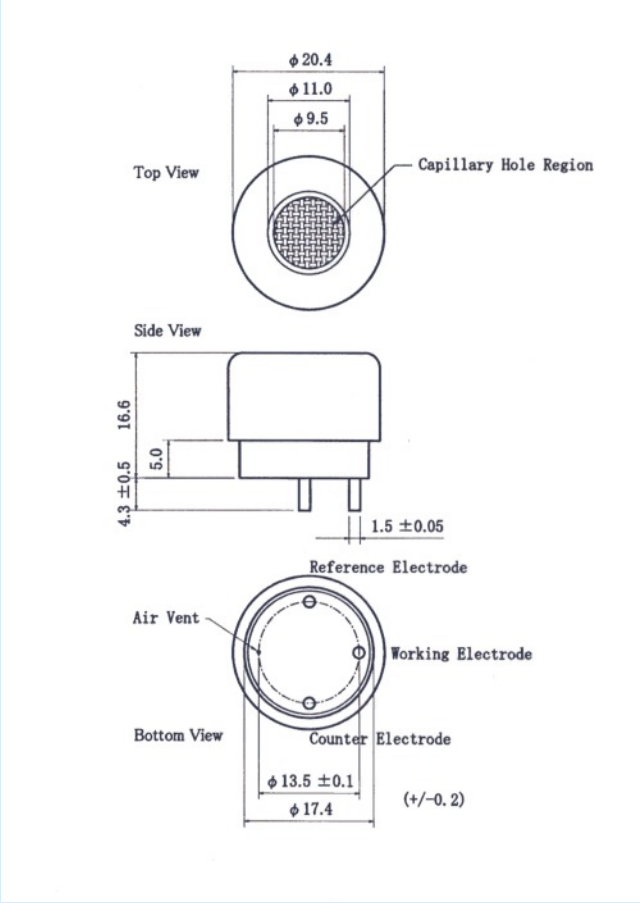
Nemoto has a policy of continuous development and improvement of its products. As such the specification for the device outlined in the data sheet may be changed without notice

ne4-nh3.ppp, issue 6, July 2017

Contact Information:	Website	email	Telephone
Europe & Africa Area	www.nemoto.eu	eusensor@nemoto.co.jp	+44 (0)1799 543968
Asia Area	www.nemoto.co.jp	sensor2@nemoto.co.jp	+81 3 3333 2760
Americas Area	www.nemoto.eu	nasensor@nemoto.co.jp	+1 604 761 7363

NEMOTO

Dimensions:



Typical Cross-Sensitivities:

Gas	Test Gas Used (ppm in Air)	Test result (ppm equivalent)	% Cross-sensitivity
Ammonia	100	100	100
Hydrogen sulphide	10	<20	<200
Hydrogen	1000	<-10	<-1
Methane	5000	0	0
Carbon dioxide	5000	0	0
Sulphur dioxide	10	<10	<100
Nitric oxide	20	0	0
Nitrogen dioxide	20	<2	<10
Carbon Monoxide	200	0	0
Ethanol	100	0	0
Ethylene	1000	0	0
Chlorine	10	0	0

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

ne4-nh3.ppp, issue 6, July 2017

Contact Information:	Website	email	Telephone
Europe & Africa Area	www.nemoto.eu	eusensor@nemoto.co.jp	+44 (0)1799 543968
Asia Area	www.nemoto.co.jp	sensor2@nemoto.co.jp	+81 3 3333 2760
Americas Area	www.nemoto.eu	nasensor@nemoto.co.jp	+1 604 761 7363