



# Serinus<sup>®</sup> 40

## Oxides of Nitrogen Analyser

The Serinus<sup>®</sup> 40\* Oxides of Nitrogen (NO<sub>x</sub>) analyser delivers precise and reliable performance at excellent value.

It uses proven chemiluminescence technology to measure NO, NO<sub>2</sub> and NO<sub>x</sub> in ambient air (LDL < 0.4 ppb, range 0 to 20 ppm).

\* Acoem Serinus 40 formerly known as Ecotech Serinus 40.

## Approvals

- US EPA approval (RFNA-0809-186)
- EN approval TÜV (0000040204 -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-2017-01)

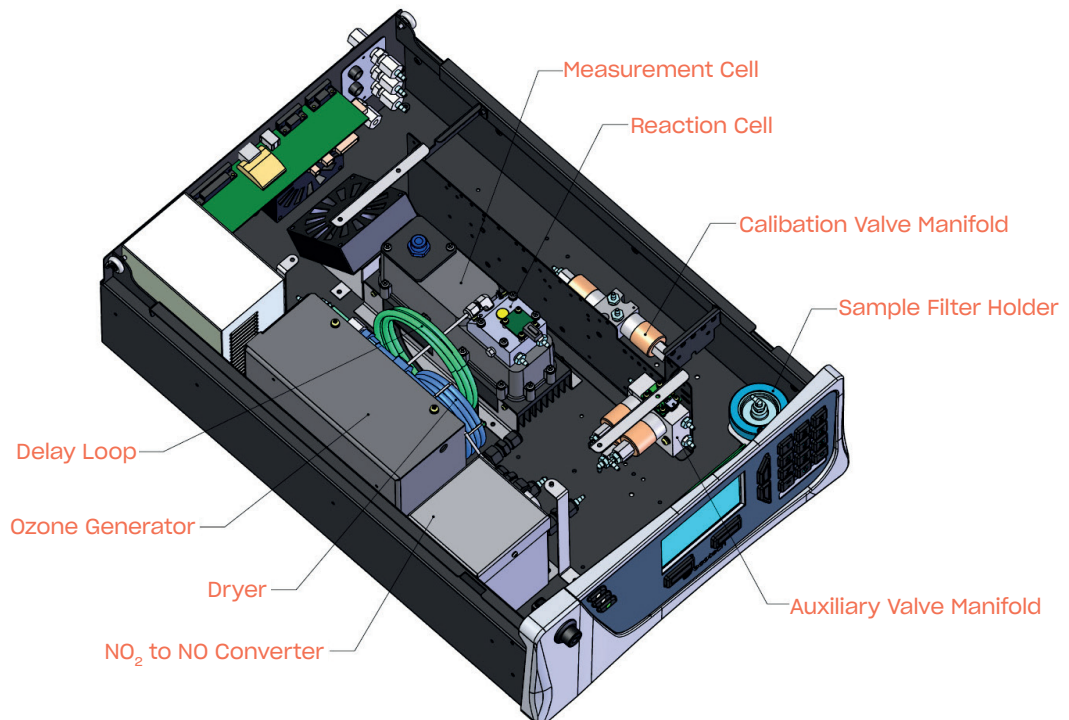
## Benefits

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>	< 0.2 ppb
<b>Lower detectable limit:</b>	< 0.4 ppb
<b>Linearity:</b>	± 1 % of full scale
<b>Precision:</b>	0.4 ppb or 0.5 % of reading, whichever is greater
<b>Zero drift:</b>	24 hours: < 0.5 ppb, 7 days: < 0.5 ppb
<b>Span drift:</b>	7 days: < 1 % of reading or 0.5 ppb whichever is greater
<b>Response time:</b>	15 seconds to 95 %
<b>STP reference:</b>	0 °C, 20 °C, 25 °C at 101.3 kPa
<b>Sample flow rate:</b>	600 cc/min (total for 2 channels)
<b>Temperature range:</b>	0 – 40 °C
<b>Power:</b>	100 – 240 VAC, 50 – 60 Hz (autoranging)
<b>Power consumption:</b>	265 VA (max at start-up) 190 VA (nominal)
<b>Dimensions:</b>	429 x 175 x 638 mm
<b>Rack Spacing:</b>	3.5 RU
<b>Weight:</b>	21.9 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

- Internal Sample Dryer
- 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)
- Metric Fitting Kit (to connect 6 mm tube to rear ports)
- 19" Rack Mount Kit
- External Pump (240 or 110 VAC)
- External Charcoal Scrubber
- Annual Maintenance Kit
- High Level Option
- Printed User Manual (a soft copy of the user manual is supplied on USB with each analyser).

