



MODEL 200E

# Chemiluminescence NO/NO<sub>2</sub>/NO<sub>x</sub> Analyzer

EPA APPROVAL RFNA-1194-099



**0-50 ppb to 0-20 ppm ranges, user selectable**

**Independent ranges for NO, NO<sub>2</sub>, NO<sub>x</sub>**

**Microprocessor controlled for versatility**

**Multi-tasking software allows viewing of test variables while operating**

**Continuous self checking with alarms**

**Permeation drier on ozone generator**

**Dual bi-directional RS-232 ports for remote operation (optional RS-485 or Ethernet)**

**Digital status outputs provide instrument condition**

**Adaptive signal filtering optimizes response time**

**Temperature & pressure compensation**

**Converter efficiency correction software**

**Continuous automatic zero correction**

**Catalytic ozone scrubber**

**Internal zero and span check (optional)**

**Internal data logging with 1 min to 365 day multiple averages (up to 1 million records)**

The Model 200E uses the proven chemiluminescence detection principle, coupled with state-of-the-art microprocessor technology to provide the sensitivity, stability and ease of use needed for ambient or dilution CEM monitoring requirements.

The analyzer uses multi-tasking software which allows complete control of all functions while providing online indication of important operating parameters. Measurements are automatically compensated for temperature and pressure changes.

In addition, stability is enhanced by an Auto-Zero circuit that continuously provides a true zero reference. The result is sensitive, accurate, and dependable performance under the harshest operating conditions.

All instruments in the TAPI E Series include built in data acquisition capability using the analyzer's internal memory. This allows the logging of multiple parameters (up to 1 million records) including averaged or instantaneous concentration values, calibration data, and operating parameters such as pressures and temperatures.

Stored data are easily retrieved through the serial or Ethernet port via APICOM or from the front panel, allowing the operator to perform predictive diagnostics and enhanced data analysis by tracking parameter trends.

The Model 200E combines lighter weight, rugged construction, ease of use, powerful diagnostics, modular design and outstanding performance to yield the ideal tool for today's air monitoring requirements.



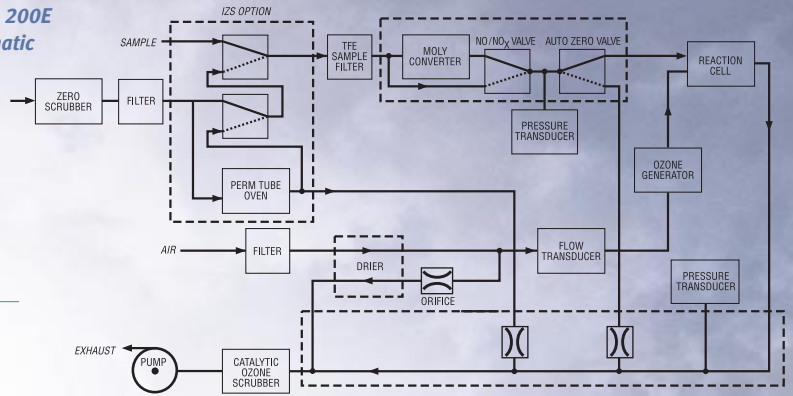
# NO/NO<sub>2</sub>/NO<sub>x</sub>

## MODEL 200E

# Chemiluminescence NO/NO<sub>2</sub>/NO<sub>x</sub> Analyzer



Model 200E schematic



### SPECIFICATIONS

Ranges:	0-50 ppb to 0-20,000 ppb full scale, user selectable; Independent NO, NO <sub>2</sub> , NO <sub>x</sub> ranges and autoranging supported
Units:	ppb, ppm, µg/m <sup>3</sup> , mg/m <sup>3</sup>
Zero Noise:	<0.2 ppb (RMS)
Span Noise:	<0.5% of reading (RMS) above 50 ppb
Lower Detectable Limit (LDL):	0.4 ppb
Zero Drift:	<0.5 ppb/24 hours, <1 ppb/7 days
Span Drift:	<0.5% of reading/24 hours, <1% of reading/7 days
Lag Time:	20 seconds
Rise and Fall Time:	<60 seconds to 95%
Linearity:	1% of full scale
Precision:	0.5% of reading
Sample Flow Rate:	500 cm <sup>3</sup> /min ±10%
Operating Temperature Range:	5 - 40°C (with EPA Equivalency)
Dimensions (HxWxD):	7" (178 mm) x 17" (432 mm) x 23.5" (597 mm)

Weight:	Analyzer 40 lbs (18 kg), External Pump 15 lbs (7 kg)
Power:	100V-120V, 220V-240V, 50/60Hz, 250W
Analog Outputs:	Bipolar, 10V, 5V, 1V, 0.1V, selectable
Recorder Offset:	±10%
Serial Outputs:	Serial Port 1: RS-232, DB-9M Serial Port 2: standard RS-232 or optional RS-485, DB-9F
Status (Digital):	8 outputs, 6 inputs (opto-isolated), 6 alarm outputs (optional)
Current Output:	0-20 mA or 4-20 mA isolated output (optional)
Approvals:	USEPA RFNA-1194-099, C C

NOTE: The values expressed above are in accordance with EPA definitions. All error specifications are based on constant conditions. Specifications exceed US EPA and Eignungsgeprüft requirements.

### HOW TO ORDER

#### Model 200E Chemiluminescence NO/NO<sub>2</sub>/NO<sub>x</sub> Analyzer includes:

- External pump
- Permeation air dryer for ozone generator air supply
- Independent NO, NO<sub>2</sub>, NO<sub>x</sub> ranges
- Auto ranging
- 47 mm diameter particulate filter
- 8 digital status outputs, 6 inputs
- Dual bi-directional RS-232
- APICOM remote control software

#### Specify input AC voltage & frequency:

- |                                      |                               |
|--------------------------------------|-------------------------------|
| <input type="checkbox"/> 100V - 115V | <input type="checkbox"/> 50Hz |
| <input type="checkbox"/> 220V - 240V | <input type="checkbox"/> 60Hz |

#### Specify output DC voltage:

- 10V    5V    1V    0.1V

#### Calibration Options:

- Dual calibration valves for selection of customer-supplied zero and span gas
- Internal zero and permeation tube oven for calibration check (requires permeation tube, available as option)
- Triple gas valve manifold

#### Optional Equipment:

- Rack mount brackets (19") with chassis slides
- Rack mount brackets only
- Isolated 0-20 mA or 4-20 mA output (specify up to three channels)

- Multi-drop RS-232 connection
- Ethernet port includes 7 ft. CAT-5 cable (disables one serial port)
- Permeation dryer for sample gas
- Permeation dryer combination for ozone and sample air

#### Accessories:

- RS-232 Cable
- Expendables Kit
- Spare Parts Kit
- Chassis carrying handle
- Zero Air Scrubber

For more information on Teledyne API's family of monitoring instrumentation products, call us or visit our website at [www.teledyne-api.com](http://www.teledyne-api.com)

