



Features

- Low cost – high level performance
- High visibility LED status indicators
- One man non-intrusive calibration
- Comprehensive fault diagnostics
- Typical calibration interval 6 months
- Detector life expectancy 2 years
- Explosion Proof Class I; Div 1; B,C,D

Description

Model SA-100-O2 gas detection sensors are designed to detect and monitor oxygen in ambient air in the range 0-25 %. Utilizing electrochemical technology, the sensor represents a simple and economical solution to assure a safe working environment across a wide range of industrial applications.

The sensor assembly includes a built-in microprocessor control and signal conditioning circuit. HMI and Detector status is via a high visibility multi-color LED. In normal operation, and in a no gas environment, the LED is a steady green. As gas concentrations reach and exceed 10% of full scale sensitivity the LED switches to a flashing yellow, indicating an early warning level. If the gas concentration reaches 20% of full scale the LED switches to a flashing bright red indicating a higher danger level. A flashing blue LED indicates a fault condition.

The unit features simple non-intrusive calibration using a magnet and the built-in LED interface or a Blue Tooth app and a suitable portable device. All electronics are contained within a certified explosion-proof housing suitable for installation in hazardous locations. The detector output is a linear 4-20 mA analog signal. SA-100 gas detectors also provide a CAN bus digital output delivering comprehensive performance diagnostics that can be connected to and stored in any one of a number of SafeGuard Analytics safety controllers.

System Specifications

Detector Type	Electrochemical
Detection Method	Diffusion
Detection Range	0-25 %
Response/Clearing Time	T50 15 seconds; T90 30 seconds
Accuracy – Repeatability	± 2% Full Scale
Zero – Span Drift	< 2% per month
Indicators	Normal - Steady Green LED Alarm Level 1 (10% of full scale) - Yellow Strobe Alarm Level 2 (20% of full scale) - Red Strobe Fault - Blue Strobe
Faults Monitored	Input Voltage Signal Loop Zero Signal Detector Processor Memory OpCheck®
Detector Life Expectancy	2 years
Area Classification	Explosion Proof Class I; Div 1; Groups BCD Class I; Zone 1, Group IIB+H2
Certifications	CSAus (Pending) ATEX (Pending) IECex (Pending)
Warranty	2 years

Electrical Specifications

Input Voltage	10-30 VDC, Nominal 24VDC
Power Consumption	2.65 watts; 110 mA DC @ 24 VDC
Analog Output	Linear 4-20 mA DC (0 mA DC Fault) (2 mA DC Cal Mode) (22 mA DC Over Range)
Serial Output	CAN bus 125 kbps MODBUS RTU 9600 bps

Environmental Specifications

Operating Temperature Range	-40°F to +122°F, -40°C to +50°C
Operating Humidity Range	15 - 95% non-condensing

Mechanical Specifications

Enclosure Material	316SS Electro Polished
Dimensions	6.4"H - 2.95"D; 162mmH - 75mmD (with splash guard)
Mounting	3/4" NPT; M20 Optional
Weight	2 lbs 3 oz; 990 grams

Specifications subject to change without notice

Dimensions

