

Air quality monitoring

Thermo Scientific 43iQ

Sulfur Dioxide Analyzer—pulsed fluorescence

The Thermo Scientific™ 43iQ Sulfur Dioxide (SO₂) Analyzer utilizes pulsed fluorescence technology to measure the amount of sulfur dioxide in the air.



43iQ Sulfur Dioxide (SO₂) Analyzer

Experience the benefits

- Predictive diagnostics
- Proactive communication
- User-friendly touchscreen display
- Trusted reliability of a Thermo Scientific™ gas analyzer

Introduction

The 43iQ Sulfur Dioxide Analyzer delivers precise, reliable SO₂ measurements using advanced pulsed fluorescence technology. By pulsing the UV source lamp, the analyzer increases optical intensity and UV energy throughput, enabling lower detection limits and enhanced measurement sensitivity.

The use of reflective bandpass filters - designed to resist photochemical degradation and provide superior wavelength selectivity - further improves detection specificity and long-term stability, ensuring consistent performance in demanding air monitoring applications.

Non-stop intelligence

The Thermo Scientific™ iQ Series Gas Analyzer models provide a smart environmental monitoring solution designed for reliability, easy operation and proactive maintenance. Get more control over your instrument's performance, costs, workflow and data availability.

Thermo Scientific 43iQ Sulfur Dioxide Analyzer

Specifications	
Range	0-10 ppm, 0-25 mg/m ³
Extended ranges	0-100 ppm, 0-250 mg/m ³
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)
Detection limit	2 ppb (10 second averaging time) 1 ppb (60 second averaging time) 0.25 ppb (300 second averaging time)
Zero drift	<0.5 ppb (24 hour)
Span drift	±0.5% full scale (24 hour)
Response time	60 seconds (10 second averaging time) 110 seconds (60 second averaging time) 320 seconds (300 second averaging time)
Precision	1% of reading or 1 ppb (whichever is greater)
Linearity	±1% full scale
Flow rate	0.5 lpm (standard)
Interferences (EPA levels)	Less than lower detectable limit except for the following: NO < 3 ppb, M-Xylene < 1ppb, H ₂ O < 3% of reading
Operating temperature	0°-45°C
Power requirements	100-240 VAC 50/60Hz, 275 Watts
Size and weight	24 in (D) x 16.75 in (W) x 8.72 in (H), 37.1 lbs 609 mm (D) 425.45 mm (W) x 221.48 mm (H), 16.8kg
Analog I/O	4 isolated voltage inputs 0-10 V 6 isolated analog voltages outputs, with 4 selectable ranges 6 isolated analog current outputs, with 2 selectable ranges
Digital I/O	16 digital inputs (TTL) 8 solenoid driver outputs 10 digital reed relay contact outputs
Serial ports	1 RS-232/485 port 1 RS-485 external accessory port
Other ports	3 Full speed USB ports (one in front, two in rear) 1 Gigabit ethernet port
Communication protocols	MODBUS, streaming
Approvals and certifications	CE, TUV-SUD safety, UL STD 61010-1, CSA STD C22.2 NO. 61010-1, US EPA: EQOA-0880-047, UKCA

Maintain your investment and get the most out of your Thermo Scientific™ products. Our comprehensive, flexible support solutions provide immediate access to experts worldwide and priority status when your air quality equipment needs repair or replacement.

Your order code: 43iQ –



Ordering information

43iQ Sulfur Dioxide Analyzer

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

1. Power cord

A = 100-120 VAC 50/60 Hz (NA)

B = 220 VAC 50/60 Hz (EU)

C = 220 VAC 50/60 Hz (CHN)

2. Communications

N = No I/O

A = Serial RS232/RS485

B = Analog and digital

C = Serial, analog and digital

3. Case configuration

N = No zero/span valves

A = Internal zero/span valves

B = Internal zero/span valves, internal permeation oven

C = No zero/span valves, high flow

D = Internal zero/span valves, high flow

E = Internal zero/span valves, internal permeation oven, high flow

Learn more at thermofisher.com/43iQ and thermofisher.com/iqseries

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