



AMERICAN
ECOTECH

WORLD CLASS
environmental
MONITORING

EC9842T

Trace Ammonia Analyzer

The EC9842T Chemiluminescence NH_3 trace analyzer combines a high performance ammonia converter and proven chemiluminescence detection to measure ammonia (NH_3), oxides of nitrogen (NO_x) and total nitrogen compounds (N_x). N_x is the sum of $\text{NO} + \text{NO}_2 + \text{NH}_3$ i.e. total oxides of nitrogen including ammonia.

The EC9842T features a higher sample flow rate and heated valve manifold to improve NH_3 response time. The higher operating vacuum in the reaction cell improves the signal to noise ratio and facilitates greater sensitivity for the detection of low levels of Ammonia (NH_3).

The Ecotech EC9842T utilizes an external platinum (Pt) converter operating at 680°C to convert Ammonia (NH_3) to NO. The resulting NO is detected by the Chemiluminescence reaction of NO with ozone inside the reaction cell.



Features

- The analyzer is easy to use in the field with a specifically designed external Ammonia converter with low absorption wetted parts
- EC9842T is based on the EC9841T which is an U.S. EPA approved technology (Automated Reference Method RFNA-1292-090)
- Specifically designed for background monitoring with a range of 0-2000 ppb and a LDL of 400 ppt
- Concentrations are automatically corrected for gas temperature and pressure changes and can be displayed in units of ppt, ppb, ppm, ug/m^3 or mg/m^3
- Kalman digital filter continuously provides the best compromise between response time and noise reduction
- Internal data logging using Flash ROM of up to 135 days of 5 minute data averages
- Increased ozone to sample ratio reduces CO_2 and H_2O quenching effects
- Operates at a lower reaction cell pressure (i.e. fewer molecules in the reaction cell means less interference due to collisions between NO and $\text{H}_2\text{O}/\text{CO}_2$ molecules)
- Ozone air source is scrubbed with Purafil® to reduce contaminants in the measurement cell
- Full external remote control capability, up to 166 analyzers parameters may be access via the USB port
- User up-gradable firmware via USB or RS232 port

Specifications

Ranges Display:	Auto ranging 0-2000 ppb
Data Display	Graphic LCD display, auto ranging 0-2000 ppb full scale, with unit selection mg/m ³ , µg/m ³ , ppm, ppb, ppt.
Resolution:	User selectable (0-5 decimal points displayed).
Analog Out:	0 - 50, 0 - 2000 ppb Selectable offset of 0%, 5% or 10%.
Filter types:	No filter, Kalman, 10,30,60,90,300 second.
Noise (At zero):	200 ppt RMS with Kalman or 300 sec filter active.
Lower Detectable Limit:	400 ppt RMS with Kalman or 300sec filter active.
Precision:	+/-2 % of reading
Zero Drift:	Temperature dependence, 0.1% per °C changes. 24 hours; less than 100 ppt
Span Drift:	Temperature dependence, 0.05 % per °C changes. 24 hours less than 1% of reading 30 days less than 1% of reading
Temperature/Pressure Compensation:	Pressure compensation with selectable reference temperature of 0°C, 20°C, 25°C at 1 01.3 kPa.
Sample Flow Rate:	0.940 SLPM (Std.)
Temperature Range:	15°C – 40°C
Analog Outputs:	Menu selectable current output 0-20 mA, 2-20 mA, 4-20mA The 50 pin I/O PCA allows for jumper selectable voltage outputs of 100 mV, 1 V, 5 V, 10 V with menu selectable zero offset of 0, 5% or 10% or menu selectable current output 0-20 mA, 2-20 mA, 4-20mA
Digital Outputs:	Multidrop RS232 port shared between analyzers for data, status and control. Service RS232 port gives front panel access to a local user DB50 with discrete status, user controls and analog, USB interface.
Data Logging:	Supports internal data logging capability with storage up to 135 days of 5 minute data stored in flash memory.
Data selection:	Instantaneous data: 1,3,5,10,30, or 60 minute intervals average 1,3,5,10,15,30 minutes, 1,4,8,12, or 24 hours.
Power:	99-132 vAC, 198-264 vAC 47-63 HZ
Dimensions/weight	43.2 x 17.8 x 64.8 cm (w x h x d), 20.9 kg
Options:	Rack mount kit assembly (19") External zero/span valve assembly (EVS) External pump 115 v 60 Hz or 220V 50/60 Hz (specify) PCA 50 pin I/O 98000066-2 External NH ₃ to NO converter, greater than 94% efficiency

Contact details:

Ph: (877) 247 0403

Fax: (401) 537 9166

Email: info@americanecotech.com Website: www.americanecotech.com