

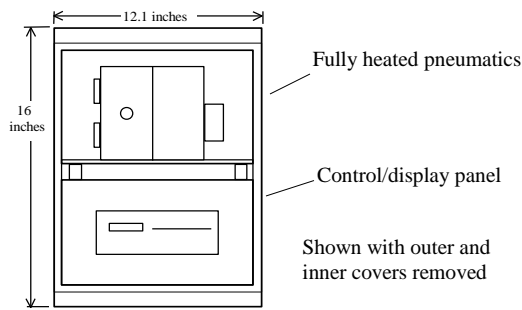


SNR674 PrevEx® Flammability Analyzer

Analyzer Design

The Model SNR674 is an industrial strength assembly consisting of a heated flame cell and an integrated controller that continuously measures total flammable vapor concentrations from 0 to 100% of the Lower Flammable Limit (LFL) range. Optional modifications allow the SNR674 to sample low oxygen and inert atmospheres.

Control Instruments' proprietary flame temperature technology assures an accurate and linear response. A carefully metered pilot flame incinerates the sample; the resulting change in flame characteristics is proportional to the total concentration of flammable vapors present.



Specifications

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|-----------------------|--|
| Calibration: | 0 to 100% Lower Flammable Limit (LFL) |
| Operating Temperature | Sensor heated to 200°C (392°F) |
| Accuracy | ± 3% of full scale reading or 10% of applied gas whichever is greater. |
| Repeatability | Within 1% of measurement range |
| Zero Stability | ± 1% in 30 days |
| Span Stability | ± 5% per year |
| Cell Response Time | Less than 1 second |
| Power Requirement | 120 VAC +10% -15% 50/60 Hertz 400 Watts maximum, 230 VAC optional |
| Oxygen | 12 to 21% oxygen in sample 0 to 21% oxygen in sample (optional) |
| Fuel Requirements | 99.99% prepurified Hydrogen |
| Fuel Consumption | 58 liters/day 40-45PSIG hydrogen |
| Compressed Air | 20 PSIG, regulated, clean, dry |
| Air Consumption | 64 SCFH, 32 LITERS/minute including purge |
| Humidity Range | 0% to 100% Relative Humidity |
| Relays | Three (3) SPDT 60 Watt contacts Three (3) SPST 60 Watt contacts |
| Relay functions | Six relays for: Warning; Danger; Fault; Horn; Calibration-in-Progress and Service Needed |
| Alarm Function | Adjustable alarm ranges |
| Analog Output | 4-20mA, 275 Ω max. includes line length |
| Digital Output | RS-485 Serial, Modbus protocol |
| Flame Cell Material | Hard-coat aluminum |
| Sample Train Material | Hard-coat aluminum & stainless steel |
| Flame Cell Rating | Explosion Proof Class I, Division 1 |
| Hazardous Area Rating | Class I, Div 2, Groups A, B, C, D |
| Enclosure Rating | NEMA 12/13, indoor NEMA 4X, outdoor (optional) |
| Assembly Dimensions | 16" H x 12.1" W x 8.5" D |
| Approvals | FM (standard) FMc, CE, ATEX (optional) |

Heated Sampling System

To avoid condensation during sampling, the entire analyzer pneumatic assembly is heated to 200°C (392°F). This eliminates both inaccurate readings caused by solvent dropout as well as excessive maintenance time due to sample condensation and clogging. A concentric sampling probe further assures accurate, trouble-free sampling.

It is suitable for monitoring many common solvent vapors. The analyzer is unaffected by the temperature of the process and can sample streams above 1500°F.

The assembly mounts directly onto the process ductwork, as close as possible to the sample pickup point. This eliminates external heated sample lines and allows the fastest response time.

The analyzer employs customer-supplied compressed air to drive its integrated air-aspirated sampling system. This method is simple, has no moving parts and requires very little maintenance. The sampling system does not require bottled air or sample pumps.

Autocalibration solenoids, which allow remote activation of calibration tests, are standard.

Failsafe Operation

A fault relay de-energizes whenever any of the following occur: controller electrical failure; loss of system power; loss of heat; loss of flow through the flame cell; and downscale readings caused by loss of flame or fuel.

Outputs

The system includes six relays: single-pole, double-throw relays for Warning, Danger, Fault; and single-pole, single-throw relays for Horn, Calibration-in-Progress and Service Needed. Other standard outputs include a 4-20mA analog output and an RS-485 serial port with Modbus protocol. Digital remote access and control is made possible with optional operator interface panels.

Performance

Detector response time is less than 1 second. The analyzer exhibits a very stable zero: less than one percent drift in thirty days. Calibration accuracy has less than five percent error per year.