Serinus® 57

Total Reduced Sulfur (TRS) Analyzer

The Acoem Serinus 57* Total Reduced Sulfur analyzer delivers precise and reliable performance at excellent value.

It uses proven UV fluorescent radiation technology and a thermal converter to measure TRS in ambient air (LDL < 0.3 ppb, range 0 – 2 ppm).

TRS is measured by converting TS to SO_2 using the external HTO–1000 converter and then measuring the resultant SO_2 using the pulsed UV fluorescence technique.

* Acoem Serinus 57 formerly known as Ecotech Serinus 57.

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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 analyzers have been designed using our experience and 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 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 & 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 analyzer from a rack cabinet easy
- AQMS power usage can be reduced due to the instrument's low power demand and its ability to operate over a wide temperature range.

Specifications

Range:	TRS: 0 – 2 ppm (autoranging)
Concentration units:	User selectable mg/m³, μg/m³, ppm, ppb, ppt
Noise:	< 0.15 ppb
Lower detectable limit:	< 0.3 ppb or 0.2 % of concentration whichever is greater
Linearity:	< 1 % of full scale
Precision:	0.5 ppb
Zero drift:	24 hours: < 0.5 ppb
	7 days: < 0.5 ppb
Span drift:	7 days: < 0.5 % of reading
Response time:	60 seconds to 95 %
STP reference:	0 °C, 20 °C, 25 °C at 101.3 kPa
Sample flow rate:	725 cc/min
Temperature range:	0 – 40 °C
Power:	99 – 132 VAC, 198 – 264 VAC, 47 – 63 Hz
Dimensions:	429 x 175 x 638 mm
Rack spacing:	3.5 RU
Weight:	18 kg

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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.

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.

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 two user specified full scale values)
- 3 scalable analog inputs, 0 – 5 V, 160 μV resolution
- 8 logic level digital status inputs/8 open collector digital outputs.

Options & accessories

- HTO-1000 thermal catalytic converter
- External AC powered pump (capable of operating 3 analyzers, excluding NO_x)
- Dual filter (particulate)
- Rack slide kit
- TCP/IP network port
- Bluetooth
- High pressure zero/span valves
- SO_2 scrubber
- Printed User Manual (a soft copy of the user manual is supplied on USB with each analyzer)
- Internal long life, low power maintenance free pump (max 6 watts).

bsi

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