NEMOTO SENSORTECH DIVISION
NANO & CYBERTECH DIVISION

TECHNICAL INFORMATION SHEET:
NEMOTO NP-17SM Single Header Pellistor Gas Sensor

General Description

The Nemoto NP-17SM 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 miniature stainless steel enclosure.

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 an improved version of the single header NP-17S device, the NP-17SM is particularly suitable where small size is an important requirement.

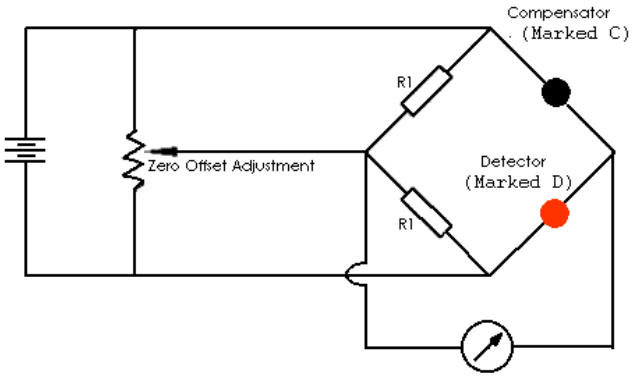
The NP-17SL exhibits excellent long term zero and sensitivity stability and a high level of resistance to catalytic poisons. The highly automated manufacturing procedure employed by Nemoto results in a repeatable reliable sensor which, unlike similar devices, requires no trimming resistor to enable the detector to be matched with a compensator.

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.

Specifications:

Recommended Voltage:	2.0V +/- 0.1V
Current Drawn:	170 +/- 20mA
Zero Offset:	0mV +/- 30mV
Minimum Sensitivity:	20mV/% CH4/Air
Standard Range:	0-100% LEL
Accuracy:	+/- 1%LEL(CH_4)
Maximum Long Term Drift:	
Span:	< +/- 5% LEL/ 3 Months
Zero:	<+/- ½ 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:	-40°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:	Linear to +/- 5% LEL At 100%LEL Gas

Test data on drift, poisoning, temperature performance, linearity will be available on the Characterisation Document np-17sm-CD.

ds-np17sm.doc, issue 1, May 2007

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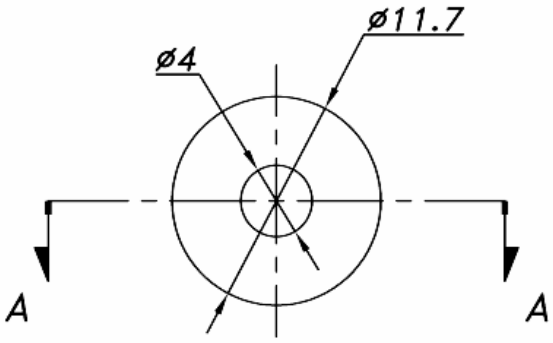
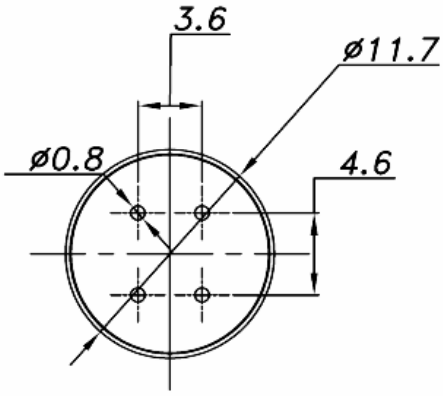
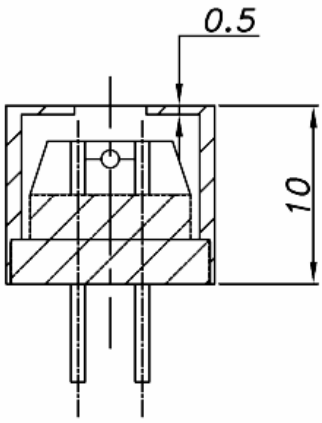
Sensor Structure and Dimensions:





Cross section
A–A



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