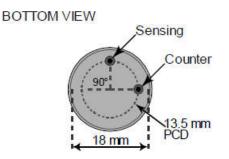
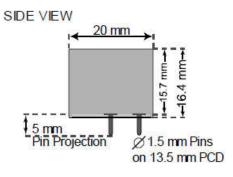
# NO2 2E N NITROGEN DIOXIDE SENSOR 0-20PPM NO2



### **OUTLINE DIMENSIONS:**





All dimensions are in millimetres mm. All tolerances are +/- 0.2mm. Note: PCB sockets are recommended for the sensor pin connection. Soldering to the sensor should be avoided and will invalidate warranty. All performance specifications are based upon the following environment conditions: +20°C, 50% relative humidity and 1 atm (1013 mBar or ambient pressure).

## **SPECIFICATION – 4 SERIES SIZE**

Operating Principle:	Electrochemical, 2-electrode cell	
Gas Detected:	Nitrogen Dioxide NO2	
Measurement Range:	0 – 20 ppm	
Maximum Overload:	Not determined	
Resolution:	0.1 ppm	
Expected Operating Life:	2 years in air	
Temperature Range:	-20°C to +50°C	
Humidity Range (non-condensing): 15 – 90% RH		
Response Time (T90):	< 60 seconds	
Long Term Sensitivity Drift:	< 2% signal per month	
Linearity at Standard Range:	Linear	
Sensitivity:	-300 +/- 70 nA/ppm	
Typical Baseline Range (20°C):-0.1ppm to +0.1ppm		
Baseline Drift (+20°C to +40°C): 0.4 ppm equivalent		
Pressure range:	Atmospheric +/- 10%	
Bias Voltage:	Not required	
Recommended Load Resistor: 33 Ohm		
Repeatability:	< 2% of signal	
Warranty Period:	12 months from date of despatch	
Storage Life:	6 months in original sealed container	
Storage Temperature:	+5°C to +20°C	
Weight (approx):	5.4 g	
Orientation Sensitivity:	None	
Part Number:	2112B9998N	





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#### **CROSS SENSITIVITY DATA**

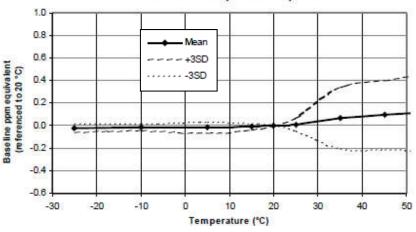
Interfering Gas	Concentration	Reading
CO	300 ppm	0 ppm
SO <sub>2</sub>	5 ppm	0 ppm
NO	35 ppm	0 ppm
H <sub>2</sub>	300 ppm	0 ppm
Ethylene	100 ppm	0 ppm
Cl <sub>2</sub>	10 ppm	~8 ppm

**Notes:** Calibration with cross-sensitivity gas is not recommended. The cross-sensitivity may fluctuate between +/- 30% and may differ from batch to batch and within the sensor's lifetime. The cross-sensitivities are including but not limited to the above gases. The sensor may also respond to other gases.

Performance data conditions: 20°C, 50% RH and 1023 mbar.

### **TEMPERATURE DEPENDENCE**

The output of an electrochemical sensor varies with temperature. The graphs below show the variation in output with temperature for this type of sensor. The results are shown in the graphs as a mean for two batches of sensors, along with confidence intervals corresponding to  $\pm 3$  times the standard deviation. The sensitivity dependence is expressed as a percentage of the signal at 20 °C.



Baseline Temperature Dependence

Sensitivity Temperature Dependence 130% 120% 110% Output (referenced to 20 °C) 100% 90% 80% 70% Mean 60% ---+3SD 50% -----3SD 40% 30% 40 -30 -20 -10 0 10 20 30 50 Temperature (°C)

**Notes:** Sensors are designed to operate in a wide range of harsh environments and conditions. However, it is important to avoid exposure to high concentrations of solvent during storage, fitting into instrumentation and operation. When using sensors on PCBs, degreasing agents should be used prior to the sensor being fitted.

By the nature of the technology used, any sensor can potentially fail to meet specification without warning. Euro-Gas makes every effort to ensure reliability of all sensors but where life safety is a performance requirement of the product and, where practical, Euro-Gas recommends that all gas sensors and instruments using sensors are checked for response to gas before use.

The data contained in this document is believed to be accurate and reliable. The data given is for guidance only. Euro-Gas Management Services Ltd accepts no liability for any consequential losses, injury or damage resulting from the use of this datasheet or the information contained in it. Customers should test the sensors under their own conditions to ensure that the sensors are suitable for their own requirements and in accordance with the plans and circumstances of the specific project and any standards/regulations pertaining to the country in which the sensors will be utilised. Performance characteristics on this data sheet outline the performance of newly supplied sensors. Output signal can drift below the lower limit over time. This datasheet is not intended to form the basis of a contract and in the interest of product improvement. Euro-Gas reserves the right to alter design features and specifications without notice. 01/17



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