

# SpectraSensors SS1000 Portable Gas Analyzer



## Key Features

- *Virtually Maintenance Free*
- *No Interference from glycol, methanol or amine contaminants (vapor phase)*
- *Fast and Accurate Real-time Measurements*
- *No wet-up or dry-down delays*
- *Short Term Payback; No Consumables*
- *NIST-Traceable Calibration*

**SpectraSensors SS1000** Portable Moisture Analyzer is a highly mobile, battery-powered moisture or carbon dioxide analyzer utilizing the same extraordinary sensor technology as the SS2000. The instrument is designed for convenience and allows for fast and easy measurements in the field.

**FAST** The SS-Series analyzers take measurements 4 times per second with a laser and detector and average the results. The laser does not contact the gas, so these real-time measurements are not hampered by wet-ups or dry-downs as with surfaced-based sensors because.

**RELIABLE** Using state-of-the-art technology developed by NASA/JPL, the SS-Series analyzers are more reliable and repeatable than surface based sensors and not subject to the interpretation errors of a chilled mirror.

The portable units are designed for fast hookups and contain their own power supply. Commonly, the portable is used to verify measurements and for spot-checking when other methods provide questionable results. In applications such as natural gas pipelines or petrochemical process control, poor quality measurement results are extremely costly. For example, additional processing or dehydration costs, upset conditions, shut-ins, and inconsistent process results may be caused by sensors that do not perform properly. The SS1000 can reveal poorly performing sensors, pinpoint high moisture or low BTU sources and can be used as a standard for measurement validation.

**NO INTERFERENCE** SpectraSensors has combined our special lasers with control electronics and "smart" software to create an analyzer that requires no sensor element in contact with 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.

## PAYBACK

The SS1000 sensor heads are not subjected to the corrosives or contaminants in the gas stream because the sensor is a photonic device that is isolated from the actual gas. A quick payback period can be realized by eliminating the cost of consumables, extra sensor heads, factory calibrations, and the labor and overhead associated with excessive maintenance. Moreover, the problems caused by unreliable gas measurements such as added processing steps and poor gas quality can be eliminated by using the SS1000. These savings easily justify the need for a reliable, fast and maintenance free solution such as the SpectraSensors SS1000 portable analyzer.

**Reliability and Speed** are ultimately critical in process measurements, especially with a portable unit. The SS Series Sensors are the fastest, most dependable method to get an accurate moisture measurement.

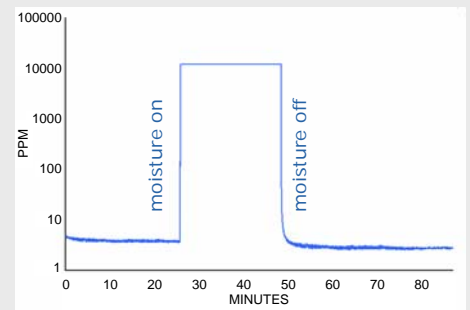


Figure 1: Instant response from a sudden introduction and interruption of a moist stream of air into the SS1000 sample cell. CO<sub>2</sub> sensor response is similar.



Ask about other available products:

*SS2000 Gas Analyzer with Sample Conditioning Panel*

**SpectraSensors™**

# SS1000

## Portable Gas Analyzer

### Specifications



<b>Performance</b>	(Standard)	(Optional)
Moisture Concentration (H <sub>2</sub> O)*	2 to 20 lbs/MMSCF Nat. Gas 42-422 ppmv, NIST Traceable	0.5 to 20 lbs/MMSCF Nat. Gas 10-422 ppmv, NIST Traceable
Accuracy (H <sub>2</sub> O)	±2% of reading or ±10 ppmv	±2% of reading or ±4 ppmv
Dew/Frost Point	-58° to -20°F (-50° to -29°C)	-76° to -20°F (-60° to -29°C)
Carbon Dioxide Concentration (CO <sub>2</sub> )*	0-10%	
Accuracy (CO <sub>2</sub> )	± 2% of reading, or ±400 ppmv, whichever is greater	
Response time**	Display updates 0.25-2 seconds (software adjustable)	

\* Consult factory for alternative ranges

\*\* Flow Rate Dependant - Sample cell volume is 0.005 ft<sup>3</sup>. Time to displace cell volume at a flow of 2 scfh is ~10 sec.

### Environmental Range

Temperature	-4° to 122°F (-20° to 50°C)
Inlet Pressure	10 to 25 PSIA, <b>10 PSIG Maximum</b> (70-170 kPaA, <b>70 kPaG Maximum</b> )
Sample Cell Construction	316L Series Polished Stainless Steel
Sample Flow Rate	0.2 to 20 SCFH (100-10,000 cc/min)
Contaminant Sensitivity	None for gas phase glycol, methanol, amines, sulfides or mercaptans

### Power Requirements

Input Voltage	100-240 VAC, 50-60 HZ Standard
Electrical Storage	12-Volt, Sealed Lead-Acid Battery Approx. 8 hours use time per charge
Current	0.5A @ 120VAC during recharging

### Physical Specifications

Output	RS232 – all parameters
LCD Display	Concentration, Cell Pressure and Cell Temperature
Size	Nominal 8"H x 7"W x 18"D (200 mm H x 175 mm W x 450 mm D) Includes Handle and Feet
Weight	Approx. 15lbs (6.8Kg)
Accessories	Membrane Separator, Carrying Case, Charger, Quick Connect Fittings included. Sample Conditioning Available.

### Area Classification

Certification	Non-Hazardous (certified) locations – General Purpose
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