



## Model T400 UV Absorption O<sub>3</sub> Analyzer

The Model T400 UV Absorption analyzer uses a system based on the Beer-Lambert law for measuring low ranges of ozone in ambient air.

A 254 nm UV light signal is passed through the sample cell where it is absorbed in proportion to the amount of ozone present. Periodically, a switching valve alternates measurement between the sample stream and a sample that has been scrubbed of ozone. The result is a true, stable ozone measurement.

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: 0-100 ppb to 0-10 ppm, user selectable**
- ▶ **Single pass ultraviolet absorption**
- ▶ **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**
- ▶ **Internal programmable zero, span and precision points (optional)**
- ▶ **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 T400 UV Absorption O<sub>3</sub> Analyzer

## Specifications

### General

Ranges:	Min: 0-100 ppb Full scale Max: 0-10 ppm Full scale (selectable, dual ranges and auto ranging supported)
Measurement Units:	ppb, ppm, µg/m <sup>3</sup> , mg/m <sup>3</sup> (selectable)
Zero Noise:	< 0.3 ppb (RMS)
Span Noise:	< 0.5% of reading (RMS) above 100 ppb
Lower Detectable Limit:	< 0.6 ppb
Zero Drift:	< 1.0 ppb/24 hours
Span Drift:	< 1% of reading/24 hours
Lag Time:	< 10 seconds
Rise and Fall Time:	< 20 seconds to 95%
Linearity:	1% of full scale
Precision:	<0.5% of reading above 100 ppb
Sample Flow Rate:	800 cm <sup>3</sup> /min ±10%

### IZS Specifications

Maximum Concentration:	1.0 ppm
Minimum Concentration:	0.050 ppm
Resolution:	0.5 ppb
Repeatability (7 days):	1% of reading
Initial accuracy:	± 5% of target

### 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 (with EPA Equivalency)
Dimensions (HxWxD):	7" x 17" x 23.5" (178 x 432 x 597 mm)
Weight:	28 lbs (12.7 kg) 30.6 lbs (13.8 kg) with IZS

### Certifications

US EPA:	EQOA-0992-087
MCERTS:	Sira MC 050070/04

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. Specifications subject to change without notice. Printed documents are uncontrolled. SAL000061B (DCN 5880) T400/10.13.10

## How to Order

### Model T400 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
- Zero Scrubber and no span (IZ; CY5)
- Zero scrubber and internal span source (IZS)
- Dessicant dryer for IZS

### 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:

- Metal fiber scrubber to replace standard scrubber
- Photometer certifications
- Concentration alarm relays
- Expendables kit



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