ELECTROCHEMICAL OXYGEN SENSORS

THE ADVANTAGE OF AMI’S PROPRIETARY SENSOR TECHNOLOGY

AMI has taken the well understood Electrochemical Oxygen sensors to new levels with superior engineering and proprietary manufacturing and testing protocols. AMI’s patented Oxygen Sensors offer customers higher reliability, a longer useful life, and faster response when compared to other manufacturers.

PROPRIETARY ELECTROLYTE

H₂S gas can poison an electrochemical O₂ sensor. The standard T-2 AMI sensor can tolerate up to 10ppm H₂S. AMI’s engineering breakthrough allows the T-4 and P-5 sensors to operate in up to 500ppm of H₂S for their warranted life. Additionally, specific AMI O₂ sensors perform in up 100% CO₂ applications.

BENEFIT: WORKS with H₂S & CO₂ IN THE GAS STREAM

PATENTED SEALING TECHNOLOGY

Competitive sensors are very prone to electrolyte leaking, caused from inferior sealing techniques that significantly degrades accuracy, stability, and sensor life. AMI’s patented sensor sealing technology eliminates all leaks for the life of the sensor, maintaining sensor performance over its useful life.

BENEFIT: LONGER SENSOR LIFE

MORE ACTIVE MATERIALS

All AMI O₂ sensors utilize a thin wall metallic body that provides increased volumes for consumable active materials. Consequently AMI sensors utilizes a much larger lead anode and a greater amount of electrolyte, resulting in longer sensor life and superior performance. Additionally, the conductive metallic body increases the cathode surface area for the oxygen reduction reaction, resulting in a faster sensor come down time.

BENEFIT: LONGER SENSOR LIFE & SUPERIOR PERFORMANCE

OPTIMIZED DIFFUSIVE MEMBRANE

Oxygen diffuses through a unique membrane and immediately gets reduced at the cathode. AMI has perfected the membrane thickness and the positioning of the anode and cathode to produce the fastest response times, highest stability and most linear outputs, which outperforms the competition.

BENEFIT: SUPERIOR ACCURACY & LINEARITY
In addition to AMI’s superior design every single oxygen sensor manufactured by AMI undergoes a rigorous temperature and performance test before it can be shipped to a customer. Each unit is independently tested for come down time, noise, linearity and diurnal performance while varying temperature.

It is one more step that AMI takes to ensure our customers receive the best sensors in the industry.

### T-SERIES | P-SERIES

<table>
<thead>
<tr>
<th>MODEL</th>
<th>T-2</th>
<th>T-4</th>
<th>P-2</th>
<th>P-3</th>
<th>P-4</th>
<th>P-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>TRACE</td>
<td>TRACE</td>
<td>PERCENT</td>
<td>PERCENT</td>
<td>PERCENT</td>
<td>PERCENT</td>
</tr>
<tr>
<td>Recommended (O_2) Measurement Range (^1)</td>
<td>0 - 10,000 ppm</td>
<td>0 - 10,000 ppm</td>
<td>0 - 50%</td>
<td>0 - 25%</td>
<td>0 - 100%</td>
<td>0 - 25%</td>
</tr>
<tr>
<td>Minimum Range (^2)</td>
<td>0 - 5 ppm</td>
<td>0 - 5 ppm</td>
<td>0 - 1,000 ppm</td>
<td>0 - 1,000 ppm</td>
<td>0 - 1.0%</td>
<td>0 - 1,000 ppm</td>
</tr>
<tr>
<td>Sensitivity (^3)</td>
<td>0.05 ppm</td>
<td>0.05 ppm</td>
<td>10 ppm</td>
<td>100 ppm</td>
<td>1,000 ppm</td>
<td>100 ppm</td>
</tr>
<tr>
<td>Special Conditions (^4)</td>
<td>&lt;10 ppm H(_2)S&lt;br&gt;100% CO(_2)</td>
<td>&lt;500 ppm H(_2)S&lt;br&gt;100% CO(_2)</td>
<td>(O_2) in inert gas</td>
<td>Up to 100% CO(_2)</td>
<td>Enriched Oxygen</td>
<td>&lt;500 ppm H(_2)S&lt;br&gt;100% CO(_2)</td>
</tr>
</tbody>
</table>

### Notes:

1. Any sensor can be used in \(O_2\) applications above its recommended operating ranges, however, it may shorten the sensor’s lifespan.
2. The minimum range of the sensor is dependent on the sensor as well as the AMI Analyzer it is used within.
3. Sensitivity is the minimum change in \(O_2\) in the gas stream that will be detected by the sensor.
4. Notify the factory for use in \(CO_2\) background gas above 50%. The AMI \(O_2\) Analyzer will require additional programming.

### PERFECT MATCH — AMI SENSORS AND ANALYZERS

For the best and most accurate oxygen measurements, our oxygen sensors should be used with our AMI Oxygen Analyzers. Combining the ELIMINATOR CELL BLOCK of the Analyzer with AMI’s proprietary sensor technology optimizes the reliability and accuracy of the measurement readings.

Substituting a lesser oxygen sensor in your high-performance AMI Oxygen Analyzer will severely degrade the performance of your Analyzer as well as damage the unit and void the warranty.