Model 5100 Gas Analyzer for the Measurement of Carbon Dioxide in Process Gas
Based on Tunable Diode Laser Absorption Spectroscopy (TDLAS)

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

- **NEMA 4X Enclosure Houses the Electronic Components**
  Designed for outdoor installation

- **Real-Time Performance Monitoring**
  Laser line-lock verification using internal reference cell

- **Fully-Integrated Sample Handling**
  Standard feature

- **Hazardous Area Certifications**
  NEC/CEC: Class I, Div 2; Class II, Div 2, Groups F & G; Class III, Div 2
  Div 1 and ATEX Zone 1 are also available

Model 5100 uses a sealed carbon dioxide reference cell for continuous on-line analyzer verification and offers high specificity, sensitivity and extremely fast response speeds.
## Specifications

**Laser Specification:** Class 1m

**Typical Operating Range:** 0-10% carbon dioxide (for lower ranges contact AMETEK sales)

**Percentage or ppm level ranges are available**

**Accuracy:** Typically ±2% of FS range

**Repeatability:** Typically ±2% of FS range

**Environment:**

- **Ambient Temperature:** -20°C to +50°C (-4°F to 122°F).
- **NEC/CEC:** Class I, Div 2; Class II, Div 2, Groups F & G; Class III, Div 2 (standard model)
- **NEC Div 1 and ATEX Zone 1**

**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) single 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:**
- < 25W; with optional heater 105W

**Physical Dimensions (HxWxD):** 86.88 cm x 43.42 cm x 21.17 cm (34.2 in. x 17.1 in. x 8.34 in.)

- **Weight:** 25 Kg (55 lb)

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

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**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)