

# Thermo Scientific Model 46i Nitrous Oxide Analyzer

Utilizes gas filter correlation technology to measure ambient levels of nitrous oxide concentrations

The Thermo Scientific™ Model 46i Nitrous Oxide Analyzer utilizes gas filter correlation technology to measure ambient levels of Nitrous Oxide (N<sub>2</sub>O) concentrations.

- Gas filter correlation technology
- Linearity through all ranges
- Dual and auto range modes
- Automatic pressure and temperature correction
- Long term zero and span stability



The Thermo Scientific Model 46i analyzer helps users to comply with global greenhouse gas regulations. Nitrous Oxide has been identified as a primary greenhouse gas with a greater potential for global warming effects than Carbon Dioxide (CO<sub>2</sub>).

The Model 46i analyzer uses an exact calibration curve to accurately linearize the instrument output over any range up to a concentration of 50 ppm, and is available in both dual and auto range modes.

In addition, the Model 46i analyzer features automatic pressure and temperature correction that provides an increased resistance to shock and vibration while delivering enhanced specificity and sensitivity.

This state-of-the-art gas analyzer offers features such as an Ethernet port as well as flash memory for increased data storage.

Ethernet connectivity provides efficient remote access, allowing the user to download measurement information directly from the instrument without having to be on-site.

Easily programmable short-cut keys allow you to jump directly to frequently accessed functions, menus or screens. The larger interface screen can display up to five lines of measurement information while the primary screen remains visible.



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Preset Ranges	0-0.2, 0 0.5, 1, 2, 5, 10, 20, and 50 ppm 0-0.5, 0 -1, 2, 10, 20, 50, and 100 mg/m <sup>3</sup>
Custom Ranges	-0.2 to 50 ppm, 0 - 0.5 to 100mg/ m <sup>3</sup>
Zero Noise	0.01 ppm RMS (30 second averaging time)
Minimum Detectable Limit	0.02 ppm (30 second averaging time)
Zero Drift (24 hour)	< 0.05 ppm
Span Drift (24 hour)	± 1% full scale
Response Time	60 seconds (0-90% at 30 second averaging time)
Linearity	± 2% full scale
Sample Flow Rate	0.5-2.0 liters/ min.
Rejection Ratio	Negligible interference from H <sub>2</sub> O, CO <sub>2</sub> , CO
Temperature Range	Performance specifications based on operation within 20°-30°C range (per U.S. EPA guidelines). Instrument may be safely operated over the range of 0°-45°C.
Power Requirements	100 VAC, 50/60 Hz, 115 VAC, 50/60 Hz, 220-240 VAC, 50/60 Hz, 275 watts
Dimensions	16.75"(W) x 8.62"(H) x 23"(D)
Weight	49 lbs. (22.2 kg)
Outputs	Selectable voltage, RS232/RS485, TCP/IP, 10 status relays and power fail indication (standard) 0-20 or 4-20 mA isolated current output (optional)
Inputs	16 digital inputs (standard), 8 0-10 Vdc analog inputs (optional)

### Ordering Information

#### Model 46i Nitrous Oxide Analyzer

Choose from the following configurations/options to customize your own Model 46i analyzer

#### 1. Voltage options:

A = 120 VAC 50/60 Hz (standard)  
B = 220 VAC 50/60 Hz  
D = 220 VAC 50/60 Hz (China)  
J = 100 VAC 50/60 Hz

#### 2. Application:

M= Ambient (standard)

#### 3. Internal zero / span and O<sub>2</sub>:

N = No zero / span valve (standard)  
Z = Internal zero / span valves

#### 5. Filter Wheel Purge:

S = Standard plumbing  
P= Filter wheel purge setup

#### 6. Optional I/O:

A = None (standard)  
C = I/O expansion board  
(4-20mA outputs - 6 channels,  
0-10v inputs - 8 channels)

#### 7. Mounting Hardware:

A = Bench mounting (standard)  
B = Ears & handles, EIA  
C = Ears & handles, Retrofit

**Your Order Code: 46i - \_ \_ \_ \_ \_**

To maintain optimal product performance, you need immediate access to experts worldwide, as well as priority status when your air quality equipment needs repair or replacement. We offer comprehensive, flexible support solutions for all phases of the product life cycle. Through predictable, fixed-cost pricing, our services help protect the return on investment and total cost of ownership of your Thermo Scientific products.

For more information, visit our website at [thermoscientific.com/ambient](http://thermoscientific.com/ambient)

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This product is manufactured in a plant whose quality management system is ISO 9001 certified.

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