

# Thermo Scientific Model 43i

## Sulfur Dioxide Analyzer—pulsed fluorescence gas analyzer

The Thermo Scientific™ Model 43i Sulfur Dioxide (SO<sub>2</sub>) Analyzer utilizes pulsed fluorescence technology to measure the amount of sulfur dioxide in the air up to 100 ppm.

### Features

- Ethernet connectivity for efficient remote access
- Enhanced user interface with one button programming and large display screen
- Flash memory for increased data storage and user downloadable software
- Enhanced electronics design optimizes product commonality

### Introduction

The Thermo Scientific Model 43i Sulfur Dioxide (SO<sub>2</sub>) Analyzer utilizes pulsed fluorescence technology to measure the amount of sulfur dioxide in the air up to 100 ppm.

The pulsing of the U.V. source lamp serves to increase the optical intensity whereby a greater U.V. energy throughput and lower detectable SO<sub>2</sub> concentration are realized.



Reflective bandpass filters, as compared to commonly used transmission filters, are less subject to photochemical degradation and more selective in wavelength isolation.

This results in both increased detection specificity and long term stability. The 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 onsite.

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.



Thermo Scientific™ Model 43i  
Sulfur Dioxide Analyzer

## Thermo Scientific Model 43i Sulfur Dioxide Analyzer

Specifications	
Preset ranges	0-0.05, 0.1, 0.2, 0.5, 1, 2, 5, and 10 ppm, 0-0.2, 0.5, 1, 2, 5, 10, 20, and 25 mg/m <sup>3</sup>
Extended ranges	0-0.05, 1, 2, 5, 10, 20, 50 and 100 ppm, 0-2, 5, 10, 20, 50, 100, 200, and 250 mg/m <sup>3</sup>
Custom ranges	0-0.05 to 100 ppm, 0-0.2 to 250 mg/m <sup>3</sup>
Zero noise	1.0 ppb RMS (10 second averaging time), 0.5 ppb RMS (60 second averaging time), 0.25 ppb RMS (300 second averaging time)
Lower detectable limit	< 0.5 ppb
Zero drift (24 hour)	Less than 1 ppb
Span drift (24 hour)	+/-0.5% full scale
Response time	< 20 seconds (lag time) (60 second or less averaging time) < 100 seconds (rise time) < 100 seconds (fall time)
Precision	1% of reading or 1 ppb (whichever is greater)
Linearity	+/-1% full scale < 100ppm
Sample flow rate	0.5 liters/min. (standard) 1 liter/min. (optional)
Interferences	< lower detectable limit except for the following: (EPA Levels) NO < 3 ppb, M-Xylene < 1 ppb, H <sub>2</sub> O < 3% of reading
Operating temperature	Performance specifications based on operation within 68°-86°F (20°C-30°C) range (per U.S. EPA guidelines). Instrument may be safely operated over the range of 32°-113°F (0°-45°C).
Power requirements	100 VAC, 115 VAC, 220-240 VAC +/-10% @ 165W
Size and weight	16.75" (W) x 8.62" (H) x 23" (D), 48 lbs. (21.8 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 0-10Vdc analog inputs (optional)
Approvals and certifications	US EPA Equivalent Method: EQSA-0486-060 MCERTS Certified: Sira MC070094/00 EN14212: TÜV 936/21203248/D Report

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.

**USA**  
27 Forge Parkway  
Franklin, MA 02038  
Ph: (866) 282-0430  
Fax: (508) 520-2800  
orders.aqi@thermofisher.com

**India**  
C/327, TTC Industrial Area  
MIDC Pawane  
New Mumbai 400 705, India  
Ph: +91 22 4157 8800  
india@thermofisher.com

**China**  
8/F Bldg C of Global Trade Ctr,  
No.36, North 3rd Ring Road,  
Dong Cheng District  
Beijing, China 100013  
Ph: +86 10 84193588  
info.eid.china@thermofisher.com

**Europe**  
Ion Path, Road Three,  
Winsford, Cheshire CW73GA UK  
Ph: +44 1606 548700  
Fax: +44 1606 548711  
sales.epm.uk@thermofisher.com

## Ordering information

### Model 43i Sulfur Dioxide Analyzer

Choose from the following configurations/options to customize your own Model 43i Analyzer

#### 1. Voltage options

A = 115 VAC 60 Hz

B = 220 VAC 50 Hz

J = 100 VAC 50/60 Hz

#### 2. Internal zero/span

N = No zero/span assembly (standard)

Z = Internal zero span assembly

P = Internal permeation span source  
w/zero/span assembly

L = Oxygen sensor with no zero/span

K = Oxygen sensor with zero/span

#### 3. Kicker type

S = Standard

H = Heated

#### 4. Optional I/O

A = None (standard)

C = 0-20, 4-20mA current output – 6 channels,  
0-10v analog input -8 channel

#### 5. Mounting hardware

A = Bench mounting and ears/handles, EIA

#### Your Order Code: Model 43i –

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