

## Model 5100HD Gas Analyzer for Measuring Oxygen in Process Gas

Based on Tunable Diode Laser Absorption Spectroscopy (TDLAS)

*The Model 5100HD uses sealed reference cells for continuous on-line analyzer verification and offers high specificity, sensitivity and extremely fast response speeds.*



### Features and Benefits

- || **Noncontact Measurement**  
Noncontact measurement offers low maintenance
- || **All Digital Signal Processing**  
32-bit microcontroller capable of sophisticated signal processing
- || **Web-Based Interface**  
To interrogate the analyzer remotely, all you need is the IP address of the analyzer
- || **Connectivity**  
Modbus, Ethernet, dry contacts and analog
- || **Real-Time Performance Monitoring**  
Laser line-lock verification using internal reference cell
- || **NEMA 4 Enclosure houses the electronic components**  
Designed for outdoor installation
- || **Fully-Integrated Sample Handling**  
Standard feature
- || **Resistant to Contamination**  
No interference from gas phase amines, glycol, methanol, H<sub>2</sub>S and mercaptans
- || **Hazardous Area Options for Model 5100HD**  
NEC/CEC: Class I, Div 2, Groups A,B,C,D;  
Class II, Div 2, Groups F & G; Class III  
ATEX Zone 2, ATEX Zone 1 and IEC Ex, CSA

# Model 5100HD Gas Analyzer

## Specifications

**Laser Specification:** Class IIIb

**Typical Operating Range:**

0-1% Min / 0-30% Max. Other ranges available subject to application. Consult AMETEK.

**Accuracy:** 1% full scale range or  $\pm 200$  ppm or whichever is higher

**Repeatability:** 1% of full scale range or  $\pm 200$  ppm or whichever is higher

**Linearity:** Better than 1%

**Environment:**

**Ambient Temperature:**  $-20^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$  ( $-4^{\circ}\text{F}$  to  $122^{\circ}\text{F}$ )

**Electrical Classification:**

NEC/CEC: Class I, Div 2, Groups A,B,C,D; Class II, Div 2, Groups F & G; Class III, ATEX Zone 2, ATEX Zone 1 and IEC Ex, CSA

**Relative Humidity:** 0% to 90%, non-condensing

**Sample Flow Rate:** 1 to 10 SLPM recommended (2 - 20 SCFH)

**Sample Cell Pressure:** 70 to 170 kPa absolute (10-25 psia)

**Speed of Response:** < 1 second photometric response. Total system response is dependent on sample flowrate.

**Outputs:** 4-line x 20-character alphanumeric VF display.

**Fast Ethernet** (IEEE802.3)

**RS-485** serial port, isolated (supports Modicon Modbus RTU)  
(1) isolated 4-20 mA loop-powered analog output

(4) dry relay contacts. Contact rating 30 VAC, 60 VDC, 100 VA resistive

**Electrical Requirements:**

120 VAC (108-132V); 47-63 Hz, or 240 VAC (216-264V), 47-63 Hz  
24 VDC (no oven heater available)

**Power Requirements:**

450W with optional heater

**Physical Dimensions (HxWxD):**

64.23 cm x 83.03 cm x 29.53 cm  
(25.29" x 32.69" x 11.63")

**Weight:**

58.97 Kg (130 lb)

**Enclosure:** IP-65, NEMA 4

TDLAS



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One of a family of innovative process analyzer solutions from AMETEK Process Instruments.  
Specifications subject to change without notice.

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