

Air quality monitoring

## Thermo Scientific Model 43i Sulfur Dioxide Analyzer

### Pulsed fluorescence gas analyzer

#### 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 UV source lamp serves to increase the optical intensity whereby a greater UV 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.



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Easily programmable shortcut 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.

#### 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

## 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 < 100 ppm
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 °F – 86 °F (20 °C – 30 °C) range (per U.S. EPA guidelines). Instrument may be safely operated over the range of 32 °F – 113 °F (0 °C – 45 °C).
Power requirements	100 VAC, 115 VAC, 220-240 VAC +/-10% @ 165 W
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 0–10 Vdc analog inputs (optional)
Approvals and certifications	US EPA Equivalent Method: EQSA-0486-060 MCERTS Certified: Sira MC070094/00 EN14212: TÜV 936/21203248/D Report
Country of origin	India

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Your order code: Model 43i






## Ordering information

### Model 43i Sulfur Dioxide Analyzer

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

#### Voltage options

A = 115 VAC 60 Hz (standard)

B = 220/240 VAC 50 Hz

D = 220 VAC 50/60 Hz with  
China power cord

J = 100 VAC 50/60 Hz

#### Internal zero/span

N = No zero/span assembly (standard)

Z = Internal zero/span assembly

P = Internal permeation oven with  
zero/span assembly

E = Internal permeation oven with external/  
span assembly

L = Oxygen sensor with no zero/span

K = Oxygen sensor with internal zero/span

#### Kicker type

S = Standard

H = Heated

#### Optional I/O

A = No optional I/O (standard)

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

#### Mounting hardware

A = Bench mounting and ears/handles, EIA

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