



415 SERIES PROCESS PPM OXYGEN ANALYZER

APPLICATIONS

For continuous analysis of PPM levels of oxygen (O₂) in process gas streams. Applications include blanketing mixtures, glove boxes, electronics, research, hydrogen/nitrogen mixtures, and many others.

FEATURES

- Bright digital readout in PPM O2
- Ranges available from 0 to 100 PPM to 0 to 9,999 PPM O2
- Microprocessor control with push button calibration
- Explosion-proof version has magnetic calibration
- Electrochemical sensor is unaffected by hydrocarbons in the sample
- Easy-to-maintain, modular layout
- Built-in sample pump or pressure regulator and 4 20 mA output
- Solenoid valves trap PPM O₂ sample to avoid sensor depletion when analyzer is powered off

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 -20°C (-4°F)
- Cabinet coolers can be fitted to most models
- Sensor is temperature controlled for maximum stability

CALIBRATION

- Nitrogen for zero
- Air or analyzed calibration gas for span

NOVA ANALYTICAL SYSTEMS www.nova-gas.com



Explosion-Proof (N7MC) Enclosure



Wall Mount (N4) Enclosure

DESCRIPTION

The Nova 415 Series Trace O₂ analyzers have been designed for the detection of trace levels of O₂ in a non-corrosive gas stream. In operation, the O₂ content in the sample gas is detected by a 'fuel cell' type electrochemical sensor. This sensor produces a small current output directly proportional to the O₂ in the sample. This small output is compensated for temperature, amplified, and then displayed in PPM O₂ on a digital meter. The signal is also sent to recorder terminals as a voltage or current output. The sensor normally lasts about 2 years as long as it is only exposed to PPM levels of O₂. The sensor may be easily replaced by the customer.

MODELS

Desc

Six types of mounting configurations are available. All tubing connections are 1/4" SS FPT.

- 415N4 Wall mounted NEMA4 (IP65) enclosure rating
- 415N4X Wall mounted corrosion-resistant NEMA4X (IP65) enclosure rating
- 415RM 19" (483mm) rack mounted, on sliding rails
- 415N7MC: Wall mounted NEMA7 UL/CSA explosion-proof with non-intrusive magnetic calibration, Class 1 Div 1 Group BCD

Nova reserves the right to specification changes which

may occur with advances in design without prior notice.

- 415RMN7: Wall mounted NEMA7 sensor housing with rack
- mounted control cabinet (two separate enclosures)

SPECIFICATIONS

Description	
Method of Detection:	Customer-replaceable 'fuel cell' oxygen sensor
Ranges Available:	Any range between 0-100 PPM and 0-9,999 PPM
Resolution:	1 PPM
Accuracy and Repeatability:	± 1% of full scale (minimum 0.5 PPM)
Drift:	Less than 1% of full scale per week
Response Time (T-90):	O ₂ sensor may require an initial purge down from air to low PPM O ₂ which may last u to 6 hours. After purge, T90 response from 1000 to 100 PPM O ₂ is 30 seconds.
Ambient Temperature Range:	32-122°F (0-50°C). Lower temperatures (-5°F, -20°C) with Cold Weather Package.
Linearity:	± 1% of full scale (minimum 0.5 PPM)
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

The O_2 sensor in the Model 415 is not normally affected by gas stream composition. However, high levels of acid gases such as carbon dioxide (CO₂) and sulfur dioxide (SO₂) can cause decreased cell life. 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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