

# EC9841 T-NO<sub>y</sub>

## Total Reactive Nitrogen Oxides Analyzer

The EC9841 Total Reactive Nitrogen Oxides Analyzer combines microprocessor control with chemiluminescence detection to measure NO and NO<sub>y</sub> in the ranges of 0-2000 ppb with a detection limit of 50 ppt.

Improved sensitivity, noise, and zero drift specifications are obtained through the use of a superior low pressure reaction cell and the introduction of a new electronics suite to provide better all round performance.

The EC9841 is used in conjunction with a NO<sub>y</sub>-1000 converter used for the conversion of NO<sub>y</sub> to NO for analysis.



## Features

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- Large Graphic LCD provides continuous output of instrument status including, analyte concentrations, real time zero/span calibration curves, and sample flow and pressure graphs.
- Menu selectable data trending graphically displays up to 100 data points.
- Auto zero routine periodically checks and corrects for background illumination, virtually eliminating zero drift.
- The micro processor facilitates total external remote control of the analyzer and provides up to 100 channels of instrument operating parameters.
- Stored data can be retrieved via RS232, USB interface or the optional Ethernet connection to a TCP/IP network via an RJ45 connector.
- Ethernet option facilitates data download from an analyzer connected to the internet via a standard web interface. This feature also supports remote access to instrument parameters and the status output screen .
- Inbuilt data logger utilizes Flash ROM to store up to 132 days of five minute data averages.





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## Specifications

Ranges:	Auto-ranging for 0-50 ppb to 0-2000 ppb	
Data Display:	Large Graphic LCD display, with unit selection mg/m <sup>3</sup> , µg/m <sup>3</sup> , ppm, ppb, ppt.	
Analogue Out:	0 - full scale from 0 - 5 ppb to 0 - 2000 ppb with menu selectable offset of 0%, 5% or 10%. Auto-ranging between two user specified full-scale values	
Noise:	25 ppt or 0.1% of reading with Kalman filter active.	
Lower Detectable Limit:	50 ppt or with Kalman filter active	
Linearity:	± 1% of full scale (from best straight-line fit)	
Precision:	50 ppt or ±0.5 % of reading whichever is greater	
Zero Drift:	24 hours < 100 ppt; 30 days; < 100 ppt	
Span Drift:	24 hours less than 1 % of reading; 30 days less than 1 % of reading	
Temperature/Pressure Compensation:	Temperature/Pressure compensation with selectable reference temperature of 0°C, 20°C, 25°C at 101.3 kPa.	
Rise/Fall Time:	Less than 60 seconds with Kalman filter active.	
Sample Flow Rate:	0.640 SLPM (Std)	
Sample Pressure:	5% change in pressure produces less than 1% change in reading	
Dependence:		
Temperature Range:	5°- 40 °C (U.S. EPA approval 15°C – 35°C)	
Analog Outputs:	Menu selectable current output 0-20 mA, 2-20 mA, 4-20mA	
50 pin I/O PCA:	Allows for jumper selectable voltage outputs of 100 mV, 1, 5, 10 V with menu selectable zero offset of 0, 5 or 10%.	
Digital I/O DB50:	Local user DB50 I/O interface with 32 digital open collector outputs and 3 digital inputs user controls. The digital outputs are 24 status output commands, 8 status alarm conditions and 2 analogue inputs 0-5V.	
Communication Port:	Rear panel multi-drop RS232 port shared between analyzers for data, status and control. Plus USB interface and optional Ethernet connection to a TCP/IP network via an RJ45 connector.	
Data Logging:	Supports internal data logging capability with storage up to 132 days of 5 minute data stored in flash ROM.	
Data Storage selection:	Instantaneous data selectable period from: 1,3,5,10,30, or 60 minute intervals Average data selectable period from: 1,3,5,10,15,30 minutes, 1,4,8,12, or 24 hours.	
Power:	99-132 VAC, 198-264 VAC 47-63 HZ, 200 Watts.	
Dimensions/weight	43.2 x 17.8 x 64.8 cm (w x h x d), 22.5 kg	
Options:	Rack mount kit assembly (19")	9800036-2
	External zero/span valve assembly (EZS)	98300087
	External pump 115V 60 Hz	002-033603
	External pump 220V 50/60 Hz	002-033601
	Internal pump and 12VDC Power Supply	98000115
	Ethernet connection to a TCP/IP network via an RJ45 connector	



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