



# Serinus<sup>®</sup> 44

**Ammonia Analyser**  
**NO, NO<sub>2</sub>, NO<sub>x</sub>, NH<sub>3</sub> Analyser**

The Acoem Serinus 44\* analyser delivers precise and reliable performance at excellent value.

It uses proven chemiluminescence technology and an external thermal catalytic converter to measure NO, NO<sub>2</sub>, NO<sub>x</sub> and NH<sub>3</sub> in ambient air.

\* Acoem Serinus 44 formerly known as Ecotech Serinus 44.

## Approvals

- US EPA approval (RFNA-0809-186)

Based on the Serinus 40 which has the following approvals:

- 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.

- Guaranteed performance 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
- Easier setup through an intuitive menu system with “Quick Menu”, advanced GUI & 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 & 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 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.

## Specifications

<b>Range:</b>	0 - 20 ppm (autoranging) (analog ranges 0 - 50 ppb to 0 - 20 ppm) (NH <sub>3</sub> range dictated by external converter; usually ~2 ppm)
<b>Concentration display:</b>	User selectable mg/m <sup>3</sup> , µg/m <sup>3</sup> , ppm, ppb or ppt
<b>Noise:</b>	< 0.2 ppb
<b>Lower detectable limit:</b>	< 0.4 ppb or 0.5 % of reading whichever is greater
<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: < 0.4 ppb 7 days: < 0.4 ppb
<b>Span drift:</b>	7 days: < 1 % of reading or 0.4 ppb whichever is greater
<b>STP reference:</b>	0 °C, 20 °C, 25 °C at 101.3 kPa
<b>Sample flow rate:</b>	900 cc/min (total for 3 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 (after warm-up)
<b>Dimensions:</b>	429 x 175 x 638 mm
<b>Rack spacing:</b>	3.5 RU
<b>Weight:</b>	21.85 kg

## 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
- Modbus RTU/TCP protocol, advanced
- 25 pin I/O port (analog outputs, analog inputs, digital status inputs, digital status outputs).

## 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 %
- Autoranging from 0 – 50 ppb to 0 – 20 ppm (between 2 user specified full scale values)
- 3 scalable analog inputs, 0 – 5 V, 160  $\mu$ V resolution
- 8 logic level inputs/8 open collector outputs.

## Data logging

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

- Instantaneous data from 1, 3, 5, 10, 30, or 60 minute intervals
- 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

- HTO-1000N NH<sub>3</sub> converter
- External AC powered pump
- TCP/IP network port
- Bluetooth
- Rack slide kit
- Dual filter (particulate)
- High pressure zero/span valves
- Printed manual – electronic manual supplied with analyser.

