

NOVA

Dependable Gas Analysis Solutions

430 SERIES

PROCESS ANALYZER FOR HYDROGEN



APPLICATIONS

For continuous analysis of up to 100% hydrogen (H₂) in process gas streams. Also recommended for other applications such as H₂ cooled generators, electrolysis units, refinery gas, heat treating atmospheres, blast furnace gas, and many more.

FEATURES

- Best value continuous H₂ analyzer
- Bright digital readout, 4 - 20 mA outputs
- Long life thermal conductivity (TC) detector with high accuracy and repeatability, cannot be burned out from loss of flow
- Fast response (T₉₀ - 10 to 15 seconds)
- Easy-to-maintain modular layout
- Built in sample pump or pressure regulator
- Sensor mounted in temperature controlled heated box to improve accuracy

OPTIONS

- Hi/Low gas, low flow, and diagnostic alarms available
- Isolated analog, RS232, RS485, MODBUS, and Ethernet outputs available
- Sample conditioning systems available for removal of moisture, acidic gas, and dust
- Cabinet purge system available for use in hazardous areas
- One-step 'cal-now' button with touch screen LCD display
- 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
- High temperature filters and probes



Panel Mount (PM) Enclosure



Rack Mount (RM) Enclosure



Explosion-Proof (N7MC) Enclosure



Ex-Proof Detector Enclosure
Panel Mount Control Enclosure (PMN7)



Wall Mount (N4) Enclosure



Wall Mount (N12) Enclosure

CALIBRATION

- Nitrogen or air for zero
- Span using a known H₂ in nitrogen calibration gas.

NOVA ANALYTICAL SYSTEMS INC.

www.nova-gas.com

DESCRIPTION

The Nova 430 Series Process Hydrogen analyzer utilizes a temperature-controlled TC cell for the detection of H₂ in process gas. This cell produces a small millivoltage output which is directly proportional to the H₂ detected. This output is then amplified and displayed on a digital readout meter and is also available as an output recorder. The analyzer can be supplied with a pump or pressure regulator depending on customer requirement.

MODELS

There are seven types of mounting configurations available:

- 430N4 - Wall mounted NEMA4 (IP65) enclosure rating
- 430N4X - Wall mounted corrosion-resistant NEMA4X (IP65) enclosure rating
- 430N12 - Wall mounted NEMA12 (IP52) enclosure rating
- 430PM - Panel mounted, slides open for easy access
- 430RM - 19" (483mm) rack mounted, on sliding rails
- 430N7MC: Wall mounted NEMA7 UL/CSA explosion-proof with non-intrusive magnetic calibration, meets Class 1 Div 1 Group BCD rating
- 430PMN7: Wall mounted NEMA7 sensor housing with panel

SPECIFICATIONS

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

Description

Method of Detection:	Temperature-controlled TC cell. Expected life in excess of 10 years. Cell cannot be burned out due to loss of sample flow.
Ranges Available:	Any range between 0-2% and 0-100% H ₂
Resolution:	0.1% H ₂ (0.01% H ₂ available)
Accuracy and Repeatability:	±1% of full scale
Drift:	Less than 1% of full scale per month
Response Time (T-90):	10-15 seconds to 90% step change
Ambient Temperature Range:	32-122°F (0-50°C). Lower temperatures (-5°F, -20°C) with Cold Weather Package. Dew point should be at least 9°F (5°C) below lowest sample temperature.
Linearity:	±1% 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.

UNIQUE APPLICATIONS

All Nova analyzers are built using proven technologies and techniques. If this product does not suit your application, please contact Nova at 1-800-295-3771. In many cases, we are able to build an analyzer specific to your needs.

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