CO SS SENSOR – MICRO
SOLID STATE CARBON MONOXIDE

SPECIFICATION – MICRO VERSION

Measuring Principle: Amperometric, 3-electrode sensor
Detectable Gases: Carbon Monoxide CO
Standard Range: 0 – 1000 ppm
Lower Detectable Limit (LDL): 2 ppm
Resolution: 0.1 ppm
Maximum Range: 2000 ppm
MAK/TLV: 30 ppm
Long Term Sensitivity Drift: < 1% / month
Linearity at standard range: Linear
Repeatability: > 98% of signal
Zero Current at Normal Conditions: +/- 100 nA
Sensitivity: 35 (+/-15) nA/ppm
Response Time (T50): <10 seconds
Response Time (T90): <30 seconds
Sensor Warm-Up Time (typically): 60 seconds
Temperature Range: -20°C – +50°C
Humidity Range (non-condensing): 10 – 95% RH
Expected Operating Life: 5 years
Sensor dimensions: 14.5mm x 13.4mm x 9.0mm
Warranty Period: 2 years from date of despatch
Part Number: 2112B012740

Note: PCB sockets are recommended for connection. However, the pins may be soldered with care.

All performance specifications are based upon the following environment conditions: +20°C, 50% relative humidity and 1 atm (1013 mBar or ambient pressure).
TEMPERATURE DEPENDENCE

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### CROSS SENSITIVITY DATA

<table>
<thead>
<tr>
<th>GAS</th>
<th>CONCENTRATION</th>
<th>READING IN PPM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonia NH₃</td>
<td>25ppm</td>
<td>0</td>
</tr>
<tr>
<td>Carbon Dioxide CO₂</td>
<td>5000ppm</td>
<td>0</td>
</tr>
<tr>
<td>Chlorine Cl₂</td>
<td>1ppm</td>
<td>0</td>
</tr>
<tr>
<td>Chlorine Dioxide ClO₂</td>
<td>1ppm</td>
<td>1</td>
</tr>
<tr>
<td>Hydrocarbons unsaturated</td>
<td>1%</td>
<td>0</td>
</tr>
<tr>
<td>Hydrogen H₂</td>
<td>100ppm</td>
<td>30</td>
</tr>
<tr>
<td>Hydrogen Sulphide H₂S</td>
<td>10ppm</td>
<td>0</td>
</tr>
<tr>
<td>Isopropanol C₃H₇OH</td>
<td>1000ppm</td>
<td>0</td>
</tr>
<tr>
<td>Nitric Oxide NO</td>
<td>20ppm</td>
<td>0</td>
</tr>
<tr>
<td>Nitrogen Dioxide NO₂</td>
<td>10ppm</td>
<td>0</td>
</tr>
<tr>
<td>Ozone O₃</td>
<td>0.5ppm</td>
<td>0</td>
</tr>
<tr>
<td>Sulphur Dioxide SO₂</td>
<td>20ppm</td>
<td>0</td>
</tr>
</tbody>
</table>

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 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. Relationship can change over time. Test conditions at 20°C / 1013 hPa, flow rate > 500 qcm/min.
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EXAMPLE CIRCUIT DIAGRAM

*Note: PCB sockets are recommended for connection. However, the pins may be soldered with care.

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. 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. 09/14
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SENSOR OPTIONS

SS solid state sensors are available in different sizes as single sensor options and also complete with precalibrated voltage or i²C-bus transmitter output options; ideal for both small and volume requirements:

Single Sensors
Raw sensor (on board of 48 sensors): Micro sensor: 4 Series sensor:

Sensors with Transmitter boards
Sensors with integrated 5V precalibrated transmitter:

Sensors with pluggable 5V or i²C-bus precalibrated transmitter:

Accessories
Adapter board for Micro sensor to convert to standard 4 series pin size: Micro sensor gas flow cap (fits directly to Micro sensor):

Installation kit for 4 series sensor with integrated 5V transmitter: 4 Series sensor gas flow cap (installation kit required):