



SS2000e SINGLE CHANNEL CO₂ GAS ANALYZER

FOR NATURAL GAS
Product Code 10303

KEY FEATURES

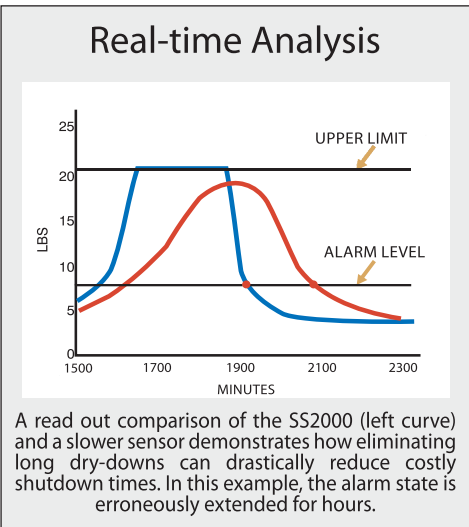
- Virtually maintenance free
- No interference from glycol, methanol or amine contaminants (vapor phase)
- Accurate, real-time measurements
- No wet-up or dry-down delays
- RELIABLE in harsh environments
- Short term payback; no consumables
- NIST-traceable calibration
- NEMA 4X enclosure
- CSA Certified
- Analog and digital Outputs for remote monitoring

NEW FEATURES

- Heated and Unheated Stainless Steel Sample Conditioning Enclosures with NEMA-4X System Rating
- Optional RS485 and Ethernet Communications
- AMS100 Analyzer Management Software

SpectraSensors SS2000e Single Channel Analyzer for CO₂ is extremely reliable and tailored for the needs of the natural gas industry. The sensor measures gas using a patented Tunable Diode Laser Diode (TDL) to determine the concentration of the gas without coming into physical contact with the stream.

RAPID RESPONSE TIME The SS2000e analyzer takes four measurements per second with a laser and detector and immediately averages the results. Because there is no contact with the gas, real-time measurements are not hampered by wet-up or dry-down times as with surfaced-based sensors.



RELIABLE Trustworthy measurements are vital to natural gas pipeline and processing companies. Independent studies have proven that the SS2000e results are highly correlated with those of chilled mirrors. However,

chilled mirrors require skilled experts to operate and the results are highly scattered (large standard deviation).

Uncertain measurements can be extremely costly. Additional processing of dehydration costs, upset conditions, shut-ins and inconsistent process results may be caused by sensors that do not perform properly. The SS2000e is the first to offer truly reliable measurement and simple operation.



LONG LIFE The TDL sensor does not come into contact with the sample gas stream. The result is a sensor which does not suffer from contamination or drift due to vapor impurities such as glycol, methanol or amines.

LOW COST OF OWNERSHIP Operating costs are dramatically reduced by eliminating the cost of consumables, extra sensor heads, labor and overhead associated with excessive maintenance.

The SS2000e dramatically reduces intangible but real costs associated with unreliable gas measurements. By eliminating added processing steps, detecting poor gas quality and the possibility of costly damage to equipment that can result from sensors that produce incorrect data.

SS2000e Single Channel Carbon Dioxide Analyzer

SPECIFICATIONS

Application Data

Target Components	CO ₂ in Natural Gas
Typical Measurement Ranges	0-5% and 0-10%*
Typical Precision	±1% of reading or ±400ppmv, whichever is greater
Measurement Response Time	0.25-2 seconds (Total system response is dependent on flow rate and sample system volume)
Principle of Measurement	Tunable Diode Laser Absorption Spectroscopy
Environmental/Sample Temperature Range	-20° to 50° C (-4° to 122° F) -10° to 60° C (14° to 140° F) <i>optional</i>
Sample Pressure	Maximum cell pressure 70kPaG (10 psig) Inlet Pressure to Sample System 140-340kPaG (20-50psig)
Sample Flow Rate	0.5-1 L/min (1-2 scfh)
Recommended Validation	Binary Cal Gas Bottle with Methane Background

Electrical Data

Input Voltage	100-240 VAC, 50-60 HZ 18-24 VDC <i>optional</i>
Max Current (unheated)	1 amp maximum @ 120 VAC , 1.6A @ 24VDC
Max Current (heated)	2 ampS maximum @ 120 VAC
Communication	Analog: Two 4-20mA Isolated, 1200 ohms @ 24 VDC max load Serial: RS232C standard, RS485 and Ethernet Optional Protocol: Modbus Gould RTU or Daniel RTU or ASCII
Digital Outputs	2, General Fault and Concentration/Assignable Alarm
LCD Display	Concentration, Cell Pressure, Temperature, Alarms & Diagnostics

Physical

Enclosure Type	NEMA 4X Stainless Steel Enclosures
Dimensions H,L,W	973, 406, 224mm (38.3, 16, 8.8 inches)
Approximate Weight	34kg (75lbs)
Sample Cell Dimensions	438 mm H x 108 mm W (17 1/4"H x 4 1/4"W)
Sample Cell Construction	316L Series Polished Stainless Steel Standard
Number of Sample Cells	1

Certification

CSA Class 1, Division 2, Groups BCD, Temp Code T3C (T3 with Heaters)
CE Directives EN61010-1 & EN61326-1

* Consult factory for alternative or extended ranges.