

Product Data Sheet

Product Datasheet

200NE Combustible Gas Sensor

Document Purpose

The purpose of this document is to present the performance specification of the 200NE combustible gas sensor.

This document should be used in conjunction with the Product Safety Datasheet (PSDS 21).

The data provided in this document are valid at 20°C, 50% RH and 1013 mBar for 3 months from the date of sensor manufacture.

Output signal can drift below the lower limit over time.

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Technical Specifications

MEASUREMENT

Operating Principle	Catalytic Bead
Gases Detected	Most combustible gases and vapours
Poison Resistance	Some
Measurement Range	0 - 100%LEL
Output Sensitivity*	12 - 18 mV/%methane
Response Time (T₉₀)*	<15 Seconds (methane)
Linearity	Linear in range 0-5% methane
Resolution	Dependant on electronics

ELECTRICAL

Operating Voltage	2.0 ± 0.1 VDC
Detector Operating Current	180 mA in recommended circuit
Maximum Power Consumption	422 mW

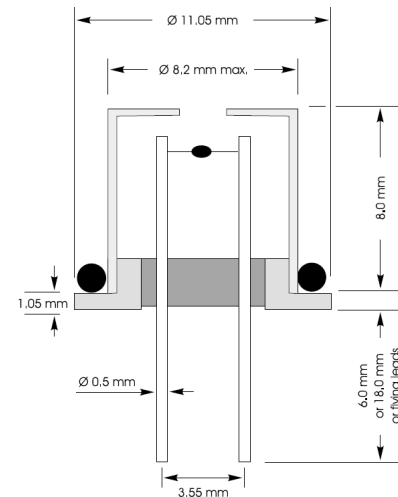
MECHANICAL

Connection	18 mm pins
Housing Material	Stainless Steel 316
Pin Material	High temperature alloy
Orientation	Any

LIFETIME

Long Term Sensitivity Drift	<5% signal / month
Long Term Zero Drift	<2%LEL _{methane} / month

Product Dimensions



All dimensions in mm

All tolerances ±0.15 mm unless otherwise stated

It is recommended that confirmation of adequate sensor performance be conducted on a regular basis by means of a defined, sensor calibration procedure. The calibration frequency will depend upon the environment in which the sensor is operated and on the perceived level of risk from the build up of flammable atmospheres.

*** Specifications are valid at 20°C, 50% RH and 1013 mBar, using City Technology recommended circuitry. Performance characteristics outline the performance of sensors supplied within the first 3 months. Output signal can drift below the lower limit over time.**

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Relative Sensitivity

IMPORTANT NOTE

The relative response data shown below does not form part of the product specification and is supplied for guidance only. For the most accurate measurements, an instrument should be calibrated using the gas under investigation.

The table below shows the variation in response of a 200N-E CiTipeL on exposure to a range of gases and vapours at the same %LEL concentration. The figures are experimentally derived and expressed relative to the methane signal (=100).

Note: The results are intended for guidance only, and for the most accurate measurements an instrument should be calibrated using the gas under investigation.

Gas / Vapour	Relative Sensitivity	Gas / Vapour	Relative Sensitivity	Gas / Vapour	Relative Sensitivity
Methane	100	Methane	100	Methane	100
Propane	55	Methanol	85	Ethyl Acetate	45
n-Butane	55	Ethanol	65	Hydrogen	90
n-Pentane	45	iso - Propyl Alcohol	50	Ammonia	120
n-Hexane	45	Acetone	55	Cyclohexane	50
n-Heptane	45	Methyl Ethyl Ketone	45	Leaded Petrol	55
n-Octane	40	Toluene	35	Unleaded Petrol	65

Each sensitivity has been rounded to the nearest 5%.

SAFETY NOTE

This sensor is designed to be used in safety critical applications. To ensure that the sensor and/or instrument in which it is used, are operating properly, it is a requirement that the function of the device is confirmed by exposure to target gas (bump check) before each use of the sensor and/or instrument. Failure to carry out such tests may jeopardize the safety of people and property.

Every effort has been made to ensure the accuracy of this document at the time of printing. In accordance with the company's policy of continued product improvement City Technology Limited reserves the right to make product changes without notice. The products are always subject to a programme of improvement and testing which may result in some changes in the characteristics quoted. As the products may be used by the client in circumstances beyond the knowledge and control of City Technology Limited, we cannot give any warranty as to the relevance of these particulars to an application. It is the clients' responsibility to carry out the necessary tests to determine the usefulness of the products and to ensure their safety of operation in a particular application.