NEMOTO SENSORTECH DIVISION
NANO & CYBERTECH DIVISION

TECHNICAL INFORMATION SHEET:
NEMOTO NP-AHS Single Header (Hydrogen) Gas Sensor

General Description

The Nemoto NP-AHS 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.

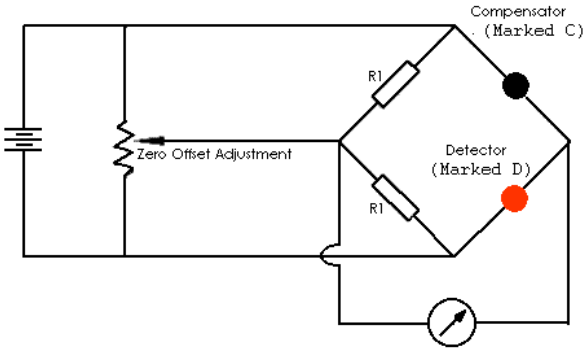
Designed as a single header, lower cost alternative to twin header devices. The sensor is optimised for the detection of **hydrogen** in air in range 0-50% LEL but is stable and sensitive enough to be used for ranges as low as 0-5,000ppm without false alarms, provided good quality circuitry is employed. A feature of the NP-AHS is its very high selectivity to hydrogen, the sensitivity of the device to gases such as methane and propane 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:	1.6V +/- 0.1V
Current Drawn:	145 +/- 15mA
Zero Offset:	0mV +/- 30mV
Gas Sensitivity:	80-125mV/% H_2/Air
Maximum Range:	0-4% (0-100%% LEL)
	(Linearity Correction advised)
Standard range	0-2.4% (0-60% LEL
Minimum Range:	0-5000ppm
Accuracy:	+/- 200ppm(H_2)
Maximum Long Term Drift:	
Span:	<+/-5% Signal/ 3 Months
Zero	<+/- 1 mV/Month
Response Time:	T_{50}: 3 sec T_{90}: 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 +50°C)
Zero:	< +/- 200ppm
Humidity:	0-95%RH, non-condensing
Humidity Response:	+/- 2%LEL
Linearity:	Linear to 60%LEL

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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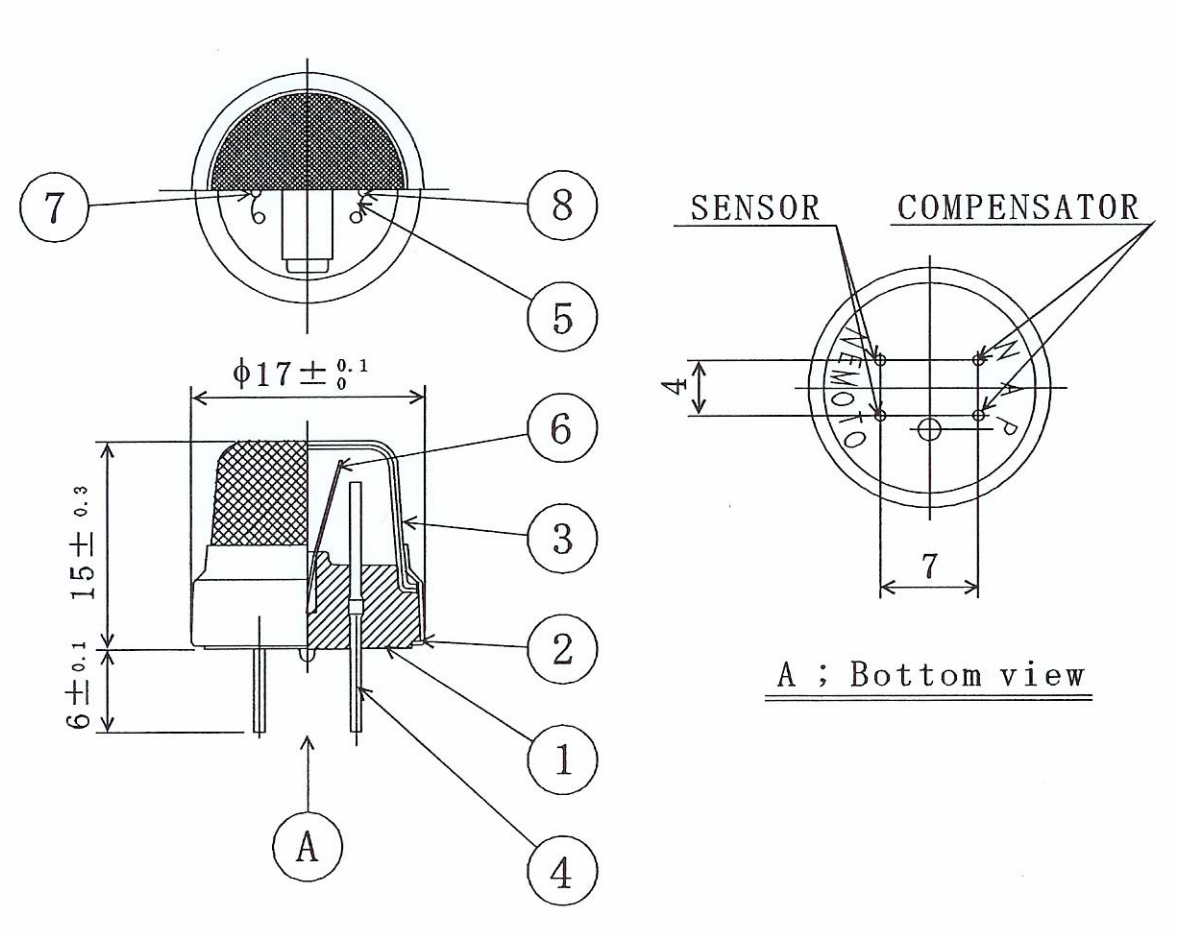
Sensor Structure, Materials of Construction and Dimensions:



1) Mount Base, PM-EE Polymer
2) Metal skirt (C2680, Nickel plated)
3) Mesh Enclosure (SS316)
4) Pin (Pure Nickel)
5) Filament Coil (Pure Platinum)
6) Partition (SS304 CSP)
7) Detecting Element
8) Compensator Element

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