

## EC9850A

### SULFUR DIOXIDE ANALYSER

The EC9850 Sulfur Dioxide Analyser combines microprocessor control with fluorescence detection to measure SO<sub>2</sub> in the ranges of 0-50 ppb and 0-20 ppm with a detection limit of 0.5 ppb.

Improved performance, sensitivity, noise and zero drift specifications are obtained through the use of a highly efficient reaction cell and electronics package.

### STANDARDS

- Complies with U.S. EPA Automated Equivalent Method EQSA-0193-092.
- Complies with Australian standard: AS 3580.41

### FEATURES

- Large Graphic LCD display provides continuous output of instrument status including gas concentration, real time zero/span calibration curves and sample flow and pressure graphs.
- The use of the zinc lamp reference source reduces SO<sub>2</sub> and water vapour interference to provide maximum sensitivity, long lamp lifetime and a lower Total Cost of Ownership (TCO).

- Menu selectable data trending graphically displays up to 100 data points.
- Auto zero routine periodically checks and corrects for background illumination, virtually eliminating zero drift.
- The micro processor facilitates total external remote control and provides up to 100 channels of instrument parameters.
- Inbuilt data logger utilises Flash ROM to store 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 status.
- Optional internal pump and internal 12VDC power supply enables the EC9850A to be operated from a battery or solar power source for remote or mobile applications.



## SPECIFICATIONS

### Ranges:

Auto-ranging for 0-50 ppb to 0-20 ppm.

### Data display:

Large Graphic LCD display, with unit selection,  $\mu\text{g}/\text{m}^3$ , ppm, ppb, ppt.

### Analogue out:

0 - full scale from 0 - 50 ppb to 0 - 20 ppm with menu selectable offset of 0%, 5% or 10%.  
Auto-ranging between two user specified full-scale values.

### Noise:

0.25 ppb with Kalman filter active.

### Lower detectable limit:

0.5 ppb with Kalman filter active.

### Linearity:

< 1% of full scale.

### Precision:

0.5 ppb or 0.5% of reading whichever is greater

### Zero drift:

24 hours; < 1 ppb  
30 days; < 1 ppb

### Span drift:

24 hours less than 0.5 %  
30 days less than 0.5 %

### 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 120 seconds for 95% of final reading with Kalman filter active.

**Sample flow rate:** 0.50 SLPM (Std).

### Sample pressure dependence:

5% change in pressure produces less than 1% difference in reading.

### Temperature range:

5°- 40 °C (U.S. EPA approval 15°C - 35°C).

### Analogue outputs:

Menu selectable current output 0-20 mA, 2-20 mA, 4-20 mA 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% .

### Digital I/O DB50:

Local user DB50 I/O interface with 32 digital open collector outputs and 3 digital inputs user controls. The digital outputs are 24 status output commands, 8 status alarm conditions and 2 analogue inputs 0-5 V.

## Communications

### 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), 25 kg.

## OPTIONS

- Rack mount kit assembly (19")
- External zero/span valve assembly (EVS)
- 12VDC Internal Power Supply
- Ethernet connection to a TCP/IP network via an RJ45 connector.

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