Serinus® 10

Ozone Analyser

The Serinus®10* Ozone (O$_3$) analyser delivers precise and reliable performanc e at excellent value.

It uses proven non- dispersive ultraviolet (UV) absorption technology to measure O$_3$ in ambient air (LDL< 0.5 ppb, range 0 to 20 ppm).

* Acoem Serinus 10 formerly known as Ecotech Serinus 10.

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Approvals

- US EPA approval (EQOA-0809-187)
- EN approval TÜV (936/21221977/C)
- Australian Standard (AS 3580.6.1-2011)
- Russian approval (56053-13)
- French approval LSCQA
- Ukraine approval (12/3/B/24/295-17)
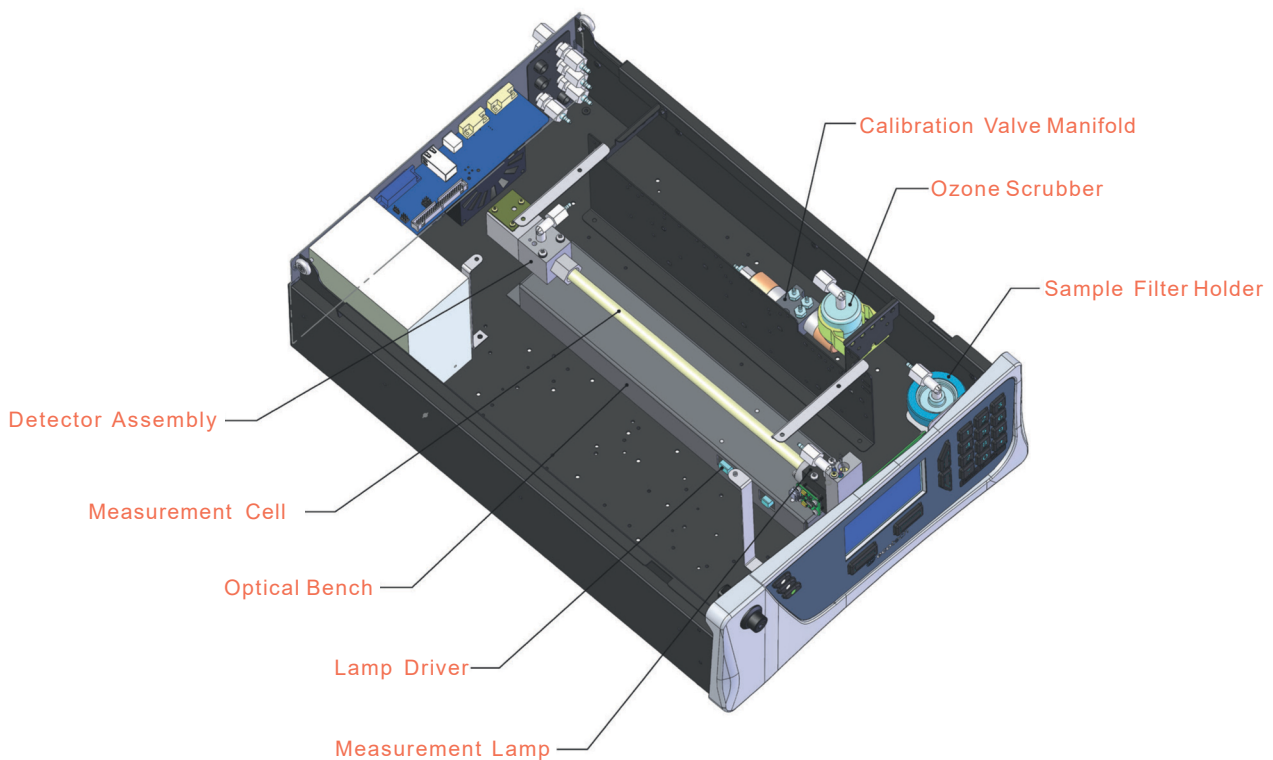- Korean approval NIER (AACMS-2017-03)

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

Range:	0 - 20 ppm (autoranging)
Concentration units:	mg/m^3, µg/m^3, ng/m^3, ppm, ppb or ppt
Noise:	< 0.25 ppb
Lower detectable limit:	< 0.5 ppb
Linearity:	< 1 % of full scale
Precision:	0.5 ppb or 0.2 % of reading whichever is greater
Zero drift:	24 hours: < 0.3 ppb
	7 days: < 0.3 ppb
Span drift:	7 days: < 0.5 % of reading or < 0.3 ppb whichever is greater
Response time:	30 seconds to 95 %
STP reference:	0 °C, 20 °C, 25 °C at 101.3 kPa
Sample flow rate:	500 cc/min
Temperature range:	0 - 40 °C
Power:	100 - 240 VAC, 50 - 60 Hz (autoranging)
Power consumption:	260 VA (max at start-up)
	150 VA (nominal)
Dimensions:	429 x 175 x 638 mm
Rack spacing:	3.5 RU
Weight:	17.2 kg

Calibration Valve Manifold

Ozone Scrubber

Sample Filter Holder

Detector Assembly

Measurement Cell

Optical Bench

Lamp Driver

Measurement Lamp

Communication

- #1 RS232 port (supports all protocols*)
- #2 RS232 port (supports all protocols* & multidrop)
- USB port (Advanced protocol only)
- Bluetooth (Optional, 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 Zero (for direct cylinder calibration)
- Internal Zero & Span (for instrument precision checks)
- 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)

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ISO 45001 Occupational Health and Safety Management CERTIFIED

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