

# Model N400

## UV Absorption O<sub>3</sub> Analyzer



- ▶ Customizable alerts and continuous self-checking
- ▶ Wide operating temperature range
- ▶ Single pass ultraviolet absorption
- ▶ Adaptive signal filtering optimizes response time
- ▶ Internal DC-powered vacuum pump
- ▶ Internal zero/span valves and IZS (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 N400 Ultraviolet (UV) Absorption analyzer uses a system based on the Beer-Lambert law for measuring low ranges of ozone in ambient air.

A 254 nm UV light signal is passed through the sample cell where it is absorbed in proportion to the amount of ozone present. Periodically, a switching valve alternates measurement between the sample stream and a sample that has been scrubbed of ozone. The result is a true, stable ozone measurement.

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 month 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.

# N400 Specifications

Subject to change

• Measurement Units	ppb, ppm, $\mu\text{g}/\text{m}^3$ , $\text{mg}/\text{m}^3$ (selectable) < 30 seconds to 95% Min: 0 -
• Response Time	100 ppb full scale Max: 0 - 10,000 ppb full scale (selectable, dual-
• Ranges	range supported) 800 cc/min $\pm 10\%$ < 0.2 ppb (RMS)* < 0.5% of reading (RMS) above 100 ppb < 0.4 ppb* < 0.5% of reading above
• Sample Flow Rate	100 ppb 1% of full scale < 1.0 ppb/24 hours < 1% of reading/24
• Zero Noise	hours 1 x Ethernet (TCP/IP) 1 x RS232 2 x front panel USB device
• Span Noise	ports Universal Analog Output Board includes (all user-defi nable):
• Lower Detectable Limit	4 x Isolated Voltage Outputs (5V, 10V; user-selectable) 3 x
• Precision	Individually Isolated Current Outputs (4-20mA) Digital I/O
• Linearity	Expansion Board includes: 3 x Isolated Digital Input Controls 5 x
• Zero Drift	Isolated Digital Output Controls (user-defi nable) 3 x Form C Relay
• Span Drift	Alarm Outputs (user-defi nable) 28 lbs (12.7 kg) 30.6 lbs (13.8 kg)
• Included I/O	with IZS Option 7" x 17" x 24.3" (178 x 432 x 617 mm) 0 - 45°C
	(with US EPA Approval) 100V-240V, 50/60 Hz, Typical
	consumption 40W US EPA: EQOA-0992-087
• Optional I/O	
• Weight	
• Dimensions (HxWxD)	
• Operating Temperature	
• Power	
• Certifi cations	

\*with 80 Sample Digital Filter

*Specifi cations subject to change without notice.*

*All specifi cations are based on constant conditions.*

## Office Location

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