

## Model T200UP Ultra-Sensitive Photolytic NO-NO<sub>2</sub> Analyzer



Control Analytics, Inc. is proud to announce the Model T200UP. This model provides Trace Level measurements of NO and NO<sub>2</sub> using our Model T200U NOx analyzer combined with a patented photolytic converter. Even low temperature molybdenum converters transform other nitrogen-containing compounds such as HNO<sub>3</sub>, PAN, etc. to a considerable extent. Simultaneous measurements of NO<sub>2</sub> performed with molybdenum and photolytic converters have shown significantly different results in the presence of such compounds.

In the photolytic process, the sample gas passes through a cell where it is exposed to light at a specific wavelength from an LED array. This causes the NO<sub>2</sub> to be selectively converted to NO with negligible interference with other gases. Combined with the proven Model T200U, it provides ultra-sensitive performance, with a lower detectable limit of 0.1 ppb or better, and is ideally suited for NCore research sites and the low-level direct NO<sub>2</sub> measurements required for roadside monitoring.

All T Series instruments offer an advanced color display, capacitive touch screen, intuitive user interface, flexible I/O, and built-in data acquisition capability. All instrument set up, control and access to stored data and diagnostic information is available through the front panel, or via RS232, Ethernet, or USB com ports, either locally or by remote connection using the included APIcom™ software.

### Features Include:

- Ranges: 0-5 ppb to 0-2,000 ppb, user selectable
- Highly specific conversion of NO<sub>2</sub>
- Ethernet, RS-232, and (optional) USB com ports
- Front panel USB connections for peripheral devices and firmware upgrades
- 8 analog inputs (optional)
- 100 ppt lower detectable limit
- Catalytic ozone scrubber
- Comprehensive internal data logging with programmable averaging periods
- Ability to log virtually any operating parameter
- Two-year warranty



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|                                     |   |
|-------------------------------------|---|
| <b>General</b>                      |   |
| Ranges:                             | Min: 0-5 ppb Full scale<br>Max: 0-2,000 ppb Full scale (selectable, independent range and auto ranging supported)   |
| Measurement Units:                  | ppb, µg/m <sup>3</sup> (selectable)   |
| Zero Noise:                         | < 25 ppt (RMS)  |
| Span Noise:                         | < 0.5% of reading (RMS) above 5 ppb   |
| Lower Detectable Limit:             | <50 ppt NO, <100 ppt NO <sub>2</sub>  |
| Zero Drift:                         | < 0.1 ppb/24 hours  |
| Span Drift:                         | < 0.5% of reading/24 hours  |
| Lag Time:                           | 20 seconds  |
| Rise and Fall Time:                 | < 50 seconds to 95%   |
| Linearity:                          | 1% of full scale  |
| Precision:                          | 0.5% of reading above 5 ppb   |
| Sample Flow Rate:                   | 1000 cm <sup>3</sup> /min ± 10%   |
| <b>Electrical Specifications</b>    |   |
| Power Requirements:                 | 100V-120V, 220V-240V, 50/60 Hz  |
| Analog Output Ranges:               | 10V, 5V, 1V, 0.1V (selectable)  |
| Recorder Offset:                    | ±10%  |
| <b>Communication Specifications</b> |   |
| Included I/O:                       | 1 x Ethernet: 10/100Base-T<br>2 x RS232 (300-115,200 baud)<br>2 x USB device ports<br>8 x opto-isolated digital outputs<br>6 x opto-isolated digital inputs<br>4 x analog outputs |
| Optional I/O:                       | 1 x USB com port 1 x RS485<br>8 x analog inputs (0-10V, 12-bit)<br>4 x digital alarm outputs<br>Multidrop RS232 3 x 4-20mA current outputs  |
| <b>Physical Specifications</b>      |   |
| Operating Temperature Range:        | 20 -30°C  |
| Dimensions (HxWxD):                 | Analyzer: 7" x 17" x 23.5" (178 x 432 x 597 mm)   |
| Weight:                             | Analyzer: 40 lbs (18 kg)<br>External pump: 21 lbs (9.5 kg)  |

**Certifications :** US EPA: EQNA-0512-200

The values expressed above are in accordance with EPA definitions.

All error specifications are based on constant conditions.

Specifications subject to change without notice.

Printed documents are uncontrolled. SAL000069A (DCN 6015) T200UP/02.28.11



### How To Order:

**Model T200UP includes:**

- Two year warranty
- External pump
- Independent ranges and auto ranging
- 47mm diameter particulate filter
- 8 isolated digital outputs
- 6 isolated digital inputs
- RS-232 ports
- Ethernet port
- USB ports for peripheral devices
- APIcom™ remote control software
- Select AC input voltage
  - 100V -120V • 50Hz
  - 220V -240V • 60Hz
- Select DC output voltage
  - 10V • 5 V
  - 1V • 0.1V

**Calibration Options:**

- Ambient zero and span

**Mounting Options:**

- Rack mount brackets with chassis slides
- Rack mount brackets only
- Handle

**I/O Options:**

- 4-20mA outputs (up to three channels)
- USB com port
- 8 Analog Inputs
- Multi-drop RS232
- RS485

**Other Options:**

- Expendables kit

For more information or a no-obligation quote, contact:  
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