



SS2000 SINGLE CHANNEL CO₂ GAS ANALYZER

FOR NATURAL GAS
Product Code 10303

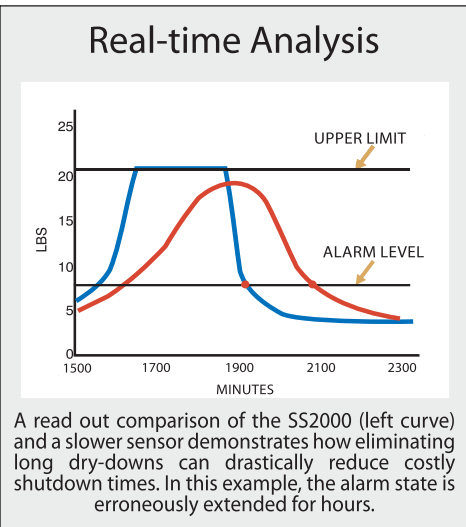


KEY FEATURES

- 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

SpectraSensors SS2000 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 SS2000 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 SS2000 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 SS2000 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 SS2000 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.

SS2000 Single Channel Carbon Dioxide Analyzer

SPECIFICATIONS

Application Data

Target Components	CO ₂ in Natural Gas
Typical Measurement Ranges	0-10% (other ranges available)
Typical Precision	±1% of reading or ±0.04ppmv (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 Temperature Range	-20° to 50° C (-4° to 122° F) -15° to 60° C (-5° to 140° F) <i>optional</i>
Sample Inlet Pressure	10 to 25 PSIA, 10 PSIG Maximum (70-170kPa Abs, 70kPaG maximum)
Sample Cell Temperature Range	-20° to 50° C (-4° to 122° F) -15° to 60° C (-5° to 140° F) <i>optional</i>
Maximum Cell Pressure	70kPag (10 PSIG)
Sample Flow Rate	0.1-10 L/min (0.2 to scfh)
Recommended Validation	Binary Cal Gas Bottle with Methane Background



Electrical Data

Voltage	100-240 VAC, 50-60 Hz 9-16 VDC OR 18-32 VDC <i>optional</i>
Max Current	1 amp maximum @ 120 VAC 1.6A @ 24VDC, 3.2A @ 12 VDC
Communication	Generic or Modbus RS232 4-20Ma loop
Digital Outputs	2, General Fault and Concentration Alarm
LCD Display	Concentration, Cell Pressure and Temperature & Diagnostics

Physical

Enclosure Type	NEMA 4X – stainless steel <i>standard</i>
Dimensions	444 mm H x 376 mm W x 135 mm D (17.5" H x 14.8" W x 5.8" D)
Weight Approximately	Approx. 11.5Kg (25lbs)
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

Area Classification

Certification	CSA Class I, Division 2, Groups ABCD, Temp Code T3C
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* Consult factory for alternative or extended ranges.