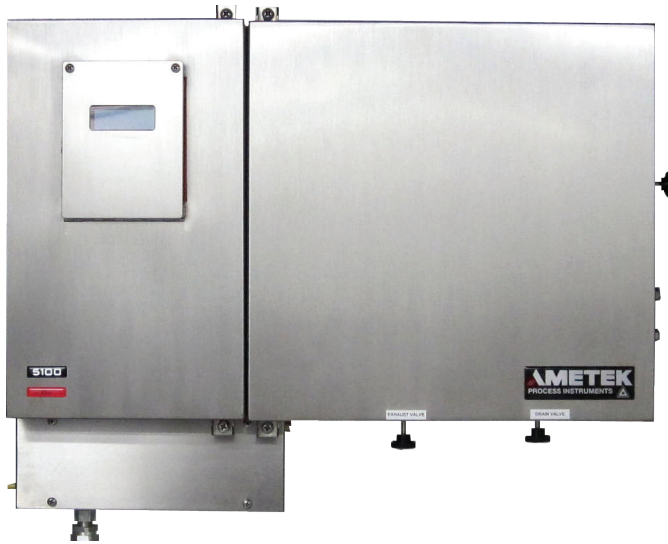


Model 5100 HD Gas Analyzers for Measuring H₂S in Process Gas

Based on Tunable Diode Laser Absorption Spectroscopy (TDLAS)
An additional gas such as CO₂ or H₂O may also be measured.

*Model 5100 HD, GP, Class I, Div 2
ATEX/IEC Ex Zone 2*



Model 5100 HD 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**
The sample has no contact with the optical measuring device which minimizes maintenance
- ▶ **All Digital Signal Processing**
32-bit microcontroller capable of sophisticated signal processing
- ▶ **Web-Based Interface**
Connect through a remote PC using standard web browser
- ▶ **Connectivity**
Modbus, Ethernet, dry contacts and analog
- ▶ **Real-Time Performance Monitoring**
Laser line-lock and span verification using internal reference cell
- ▶ **NEMA 4X Enclosure to house the electronic components**
Designed for outdoor installation
- ▶ **Fully-Integrated Sample Handling**
Standard feature
- ▶ **Resistant to Contamination**
No interference from gas phase amines, glycol, methanol, and mercaptans
- ▶ **Hazardous Area Options**
Class I Div 1, BCD T3; Ex De IIB+H2 T3 Gb; Pressurized Class 1 Zone 1 ATEX de IIB+H2 T3 (or T5); Div 2 and Zone 2 are also available.

Model 5100 HD Gas Analyzers

Specifications

Laser Specification: Class 1m or 3b depending on application

Typical Operating Range: 0-300 ppm Min / 0 to 50% Max; Other ranges available subject to application, consult AMETEK
CO₂: 0-100ppmv up to % ranges
H₂O: 0-100ppmv up to % ranges
Accuracy: Application dependent. Typical ±5ppmv or 2% of reading, whichever is greater

Environment:

Ambient Temperature: -20°C to +50°C (-4°F to 122°F).

Electrical Classification:

Class I Div 1, BCD T3; Ex De IIB+H2 T3 Gb; Pressurized Class 1 Zone 1 ATEX de IIB+H2 T3 (or T5);

Div 2 and Zone 2 are also available. INMETRO Certification for Zone 2 - Ex nA nC ic op is IIC T3 Gb, IP65

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)

Sample Cell Temperature: The horizontal cell is located in an oven with sample tubing and filter which has variable temperature options depending on application requirement. Note that sample must be presented to the analyzer in the gas phase. The analyzer may maintain gas phase at the appropriate temperature but should not be used to vaporize liquid sample.

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 (Consult AMETEK)

Power Requirements: Model 5100 HD: 450W; 105W without heater

Physical Dimensions (HxWxD):

Model 5100 HD:
67.4 cm x 83.0 cm x 30.5 cm
(26.5 in. x 32.7 in. x 12.0 in.)

Model 5100 HD Atex Zone 1:
64.8 cm x 114.3 cm x 43.6 cm
(25.5 in. x 45.0 in. x 17.1 in.)

Weight:

Model 5100 HD:
60 Kg (132 lb)

Model 5100 HD Atex Zone 1:
114 Kg (250 lb)

Enclosure: IP-65, (NEMA 4X available)



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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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TDLAS