AMETEK® PROCESS INSTRUMENTS

TDLAS

Model 5100 Gas Analyzer for the Measurement of Moisture in Gas Streams

Based on Tunable Diode Laser Absorption Spectroscopy (TDLAS)

Model 5100 uses a sealed moisture reference cell 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 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 other gas phase species
- ***Hazardous Area Certifications***
  NEC/CEC: Class I, Div 2; Class II, Div 2, Groups F & G; Class III, Div 2

  NEC Div 1 and ATEX certifications also available

Model 5100 Gas Analyzer

TDLAS

SPECIFICATIONS

Laser Specification: Class 1m

Operating Range: Dependant on application. Vary from % levels to 10 ppm range.

Typical Accuracy: ±2% of FS range

Typical Repeatability: ±2% of FS range

Environment:

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

Electrical Classification:

NEC/CEC: Class I, Div 2; Class II, Div 2, Groups F & G; Class III, Div 2 (standard model)

NEC Div 1 and ATEX certifications also available

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 (216-264), 47-63 Hz

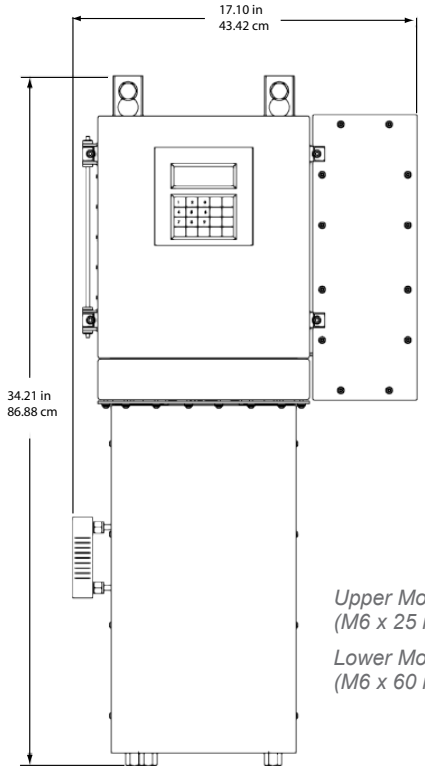
Power Requirements: < 25 W; with optional heater 105W

Physical Dimensions (HxWxD):

86.88 x 43.42 x 21.17 cm (34.2 x 17.1 x 8.34 in.)

Weight: 25 Kg (55 lb)

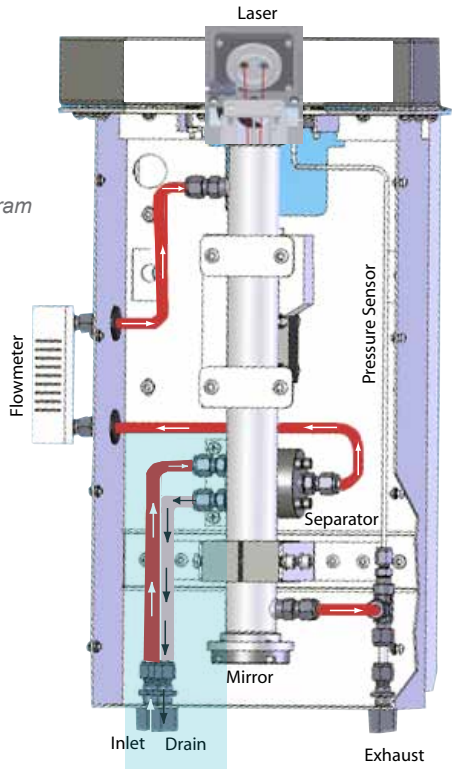
Enclosure: IP-65, NEMA 4



Upper Mounting Hardware: (2) 1/2" x 1.00 L (M6 x 25 mm L) hex bolts

Lower Mounting Hardware: (2) 1/2" x 2.50 L (M6 x 60 mm L) hex bolts (Optional)

5100 Flow Diagram



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PROCESS INSTRUMENTS

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ISO 9001 REGISTERED MANAGEMENT SYSTEM

F-0221 Rev. 3 (0311)

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

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