TELEDYNE
ADVANCED POLLUTION INSTRUMENTATION
A Teledyne Technologies Company

T SERIES

Model T320 Gas Filter Correlation N_2O Analyzer

The Model T320 N_2O analyzer measures Nitrous Oxide by comparing infrared energy absorbed by a sample to that absorbed by a reference gas according to the Beer-Lambert law. Using a Gas Filter Correlation Wheel, a high-energy IR light source is alternately passed through a N_2O filled chamber and a chamber with no N_2O present. The light path then travels through the sample cell, which has a folded path of 2.56 meters.

The energy loss through the sample cell is compared with the reference signal provided by the filter wheel to produce a signal proportional to concentration, with little effect from interfering gases within the sample. This design produces excellent zero and span stability and high signal to noise ratio, allowing excellent performance over a wide concentration range.

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 0-1,000 ppm, user selectable**
- **Dual ranges and auto ranging**
- **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**
- **Five-year warranty on GFC wheel**

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

Model T320 Gas Filter Correlation N_2O Analyzer

Specifications

General

Ranges:	Min: 0-1 ppm Full scale Max: 0-1,000 ppm Full scale (selectable, dual ranges and auto ranging supported)
Measurement Units:	ppb, ppm, µg/m^3, mg/m^3 (selectable)
Zero Noise:	< 0.02 ppm (RMS)
Span Noise:	< 0.5% of reading (RMS)
Lower Detectable Limit:	< 0.04 ppm
Zero Drift:	< 0.1 ppm/24 hours
Span Drift:	< 0.5% of reading/24 hours
Lag Time:	< 10 seconds
Rise and Fall Time:	< 60 seconds to 95%
Linearity:	1% of full scale
Precision:	0.5% of reading
Sample Flow Rate:	800 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:	50 lbs (22.7 kg)

How to Order

Model T320 includes:

- ☐ Two year warranty
- ☐ Internal pump or external pump (optional)
- ☐ Dual 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

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:

- ☐ 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. SAL000056A (DCN 5815) T320/11.05.10

TELEDYNE
ADVANCED POLLUTION INSTRUMENTATION
A Teledyne Technologies Company

9480 Carroll Park Drive ■ San Diego, CA 92121-5201
Ph. 858-657-9800 Fax 858-657-9816
Email api-sales@teledyne.com

For more information about the Teledyne API family of monitoring instrumentation products, call us or visit our website at

www.teledyne-api.com

CERTIFIED QUALITY MANAGEMENT SYSTEM ISO 9001:2008 DNV