



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-O2D (Oxygen)

Specification*

Detector Type	Electrochemical
Detection Method	Diffusion
Range of Sensitivity**	0-25%
Response Time	T90 ≤ 15s
Accuracy	± 2% FS
Zero Drift	< 2% per month
Span Drift	< 2% per month
Temperature Range	-30°C to +50°C; -22°F to 122°F
Humidity Range	5% to 95% RH non-condensing
Pressure Range	1 atm ±.1
Input Power	3.5 to 5 VDC
Power Consumption	2.64 milliwatts
Detector Life Expectancy	>2 years
Detector Warranty	1 year

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

Cross Interference Data

Toxic Gases at TLV levels show no cross sensitivity to the oxygen sensor. At very high levels highly oxidizing gases such as chlorine and ozone will interfere to the extent of their oxygen equivalent.

Acid gases such as CO₂ and SO₂ will be absorbed by the electrolyte and tend to give an enhanced oxygen signal. i.e., 0.3% signal per 1% CO₂. Safeguard Analytics SA1-O2D oxygen sensors are not suitable for continuous operation in concentrations of CO₂ above 25%.