

Model N300

Gas Filter Correlation CO Analyzer



- ▶ Single or dual range capability
- ▶ Customizable alerts and continuous self-checking
- ▶ Wide operating temperature range
- ▶ Internal DC-powered vacuum pump
- ▶ 5-year warranty on Gas Filter Correlation (GFC) wheel
- ▶ Integrated Oxygen (O₂) or Carbon Dioxide (CO₂) sensor (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 N300 is a microprocessor-controlled analyzer based on the Beer-Lambert law that is used to determine the concentration of carbon monoxide (CO) in a sample gas.

The N300 uses Gas Filter Correlation (GFC) to overcome the interfering effects of various other gases (such as water vapor) that also absorb Infrared (IR) light. The analyzer passes the IR light beam through a spinning wheel made up of two separate chambers: one containing a high concentration of CO known as the reference, and the other containing a neutral gas known as the measure. The concentration of CO in the sample chamber is computed by taking the ratio of the instantaneous measure and reference values and then compensating the ratio for sample temperature and pressure.

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.



N300 Specifications

• Measurement Units	ppb, ppm, $\mu\text{g}/\text{m}^3$, mg/m^3 (selectable)
• Response Time	< 70 seconds to 95%
• Ranges	Min: 0 - 1 ppm full scale Max: 0 - 1,000 ppm full scale (selectable, dual-range supported)
• Sample Flow Rate	800 cc/min $\pm 10\%$
• Zero Noise	< 0.02 ppm (RMS)
• Span Noise	< 0.5% of reading (RMS) above 5 ppm
• Lower Detectable Limit	< 0.04 ppm
• Precision	0.5% of reading (RMS) above 5 ppm
• Linearity	1% of full scale
• Zero Drift	< 0.1 ppm/24 hours
• Span Drift	< 0.5% of reading/24 hours
• Included I/O	1 x Ethernet (TCP/IP) 1 x RS232 2 x front panel USB device ports
• Optional I/O	Universal Analog Output Board includes (all user-definable): 4 x Isolated Voltage Outputs (5V, 10V; user-selectable) 3 x Individually Isolated Current Outputs (4-20mA) Digital I/O Expansion Board includes: 3 x Isolated Digital Input Controls 5 x Isolated Digital Output Controls (user-definable) 3 x Form C Relay Alarm Outputs (user-definable)
• Weight	40 lbs (18.1 kg)
• Dimensions (HxWxD)	7" x 17" x 24.3" (178 x 432 x 617 mm)
• Operating Temperature	0 - 40°C (with US EPA Approval)
• Power	100V-240V, 50/60 Hz, Typical consumption 115W
• Certifications	US EPA: RFCA-1093-093

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

All N Series instruments include a 2-year manufacturer's warranty as well as email and phone support for the lifetime of the instrument.



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