



● NEMOTO SENSORTECH DIVISION
● NANO & CYBERTECH DIVISION



TECHNICAL INFORMATION SHEET: NEMOTO NP-13S Single Header Pellistor Gas Sensor



General Description

The Nemoto NP-13S is a low-power, catalytic (pellistor) type flammable gas sensor designed for use in portable gas detection instruments. The sensor is supplied as a matched pair of pellistor elements mounted on a single header and protected by a metal mesh enclosure and can.

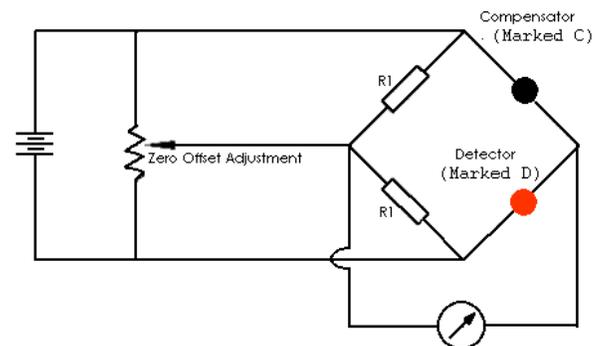
The sensor detects and measures the presence of flammable gases and vapours in air, in the range 0-100% of the Lower Explosive Limit (LEL) of the gas or vapour being measured. Designed as a lower cost alternative to the twin-header NP-13 device, the NP-13S is especially suitable for use in applications such as cap-lamp mounted gas detectors.

The NP-13S exhibits excellent long term zero and sensitivity stability and its resistance to catalytic poisons is also excellent when compared to other low power pellistor type gas sensors available. 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:	3.00V +/- 0.3V
Current Drawn (@3V)	75 +/- 5mA
Gas Sensitivity:	60-100mV/% CH ₄ /Air
Range:	0-100% LEL
Accuracy:	+/- 1%LEL(CH ₄)
Maximum Long Term Drift:	
Span:	< +/- 2% LEL/Month
Zero:	< +/- 2 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. 1KΩ is suggested.

Temperature Range:	-20°C to +70°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 60%LEL

Test data on drift, poisoning, temperature performance, linearity will be available on the Characterisation Document NP-13CD.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

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Sensor Structure and Dimensions:

