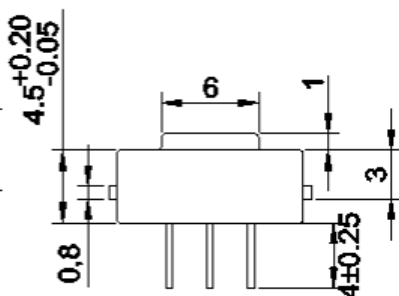
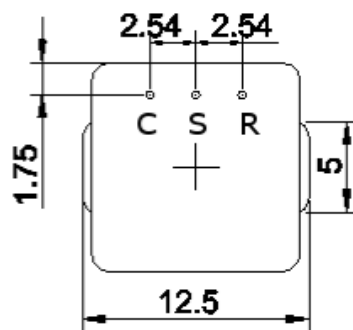
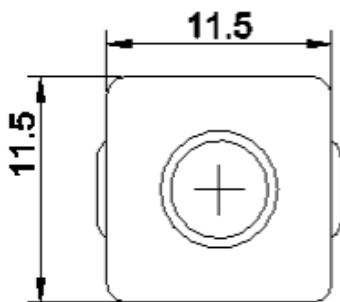
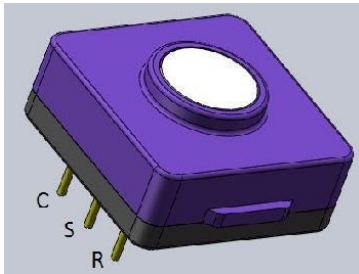


MICRO SS SENSOR 2000PPM SOLID STATE MULTI-GAS / VOC



FEATURES

- Advantages for air quality, gas detection and breath alcohol measurement equipment
- Micro size ideal for portable, fixed, wireless and digital applications
- High sensitivity with low noise
- Low cost alternative to PID detection
- Solid state technology without risk of leakage



SPECIFICATION

Measuring Principle:	Amperometric, 3-electrode advanced solid state technology sensor
Detectable Gases:	Multi-gas and Volatile Organic Compounds VOC sensor calibrated to CO equivalent
Standard Range:	0 – 2000 ppm CO equivalent
Maximum Overload:	5000 ppm
Linear Range:	5000 ppm
Lower Detectable Limit (LDL):	≤ 4 ppm
Resolution (16 Bit ADC):	0.1 ppm
Long Term Sensitivity Drift:	< 1% / month
Zero Drift in Clean Air:	< 2 ppm
Repeatability:	1%
Zero Current at Normal Conditions:	+/- 100 nA
Sensitivity:	25 ± 15 nA/ppm
Response Time (T50):	< 10 seconds
Response Time (T90):	< 30 seconds
Sensor Warm-Up Time (open/short):	< 90 / 60 seconds
Bias Voltage:	0 mV
Recommended Load Resistor:	100 Ω

Note: PCB sockets are recommended for the sensor pin connection. Soldering or using glue with the sensor should be avoided and will invalidate warranty. Socket connector information available on request.

All dimensions are in mm. Tolerances are +/- 0.10mm unless otherwise stated.



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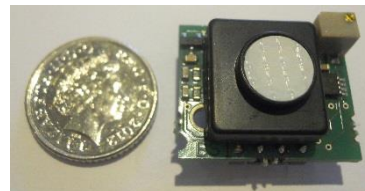
MICRO SS SENSOR 2000PPM SOLID STATE MULTI-GAS / VOC

SPECIFICATION

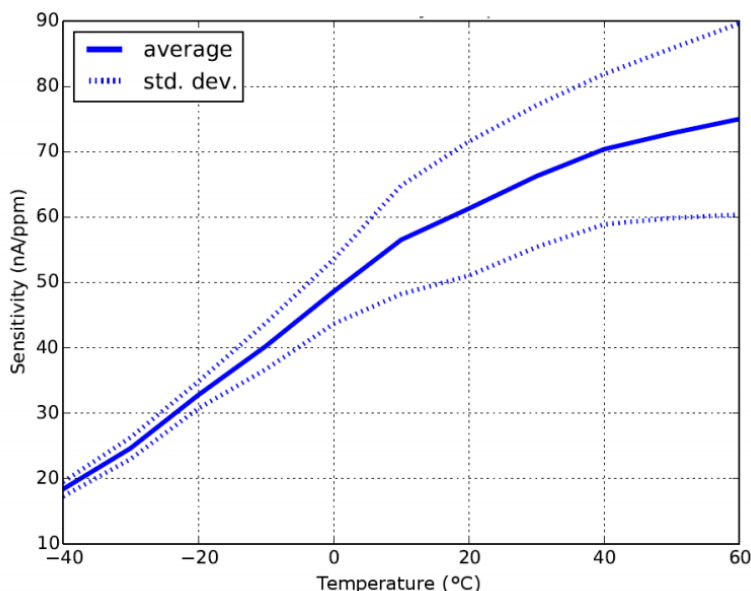
Temperature Range:	-20°C to 50°C
Humidity Range (non-condensing):	10 – 95% RH
Pressure Range:	800 – 1200 hPa
Expected Operating Life:	> 3 years
Storage Life:	6 months in original container
Storage Temperature:	0 – 20°C
Sensor dimensions:	12.5mm x 11.5mm x 9.5mm
Weight:	< 0.7g
Housing material:	PPO
Warranty Period:	24 months from manufacture date
Part Number:	2112B012780

Accessories:

- Precision SIP terminals for sensor pin connection, part no. 2112B4503330
- i2c and voltage miniature SS PCB transmitter, part no. 2112B019900



TEMPERATURE CO-EFFICIENT



Transmitter accessory for
Micro sensors - i2c and
voltage outputs, part no.
2112B019900

Note: PCB sockets are recommended for the sensor pin connection. Soldering or using glue with the sensor should be avoided and will invalidate warranty.

All performance specifications are based upon the following environment conditions: +23°C, 50% relative humidity, 1 atm (1013 mBar or ambient pressure), flow rate > 150qcm/min.



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CROSS SENSITIVITY DATA

GAS	TEST CONCENTRATION (PPM)	READING (PPM)
Ammonia NH ₃	50ppm	0.1ppm
Carbon Dioxide CO ₂	1000ppm	0ppm
Carbon Monoxide CO	100ppm	100ppm
Chlorine Cl ₂	1ppm	-6ppm
Dichloromethane CH ₂ Cl ₂	30ppm	0ppm
Ethanol C ₂ H ₆ O	104ppm	100ppm
Ethylene Oxide C ₂ H ₄	14ppm	7ppm
Ethylene C ₂ H ₂	80ppm	250ppm
Hydrogen H ₂	100ppm	20ppm
Hydrogen Cyanide HCN	10ppm	9ppm
Hydrogen Sulphide H ₂ S	10ppm	400ppm
Isopropanol C ₃ H ₇ OH	<4000ppm	>750ppm
Methane CH ₄	30,000ppm	0
Methanal CH ₂ O	-	Ok
Methanol CH ₃ OH	-	Ok
Methylpropene C ₄ H ₈	15ppm	18ppm
Nitrogen Dioxide NO ₂	10ppm	-5ppm
Nitric Oxide NO	25ppm	Not expected
Ozone O ₃	0.5ppm	0
Sulphur Dioxide SO ₂	-	Ok
Toluene C ₇ H ₈	-	Ok with bias
Xylene C ₈ H ₁₀	-	Ok
Gasoline	-	Ok

Notes: Sensor reading in ppm after calibration to CO. Cross sensitivities indicated with Ok showed a signal response under a bump test. Please see over page for cross-sensitivity table notes.



MICRO SS SENSOR 2000PPM SOLID STATE MULTI-GAS / VOC

CROSS SENSITIVITY DATA

Cross-sensitivity Data Table Notes:

Test conditions at +23°C, 50% relative humidity, 1 atm (1013 mBar or ambient pressure), flow rate > 150qcm/min.

Cross-sensitivity gases are not target gases. Relationship can change overtime.

Sensor reading in ppm after calibration to CO.

Cross sensitivities indicated with Ok showed a signal response under a bump test.

Whilst the SS sensor is designed to be highly specific to the gas it is intended to measure, it will still respond to some degree to various gases. The table is not exclusive and other gases not included in the table may still cause a sensor to react.

The cross-sensitivity values quoted are based on tests conducted on a small number of new sensors. They are intended to indicate sensor response to gases other than the target gas. Sensors may behave differently with changes in ambient conditions and any batch may show significant variation from the values quoted.

The figures in this table are typical values and should not be used as a basis for cross calibration. Cross sensitivities may not be linear and should not be scaled. For some cross interference, break through will occur if gas is applied for a longer time period.

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. 01/20

TYPICAL APPLICATIONS

- **Consumer Markets**
- **Gas Detection**
- **VOC Gas Detection**
- **Low Power Nose**
- **Mobile Phone Nose**
- **Indoor Air Quality**
- **Outdoor Air Quality**
- **Breath Alcohol Detectors**

