

## Chemiluminescent Nitrogen Oxides Analyzer Model AC32M

Low level monitoring of NO-NO<sub>2</sub>-NO<sub>x</sub> from 0.4 ppb to 20 ppm

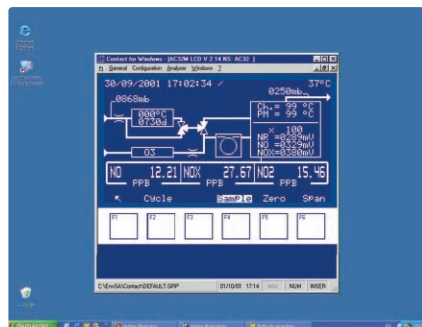


### 2M Series analyzer:

- Ultra compact and light – rack 3U
- Single chamber technology
- Modular design
- SMD enhanced electronics
- High precision metrology
- Enhanced data logging functions
- Complies with ISO 7996, EN 14211 and VDI 4202

### Reduced maintenance:

- New converter oven with interchangeable cartridges (2 year life time)
- Ease and accessibility of components
- Traceability of parts and consumables
- Remote maintenance and telediagnosics



CONTACT remote control software



### Major fields of applications:

- Ambient air monitoring
- Indoor air monitoring
- Mobile laboratory
- NO<sub>2</sub> measurement in medical gases
- Continuous emissions monitoring (CEM) by dilution extraction

### Exclusive features:

- Type approvals: TÜV report n° 936/21205818/C (Germany), US EPA n°RFNA-0202-146 (USA)
- Graphic Liquid Crystal (LCD) display
- Interactive menu-driven software with enhanced speed display
- Real-time synoptic flow diagram display
- User programmable ranges and average times
- Auto-ranging
- Automatic response time
- Real time calibration graph
- User programmable ranges and average times
- Built-in serial interface (RS 232 / RS 422)
- Built-in storage of 1 month average data (up to 6 months with the optional memory extension)
- Full remote emulation of the analyzer

## Chemiluminescent Nitrogen Oxides Analyzer - model AC32M

### Specifications:

- Ranges: 0-0.05 / 0.1/0.2 / 0.5 / 1 / 2 / 5 / 10 / 20 ppm or user selectable ranges
- Autoranging between two user specified ranges
- Noise: 0.2 ppb
- Lower detectable limit: 0.4 ppb
- Response time : automatic and programmable (minimum 30 sec)
- Zero drift: < 0.5 ppb / 24 h & 1 ppb / 7 days
- Span drift: < 0.5 % / 24 h & 1 % / 7 days
- Linearity: ± 1 % of F.S.
- Sample flow rate: 0.7 lpm
- Ozone flow rate: 0.06 lpm
- Averaging time: programmable from 1 min to 24 hours
- Data storage: more than 1 month (1/4 h data)
- External sample pump with zero air scrubber
- Chassis: 19" rack mountable, 3U
- Dimensions: 545 x 483 x 133 mm (L x W x H)
- Weight: 13 kg (28.7 lbs), without pump
- Power: 115 V, 60 Hz - 230 V, 50 Hz
- Power consumption: 250 VA
- Operating temperature : 5 – 40 °C
- Digital output : 2 RS 232 or RS 422 ports
- PVDF sample filter holder

### Options:

- Memory extension
- Ethernet network connection
- ESTEL electronic board (1 or 2) with:
  - 4 independent analog inputs
  - 4 independent analog outputs
  - 4 remote control inputs
  - 6 dry contacts outputs
- SOREL electronic board with:
  - 4 dry contacts outputs
  - 4 dry contacts inputs
- Valves block for selection of external zero and span gas
- Built-in permeation bench with NO<sub>2</sub> tube
- External converter for NH<sub>3</sub> monitoring (see special leaflet)
- Sample dryer
- Tight box version



AC32M tight box version

### Principle of operation:

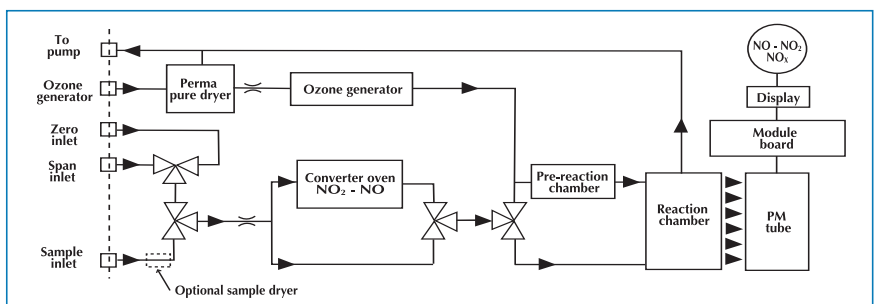
The new Chemiluminescent NO-NO<sub>2</sub>-NO<sub>x</sub> analyzer, model AC32M, combines our 30 years of experience with its predecessors AC30M & AC31M, with an enhanced electronics package and a modular component parts design.

The outcome is an ultra compact and light- rack 3U, easy-to-use, chemiluminescence based analyzer capable of measuring nitrogen oxides at ppb levels. Applied to nitrogen oxides measurement, Chemiluminescence corresponds to an oxidation of NO molecules by O<sub>3</sub> molecules. The return to a fundamental electronic state of the excited NO<sub>2</sub> molecules is made by luminous radiation, detected by the PM tube.

Model AC32M is a state-of-the-art single chamber, single photomultiplier tube design which automatically cycles between the NO and NO<sub>x</sub> modes. It was developed to meet the customer's requirement for reduced and easier maintenance with high metrology. It combines a powerful, easy-to-use interface with quality components and design technology.

Real-time calibration graphs can be displayed during span check operation. Multi-tasking software, combined with the LCD graphic display, gives a user-friendly access to the instrument set-up, as well as the status and maintenance parameters. Real-time synoptic, auto-diagnostic and maintenance data screens can be displayed while the instrument is operating. The new electronics allow enhanced data storage of more than one month of 15 minute averages, and total remote troubleshooting diagnostic capabilities via modem, using the analyzer's complete display and functions emulation.

Equipped with the optional ESTEL I/O analog & digital board, the AC32M can be easily interfaced with other equipment and can be operated as a stand alone unit able to store several months of data.



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