



# SS2100i-1 SINGLE BOX IECEX/ATEX ZONE 1 TDL GAS ANALYZER

## KEY FEATURES

- Touch keypad interface, no tools required
- Simple design, trouble-free operation
- No routine maintenance required
- Field calibration not needed
- No drift or interference from contaminants
- Reliable in harsh environments
- Available for H<sub>2</sub>O, CO<sub>2</sub>, H<sub>2</sub>S, NH<sub>3</sub>, and C<sub>2</sub>H<sub>2</sub> measurements
- ATEX and IECEx Certifications



**SpectraSensors SS2100i-1 Process Gas Analyzers** are exceptionally reliable for measuring trace gas components using Tunable Laser Diode (TDL) technology. TDL absorption spectroscopy is a high-resolution infrared technique that enables the measurement of specific gases with precision while avoiding interferences that are common with traditional infrared analyzers. The SS2100i-1 is certified for ATEX and IECEx.

**SIMPLE OPERATION** The operation of the analyzer is very straightforward. Most technical personnel can learn to operate the system in a very brief time. When coupled with the fact the analyzer has very little maintenance requirements, the end result is an extremely low cost of ownership.

At the same time, technical support capability is a crucial element of the product design. There are several health monitoring parameters and remote access is available using AMS100™ software or directly through the touch sensitive keypad.

**RELIABLE** Trustworthy measurements are vital in process analytical applications. The TDL sensor is unaffected by contaminants and corrosives since the gas stream never touches the laser or detector.



SS2100i-1

The SS2100i-1 requires little regular maintenance and does not need recalibration or periodic replacement parts due to the inherent stability of TDL technology.

**TROUBLE-FREE INSTALLATION** The SS2100i-1 is easy to install; connect the power, data link and measured gas line and the analyzer begins working without the need for extensive calibrations or setup.

# SS2100i-1 ATEX/IECEX Zone 1 TDL Gas Analyzer



## SPECIFICATIONS

### Application Data

Target Components	H <sub>2</sub> O, H <sub>2</sub> S, CO <sub>2</sub> , NH <sub>3</sub> , C <sub>2</sub> H <sub>2</sub> (Ranges from low ppmv to %)*
Principle of Measurement	Tunable Diode Laser Absorption Spectroscopy
Measurement Time	Typically less than 20 seconds*
Environmental Temperature Range	-20°C to +50°C - <i>standard</i> , -10°C to +60°C - <i>optional</i>
Sample Cell Operating Pressure Range	800-1200 mbar - <i>standard</i> , or 700-1700 mbar - <i>optional</i> *
Pressure to Sample Cabinet	Typically between 140-350 kPaG (20-50 PSIG)*
Sample Flow Rate	0.5-4 SLPM (0.02-0.1 SCFM)*


### Electrical & Communications

Input Power, Maximum	120 or 240 VAC ±10%, 50-60 Hz - <i>standard</i> ; ~300W*
Analog Communication	Isolated Analog channels, 1200 ohms @ 24 VDC max Outputs: Qty 2 4-20 mA (measurement value) Input: Qty 1 4-20 mA (pipeline pressure)*
Serial Communications	Ethernet & RS485 half-duplex - <i>standard</i> , RS232C - <i>optional</i>
Digital Signals	Outputs: Qty 5 Hi/Lo Alarm, General Fault, Validation Fail*, Validation 1 Active*, Validation 2 Active* Inputs: Qty 2 Flow Alarm*, Validation Request*
Protocol	Modbus Gould RTU or Daniel RTU or ASCII
Diagnostic Value Examples	Detector Power (Optics Health), Spectrum Reference Comparison and Peak Tracking (Spectrum Quality), Cell Pressure and Temperature (Overall System Health)
LCD Display	Concentration, Cell Pressure and Temperature & Diagnostics

### Physical

Electronics Enclosure	IP66 Copper-Free Aluminum with Weather Resistant Polyester Powder Coating, 80-120 micron thickness
Sample System Enclosure(s)	IP55 (min) 304 or 316L Stainless Steel
Analyzer Dimensions	670H X 470W X 377D mm (not including Sample System)
Analyzer Weight	Approximately 86 kg (190 lb) (not including Sample System)
Sample Cell Construction	316L Series Polished Stainless Steel - <i>standard</i>
Number of Sample Cells	1 per Analyzer

### Certification

CE, ATEX and IECEx	CE  II 2 G Ex d IIB+H2 T4 Gb LCIE 11 ATEX 3071, IECEx LCI 11.0057 Directive 2004/108/EC, Directive 94/9/EC
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\*Application dependent



4333 W Sam Houston Pkwy N, Ste 100  
Houston, TX 77043  
Tel: +1 800 619-2861  
Direct: +1 713 300-2700 Fax: +1 713 856-6623



www.spectrasensors.com

DS SS2100i-1 EN 02



UK Distribution by: IMA Ltd, Parkwell House, Otley Road, Guiseley, West Yorkshire, LS20 8BH, England

Phone: +44 (0)1943 878877 Email: info@ima.co.uk Web: www.ima.co.uk