



## Canada

270 Sherman Avenue N.

Hamilton, ON L8L 6N5

**Phone:** (905) 545 2003 • **Fax:** (905) 545 4248

**Email:** [sales@nova-gas.com](mailto:sales@nova-gas.com) or [websales@nova-gas.com](mailto:websales@nova-gas.com) **United States**

1925 Pine Avenue

Niagara Falls, NY 14301

**Phone:** (716) 285-0418 • **Fax:** (716) 282-2937

## Item # 975A, Continuous Analyzer for Syn-Gas Atmospheres - O<sub>2</sub>, CO, CO<sub>2</sub>, CH<sub>4</sub> and H<sub>2</sub>

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

The Nova 970 Series utilizes high-stability infrared detectors for the simultaneous measurement of CO, CO<sub>2</sub>, and CH<sub>4</sub>. In addition, the analyzer can also be supplied with a non-consumable, long-life thermal conductivity cell for H<sub>2</sub> that compensates for the interference effects of CO, CO<sub>2</sub>, and CH<sub>4</sub>. This

[+ more](#)



[Specifications](#) | [Applications](#) | [Features](#) | [Options](#) | [Calibration](#)

### Specifications

#### Method of Detection

Electrochemical sensor for O<sub>2</sub>

NDIR infrared detector for CO, CO<sub>2</sub> and CH<sub>4</sub>

Thermal conductivity cell for H<sub>2</sub>

<b>Ranges Available</b>	0-10.0%, 0-50.0%, 0-100.0% CO 0-10.0%, 0-50.0%, 0-100.0% CO <sub>2</sub> 0-2.0%, 0-25.0%, 0-50.0%, 0-100.0% O <sub>2</sub> 0-5.0%, 0-50.0%, 0-100.0% H <sub>2</sub> 0-50.0%, 0-100.0% CH <sub>4</sub>
<b>Resolution</b>	0.1% for all gases
<b>Accuracy &amp; Repeatability</b>	± 1.5% of full scale on all gases
<b>Drift</b>	Less than 2% of full scale per month
<b>Response Time (T-90)</b>	20-30 seconds to 90% step change
<b>Ambient Temperature Range</b>	40-104 °F (4 to 40°C). Optional -22 to 158 °F (-30 to 70 °C) with Outdoor Packages
<b>Linearity</b>	± 1.5% of full scale
<b>Size &amp; Weight</b>	24" H x 24" W x 10" D @ 90 lbs (61 x 61 x 25 cm @ 20 kg)
<b>Power</b>	115 VAC 60 Hz (220 VAC 50 Hz available)
<b>Output Options</b>	Isolated 4-20 mA standard RS232, RS485, MODBUS®, Ethernet outputs optional
<b>Alarms</b>	High and/or low alarm contacts available, relay contacts SPDT 5A @ 220 VAC rating.

## Applications



For continuous monitoring of syngas and gasification atmospheres or other industrial process gases for any combination of methane (CH<sub>4</sub>), carbon dioxide (CO<sub>2</sub>), carbon monoxide (CO) and hydrogen (H<sub>2</sub>) and oxygen (O<sub>2</sub>).

## Features



Infrared detector for reliable measurement of CO, CO<sub>2</sub> and CH<sub>4</sub>. Detector may be cleaned in the field.

Thermal conductivity cell for H<sub>2</sub>

Oxygen analysis by choice of electrochemical or paramagnetic oxygen sensor

Sensors/detectors temperature controlled or compensated for maximum analytical stability

H<sub>2</sub> 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 4-20 mA analog recorder outputs

Durable stainless steel lines & sample components (where prudent)

Automatic moisture removal system included

## Options

Calculations performed on gas readings such as gas ratios and heating value of flammable gases

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 packages available for operation from -22 to 158 °F (-30 to 70 °C)

Cabinet coolers can be fitted to most models

Heated filters and high temperature probes

Methane-specific detector in place of standard hydrocarbons detector; allows more accurate CH<sub>4</sub> analysis in other HC's

## Calibration

Ambient air for O<sub>2</sub> and to zero all other gases

Analyzed calibration gas with representative concentrations for span of all other gases