

# Model N200

## Chemiluminescence NO<sub>x</sub>-NO<sub>2</sub>-NO Analyzer



- ▶ Single or dual range capability
- ▶ Automatic converter efficiency compensation
- ▶ Customizable alerts and continuous self-checking
- ▶ Wide operating temperature range
- ▶ Internal DC-powered pump (optional)
- ▶ Internal zero and span valves (optional)
- ▶ Optional 47mm membrane or long-life sample particulate filter

### N Series Platform Features



Color Touch-Screen Graphics Display



Two Front Panel USB Ports



Modular Internal Hardware Design



All DC-powered Internal Components



Large Internal Data Storage



Serial and TCP/IP Ethernet Included



Digital and Analog Expansion Options



Indicator Illuminated Soft Power Switch



Split Fold-Down Rear Panel

The Model N200 uses the proven chemiluminescence detection principle, combined with a state-of-the-art modular architecture, and intuitive operating software to provide accurate and dependable measurements of low-level Nitric Oxide (NO), Nitrogen Dioxide (NO<sub>2</sub>) and total Nitrogen Oxides (NO<sub>x</sub>) gases.

The instrument reaction cell uses a diffusion-based inlet nozzle to minimize build-up of contamination on the optics, reducing the frequency of maintenance and minimizing drift. Stability is further enhanced using an automatic baseline reference cycle which compensates for any potential baseline drift. The result is sensitive, accurate, and dependable performance under the harshest operating conditions.

Instrument functions and controls are managed through a series of integrated microprocessor-controlled modules utilizing a simple and reliable CAN Bus communications architecture. Each module is independently assembled and calibrated allowing easy and fast field replacement to maximize instrument uptime. The long-life sample filter option further improves efficiency with a ~6 months exchange interval in ambient air quality monitoring applications.

Intuitive operation and calibration of all N Series products is achieved through the NumaView™ Software interface. The graphical user interface (GUI) is customizable, giving the user fast and efficient access to instrument status, as well as measurement data and diagnostic parameters in either numeric or graphical form. NumaView™ Remote Software (included at no charge) provides the same virtual interface and complete instrument control, as well as access to the instrument's large internal data storage buffer from a remote PC or tablet.



# N200 Specifications

|                          |   |
|--------------------------|---|
| • Measurement Units      | ppb, ppm, $\mu\text{g}/\text{m}^3$ , $\text{mg}/\text{m}^3$ (selectable)  |
| • Response Time          | < 80 seconds to 95% (in switching mode)   |
| • Ranges                 | Min: 0 - 50 ppb full scale<br>Max: 0 - 20,000 ppb full scale (selectable, dual-range supported)   |
| • Sample Flow Rate       | 500 cc/min $\pm 10\%$   |
| • Zero Noise             | < 0.1 ppb (RMS)   |
| • Span Noise             | < 0.2% of reading (RMS) above 50 ppb  |
| • Lower Detectable Limit | < 0.2 ppb   |
| • Precision              | 0.5% of reading above 50 ppb  |
| • Linearity              | 1% of full scale  |
| • Zero Drift             | < 0.5 ppb/24 hours  |
| • Span Drift             | < 0.5% of full scale/24 hours   |
| • Included I/O           | 1 x Ethernet (TCP/IP)<br>1 x RS232<br>2 x front panel USB device ports  |
| • Optional I/O           | Universal Analog Output Board includes (all user-definable):<br>4 x Isolated Voltage Outputs (5V, 10V; user-selectable)<br>3 x Individually Isolated Current Outputs (4-20mA)<br>Digital I/O Expansion Board includes:<br>3 x Isolated Digital Input Controls<br>5 x Isolated Digital Output Controls (user-definable)<br>3 x Form C Relay Alarm Outputs (user-definable) |
| • Weight                 | Analyzer: 35 lbs (15.9 kg)<br>External pump: 22 lbs (10 kg)   |
| • Dimensions (HxWxD)     | 7" x 17" x 24.3" (178 x 432 x 617 mm)   |
| • Operating Temperature  | 0 - 45°C (with US EPA Approval)   |
| • Power                  | Analyzer: 100V-240V, 50/60 Hz, Typical consumption 55W,<br>with internal pump 80W<br>External pump: 115V, 60 Hz, Typical consumption 85W<br>220-240V, 50/60 Hz, Typical consumption 85W   |
| • Certifications         | US EPA: RFNA-1194-099   |

*Specifications subject to change without notice.  
All specifications are based on constant conditions.*