

SS3000 DUAL CHANNEL H₂O/H₂O GAS ANALYZER

FOR NATURAL GAS
Product Code 10805

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 or NEMA 7 enclosure
- CSA Certified
- Analog and digital Outputs for remote monitoring

SpectraSensors SS3000 Dual Channel Gas Analyzer is a cost effective measurement system which enhances cost savings by incorporating two sensors in one.

RAPID RESPONSE TIME

The SS3000 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.

TRUSTWORTHY MEASUREMENTS

Dependable data is an essential element in the quest for improved safety and quality. The SS3000 analyzer delivers precise, reliable measurements using patented Tunable Diode Laser (TDL) technology developed by NASA.

The TDL sensor never comes 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.

The SS3000 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.



STATE OF THE ART TECHNOLOGY

The analyzer works by shining a laser beam through the sample cell. The laser beam is selected to interact only with the measured compound, creating an absorption signal. The higher the concentration of H₂O, the greater absorption of light and the stronger the corresponding absorption signal. Spectrum Software analyzes these absorption peaks to produce very accurate and repeatable measurements. Since the calculation is a direct, fundamental measurement, the amount of H₂O present can be measured in real-time.

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.

SS3000 Dual Channel Moisture Analyzer

SPECIFICATIONS

Application Data

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|---------------------------------|---|
| Target Components | H ₂ O / H ₂ O in Natural Gas |
| Typical Measurement Ranges | 0-422ppmv (0-20 lb/MMscf) Ranges up to 10,000ppmv available* |
| Typical Precision | ±4ppm |
| 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 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 | Bureau of Mines Chilled Mirror or Portable TDL |



Electrical Data

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|-----------------|--|
| Power | 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 @ 24 VDC, 3.2A @ 12 VDC |
| Communication | Generic or Modbus RS232C, 4-20mA loop |
| Digital Outputs | 4, General Fault and Concentration Alarms for Each Measurement Channel |
| LCD Display | Concentration, Cell Pressure and Temperature & Diagnostics |

Physical

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|--------------------------|---|
| 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 | 2 (Dual Channel SS3000) |

Area Classification

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| Certification | CSA Certified for Class I, Div. 2, Groups ABCD T3C |
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