

SGA-1

ECS Protector SMART Gas Analyzer



Features

ECS Protector SMART Gas Analyzer (U.S. Patents No. 9,144,700 and 9,186,533)

- Oxygen sensor has a 10 year service life
- Digital displays nitrogen or oxygen purity
- Continuous monitoring of nitrogen/oxygen purity
- Can be monitored by a Building Monitoring System (BMS)

General Description

The ECS Protector SMART Gas Analyzer provides a continuous real-time monitoring of nitrogen/oxygen concentration levels within a dry/preaction fire protection system. The analyzer samples discharge gas from an adjacent ECS Protector Vent (PAV-D) or SMART Vent (PSV-D/PSV-DE). The gas flows out of a restricted orifice on the vent through pressure-rated tubing to provide slow, controlled flow to the analyzer. One SGA-1 analyzer is recommended with each Nitrogen Generation System.

The SGA-1 has many different functions. It is equipped with a programmable contact closure for one of three different oxygen concentration levels (1%, 3%, and 5%), which will provide early warning to a user when the nitrogen concentration within the fire protection system falls below the desired level. The SGA-1 is also equipped with an RS-485 port for optional remote control and monitoring. The SGA-1 can also display either oxygen or nitrogen concentration.

The SGA-1 is equipped to protect itself from damage, and also let the user know if the sensor is in poor health. Five minutes after the sensor is powered on, it begins a self-diagnostic protocol. If at this time the oxygen level is below .3%, the alarm relay will energize, and the sensor will automatically shut itself down. It will reboot automatically after 24 hours and resume reading gas concentration levels. This operation is to prevent sampling at extremely low oxygen levels which can eventually cause damage to the sensor. If the sensor detects rapid deviation in oxygen content it will signal an error and energize the alarm relay without shutting down.

Specifications

Dimensions	8" (W) x 10" (H) x 6" (D)
Weight	12 Lbs (5.5kg)
Temperature Range	40°F - 105°F (5°C - 40°C)
Power Supply	120-240VAC, 50-60Hz/.5A 24VDC/2A
Sensor Type	Zirconium Dioxide
Power Supply	0-5VDC linear output 4-20mA linear output
Output Display	%O ₂ or %N ₂
%O₂ Contact Closure Level	1%, 3%, or 5%
Resolution	1dp (nn.n%)
Accuracy	1%
Sample Connection	5/32" plastic tubing quick connect

Installation

Install the SGA-1 on a wall or vertical surface near the vent assembly in an accessible location. For detailed installation and operation please refer to the AdvancedIQ Nitrogen Generator Manual or SGA-1 installation sheet.

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