CO/CF-200
Carbon Monoxide Gas Sensor in Compact Housing

**SPECIFICATION SHEET**

**MEASUREMENT**
- Operation Principle: 3-Electrode Electrochemical
- Nominal Range: 0 – 200 ppm
- Maximum Overload: 400 ppm
- Inboard Filter: To remove acid gases
- Output Signal: 700 ± 120 nA/ppm
- Resolution (Electronics dependent): < 0.1 ppm
- T90 Response Time: < 40 sec
- Typical Baseline Range (pure air, 20°C): -1 ppm to 1 ppm
- Maximum Zero Shift (+20°C to +40°C): 2 ppm
- Repeatability: < 2 % of signal
- Output Linearity: Linear
- Gain: –

**ELECTRICAL**
- Rec. Load Resistor: 10 Ohm
- Bias (V_Sens-V_Ref): not recommended
- Conformity to RoHS directive: RoHS Compliance

**ENVIRONMENTAL**
- Relative Humidity Range: 15 % to 90 % R.H. non-condensing
- Temperature Range: -20 °C to 50 °C
- Pressure Range: Atmospheric ± 10%
- Pressure Coefficient: N.D.
- Humidity Effect: none

**LIFETIME**
- Expected Operation Life: 3 years in air
- Expected Long Term Output Drift in air: < 2 % per month
- Filter Life: N.D.
- Storage Life: 6 months in container
- Rec. Storage Temperature: 5 °C – 20 °C
- Warranty Period: 12 months from date of dispatch

Performance data conditions: 20 °C, 50% RH, 1013 mbar

**MECHANICAL**
- Weight: 13 g
- Position Sensitivity: None

**APPLICATIONS**
- Continuous Air Quality Monitoring
- Safety and Environmental Control

**CROSS-SENSITIVITY DATA**
The table below does not claim to be complete. Interfering gases should not be used for calibration.

<table>
<thead>
<tr>
<th>Interfering Gas</th>
<th>Conc. ppm</th>
<th>Reading ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>H₂S</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td>SO₂</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>H₂</td>
<td>100</td>
<td>&lt; 40</td>
</tr>
<tr>
<td>NO₂</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>NO</td>
<td>50</td>
<td>0</td>
</tr>
<tr>
<td>O₃</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Cl₂</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td>CH₂O</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>HCl</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td>NH₃</td>
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<td>0</td>
</tr>
<tr>
<td>C₂H₄</td>
<td>100</td>
<td>50</td>
</tr>
</tbody>
</table>

The data contained in this document is for guidance only. Membrapor AG accepts no liability for any consequential losses, injury or damage resulting from the use of this document or from any omissions or errors herein. Customers should test under their own conditions, to ensure that the sensors are suitable for their own requirements.
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 a batch of sensors. The sensitivity dependence is expressed as a percentage of the signal at 20 °C. The shift in baseline is shown in ppm referenced to 20 °C and a relative humidity of 50%.

Please note:
It is highly recommended to acquire the temperature dependence curves with the whole instrument. The sampling system, the humidity, the electronics, the interaction between the electronics and the sensor, all have a significant impact on the temperature dependence of the final measurement reading.

Figure 1: Sensitivity dependence expressed as a percentage of the signal at 20 °C. The result is shown along with confidence intervals corresponding to ±3 times the standard deviation.