



## SS500e SINGLE CHANNEL H<sub>2</sub>O GAS ANALYZER

FOR NATURAL GAS  
Application Code 10101



### 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
- Analog and digital outputs for remote monitoring

### NEW FEATURES

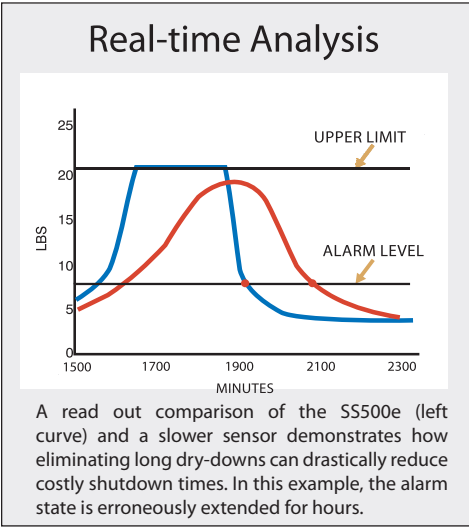
- Heated and Unheated Stainless Steel Sample Conditioning Enclosures with NEMA-4X System Rating
- Optional RS485 and Ethernet Communications

#### SpectraSensors SS500e Analyzer

is an economical analyzer which utilizes the same state-of-the-art technology as SpectraSensors higher detection analyzers, assuring the user of high reliability and repeatability.

**RAPID RESPONSE TIME** At four measurements per second, the analyzer can measure the fastest changes in the pipeline. Adjustable, real-time results display every 0.25-2 seconds.

**NO CONSUMABLES** Because the analyzer's sensor never touches the gas stream, it does not get contaminated. The factory set calibration lasts for the life of the analyzer and reconditioning is never required.



**PAYBACK** The SS500e very quickly pays for itself by doing away with expensive consumables, extra sensor heads, labor and overhead associated with excessive maintenance. Costs due to unreliable gas measurements

can be reduced by eliminating added processing steps, poor gas quality and the possibility of damage to expensive equipment can result from sensors that produce incorrect data.

**NO INTERFERENCE** As with all SpectraSensors analyzers, the SS500e combines a patented laser with control electronics and "smart" software. The analyzer's sensor heads are not subjected to corrosives or contaminants in the gas because the sensor is isolated from the sample gas stream.

The result is an analyzer which does not suffer from contamination or drift due to vapor impurities such as glycol, methanol, amines, hydrogen sulfide, or mercaptans.

#### 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 H<sub>2</sub>O 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 H<sub>2</sub>O present can be measured in real-time.

# SS500e Moisture Analyzer

## SPECIFICATIONS

### Application Data

Target Components	H <sub>2</sub> O in Natural Gas
Typical Measurement Ranges	40-422 ppmv, 40-1055 ppmv, 40-2110 ppmv (2-20 lbs, 2-50 lbs, 2-100 lbs/MMscf) Ranges up to 5,000 ppmv available*
Typical Repeatability	±10 ppmv or ±2% of reading
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 (15° to 140°F) - <i>optional</i>
Sample Cell Pressure Range	700 - 1400 mbara , 700 - 1700 mbara - <i>optional</i>
Maximum Cell Pressure	70kPag (10 PSIG)
Sample Flow Rate	0.5-1 L/min (1-2 scfh)
Recommended Validation	Bureau of Mines Chilled Mirror, Portable TDL or Binary Cal Gas 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 @ 24 VDC
Max Current (heated)	2 amps maximum @ 120 VAC
Communication	Analog: Two 4-20mA Isolated, 1200 ohms @ 24 VDC max load Serial: RS232C - <i>standard</i> , RS485 and Ethernet - <i>optional</i> Protocol: Modbus Gould RTU or Daniel RTU or ASCII
Digital Outputs	2, General Fault and Concentration Alarm
LCD Display	Concentration, Cell Pressure and Temperature & Diagnostics

### Physical

Enclosure Type	NEMA 4X Stainless Dual Enclosures
Dimensions	973 mm H x 406 mm W x 229 mm D (38.3 H x 16 W x 9 D inches)
Approximate Weight	34 kg (75 lbs)
Sample Cell Dimensions	438 mm H x 108 mm W (17.3 H x 4.3 W inches)
Sample Cell Construction	316L Series – Polished Stainless Steel - <i>standard</i>
Number of Sample Cells	1

### Area Classification

Certification	CSA Class I, Div 2, Groups B,C, and D, Temp Code T3C (T3 with Heaters) CE Directives EN61010-1 & EN61326-1
---------------	---

\* Consult factory for alternative or extended ranges.