



# Serinus® 50T

Trace Sulfur Dioxide Analyser

The Acoem Serinus 50T\* Trace 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 100 ppt, range 0 - 2000 ppb).

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

## Approvals

- EN approval TÜV (0000040205)

Based on the Serinus 50 which has the following approvals:

- US EPA approval (ESQA-0809-188)
- 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

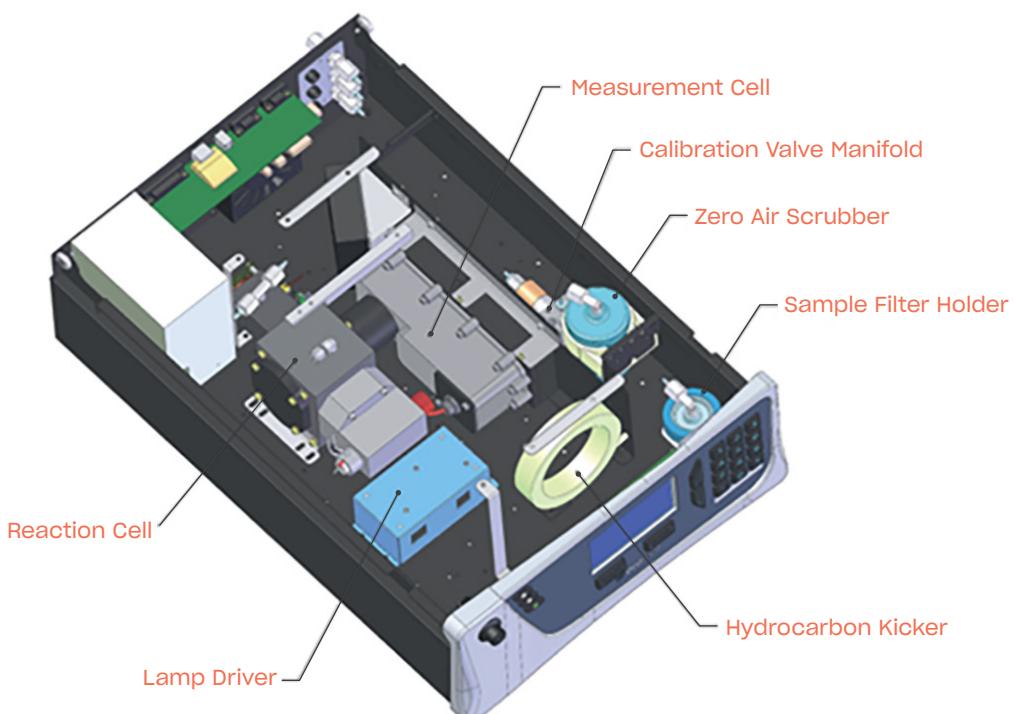
The Serinus range of analysers have been designed using our experience & knowledge gained from operating large air quality monitoring networks for more than 45 years. The result, instruments that integrate seamlessly into continuous monitoring networks.

- 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
- 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

Range:	0 – 2000 ppb (autoranging)
Concentration units:	mg/m <sup>3</sup> , $\mu$ g/m <sup>3</sup> , ng/m <sup>3</sup> , ppm, ppb or ppt
Noise:	< 50 ppt
Lower detectable limit:	< 100 ppt (with Kalman filter enabled)
Linearity:	$\pm 1\%$ of full scale
Precision:	50 ppt or 0.5 % of reading whichever is greater
Zero drift:	24 hours: < 200 ppt
Span drift:	24 hours: < 0.5 % of reading or 1 ppb whichever is greater
Response time:	60 seconds to 90 %
STP reference:	0 °C, 20 °C, 25 °C at 101.3 kPa
Sample flow rate:	750 cc/min
Temperature range:	0 – 40 °C
Power:	100 – 240 VAC, 50 – 60 Hz (autoranging)
Power consumption:	255 VA (max at start-up) 180 VA (nominal)
Dimensions:	429 x 175 x 638 mm
Rack spacing:	3.5 RU
Weight:	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

## Data logging

- 8 GB removable USB flash memory drive that stores the following:
- Internal data logger (can log up to 12 of 200+ parameters)
  - Event log
  - Automatic/Manual configuration backup
  - Automatic/Manual parameter list save
  - Logger interval (1 second to 24 hours)
  - Storage capacity ~10 years (set to 1 minute intervals).

## 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.

## 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).

