

NOVA

Dependable Gas Analysis Solutions



470 SERIES CONTINUOUS PROCESS INFRARED HYDROCARBON ANALYZER

APPLICATIONS

For continuous analysis of hydrocarbons (HC's), including methane (CH₄), in process gas streams using an infrared detector. Percent and PPM levels available as Models 470 & 470L respectively.

FEATURES

- PPM or percent HC's by infrared detector
- Detector is sensitive, very reliable, and non-depleting
- Bright digital readout, 4 - 20 mA outputs
- Fast response (T90 - less than 15 seconds)
- Microprocessor control with push button calibration
- Explosion-proof version has magnetic calibration feature
- Easy-to-maintain modular layout
- Built-in sample pump, flowmeter, and filters

OPTIONS

- Hi/Low gas, low flow, and diagnostic alarms available
- Isolated analog, RS232, RS485, MODBUS®, and Ethernet outputs available
- Cabinet purge system available for use in hazardous areas
- Full automatic calibration with touch screen LCD display
- Cold weather package for operation to -5°F (-20°C)
- Cabinet coolers can be fitted to most models
- Detector is temperature controlled for maximum stability

CALIBRATION

- Easily zero checked on ambient air or nitrogen (N₂)
- Span using known HC's in nitrogen calibration gas



Wall Mount (N4) Enclosure



Explosion-Proof (N7MC)
Enclosure

NOVA ANALYTICAL SYSTEMS

www.nova-gas.com

DESCRIPTION

The Nova 470 Series Hydrocarbon (HC) analyzers utilize a simple and reliable, microprocessor-based, non-dispersive infrared detector specific to hydrocarbons, including methane. A special version is available that can detect methane only in the presence of other hydrocarbons. The detector pulses an infrared beam of light through the sample tube, without the need for a mechanical chopper. In operation, the internal sample pump draws the sample gas through the filter/condensate trap, secondary filter, flowmeter, and then on to the infrared detector. The detector output is digitally linearized and then displayed as percent or PPM HC on the digital meter. The output is also available as an analog or digital signal. All tubing connections are 1/4" SS FPT.

MODELS

There are seven types of mounting configurations available for the % HCs version.

- 470N4 - Wall mounted NEMA4 (IP65) enclosure rating
- 470N4X - Wall mounted corrosion-resistant NEMA4X (IP65) enclosure rating
- 470RM - 19" (483mm) rack mounted, on sliding rails
- 470N7MC: Wall mounted NEMA7 UL/CSA explosion-proof with non-intrusive magnetic calibration, Class 1 Div 1 Group BCD
- 470RMN7: Wall mounted NEMA7 sensor housing with rack mounted control cabinet (two separate enclosures)

SPECIFICATIONS

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

Description

Method of Detection:	Single cell, dual wavelength NDIR with no moving parts	
Ranges Available:	470L - 0-500, 0-1000, 0-3000, 0-5000 PPM HC's 470 - 0-1, 0-5, 0-10, 0-20, 0-30, 0-50, 0-100% HC's	<i>(PPM versions i.e. 470L not currently avail. in exp-proof enclosure)</i>
Resolution:	0.1% CH ₄ on % versions, 1 PPM CH ₄ on PPM versions	
Accuracy and Repeatability:	1% of full scale	
Drift:	Less than 2% of full scale per month	
Response Time (T-90):	Less than 15 seconds	
Ambient Temperature Range:	32-120°F (0-50°C). Lower temps (-5°F, -20°C) avail. with Cold Weather Package.	
Linearity:	Better than 1% of full scale	
Size and Weight:	Physical data will vary depending on enclosure style and options required	
Power:	115VAC 60Hz (220VAC 50Hz available)	
Output Options:	4-20ma into 500 ohms non-isolated standard Isolated 4-20mA, RS232, RS485 optional	
Alarms:	High and/or low alarm contacts available, relay contacts SPDT 5A @ 220VAC rating. Low flow alarm optional	

UNIQUE APPLICATIONS

The 470 Series analyzers are designed for detection of HC's in *non-corrosive* gas streams. Detector response varies with each HC in the sample gas. Consult Nova for these applications.



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