



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

FOR NATURAL GAS  
Product 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
- AMS100 Analyzer Management Software

**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.

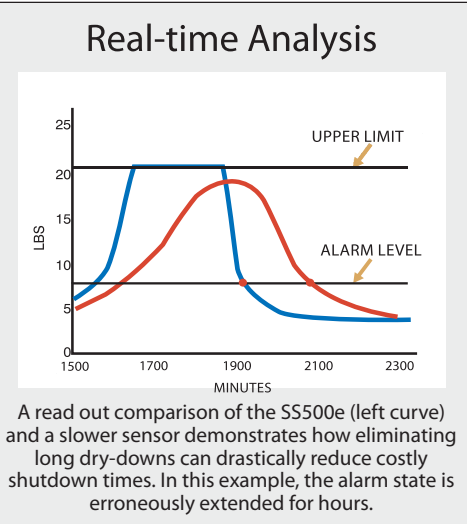
processing steps, poor gas quality and the possibility of damage to expensive equipment can result from sensors that produce incorrect data.

**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.



**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

# SS500e Moisture Analyzer

## SPECIFICATIONS

### Application Data

Target Components	H <sub>2</sub> O in Natural Gas
Typical Measurement Ranges	40-422ppmv/40-2000ppmv (2-20 lb/MMscf)
Typical Precision	±10ppm
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) optional
Sample Inlet Pressure	Maximum cell pressure 70kPaG (10 psig) Inlet Pressure to Sample System 140-340kPaG (20-50 psig)
Sample Flow Rate	0.5-1 L/min (1-2 scfh)
Recommended Validation	Bureau of Mines Chilled Mirror or Portable TDL

### 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