

EC9841T

TRACE NITROGEN OXIDES ANALYSER

The EC9841T Nitrogen Oxides Analyser utilises microprocessor control and chemiluminescence detection to measure low concentration nitric oxide (NO), total oxides of nitrogen (NO_x), and nitrogen dioxide (NO₂).

Based on a modified version of the standard EC9841 series analyser, the EC9841T features a higher operating vacuum, more highly polished reaction cell and optimised photomultiplier tube to facilitate greater sensitivity for detection of low level Oxides of Nitrogen.

NO, NO₂ and NO_x concentrations are automatically corrected for gas temperature and pressure changes and can be displayed in units of ppm, ppb, µg/m³ or mg/m³.

STANDARDS

- EC9841T is U.S. EPA approved (Automated Reference Method RFNA-1292-090).

FEATURES

- Low concentration NO/NO_x measurement using proven chemiluminescence detection.
- Specifically designed for background monitoring with a range of 0-2000 ppb and a LDL of 50 ppt.
- 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 CO₂ and H₂O 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 H₂O/CO₂ molecules).
- Full external remote control capability.
- 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/m³, µg/m³, ppm, ppb, ppt.

Resolution:

User selectable (0-5 decimal points displayed).

Analog out:

0 - 5 ppb to 0 - 2000 ppb
Selectable offset of 0 %, 5 % or 10 %.

Filter types:

No filter, Kalman, 10, 30, 60, 90, 300 second.

Noise (At zero):

25 ppt RMS with Kalman or 300 sec filter active.

Lower detectable limit:

50 ppt with Kalman or 300 sec filter active.

Precision:

100 ppt or ± 0.5 % of reading (whichever is greater).

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:

0.64 SLPM (Std.)

Temperature range:

Operating temperature 20 °C - 30 °C may be operated 15 °C - 35 °C.

Analog outputs:

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, 4-20 mA.

Digital outputs:

Multidrop RS232 port shared between analysers 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 cm x 17.8 cm 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 220 V 50/60 Hz (specify)
- PCA 50 pin I/O.

For your local certified distributor visit:

www.ecotech.com/distributors

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