

NOVA

Dependable Gas Analysis Solutions

430L SERIES PPM HYDROGEN ANALYZER



APPLICATIONS

For continuous analysis of PPM levels of hydrogen (H_2) in process gas streams such as helium purification and others.

FEATURES

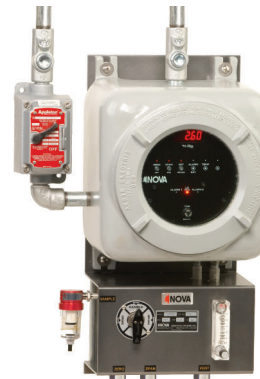
- Best value continuous PPM level H_2 analyzer
- Bright digital readout, 4 - 20 mA outputs
- Long life electrochemical H_2 sensor
- Easy-to-maintain modular layout
- Built-in sample pump or pressure regulator
- Sensors temperature controlled for maximum stability
- Explosion-proof version has magnetic calibration

OPTIONS

- Hi/Low gas, low flow, and diagnostic alarms available
- Isolated analog, RS232, RS485, MODBUS®, and Ethernet outputs available
- Cabinets 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
- Heated filters and high temperature probes
- Air make-up for oxygen-free processes
- Dilution system for high PPM measurements



Wall Mount (N4)
Enclosure



Explosion-Proof
(N7MC) Enclosure



Ex-Proof Detector Enclosure
Rack Mount Control Enclosure
(RMN7)

CALIBRATION

- Nitrogen or air for zero
- Span using a known PPM H_2 calibration gas.

NOVA ANALYTICAL SYSTEMS

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DESCRIPTION

The Nova 430LRM Series Low Range Hydrogen Analyzer is designed for the continuous analysis of low level hydrogen in a sample of air, nitrogen, or helium, that also contains some oxygen. If oxygen is not normally present, then an air make-up system will be included. H₂ in the sample is detected by a long life electrochemical sensor. The electrochemical sensor has an anode, cathode, and a suitable electrolyte sealed inside which, when exposed to hydrogen, produces a small output current corresponding to the PPM H₂ present in the sample. This output is amplified then directed to the digital display meter on the front panel and is also converted to a 4-20 mA output for remote recording. The analyzer can be supplied with a pump or pressure regulator depending on the process requirement.

MODELS

There are six types of mounting configurations available. All connections are 1/4" SS FPT.

- 430LN4 - Wall mounted NEMA4 (IP65) enclosure rating
- 430LN4X - Wall mounted corrosion-resistant NEMA4X (IP65) enclosure rating
- 430LRM - 19" (483mm) rack mounted, on sliding rails
- 430LN7MC: Wall mounted NEMA7 UL/CSA explosion-proof with non-intrusive magnetic calibration, meets Class 1 Div 1 Group BCD rating
- 430LRMN7: 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:	Temperature-controlled electrochemical cell. Expected life in excess of 1-2 years.
Ranges Available:	Standard - 0-200 PPM; 0-500 PPM; 0-1000 PPM H ₂ Diluted sample - 0-2000 PPM; 0-5000 PPM; 0-10,000 PPM H ₂
Resolution:	1 PPM H ₂ on Standard and Diluted systems
Accuracy and Repeatability:	Standard - ±1% of full scale; Dilution systems - ±2% of full scale
Drift:	Less than 2% of full scale per month
Response Time (T-90):	30-40 seconds to 90% step change
Ambient Temperature Range:	32-122°F (0-50°C). Lower temperatures (-5°F, -20°C) with Cold Weather Package.
Linearity:	Standard - ±1% of full scale; Dilution systems - ±2% of full scale
Size and Weight:	Dimensions 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, MODBUS®, Ethernet outputs optional
Alarms:	High and/or low alarm contacts available, relay contacts SPDT 5A @ 220VAC rating. Low flow alarm optional

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UNIQUE APPLICATIONS

If no oxygen is present in the sample, a Nova-supplied air make-up system must be used. The standard electrochemical H₂ sensor can be affected by the presence of other gases in the sample such as carbon monoxide (CO) and nitrogen oxide (NO). To properly apply this equipment, detailed sample information is required.



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