

# NOVA

Dependable Gas Analysis Solutions



## 312 SERIES PORTABLE FLUE GAS ANALYZER FOR OXIDES OF NITROGEN

### APPLICATIONS

Analysis of oxides of nitrogen ( $\text{NO}_x$ ) as nitric oxide (NO) in boiler, furnace, or engine exhaust.

### FEATURES

- Rugged design that is easy to operate and maintain
- Fast warm-up and response
- Disposable, long-life electrochemical NO sensor
- Digital readout meter with backlight
- Modular layout that is easy to maintain
- Rechargeable battery operation
- Built-in sample pump, filter and flowmeter
- Continuous condensate removal
- Rapid recovery on  $\text{NO}_x$  overdose
- Stainless steel probe with sample hose

### OPTIONS

- Recorder outputs of 0-1V or 4-20 mA
- Stack temperature readout (312T)
- Sample pre-cooler
- Suitcase (K) style cabinet available
- $\text{NO}_x$  alarms with LED
- Detachable/portable data logger

### CALIBRATION

- Air for zero
- Analyzed calibration gas mixture of PPM NO in air for span.



Weatherproof (WP) Enclosure



Suitcase (K) Enclosure



Optional Precooler  
for hot or wet  
sample gases

NOVA ANALYTICAL SYSTEMS

[www.nova-gas.com](http://www.nova-gas.com)

## DESCRIPTION

The Nova 312 Series Portable Flue Gas Analyzer for NO<sub>x</sub> utilizes a reliable, stable nitric oxide (NO) sensor which responds quickly to the NO present in flue gases or engine exhaust. NO is the major component (90-95%) of the NO<sub>x</sub> found in flue gases or engine exhaust (except diesel).

In operation, a built-in sample pump draws in the gas sample through the S.S. probe, 12 ft sample hose, condensate removal filter, secondary filter and flowmeter then on to the NO sensor. The detected NO is displayed on a LCD digital meter which has a switchable backlight for use in dark areas.

The rechargeable battery provides enough power for about 20 hours of continuous operation and the analyzer can be used while it is being recharged. A red LED tells when to recharge and a green LED verifies that it is receiving recharging power. The recharger is included.

## SPECIFICATIONS

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

Description	
<b>Method of Detection:</b>	Customer replaceable electrochemical NO sensor
<b>Ranges Available:</b>	0-2000 PPM NO <sub>x</sub> (as NO)
<b>Resolution:</b>	1 PPM
<b>Accuracy and Repeatability:</b>	Better than 2% full scale
<b>Drift:</b>	Within 1% full scale per 8 hours of continuous operation
<b>Response Time (T-90):</b>	20-30 seconds for 90% step change
<b>Ambient Temperature Range:</b>	55° to 120°F (12° to 49°C)
<b>Linearity:</b>	± 2% of full scale
<b>Size and Weight:</b>	WP style - approx. 11½" L x 8" W x 7¼" H @ 8 lbs (29 x 20 x 18 cm @ 3.6 kg) K style - approx. 14" L x 10½" W x 6" H @ 12 lbs (36 x 27 x 15 cm @ 5.5 kg)
<b>Power:</b>	AC/DC operation. 115VAC 60Hz for recharging (other voltages available)
<b>Output Options:</b>	4-20 mA or 0-1 VDC

## UNIQUE APPLICATIONS

Note: For proper operation, the sample gas should also contain a small amount of oxygen. 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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