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WORLD CLASS environmental MONITORING

EC9850T
Trace Sulphur Dioxide Analyzer

The Ecotech Model EC9850T Trace Sulphur Dioxide (SO_2) analyzer incorporates UV fluorescence spectrometry with microprocessor control for accurate and reliable measurement of sub-ambient levels of SO_2.

The EC9850T can measure levels of SO_2 to a sensitivity of 200ppt in the range of 0-2000 ppb. SO_2 concentration is automatically corrected for gas temperature and pressure changes and can be displayed in units of ppb, ppm, $\mu g/m^3$ or mg/m^3.

Excitation (UV radiation) is measured by a reference detector and emission (fluorescence radiation) from the sample is measured by a photomultiplier tube (PMT).

Features

- EC9850T is U.S. EPA approved (Automated Equivalent Method EQSA-0193-092)
- Specially selected high output UV lamp operating at 214nm
- High performance SO_2 scrubber impregnated with Na_2CO_3 solution.
- Extremely low sensitivity to NO interferences.
- Scrubbed sample air is used for background zero to minimize discrepancies between air quality of the sample and background air.
- Auto-zero routine allows the analyzer to periodically check and correct for cell contamination.
- Kalman digital filter continuously provides the best compromise between response time and noise reduction.
- Internal data logging uses Flash ROM to store up to 175 days of 5 minute averaged data.

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Specifications

Ranges Display:	Auto ranging 0-2000 ppb.
Data Display:	Graphic LCD display, auto ranging 0-2000 ppb full scale, with unit selection mg/m^3, µg/m^3, ppm, ppb, ppt.
Resolution:	User selectable (0-5 decimal points displayed).
Analogue Out:	0 - full scale from 0 - 2000 ppb. Selectable offset of 0%, 5% or 10% offset.
Filter types:	No filter, Kalman, 10,30,60,90,300 second.
Noise (At zero):	100 ppt RMS with Kalman or 300 sec filter active.
Lower Detectable Limit:	200 ppt with Kalman or 300sec filter active.
Precision:	+/-2 % of reading.
Zero Drift:	Temperature dependence, 0.1% per °C changes. 24 hours; less than 200 ppt.
Span Drift:	Temperature dependence, 0.05% per °C changes. 24 hours less than 0.5% of reading. 30 days less than 1.0% of reading.
Temperature/Pressure Compensation	Temperature/Pressure compensation with selectable reference temperature of 0ºC, 20ºC, 25ºC at 1 01.3 kPa.
Sample Flow Rate:	500-750cc/min, 0.5-1.00 LPM optional. Optional external sample pump required.
Temperature Range:	Operating temperature 20 - 30°C may be operated 15°C – 35°C
Analogue Outputs:	Menu selectable current output 0-20 mA, 2-20 mA, 4-20 mA The 50 pin I/O PCA allows for jumper selectable voltage outputs of 100 mV, 1 V, 5 V, 10 V with menu selectable zero offset of 0, 5% or 10% or menu selectable current output 0-20 mA, 2-20 mA, 4-20mA.
Digital Outputs	USB port for enhanced data collection and remote diagnostics/configuration; plus multidrop RS232 port or optional ethernet capability.
Data Logging	Supports internal data logging capability with storage up to 175 days of 5 minute data stored in flash memory.
Data selection	instantaneous data: 1,3,5,10,30, or 60 minute intervals, average 1,3,5,10,15,30 minutes, 1,4,8,12, or 24 hours.
Power	99-132 VAC, 198-264 VAC 47-63 HZ.
Dimensions/weight	43.2 x 17.8 x 64.8 cm (w x h x d), 20.9 kg.
Options	Rack mount kit assembly (19”). External zero/span valve assembly (EZS).
External pump	115 v 60 Hz or 220V 50/60 Hz (specify) PCA 50 pin I/O 98000066-2Pca 50 pin I/O 98000066-2

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