



### 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.

### Model SA1-CPS (non-selective combustible gases)

#### Specification\*

Detector Type	Catalytic Pellistor
Detection Method	Diffusion
Range of Sensitivity**	0-100 % LEL
Response Time	T90 ≤ 30s
Accuracy	± 2% FS
Zero Drift	< 2% per month (In clean air)
Span Drift	< 2% per month (In clean air)
Temperature Range	-40°C to +60°C; -40°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	< 500 milliwatts
Detector Life Expectancy	3-5 years
Detector Warranty	2 years

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

#### Detectable Combustible Gases (Partial List)

Acetaldehyde	cis-Butene-2	Diethylamine	Diethyl Ether	Methylethyl Ketone	n-Propyl Alcohol
Acetic Acid	trans-Butene-2	Dimethyl Ether	Ethyl Formate	Methyl Formate	n-Propylamine
Acetic Anhydride	n-Butyl Alcohol	Dimethylamine	Ethyl Mercaptan	Methyl Mercaptan	Propylene
Acetone	iso-Butyl Alcohol	2,3-Dimethylpentane	n-Heptane	Methyl propionate	Propylene Oxide
Acetylene	tert-Butyl-Alcohol	2,2-Dimethylpropane	n-Hexane	Methyl n-propyl Ketone	iso-Propyl Ether
Alkyl Alcohol	n-Butyl Benzene	Dimethyl sulfide	Hydrazine	Naphtha	Propyne
Ammonia	iso-Butyl Benzene	1,4-Dioxane	Hydrogen Cyanide	Naphthalene	Toluene
n-Amyl Alcohol	n-Butyric Acid	Ethane	Hydrogen	Natural Gas	Triethylamine
Aniline	Carbon Disulphide	Ethyl Acetate	Hydrogen Sulfide	Nitromethane	Trimethylamine
Benzene	Carbon Monoxide	Ethyl Alcohol	Methane	n-Nonane	Vinyl Chloride
Biphenyl	Carbon Oxysulphide	Ethylamine	Methyl Acetate	n-Octane	Vinyl Ethyl Ether
1,3-Butadiene	Cyanogen	Ethyl Benzene	Methyl Alcohol	Oxygen	o-Xylene
Butane	Cyclohexane	Ethylcyclopentane	Methylamine	n-Pentane	m-Xylene
iso-Butane	Cyclopropane	Ethylene	Methylcyclohexane	iso-Pentane	p-Xylene
Butene-1	Decane	Ethylene Oxide	Methylethyl Ether	Propane	