



# Serinus<sup>®</sup> 50

## Sulfur Dioxide Analyser

The Serinus<sup>®</sup> 50\* sulfur dioxide (SO<sub>2</sub>) analyser delivers precise and reliable performance at excellent value.

It uses proven pulsed UV fluorescent radiation technology to measure SO<sub>2</sub> in ambient air (LDL < 0.3 ppb, range 0 to 20 ppm).

\* Acoem Serinus 50 formerly known as Ecotech Serinus 50.

## Approvals

- US EPA approval (RFNA-0809-186)
- EN approval TÜV (0000040205-02)
- Australian Standard (AS 3580.5.1-2011)
- Russian approval (56263-14)
- French approval LSCQA
- Ukraine approval (12/3/B/24/295-17)
- Chinese Pattern Approval (JJF1361-2012)
- Korean approval NIER (AACMS-2017-04)

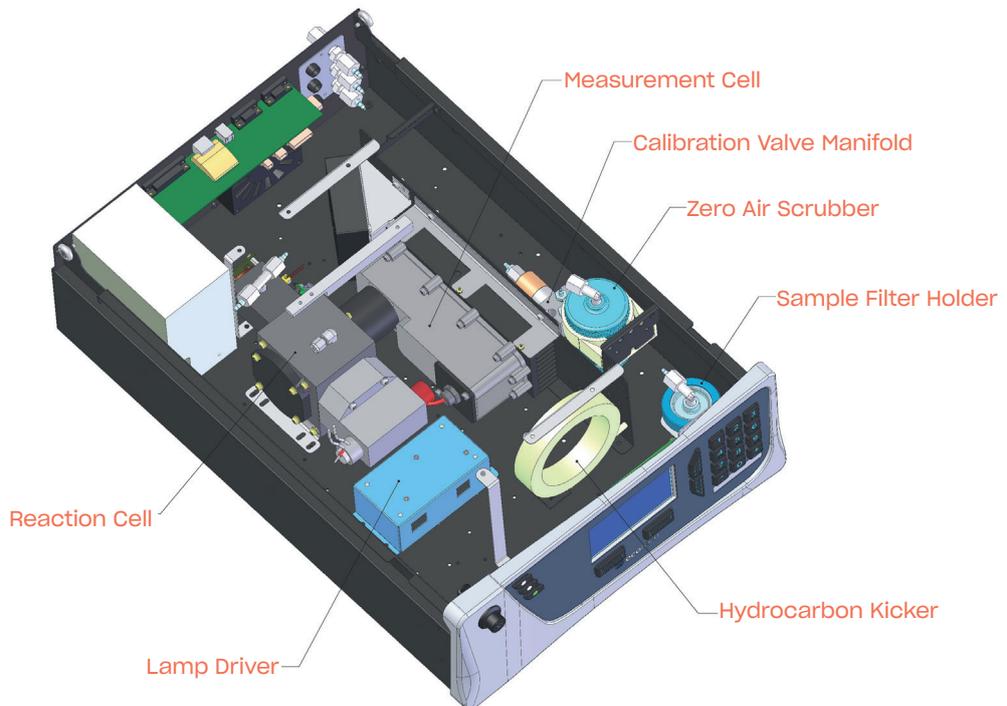
## Benefits

The Serinus® range of analysers have been designed using our experience & knowledge gained from operating large air quality monitoring networks for more than 45 years. The result, instruments that integrate seamlessly into continuous monitoring networks.

- Reliable performance complemented with a two year warranty
- Minimise time spent on site performing maintenance through superior remote instrument control, diagnostic viewing & calibration
- Comprehensive data logging & remote viewing of over 200 operational parameters
- Versatile interfacing through RS232, analog & digital I/O & optional TCP/IP & Bluetooth
- Easy setup through an intuitive menu system, advanced GUI & a large alphanumeric keypad with tactile keys
- Instant status indication via illuminated instrument status light buttons on the front panel
- Removable flash memory stores ~ 10 years of data, including up to 12 individual parameters & event logs. Operational parameters can also be transferred to memory for easy retrieval
- Latest firmware updates can easily be installed using the USB flash memory drive
- Programming, viewing, downloading & emailing of data is made even simpler using optional Bluetooth connectivity combined with the Serinus Remote Android App
- Built-in digital display measuring values & having function of measuring values transferred to graphical trend display
- Enhanced operator safety through the use of 12 VDC internal voltages
- Reduced cost of spare parts, accessories & consumable items through extensive use of standard components across the Serinus range
- Rack slide design makes accessing internal components & removing the analyser from a rack cabinet easy
- AQMS power usage can be reduced due to the instrument's low power demand & its ability to operate over a wide temperature range.

