



# Serinus<sup>®</sup> 56

## Total Sulfur Analyser

The Serinus 56\* Total Sulfur analyser delivers precise and reliable performance at excellent value. It uses proven UV fluorescent radiation technology and a thermal converter to measure TS in ambient air (LDL < 0.3 ppb, range 0–10 ppm).

TS is measured by converting TS to SO<sub>2</sub> using the external HT01000 converter and then measuring the resultant SO<sub>2</sub> using the pulsed fluorescence technique.

\* Acoem Serinus 56 formerly known as Ecotech Serinus 56.

## Approvals

Based on the Serinus 50 which has the following 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 and knowledge gained from operating large air quality monitoring networks for more than 35 years. The result, instruments that integrate seamlessly into continuous monitoring networks.

- Guaranteed performance with a two year warranty
- Minimises time spent on site performing maintenance through superior remote instrument control, diagnostic viewing and calibration
- Enhanced operator safety through the use of 12VDC internal voltages
- Comprehensive data logging and remote viewing of over 200 operational parameters
- Versatile interfacing through RS232, USB, analogue and optional TCP/IP & Bluetooth
- Easier setup through an intuitive menu system with “Quick Menu”, advanced GUI and a large keypad with tactile keys
- Instant display of operational status using illuminated traffic lights on the front panel
- Removable flash memory stores 10 years of data, including up to 12 individual parameters and 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 and emailing of data is made even simpler using Bluetooth connectivity combined with the “Ecotech Serinus Remote” Android App
- Reduced cost of spare parts, accessories and consumable items through extensive use of standard components across the Serinus range
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- Rack slide design makes accessing internal components and removing the analyser from a rack cabinet easy
- AQM system power usage can be reduced due to the instrument’s low power demand and its ability to operate over a wide temperature range.

## Specifications

<b>Range:</b>	0–10 ppm (Autoranging)
<b>Concentration display:</b>	User selectable mg/m <sup>3</sup> , µg/m <sup>3</sup> , ppm, ppb, ppt
<b>Noise:</b>	< 0.15 ppb
<b>Lower detectable limit:</b>	< 0.3 ppb or 0.2 % of concentration whichever is greater
<b>Linearity:</b>	< 1 % of full scale
<b>Precision:</b>	0.5 ppb
<b>Zero drift:</b>	24 hours: < 0.5 ppb 7 days: < 0.5 ppb
<b>Span drift:</b>	7 days: < 0.5 % of reading
<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>	99 – 132 VAC, 198 – 264 VAC, 47 – 63 Hz
<b>Dimensions:</b>	429 x 175 x 638 mm
<b>Rack spacing:</b>	3.5 RU
<b>Weight:</b>	18 kg (analyser)

## Communication

- USB port (digital communication)
- Bluetooth (digital communication via Android App)
- TCP/IP Ethernet network connection (optional)
- RS232 Port 1: Digital communication
- RS232 Port 2: Multidrop port
- Protocols: Modbus RTU/TCP, Bavarian, EC9800, Advanced.

## Inputs / Outputs

- 25 pin I/O port
- Menu selectable current or voltage output  
0 – 20 mA, 4 – 20 mA or 0 – 5 VDC (opt. 0 – 10 VDC)
- Menu selectable offset of 0%, 5% or 10%
- Auto-ranging from 0 – 50 ppb to 0 – 20 ppm  
(between two user specified full scale values)
- 3 scalable analogue inputs, 0 – 5 V, 160  $\mu$ V resolution
- 8 logic level digital status inputs/8 open collector digital outputs

## Data logging

Removable USB flash memory drive that stores data in the following formats:

- Instantaneous data from: 1, 3, 5, 10, 30, or 60 minute intervals and 2, 5, 10, 30 seconds.
- Average data from: 1, 3, 5, 10, 15, 30 minutes, 1, 4, 8, 12, or 24 hours
- Data storage of 10 years of 12 parameters, 1 minute data on 8 Gb memory.

## Options & accessories

- HT01000 thermal catalytic converter
- External AC powered pump (capable of operating 3 analysers, excluding NO<sub>x</sub>)
- 12VDC power supply, Dual filter (particulate), Rack slide kit
- TCP/IP network port
- Bluetooth
- High pressure zero/span valves
- Printed manual–electronic manual supplied with analyser
- Internal long life, low power maintenance free pump (max 6 watts).

