General Description

The NE4-H2S is an Electrochemical gas sensor with 3 electrodes for the detection of Hydrogen Sulphide (H₂S) in a variety of gas detection applications.

Exhibiting high performance with long term stability, this compact (20.4mm dia) sensor is suitable for portable Gas Detection Instruments or Fixed Gas Detection heads.

Nemoto's porous electrode technology enables accurate gas detection with high sensitivity. The mechanical design of the sensor gives optimum gas diffusion characteristics, and the hermetically sealed enclosure prevents costly electrolyte leakage.

Specifications:

- **Detectable Gas**: Hydrogen Sulphide (H₂S)
- **Detection Range**: 0-100ppm, 500ppm
- **Maximum overload**: 500 +/- 100 nA/ppm, +/- 2%
- **Output Current**: < +/- 1ppm equivalent
- **Reproducibility (same day)**: < +/- 1ppm / year
- **Zero in clean air**: <10% signal / year
- **Response time (T 90%)**: < 30 seconds
- **Temperature drift (zero)**: <1ppm (-20°C to +50°C)
- **Expected lifetime**: > 2 years
- **Temperature Range**: -20°C to +50°C
- **Humidity range (constant)**: 15-90% RH
- **Humidity range intermittent**: 0-99% RH
- **Pressure**: 0.9 - 1.1 atm
- **Recommended load resistor**: 10 Ω
- **Storage time**: 6 months

Test data on drift, poisoning, temperature performance, linearity are available on the Characterisation Document.

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Test data on drift, temperature performance, linearity etc are available on the Characterisation Document.

Nemoto has a policy of continuous development and improvement of its products. As such the specification for the device outlined in the data sheet may be changed without notice.

**Typical Cross-Sensitivities:**

<table>
<thead>
<tr>
<th>Gas</th>
<th>Test Gas Used (ppm in Air)</th>
<th>Test result (ppm equivalent)</th>
<th>% Cross-sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen Sulphide</td>
<td>10</td>
<td>10</td>
<td>100</td>
</tr>
<tr>
<td>Carbon Monoxide</td>
<td>100</td>
<td>&lt; 2</td>
<td>&lt; 2</td>
</tr>
<tr>
<td>Hydrogen</td>
<td>1000</td>
<td>-3 to + 5</td>
<td>&lt; +/- 1%</td>
</tr>
<tr>
<td>Methane</td>
<td>5000</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Carbon Dioxide</td>
<td>5000</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Sulphur Dioxide</td>
<td>30</td>
<td>&lt;4</td>
<td>&lt; 13</td>
</tr>
<tr>
<td>Nitric Oxide</td>
<td>10</td>
<td>&lt; -0.5</td>
<td>&lt; -5</td>
</tr>
<tr>
<td>Nitrogen Dioxide</td>
<td>10</td>
<td>&lt; -2</td>
<td>&lt; -20</td>
</tr>
<tr>
<td>Ammonia</td>
<td>200</td>
<td>0</td>
<td>&lt; -30</td>
</tr>
<tr>
<td>Ethylene</td>
<td>100</td>
<td>-1 to +1</td>
<td>&lt; +/- 1</td>
</tr>
<tr>
<td>Chlorine</td>
<td>10</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Contact Information:**

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