



### Description

Model SA1 smart sensor modules are designed to detect and monitor various gases in ambient air. The modules consist of a target specific gas detection sensor and a microprocessor-based signal conditioning circuit. Both are housed in a metallic enclosure fitted with gold plated connecting pins. The “Smart Sensor Module” is factory programmed for a specific gas and range of sensitivity. On power up the gas type, measurement range and previous zero and span calibration data points are read by the transmitter facilitating a fully automated startup. The modules can be used with any of Safeguard Analytics gas detection transmitters.

### Specifications Model SA1-VOC-2 (Volatile Organic Compounds)

Detector Type	Photo Ionization Detector (PID 10.6eV)
Detection Method	Diffusion
Range of Sensitivity**	0-2,000 PPM
Response Time	T90 ≤ 10s
Accuracy	± 2% FS
Zero Drift	< 2% per month (In clean air)
Span Drift	< 2% per month (In clean air)
Temperature Range	-20°C to +60°C; -4°F to 140°F
Humidity Range	0% to 90% RH non-condensing
Temperature Range	1 atm ±.1
Input Power	~ 3.5 to 5 VDC
Power Consumption	< 100 milliwatts
Sensor Life Expectancy	~ 5 years
Lamp Life Expectancy	~ 9-12 months
Detector Warranty	1 year

\*Specifications subject to change without notice \*\*Contact Safeguard Analytics for additional ranges

### Response Factor Data (RFD) (Partial List)

Gas – Cross Sensitivity		Gas – Cross Sensitivity		Gas – Cross Sensitivity	
Isobutylene	1.0	Acetic Acid	11	Acetone	1.2
Allyl Alcohol	2.5	Arsine	2.6	Benzene	.53
Butanol	3.4	Carbon Disulfide	1.2	Ethanol	10
Ethylene	10.1	Heptane	2.5	Hydrazine	2.6
Hydrogen Sulfide	3.2	Isopropanol	5.6	JP-5	.48
Methyl Mercaptan	.6	m-Xylene	.53	Nitric Oxide	7.2
Phosphine	2.8	Toluene	.53	Vinyl Chloride	1.8

For a complete list of cross interfering gases contact Safeguard Analytics

### \*\* Range Options

Range	Model Number	Range	Model Number	Range	Model Number
0-2,000 PPM	Model SA1-VOC-2	0-20,00 PPM	Model SA1-VOC-20	0-200.0 PPM	Model SA1-VOC-200
0-1000 PPM	Model SA1-VOC-1K	0-5000 PPM	Model SA1-VOC-5K	0-9999 PPM	Model SA1-VOC-10K

Contact Safeguard Analytics for additional or custom ranges of sensitivity