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EC9850H

Sulfur Dioxide Analyser

The EC9850H Sulfur Dioxide (SO₂) analyser combines microprocessor control with fluorescence detection to measure sulfur dioxide.

SO₂ concentration is automatically corrected for gas temperature/pressure fluctuations and can be displayed in units of ppm or mg/m³.

SO₂ concentration is determined when UV radiation emitted by excited molecules is detected by a reference detector and the subsequent fluorescence radiation is measured by a Photomultiplier tube (PMT). The reduced atmosphere reaction cell and optional factory fitted 10:1 sample dilution system enables the analyser to measure high concentrations of SO₂ with greatly reduced interference from water vapor or quenching.



Features

- The analyser uses a custom designed zinc lamp UV source. The single spectral line produced at 214nm allows the analyser to operate free from water vapor interference. A 360nm optical filter also reduces NO interference.
- Auto ranging from 50ppm (100mg/m³) to 400ppm (800mg/m³) with LDL of 1ppm (2.0 mg/m³)
- Optional 10:1 dilution range from 50ppm (100mg/m³) to 4000ppm (8000mg/m³)
- On board software controls all instrument functions including diagnostics, signal output, zero and span calibrations and SO₂ concentration calculations. Operator input is limited to routine maintenance and periodic calibration .
- Zero drift is all but eliminated through the use of an in-built zero air scrubber .
- Inbuilt data logger uses Flash ROM storing up to 175 days of 5 minute data. averages
- Stored data can be retrieved via RS232, USB interface or the optional Ethernet connection and uploaded to a TCP/IP network.
- Ethernet option facilitates data download from an analyser connected to the internet via a standard web interface. This feature also supports remote access to instrument parameters and the status screen.



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Specifications

Ranges Display:	Auto-ranging 0-400ppm full scale Auto-ranging 0-4000ppm (with 10 dilution)
Units & Resolution	Selectable
Analogue Out:	0 - full scale from 0 - 50 ppb to 0 - 400ppm with menu selectable 0%, 5%, 10% offset. Auto-ranging between two user specified full-scale values
Noise:	0.1% of reading (1)
Lower Detectable Limit:	1ppm (1)
Linearity:	< 1% of full scale
Precision:	0.5 % of reading
Zero Drift:	24 hours less than 1ppm
Span Drift:	24 hours less than 0.5% of reading
Temperature/Pressure Compensation:	Temperature/Pressure compensation with selectable reference temperature of 0°C, 20°C, 25°C at 101.3 kPa.
Rise/Fall Time:	Less than 100 seconds (0.650 slpm flow for 95% of final reading (1))
Sample Flow Rate:	1.0 slpm (nominal flow)
Temperature Range:	5°- 40 °C
Analogue Outputs:	Jumper selectable voltage outputs for 100mV, 1V, 5V, 10V with menu selectable zero offset of 0%, 5%, or 10% or menu selectable current output 0-20 mA, 2-20 mA, 4-20 mA
Digital I/O DB50:	Multidrop RS232 port shared between analysers for data, status and control. DB50 with discrete status, user controls and analogue output and USB port.
Communication Port:	Rear panel multi-drop RS232 port shared between analysers for data, status and control. Plus USB interface and optional Ethernet connection to a TCP/IP network via an RJ45 connector.
Data Logging:	Supports internal data logging capability with storage up to 175 days of 5 minute data stored in flash ROM.
Data Storage selection:	Instantaneous data selectable period from: 1,3,5,10,30, or 60 minute intervals Average data selectable period from: 1,3,5,10,15,30 minutes, 1,4,8,12, or 24 hours
Power:	99-132 VAC, 198-264 VAC 47-63 HZ, 100 Watts.
Dimensions/weight	43.2 x 17.8 x 64.8 cm (w x h x d), 21.3 kg (47 lbs)

(1) With Kalman Adaptive Filter active



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