

NEMOTO & CO., LTD SENSOR DIVISION

NAP-50A Catalytic Sensor for Methane / Natural Gas

The NAP-50A Gas Sensor is a low-cost Catalytic Flammable Gas Sensor designed for the detection and measurement of Methane or Natural Gas in the range 0-50% LEL. It is a slightly modified version of the original NAP55A sensor, to reduce the effect of potential cross sensitive gases likely to be encountered in domestic premises, particularly Ethanol, in compliance with the European standard for Residential Gas Detectors EN 50194.



- **Unaffected by humidity**
- **Very low long term drift**
- **Excellent resistance to catalytic poisons**
- **Single header design for ease of use**
- **Resistant to shocks and vibration**

The NAP-50A should therefore only be selected if high sensitivity to Natural Gas or Methane only is required, and the lowest cross sensitivity to other flammable gases and vapours is desirable. Where maximum sensitivity to all flammable gases is required, The NAP-55A should be used.

Specifications NAP-50A:

Detectable gas:	Methane and Natural gas
Detection range:	0-50% LEL (0-2.5% V/V)
Bridge Voltage	2.5V +/- 0.25V
Bridge Current	170mA +/- 10mA
Sensitivity to Gas*:	37-53mV for 1% CH ₄
Bridge zero offset*:	0 +/- 35mV

*in Nemoto's recommended bridge circuit

Repeatability:	
Zero:	+/- 0.5mV
Signal:	+/- 0.5mV
Expected lifetime:	5 years

Long Term Drift: Zero:	<+/- 5mV/month
Span:	<+/- 2%/month
Linearity:	Effectively Linear to 50% LEL
Response time(T ₉₀):	<10 seconds

Note: In practice the response time of a gas sensor is very much dependent on the mounting arrangement within an instrument.

Environmental Conditions:

Operating temperature:	-10°C to +50°C
Humidity range:	0-95% RH
Pressure:	0.9 – 1.1 atm
Storage Temperature:	-20°C to +50°C
Recommended Storage Time:	6 months

More detailed information, covering all aspects of performance, including long term stability, repeatability, environmental tolerances to humidity, temperature, wind, shock, cross sensitivity to other gases, recommended circuitry, handling requirements and an explanation of the operating principles of the NAP-50A, please consult the Handling Manual for the device, available on request.

NAP-50A datasheet April 2008

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.

Nemoto (Europe) B.V.
Strawinskyiaan 647,1077 XX Amsterdam, Netherlands
TEL: +31 20 670 3858
FAX: +31 20 670 2709

URL: <http://www.nemoto.co.jp>

