

# 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

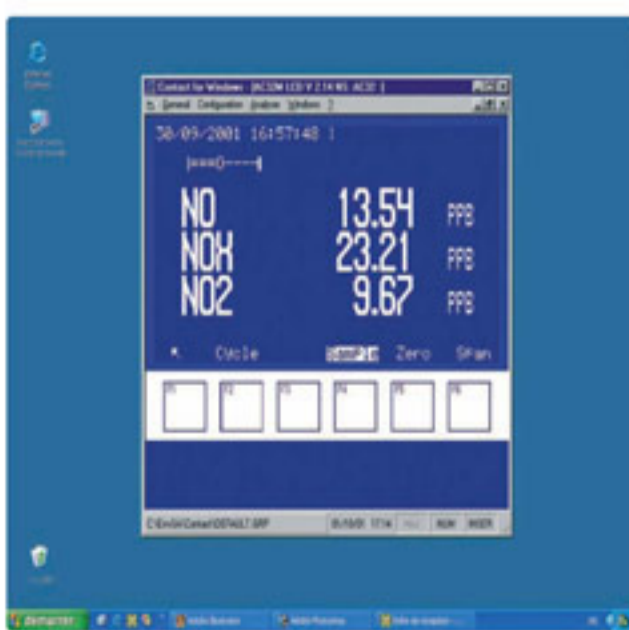


## 2M Series analyzer:

- Ultra compact and light – rack 3U
- Single chamber technology
- SMD enhanced electronics
- High performance metrology
- Enhanced data logging functions
- ISO 7996 & EN 14211:2005 compliant

## Reduced maintenance:

- New converter oven with interchangeable cartridges – 2 years life time
- Very low span drift
- Ease and accessibility of components
- Traceability of parts and consumables
- Remote maintenance and telediagnosics



Remote Control



INSPECTED BY ACIME  
Instruments for the environment

## 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

## Main features:

- Graphic Liquid Crystal Display (LCD)
- Interactive menu driven software with enhanced speed display
- Real-time synoptic flow diagram display
- User programmable ranges and average times
- Autoranging
- Temperature and pressure compensation
- Automatic response time
- Real time calibration graph
- Built-in storage of one month average data (up to 6 months with the optional memory extension )
- Built-in double serial interface (RS232/RS422) for remote control and maintenance



## 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 ( $\sigma$ : 0.2 ppb)
- Lower detectable limit ( $2\sigma$ ): 0.4 ppb
- Response time: automatic and programmable (minimum 30 sec)
- Zero drift: less than 0.5 ppb / 24 h  
less than 1 ppb / 7 days
- Span drift: less than 0.5 % / 24 h  
less than 1 % / 7 days
- Linearity:  $\pm 1$  % of F.S.
- Sample flow rate: 0.7 lpm
- Ozone flow rate: 0.06 lpm
- Averaging time: programmable from 1min to 24 hours
- Data storage: more than one month quarterly average values
- External sample pump with zero air scrubber
- Chassis: 19" rack mountable, 3U
- Dimensions: 545 mm x 483 mm 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 (typical as per US EPA 10 - 35° C)
- Digital output: 2 RS 232 or RS 422 ports
- PVDF sample filter holder

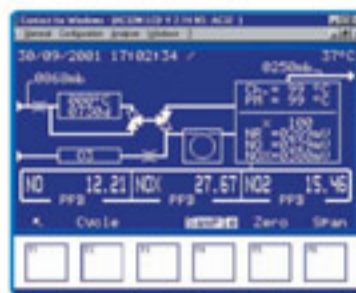
### Options:

- ESTEL electronic board (1 or 2) with:
  - 4 independent analog inputs
  - 4 independent analog outputs
  - 4 remote control inputs / 6 dry contacts
- Permeation dryer for ozone generation supply
- Valves block for selection of customer-supplied zero and span gas
- Built-in permeation bench with NO<sub>2</sub> tube and Filter - Valves block
- External NH<sub>3</sub> → NO converter for low level NH<sub>3</sub> monitoring
- Memory extension (6 months 1/4 average values)
- Wall mounted weather proof enclosure

### Main Features:

The new Chemiluminescent NO-NO<sub>2</sub>-NO<sub>x</sub> analyzer, model AC32M, combines our 20 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.



