

NOVA

Dependable Gas Analysis Solutions

970 SERIES

SYNGAS / GASIFICATION ANALYZERS



APPLICATIONS

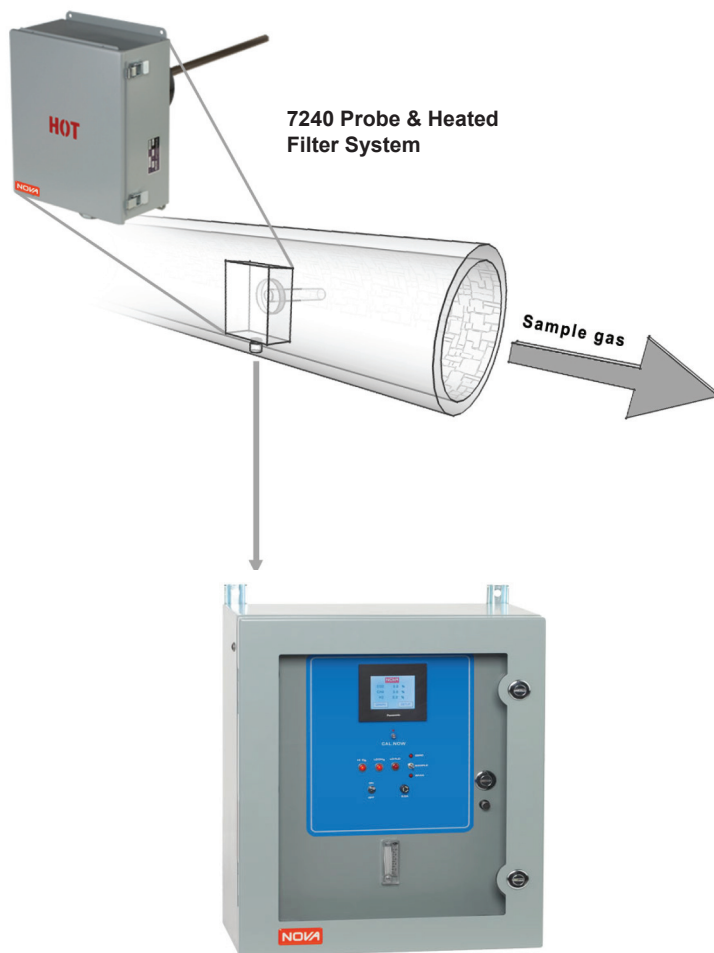
For continuous monitoring of syngas and gasification atmospheres or other industrial process gases for any combination of methane (CH_4), carbon dioxide (CO_2), carbon monoxide (CO), hydrogen (H_2), and oxygen (O_2).

FEATURES

- Field-cleanable infrared detector for reliable measurement of CO , CO_2 , and CH_4
- Thermal conductivity detector for H_2
- Oxygen analysis by electrochemical sensor
- Sensors/detectors temperature-controlled or compensated for maximum analytical stability
- H_2 reading is compensated for the interference effects of the other gases measured
- High ranges on each channel available (up to 100%)
- Touch-screen display for gas readings
- Built-in sample pump or pressure regulator
- Automatic calibration & serial output package
- Isolated 4-20mA analog recorder outputs
- Durable stainless steel lines & sample components (where prudent)
- Automatic moisture removal system included

OPTIONS

- Hi/Low gas, low flow, and other alarms available
- Sample conditioning systems available for acidic gas and dust
- Cabinet purge system available for use in hazardous areas
- Outdoor weather packages for operation from -20°C up to 55°C (-4°F up to 130°F)
- Heated filters and high temperature probes
- Methane-specific detector in place of standard hydrocarbons detector; allows more accurate CH_4 analysis in other HC's



970 Series Analyzer
in NEMA 4 Enclosure

NOVA ANALYTICAL SYSTEMS

www.nova-gas.com

DESCRIPTION

The Nova 970 Series Syn-Gas Analyzer System has been designed with the flexibility and robustness required in the experimental and industrial environments that characterize synthetic gas production and gasification applications.

The Nova 970 Series utilizes high-stability infrared detectors for the simultaneous measurement of CO, CO₂, and CH₄. In addition, the analyzer can also be supplied with a non-consumable, long-life thermal conductivity cell for H₂ that is compensated for the interference effects of CO, CO₂, and CH₄. This ensures that H₂ will always read correctly regardless of the background gas composition. A long-life electrochemical sensor is used for O₂ analysis. All sensors / detectors are temperature-controlled or temperature-compensated for maximum analytical stability. Autocalibration functionality allows easy calibration without user intervention. The included Serial Output Package allows connection of analyzer to personal computers via a choice of USB / RS-232 / RS-485. Data recording software is also included.

ENCLOSURES

Two types of enclosures are available. All tubing connections are 1/4" SS FPT.

- N4 - Wall mounted NEMA4 (IP65) enclosure rating
- N4X - Wall mounted stainless steel corrosion-resistant NEMA4X (IP65)

SPECIFICATIONS

Nova reserves the right to specification changes which may occur with advances in design without prior notice.

Description	
Method of Detection:	NDIR infrared detector for CO, CO ₂ , & CH ₄ ; thermal conductivity cell for H ₂ ; electrochemical detector for O ₂
Ranges Available: <small>(Other gas ranges may also be available)</small>	0 - 2.0%, 0 - 25.0%, 0 - 50.0%, 0 - 100.0% O ₂ 0 - 10.0%, 0 - 50.0%, 0 - 100.0% CO 0 - 10.0%, 0 - 50.0%, 0 - 100.0% CH ₄ 0 - 10.0%, 0 - 50.0%, 0 - 100.0% CO ₂ 0 - 5.0%, 0 - 50.0%, 0 - 100.0% H ₂
Resolution:	0.1%
Accuracy and Repeatability:	±1.0-1.5% of full scale, depending on gas measured
Drift:	Less than 2% of full scale per month
Response Time (T-90):	20-30 seconds to 90% step change
Ambient Temperature Range:	40 to 104°F (4 to 40°C). Optional: -22 to 130°F (-30 to 55°C) with Outdoor Packages.
Linearity:	± 1.5% of full scale
Size and Weight:	Physical data will vary depending on model and enclosure required
Power:	115VAC 60Hz (220VAC 50Hz available)
Output Options:	4-20mA into 500 ohms isolated; choice of RS232 / RS485 / USB serial connection
Alarms:	High and/or low alarm contacts available, relay contacts SPDT 5A @ 220VAC rating. Low flow alarm optional



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