

# Thermo Scientific Model 17i

## Ammonia 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.

### Features

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

### Introduction

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 Nt.

**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.



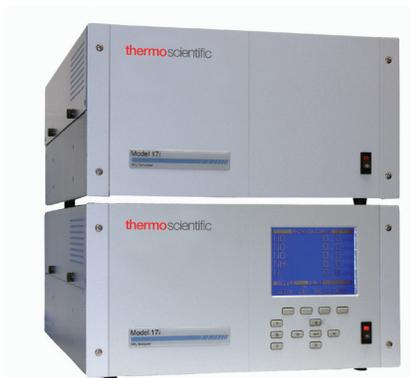
**Mode 2:** In the NO<sub>x</sub> mode, the sample is passed through a molybdenum converter which reduces any NO<sub>2</sub> in the sample to NO. This is then transported to the reaction chamber where the sample is measured as NO<sub>x</sub> (NO + NO<sub>2</sub>).

**Mode 3:** In the third mode, the Nt 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 Nt (NO + NO<sub>2</sub> + NH<sub>3</sub>).

The software subtracts NO from NO<sub>x</sub> and NO<sub>x</sub> from Nt 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 Nt 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

## Thermo Scientific Model 17i Ammonia Analyzer

Specifications	
Preset ranges	0-0.05, 0.1, 0.2, 0.5, 1, 2, 5, 10, and 20 ppm 0-0.1, 0.2, 0.5, 1, 2, 5, 10, 20, and 30 mg/m <sup>3</sup>
Extended ranges	0-0.2, 0.5, 1, 2, 5, 10, 20, 50, and 100 ppm 0-0.5, 1, 2, 5, 10, 20, 50, 100, and 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	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 Output (optional)
Inputs	16 Digital inputs (standard), 8 0-10Vdc analog inputs (optional)
Available Options	Tefl on 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 Ammonia 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 = 20 LPM Compressor

#### 3. Ozone handling

D = Drierite scrubber (standard)

P = Permeation dryer

#### 4. Optional I/O

A = None (standard)

C = I/O expansion board (4-20mA outputs—  
6 channels 0-10v inputs-8 channels)

#### 3. Ozone handling

D = Drierite scrubber (standard)

P = Permeation dryer

#### Your Order Code:

#### Model 17i Ammonia Analyzer

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