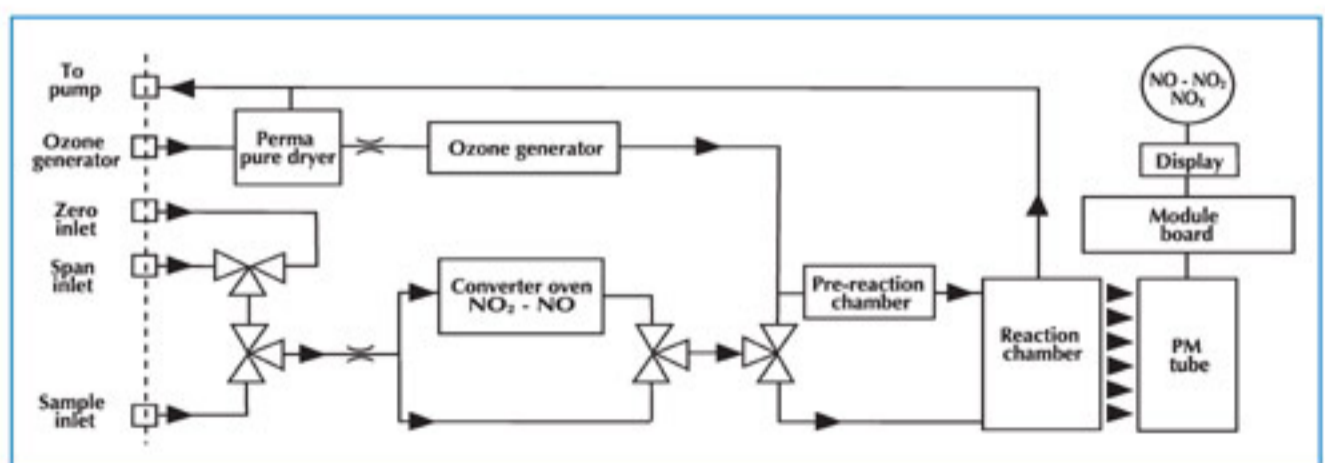
Model AC32M is a state-of-the-art single chamber, single photomultiplier tube design which automatically cycles between the NO and NO<sub>x</sub> modes. It was developed to meet the customer's requirement for reduced and easier maintenance with high metrology. It combines a powerful, easy-to-use interface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



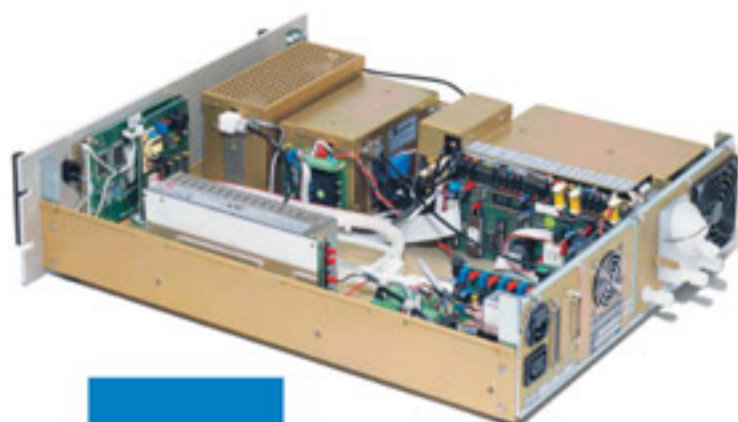
Real-time calibration graphs can be displayed during span check operation. Multi-tasking software, combined with the LCD graphic display, gives a user-friendly access to the instrument set-up, as well as the status and maintenance parameters. Real-time synoptic, auto-diagnostic and maintenance data screens 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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### Distributed by:



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