5100/5100 HD Gas Analyzers

Fast, accurate results with proven, laser-based measurement

Based on Tunable Diode Laser Absorption Spectroscopy (TDLAS), the 5100 and 5100HD analyze components of interest in a variety of gas streams. The proven laser-based measurement system is free of interferences from other sample stream components, providing fast and accurate results.

Maintenance requirements are minimal, as the gas stream being analyzed never contacts the key measurement components – the laser light source and detector. For samples requiring conditioning or heat to maintain the sample stream in a measurable gas phase, the 5100HD can include pressure and flow regulators, a 150°C (302°F) heater and/or a pump or educator.

AMETEK TDLAS analyzers are available in a variety of configurations, designed to meet your specific measurement and installation location requirements.

Non-contact measurement
The sample never contacts the key optical components, reducing maintenance.

Line lock
The wavelength of interest is constantly verified using an integrated reference.

Designed for use in difficult environments
Can be installed in many environments, including those defined as hazardous.

Heater available
Perform hot/wet analysis, eliminating the need to remove water and the use of compensation calculations.

Multiple components
Measure up to three components in one AMETEK 5100HD analyzer.

KEY BENEFITS
- Real-time performance monitoring
- Low-maintenance cost and requirements
- Remote monitoring and maintenance access
- IP 65/Type 4X enclosure
- Fully-integrated sample handling

APPLICATIONS
- Moisture in natural gas
- Hydrogen sulfide (H₂S) in fuel gases and flares
- Ethylene production
- Combustion monitoring
- Oxygen (O₂) in production processes

KEY MARKETS
- Natural gas
- Chemicals
- Petrochemicals
- Refining

To find out more or request a quote visit our website ametekpi.com
## PERFORMANCE SPECIFICATIONS

<table>
<thead>
<tr>
<th>Typical measured gases</th>
<th>Water, H₂S, carbon monoxide, carbon dioxide, O₂, ammonia, methane, acetylene, ethylene, and others. Note: more than one gas may be measured on the 5100HD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ranges and performance</td>
<td>Percent level down to parts per million (ppm) level ranges</td>
</tr>
<tr>
<td>Accuracy</td>
<td>Typically, better than ±2% of reading</td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>-20 to 50°C (-4 to 122°F)</td>
</tr>
<tr>
<td>Relative humidity</td>
<td>0 to 90%, non-condensing</td>
</tr>
<tr>
<td>Sample flow rate</td>
<td>1 to 10 slpm (2-20 SCFH)</td>
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<tr>
<td>Sample cell pressure</td>
<td>70 to 170 kPa absolute (10-25 psia)</td>
</tr>
<tr>
<td>Speed of response</td>
<td>&lt;1 second photometric response. Total system response is dependent on sample flow rate</td>
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<tr>
<td>Outputs</td>
<td>Keypad and display Fast Ethernet (IEEE802.3) RS485 serial port, isolated (supports Modicon Modbus RTU) Up to two single isolated 4-20 mA loop powered analog outputs Four dry relay contacts Contact rating 30 VAC, 60 VDC, 100 VA resistive</td>
</tr>
<tr>
<td>Electrical requirements</td>
<td>120/240 VAC (108-132/216-264V); 47-63 Hz, or 24 VDC (consult AMETEK)</td>
</tr>
<tr>
<td>Power requirements</td>
<td>5100: 105W; &lt; 25W without cell heater 5100HD: 450W; 105W without heater</td>
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<tr>
<td>Physical dimensions (W x H x D)</td>
<td>5100: 434.2 x 868.8 x 211.7 mm (17.1 x 34.2 x 8.34 in.) 5100HD: 830 x 674 x 305 mm (32.7 x 26.5 x 12 in.) (can vary based on configuration)</td>
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<tr>
<td>Weight</td>
<td>5100: 25 kg (55 lb) 5100HD: 60 kg (132 lb) (can vary based on configuration)</td>
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<tr>
<td>Enclosure</td>
<td>IP-65, Type 4, 4X</td>
</tr>
<tr>
<td>Electrical classification</td>
<td>Approvals and certifications: Certified to meet multiple ATEX, IECEx, CSA, NEC and Inmetro standards for hazardous areas Consult AMETEK for more details</td>
</tr>
</tbody>
</table>

## SALES, SERVICE & MANUFACTURING

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