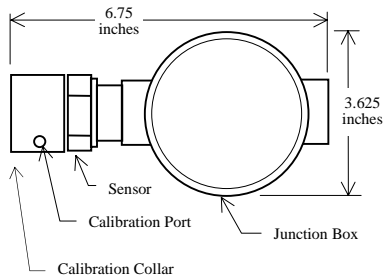




Catalytic Sensor for SmartMaxII



Standard Specifications

Assembly Part #	SNR480
Calibration	0-100% LFL
Accuracy	±3% of full scale reading or ±10 % of applied gas concentration, whichever is greater.
Repeatability	Within 1% of full scale reading
Zero Stability	Less than 2% drift in 30 days
Response Time with Speed Reader	Less than 12 seconds for methane 3 seconds (T = 63.2%)
Filament Life	One year minimum, five years average
Temperature Limits Operating	-40°C (-40°F) to 75°C (167°F)
Detector Cell Rating	Explosion Proof Class I Division 1 Groups A, B, C, D
Detector Cell Material	Aluminum
Replacement Part #	SNR321
Meets ISA-SP12.B Performance Requirements for Combustible Gas Detectors.	

SNR321 and SNR334 sensor elements have been tested and approved by FM Approvals

Option Specifications

Certain assembly options change the standard specifications:

Detector Cell Material: Stainless Steel:

- Assembly part number SNR481
- Replacement Part # SNR334

Assembly Design

The Catalytic Sensor for SmartMaxII employs the same, reliable field-proven catalytic sensor used in all Control Instruments catalytic systems. The assembly differs only in that it includes sealed electronics that enable the sensor to be used with the SmartMaxII controller.

Sensor Design

The Catalytic Sensor consists of two matched, heated elements arranged in a Wheatstone bridge, one catalytically active and one inert. The active element is sensitive to all flammable gases, while the inert one compensates for ambient temperature and pressure changes and physical properties of the sample gas. The presence of flammable gas causes the active element to catalytically oxidize the gas and the resultant thermal reaction is displayed in terms of 0-100% Lower Flammable Limit (LFL) on the SmartMaxII controller.

Construction

The sensor can be constructed of either aluminum or stainless steel. The optional stainless steel design is resistant to highly corrosive elements, salt atmospheres and is durable in high temperature conditions.

The replaceable sensor element mounts into its explosion-proof junction box. A sensor collar protects the sensor from environmental conditions and also provides a port for calibration. The sensor utilizes a flame arrester that provides safety while allowing the flammable gas to diffuse quickly into the detecting element.

The standard junction box is rated Class I, Division 1, Groups A, B, C, D for hazardous areas. The sensor is also available in a duct mount assembly that mounts directly on a duct. The duct-mount is rated for Class 1, Division 1, Group D hazardous areas.

Sampling System

The sensor relies on diffusion for sampling. In the diffusion mode the sensor detects a flammable gas by direct sampling of the atmosphere through the sensor flame arrester.

Performance

The Catalytic Sensor is designed for uniformly dependable performance under a wide range of operating conditions. The sensor has a proprietary design that gives it superior tolerance to a wide range of poisons and inhibitors.

The sensor elements used in this assembly (part numbers SNR321 and SNR334) have been tested and are tolerant to tetraethyl lead, Hexamethyldisilazane (HMDS), trichloroethane, RTV sealant and hydrogen sulfide.

Factory Tested as a Complete System

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