

EC9841AS

Nitrogen Oxides Analyzer

The EC9841AS Nitrogen Oxides Analyzer uses microprocessor control and chemiluminescence detection to measure high concentration nitric oxide (NO), total oxides of nitrogen (NO_x), and nitrogen dioxide (NO₂).

The EC9841AS analyzer delivers excellent sensitivity and reliability by using single measurement channel and gas sample accumulator to provide precise measurement of NO and NO_x artifacts.

Advanced signal processing provides continuous zero measurement and NO_x, NO, and NO₂ concentrations are corrected for fluctuations in gas temperature/pressure, flow rate and NO₂ converter efficiency. Data can be displayed either in parts per million (ppm) or milligrams per cubic meter (mg/m³).



Features

- High concentration NO/NO_x measurement using chemiluminescence detection. The EC 9841AS has been specifically designed for applications with ranges of 0 - 1000 ppm or 0 - 300 ppm (option).
- Optional external Stainless Steel converter is available for applications requiring measurement of NO₂ concentrations greater than 10 ppm. (maximum detection limit when using the internal Molybdenum converter).
- Inbuilt LCD presents real time data, molybdenum converter efficiency, instrument status and historical information in a digital or graphical format. User selectable screens provide access to all instrument setup and diagnostics menus.
- Stored data can be retrieved via RS232, USB interface or the optional Ethernet connection and uploaded to a TCP/IP network.
- 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.
 - Auto zero pre-reactor control provides continuous zero function.
 - Inbuilt data logger uses Flash ROM with storage capacity up to 175 days of 5 minute data.

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environmental
MONITORING

Specifications

| | |
|------------------------------------|--|
| Ranges Display: | Auto-ranging 0-1000 ppm, optional 0-300 ppm resolution equals 0.01ppm |
| Analogue Out: | 0 - full scale from 0 - 50 ppb to 0 - 1000 ppm with 0%, 5%, 10% offset. Auto-ranging between two user specified full-scale values |
| Noise (At zero): | 2 ppb or 0.1% of concentration reading (1) |
| Lower Detectable Limit: | 4 ppb (1) |
| Zero Drift: | Temperature dependent, 1ppb per °C Time dependent at fixed temperature 24 hours less than 10ppb; 30 days less than 10ppb |
| Span Drift: | Temperature dependent, 0.2% per °C Time dependent at fixed temperature 24 hours 0.35% of reading; 7 days 2.5% of reading |
| Temperature/Pressure Compensation: | Temperature/Pressure compensation with selectable reference temperature of 0°C, 20°C, 25°C at 101.3 kPa. |
| Linearity Error: | ± 1% of full scale |
| Lag Time | Less than 25 sec |
| Rise/Fall Time: | 95% of final value. Less than 90 sec (with Kalman filter active) |
| Precision: | Better than 0.5 ppb or 1% of reading (1) |
| Temperature Range: | 15°C to 35°C |
| Relative Humidity: | 10% to 80% non-condensing |
| Sample Flow rate: | 370mL/minute (50mL/minute sample plus 320 mL/minute bypass) |
| Analogue Outputs: | Jumper selectable voltage output of 100mV, 1V, 5V, 10V, 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 analyzers for data, status and control. USB port DB50 with discrete status, user controls and analogue output. |
| Communication Port: | Rear panel multi-drop RS232 port shared between analyzers for data, status and control and front panel service RS232 port. 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 175 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, 219 Watts consumed at 115VAC |
| Dimensions/weight | 43.2 x 17.8 x 64.8 cm (w x h x d), 26.4 kg (61 lbs) |

(1) Whichever is greater with Kalman filter active



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