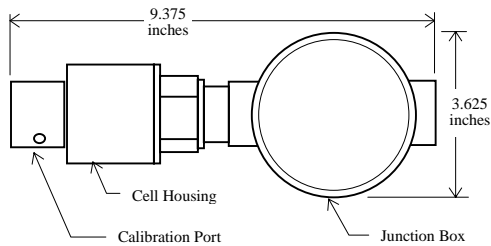




Oxygen Sensor for SmartMaxII



Standard Specifications

Part Number	SNR477
Standard Range	0–25%
Accuracy	± 0.5%
Response Time	20 seconds to 95% of scale
Assembly Rating	Class I, Division 1
Assembly Material	Aluminum
Operating Life	2 years in air
Storage life in container	6 months
Temperature Limits	
Operating	-20°C to 50°C
Operating pressure	Ambient ±10%
Pressure effect	Negligible
Humidity range	0 to 90% RH
One-way line length	5,000 feet 14 AWG
Interconnection wiring	3 wires
Output Signal	mA DC into SmartMaxII monitor

Cross Sensitivity to:	SNR477 Response
Methane	No effect
Hydrocarbons	No effect
100% Hydrogen	Up to 2%
20% Carbon Monoxide	Up to 0.5%

Sensor Design

The Oxygen Sensor employs electrochemical technology. The sample diffuses into a micro fuel cell, where it chemically reacts to produce an electrical current. The micro fuel cell is designed so that the current produced is proportional to the concentration of oxygen present. The output signal is a linear mA output and readings are displayed as percent by volume.

Construction

The sensor assembly consists of the micro fuel cell housed in an aluminum sensor body which connects to a junction box for field wiring. A collar protects the sensor from environmental conditions and also provides a means of introducing calibration gas.

The micro fuel cell employs a capillary diffusion barrier which eliminates the possibility of puncturing the membrane and destroying the cell. The cell is a rugged and stable design that is less sensitive to temperature and pressure variations than other electrochemical cells.

Sampling System

The sensor relies on diffusion for sampling. In the diffusion mode the sensor detects oxygen by direct sampling of the atmosphere through the sensor flame arrestor.

Performance

The Oxygen Sensor exhibits high accuracy, excellent repeatability, and long-term stability for zero and span readings.

Factory Tested as a Complete System

The sensor is completely factory assembled, calibrated and tested with its control monitor prior to shipment.