

## PRODUCT DATA SHEET

# 5100HD Gas Analyzers for Measuring O<sub>2</sub> in Process Gas

Based on tunable diode laser absorption spectroscopy (TDLAS), the 5100HD analyzes oxygen in a variety of gas streams.

The 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 makes contact with 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.

### Non-contact measurement

The sample never contacts the key optical components, reducing maintenance requirements

### 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



## KEY BENEFITS

- Real-time performance monitoring
- Low maintenance cost and requirements
- Reduced downtime
- IP 65/Type 4X enclosure
- Fully-integrated sample handling

## APPLICATIONS

- Process safety
- Headspace analysis

## KEY MARKETS

- Chemicals
- Oil & gas
- Petrochemicals
- Refining

**PERFORMANCE SPECIFICATIONS**

|  |   |
|--|---|
| <b>Typical operating range</b>         | 0-5% and 0-25%  |
| <b>Accuracy</b>                        | ±2000 ppm (v/v) or ±2% of reading, whichever is greater   |
| <b>Ambient temperature</b>             | -20 to +50°C (-4 to 122°F).   |
| <b>Relative humidity</b>               | 0 to 90%, noncondensing   |
| <b>Sample flow rate</b>                | 1 to 10 SLPM recommended (2-20 SCFH)  |
| <b>Sample cell pressure</b>            | 70 to 170 kPa absolute (10-25 psia)<br>For higher pressures, consult AMETEK   |
| <b>Speed of response</b>               | < 1 second photometric response. Total system response is dependent on sample flowrate  |
| <b>Outputs</b>                         | Display and keypad.<br>Fast ethernet (IEEE802.3)<br>RS485 serial port, isolated (supports Modicon Modbus RTU)<br>(1) isolated 4-20 mA loop-powered analog output<br>(4) dry relay contacts. Contact rating 30 VAC, 60 VDC, 100 VA resistive |
| <b>Electrical requirements</b>         | 120 VAC (108-132V); 47-63 Hz, or 240 VAC (216-264V), 47-63 Hz 24 VDC (Consult AMETEK)   |
| <b>Power requirements</b>              | 5100HD: 450W, 105W without heater   |
| <b>Physical rimensions (W x H x D)</b> | 5100HD: 830 x 674 x 305 mm (32.7 x 26.5 x 12.0 in.)<br>5100HD ATEX Zone 1: 1143 x 648 x 436 mm (45.0 x 25.5 x 17.1 in.)   |
| <b>Weight</b>                          | 5100HD: 60 Kg (132 lb)  |
| <b>Enclosure</b>                       | IP-65, TYPE 4X  |
| <b>Approvals and certifications</b>    | Certified to meet multiple ATEX, IECEx, CSA and NEC standards for hazardous areas<br>Consult AMETEK for more details  |

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