

## Model 43i SO<sub>2</sub> Analyzer

Pulsed fluorescence gas analyzer with enhanced communication capabilities for ambient air and source emissions monitoring



### Key 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
- ◆ Improved layout for easier accessibility to components

### A change is in the air

The industry's new best-of-breed. Our customers told us exactly what they're looking for in a gas monitoring solution: reliability, simplicity, ease of use. The new *iSeries* platform delivers on all counts - and then goes a step farther. A core product in Thermo's new *iSeries* product line is the Model 43i SO<sub>2</sub> analyzer.

Using pulsed fluorescence technology, the Model 43i measures the amount of sulfur dioxide in the air up to 10ppm. 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.

This 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 on-site.

You can easily program soft-keys to 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 primary screen remains visible.

## Product Specifications

|                                   |  |
|-----------------------------------|--|
| <b>Preset Ranges</b>              | 0-0.05, 0.1, 0.2, 0.5, 1, 2, 5, and 10 ppm<br>0-0.2, 0.5, 1, 2, 5, 10, 20, and 25 mg/m <sup>3</sup>  |
| <b>Extended Ranges</b>            | 0-0.05, 1, 2, 5, 10, 20, 50 and 100 ppm<br>0-2, 5, 10, 20, 50, 100, 200, and 250 mg/m <sup>3</sup>   |
| <b>Custom Ranges</b>              | 0-0.05 to 10 ppm<br>0-0.2 to 250 mg/m <sup>3</sup>   |
| <b>Zero Noise</b>                 | 1.0 ppb RMS (10 second averaging time), 0.5 ppb RMS (60 second averaging time),<br>0.25 ppb RMS (300 second averaging time)                            |
| <b>Lower Detectable Limit</b>     | 2.0 ppb (10 second averaging time), 1.0 ppb (60 second averaging time),<br>0.5 ppb (300 second averaging time)   |
| <b>Zero Drift (24 hour)</b>       | Less than 1 ppb  |
| <b>Span Drift (24 hour)</b>       | +/-1%  |
| <b>Response Time</b>              | 80 seconds (10 second average time)<br>110 seconds (60 second average time)<br>320 seconds (300 second average time)                                   |
| <b>Precision</b>                  | 1% of reading or 1 ppb (whichever is greater)  |
| <b>Linearity</b>                  | +/-1% full scale $\leq$ 100ppm   |
| <b>Sample Flow Rate</b>           | 0.5 liters/min. (standard)<br>1 liter/min. (optional)  |
| <b>Interferences (EPA levels)</b> | < lower detectable limit except for the following:<br>NO < 3 ppb, M-Xylene < 2 ppb, H <sub>2</sub> O < 2% of reading                                   |
| <b>Operating Temperature</b>      | 20°C - 30°C  |
| <b>Power Requirements</b>         | 100 vac, 115 vac, 220-240 vac +/-10% @ 165W  |
| <b>Size and Weight</b>            | 16.75"(W) x 8.62"(H) x 23"(D), 48 lbs. (21.8 kg)   |
| <b>Outputs</b>                    | Selectable Voltage, RS232/RS485, TCP/IP, 10 Status Relays, and Power Fail Indication (standard).<br>0-20 or 4-20 mA Isolated Current Outout (optional) |
| <b>Inputs</b>                     | 16 Digital Inputs (standard), 8 0-10vdc Analog Inputs (optional)   |

## Ordering Information

### Model 43i SO<sub>2</sub> Analyzer

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

#### Voltage options:

A = 120 Vac 50/60 Hz  
B = 220 Vac 50/60 Hz  
J = 100 Vac 50/60 Hz

#### Internal zero /span:

N = No zero / span assembly  
Z = Internal zero / span assembly  
P = Internal permeation span source with zero/span assembly

#### Kicker type:

S = Standard  
H = Heated

#### Optional I/O:

A = No optional I/O (standard)  
C = 0-20, 4-20mA current output - 6 channels, 0-10v analog input - 8 channels

#### Mounting hardware:

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

**Your Order Code: 43i - \_ \_ \_ \_ \_**

#### Other options:

- Teflon particulate filter
- Rack mounts
- Rear extender

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