## Specifications

|                                |  |
|--------------------------------|--|
| <b>Range:</b>                  | 0 – 20 ppm (autoranging)   |
| <b>Concentration units:</b>    | mg/m <sup>3</sup> , µg/ m <sup>3</sup> , ng/m <sup>3</sup> , ppm, ppb or ppt |
| <b>Noise:</b>                  | < 0.15 ppb   |
| <b>Lower detectable limit:</b> | < 0.3 ppb 0.2 % of concentration whichever is greater                        |
| <b>Linearity:</b>              | < 1 % of full scale  |
| <b>Precision:</b>              | 0.5 ppb or 0.5 % of reading whichever is greater                             |
| <b>Zero drift:</b>             | 24 hours: < 0.5 ppb<br>7 days: < 0.5 ppb                                     |
| <b>Span drift:</b>             | 24 hours: < 0.5 % of reading or < 0.5 ppb whichever is greater               |
| <b>Response time:</b>          | 60 seconds to 95 %   |
| <b>STP reference:</b>          | 0 °C, 20 °C, 25 °C at 101.3 kPa  |
| <b>Sample flow rate:</b>       | 725 cc/min   |
| <b>Temperature range:</b>      | 0 – 40 °C  |
| <b>Power:</b>                  | 100 – 240 VAC, 50 – 60 Hz (autoranging)                                      |
| <b>Power consumption:</b>      | 255 VA (max at start-up)<br>180 VA (nominal)                                 |
| <b>Dimensions:</b>             | 429 x 175 x 638 mm   |
| <b>Rack spacing:</b>           | 3.5 RU   |
| <b>Weight:</b>                 | 18.1 kg  |



## Communication

- #1 RS232 port (supports all protocols\*)
- #2 RS232 port (supports all protocols\* & multidrop)
- USB port (Advanced protocol only)
- Bluetooth (Advanced protocol only)
- TCP/IP network port (optional, supports all protocols\*).

\* Available protocols: Modbus (RTU/TCP), Bayern Hessen, EC9800 or Advanced

## Communication analog & digital I/O port:

- 3 x analog outputs (current or voltage), 12 bit resolution user definable range (between two user specified points)  
Current range: 0 - 20 mA, 2 - 20 mA or 4 - 20 mA  
Voltage range: 0 - 5 V, 0 - 10 V (voltage offset of 0 V, 0.25 V or 0.5 V)
- 3 x analog inputs (scalable), 0 - 5 V, 16 bit resolution
- 8 x logic level digital control inputs
- 8 x open collector digital status outputs.

## Data logging

- 8 GB removable USB flash memory drive that stores the internal data logger, event log, automatic/manual configuration backup & automatic/manual parameter list save
- Internal data logger (can log up to 12 of 200+ parameters)
- Logger interval (1 second to 24 hours)
- Storage capacity ~ 10 years (set to 1 minute interval).

## Options & accessories

- TCP/IP Network Port
- Bluetooth
- Dual Sample (particulate) Filter
- High Pressure Span (for direct cylinder calibration)
- High Pressure Zero (for direct cylinder calibration)
- Test Lamp (for PMT diagnostics)
- Internal DC Pump (long life, low power, minimal maintenance)
- Metric Fitting Kit (to connect 6 mm tube to rear ports)
- 19" Rack Mount Kit
- External Pump (240 or 110 VAC)
- Annual Maintenance Kit
- Printed User Manual (a soft copy of the user manual is supplied on USB with each analyser).

