TELEDYNE
ADVANCED POLLUTION INSTRUMENTATION
A Teledyne Technologies Company

T SERIES

Model T200M Mid-Range Chemiluminescence $NO/NO_2/NO_x$ Analyzer

The Model T200M combines the proven chemiluminescence principle with a number of innovative features to provide reliable and repeatable NO, NO_2, and NO_x measurements for extractive type CEM systems. The option of either a molybdenum converter or a high-efficiency stainless steel thermal NO_2 converter allows the T200M to be used in a variety of extractive CEM systems, from gas turbines to coal-fired boilers.

The T200M may be fitted with an optional, internal paramagnetic O_2 sensor or an infrared absorption CO_2 sensor, reducing integration and operating costs significantly.

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.

- **Ranges: 0-1 ppm to 0-200 ppm, user selectable**
- **Independent ranges and auto ranging**
- **Optional internal O_2 or CO_2 sensor**
- **Large, vivid, and durable color graphics display with touch screen interface**
- **Ethernet, RS-232, and (optional) USB com ports**
- **Front panel USB connections for peripheral devices and firmware upgrades**
- **8 analog inputs (optional)**
- **Adaptive signal filtering optimizes response time**
- **Temperature & pressure compensation**
- **Comprehensive internal data logging with programmable averaging periods**
- **Ability to log virtually any operating parameter**
- **Two-year warranty**

Free Customer Support by telephone and email for the life of the instrument

Model T200M Mid-Range Chemiluminescence $NO/NO_2/NO_x$ Analyzer

Specifications

General

Ranges:	Min: 0-1 ppm Full scale Max: 0-200 ppm Full scale (selectable, independent NO, NO_2, NO_x ranges and auto ranging supported)
Measurement Units:	ppm, mg/m^3 (selectable)
Zero Noise:	< 20 ppb (RMS)
Span Noise:	< 0.2% of reading (RMS) above 20 ppm
Lower Detectable Limit:	40 ppb
Zero Drift:	< 20 ppb/24 hours
Span Drift:	< 0.5% of reading/24 hours
Lag Time:	20 seconds
Rise and Fall Time:	< 60 seconds to 95% (in switching mode)
Linearity:	1% of full scale
Precision:	0.5% of reading above 5 ppm
Sample Flow Rate:	250 cm^3/min ±10%

Electrical Specifications

Power Requirements:	100V-120V, 220V-240V, 50/60 Hz
Analog Output Ranges:	10V, 5V, 1V, 0.1V, (selectable)
Recorder Offset:	±10%

Communication Specifications

Included I/O:	1 x Ethernet: 10/100Base-T 2 x RS232 (300-115,200 baud) 2 x USB device ports 8 x opto-isolated digital outputs 6 x opto-isolated digital inputs 4 x analog outputs
Optional I/O:	1 x USB com port 1 x RS485 8 x analog inputs (0-10V, 12-bit) 4 x digital alarm outputs Multidrop RS232 3 x 4-20mA current outputs

Physical Specifications

Operating Temperature Range:	5 - 40°C
Dimensions (HxWxD):	7" x 17" x 23.5" (178 x 432 x 597 mm)
Weight:	Analyzer: 40 lbs (18 kg) External pump: 15 lbs (7 kg)

How to Order

Model T200M includes:

- ☐ Two year warranty
- ☐ External pump or internal pump (optional)
- ☐ 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 ☐ 5V
  - ☐ 1V ☐ 0.1V

Calibration Options:

- ☐ Ambient zero and ambient span
- ☐ Ambient zero and pressurized span
- ☐ Zero scrubber and 2 pressurized spans
- ☐ Zero air scrubber for Z/S valves

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:

- ☐ Paramagnetic O_2 Sensor
- ☐ CO_2 Sensor
- ☐ Internal ss converter
- ☐ Model 501 external converter (ss only)
- ☐ Model 501 external converter with stainless steel and moly converter
- ☐ Concentration alarm relays
- ☐ Expendables kit

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. SAL000048A (DCN 5815) T200M/11.18.10

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CERTIFIED QUALITY MANAGEMENT SYSTEM ISO 9001:2008 DNV