

# Thermo Scientific Model 17i Ammonia Analyzer

Chemiluminescent gas analyzer

The Thermo Scientific™ Model 17i Ammonia Analyzer uses the light producing reaction of nitric oxide (NO) with ozone (O<sub>3</sub>) as its basic principle.

- Measurement of NH<sub>3</sub> as well as NO, NO<sub>2</sub>, NO<sub>x</sub> and N<sub>t</sub>
- Replaceable NO<sub>2</sub> and NH<sub>3</sub> converter cartridges
- Unparalleled sensitivity and selectivity
- Automatic and manual modes
- Selectable time constants



The Thermo Scientific Model 17i Ammonia Analyzer uses the light producing reaction of nitric oxide (NO) with ozone (O<sub>3</sub>) as its basic principle. The instrument has three modes of operation, NO, NO<sub>x</sub> and N<sub>t</sub>.

Mode 1: While operating in the NO mode, the sample is mixed with Ozone in the reaction chamber. This reaction produces a characteristic luminescence with intensity proportional to the concentration of NO.

Mode 2: In the NO<sub>x</sub> mode, the sample is passed through a molybdenum converter which reduces any NO<sub>2</sub> in the sample to NO. This is then transported to the reaction chamber where the sample is measured as NO<sub>x</sub> (NO + NO<sub>2</sub>).

Mode 3: In the third mode, the N<sub>t</sub> sample is passed through a stainless steel converter where both the NO<sub>2</sub> and the NH<sub>3</sub> are converted to NO. This is then measured as N<sub>t</sub> (NO + NO<sub>2</sub> + NH<sub>3</sub>).

The software subtracts NO from NO<sub>x</sub> and NO<sub>x</sub> from N<sub>t</sub> and provides outputs of NO<sub>2</sub> and NH<sub>3</sub> respectively. The Model 17i analyzer can output NH<sub>3</sub> along with NO, NO<sub>2</sub>, NO<sub>x</sub>, and N<sub>t</sub> to the display or electronic outputs.

This state-of-the-art iSeries gas analyzer also features:

- Ethernet port
- Flash memory for increased data storage
- Ethernet connectivity for remote access
- Off-site measurement downloads
- Easily programmable short-cut keys
- A large interface screen



## Thermo Scientific Model 17i Ammonia Analyzer

Preset Ranges	0-0.05, 0.1, 0.2, 0.5, 1, 2, 5, 10, 20 ppm 0-0.1, 0.2, 0.5, 1, 2, 5, 10, 20, 30 mg/m <sup>3</sup>
Extended ranges	0-0.2, 0.5, 1, 2, 5, 10, 20, 50, 100 ppm 0-0.5, 1, 2, 5, 10, 20, 50, 100, 150 mg/m <sup>3</sup>
Custom Ranges	0-0.05 to 100 ppm 0-0.1 to 150 mg/m <sup>3</sup>
Zero Noise	0.50 ppb RMS (120 second averaging time)
Lower Detectable Limit	1.0 ppb (120 second averaging time)
Zero Drift (24 hour)	< 1 ppb
Span Drift (24 hour)	+/-1% full scale
Response Time (0-90%)	120 seconds (10 second averaging time)
Precision	+/-0.4 ppb (500 ppb range)
Linearity	+/-1% full scale
Sample Flow Rate	0.6 liters/min.
Operating Temperature	59° - 95° F (15° - 35°C)
Power Requirements	100 vac, 115 vac, 220-240 vac +/-10% @ 50/60hz, 300W (analyzer) 600W (converter)
Size and Weight	16.75"(W) x 8.62"(H) x 23"(D), 60 lbs. (28 kg) Analyzer: 29 lbs. (14 kg) Converter
Outputs	Selectable Voltage, RS232/RS485, TCP/IP, 10 Status Relays, and Power Fail Indication (standard). 0-20 or 4-20 mA Isolated Current Outout (optional)
Inputs	16 Digital Inputs (standard), 8 0-10 Vdc Analog Inputs (optional)
Available Options	Teflon particulate filter, Ozone particulate filter, Rack mounts, Rear extender

### Ordering Information

#### Model 17i Ammonia Analyzer

Choose from the following configurations/options to customize your own Model 17i analyzer

#### 1. Voltage options:

A = 115 Vac 60 Hz (standard)  
B = 220 Vac 50 Hz  
C = 220 Vac 60 Hz  
E = 115 Vac 50 Hz  
J = 100 Vac 50/60 Hz

#### 2. Internal zero / span:

N = No zero / span assembly (standard)  
Z = Internal zero span assembly

#### 3. Ozone handling:

D = Drierite scrubber (standard)  
P = Permeation dryer

#### 4. Optional I/O:

A = No optional I/O (standard)  
C = I/O expansion board  
(4-20mA outputs - 6 channels, 0-10v inputs - 8 channels)

#### 5. Mounting hardware:

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

**Your Order Code: Model 17i - \_ \_ \_ \_ \_**

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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