



# nemototech

## TECHNICAL INFORMATION SHEET: NEMOTO NP-ANS Single Header Ammonia Pellistor Gas Sensor



### General Description

The Nemoto NP-ANS is a catalytic (pellistor) type flammable gas sensor supplied as a matched pair of pellistor elements mounted on a single header and protected by a metal mesh enclosure and can.

Designed as a single header, lower cost sensor, the NP-ANS is optimised for the detection of **ammonia** in air in range 0-100% LEL but is stable and sensitive enough to be used for ranges as low as 0-5,000ppm, with alarm levels as low as 2,000ppm without false alarms, provided good quality circuitry is employed.

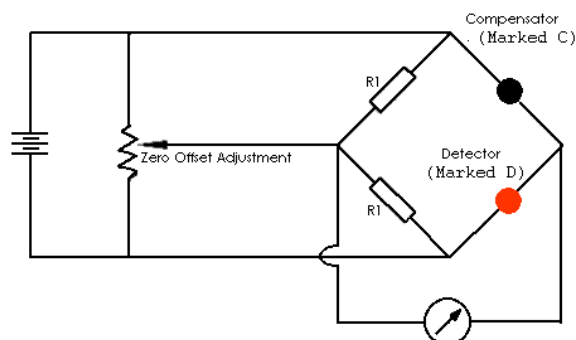
A feature of the NP-ANS is its very high selectivity to ammonia, the sensitivity of the device to hydrocarbon gases being negligible.

The highly automated manufacturing procedure employed by Nemoto results in a repeatable reliable sensor which, unlike similar devices, requires no trimming resistor to enable the detector to be matched with a compensator.

### Specifications:

Recommended Voltage:	2.2V +/- 0.1V
Current Drawn:	175 +/- 15mA
Zero Offset:	0mV +/- 30mV
Gas Sensitivity:	23 - 45mV/% NH <sub>3</sub> /Air
Maximum Range:	0-50% LEL
Minimum Range:	0-5000ppm
Accuracy:	+/- 200ppm(NH <sub>3</sub> )
Maximum Long Term Drift:	
Span:	< +/- 5% Signal/Month
Zero:	< +/- 1/2 mV/Month
Response Time:	T <sub>50</sub> : 3 sec T <sub>90</sub> : 8 sec

### Recommended Circuit:



Note: The value R1 is arbitrary, since the function of R1 is to balance the bridge. 200Ω - 1KΩ is suggested.

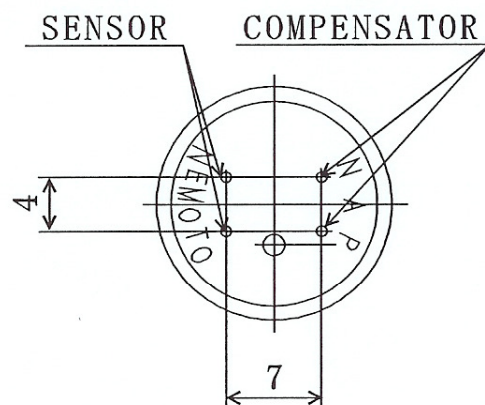
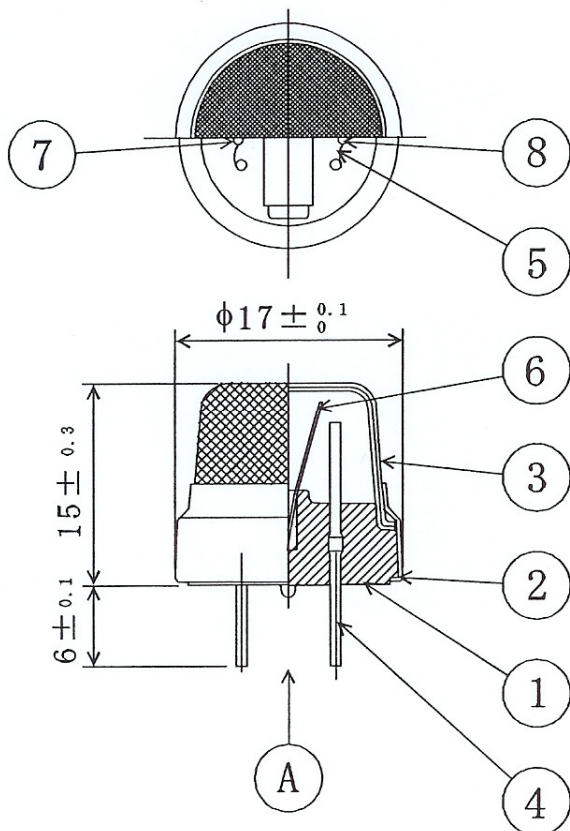
Temperature Range:	-20°C to +60°C
Temperature Drift:	(-20°C to +70°C)
Zero:	< +/- 2%LEL
Humidity:	0-100%RH, non-condensing
Humidity Response:	+/- 2%LEL
Linearity:	Effectively Linear to 50%LEL

**Test data on drift, poisoning, temperature performance, linearity is available on the Characterisation Document np-ans-CD.doc**

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

ds-npans.doc, issue 3, May 2008

**Sensor Structure, Materials of Construction and Dimensions:**



A ; Bottom view

- 1) Mount Base, PM-EE Polymer
- 3) Mesh Enclosure (SS316)
- 5) Filament Coil (Pure Platinum)
- 7) Detecting Element

- 2) Metal skirt (C2680, Nickel plated)
- 4) Pin (Pure Nickel)
- 6) Partition (SS304 CSP)
- 8) Compensator Element