



## SS500 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

**SpectraSensors SS500 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 head 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.

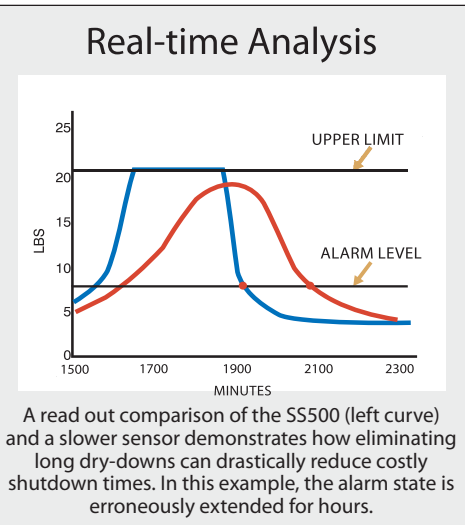
gas quality and the possibility of damage to expensive equipment can result from sensors that produce incorrect data.

**NO INTERFERENCE** As with all SpectraSensors analyzers, the SS500 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 the 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 SS500 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

# SS500 Moisture Analyzer

## SPECIFICATIONS

### Application Data

Target Components	H <sub>2</sub> O in Natural Gas
Typical Measurement Ranges	40-422ppmv/40-2000ppmv
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 Temperature Range	-20° to 50° C (-4° to 122° F)
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 (0.2-20 scfh)
Recommended Validation	Bureau of Mines Chilled Mirror or Portable TDL



### 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 <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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