

# Serinus® 50

## SULFUR DIOXIDE ANALYSER



**The Serinus® 50 sulfur dioxide (SO<sub>2</sub>) analyser delivers precise and reliable performance at excellent value. It uses proven pulsed UV fluorescent radiation technology to measure SO<sub>2</sub> in ambient air (LDL < 0.3 ppb, range 0 to 20 ppm).**

### APPROVALS

- US EPA approval (RFNA-0809-186)
- EN approval TÜV (0000040205-02)
- EN approval MCERTS (MC100167/07)
- 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 40 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 and calibration
- Comprehensive data logging and remote viewing of over 200 operational parameters
- Versatile interfacing through RS232, USB, Bluetooth, analog and digital I/O and optional TCP/IP
- Easy setup through an intuitive menu system, advanced GUI and 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 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® 50 Remote' Android App
- Built-in digital display measuring values and 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 and consumable items through extensive use of standard components across the Serinus® 50 range
- Rack slide design makes accessing internal components and removing the analyser 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

<b>Ranges:</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>	< 0.15 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 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>	24 hours: < 0.5 % of reading or < 0.5 ppb whichever is greater
<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 to 40 °C
<b>Operating power:</b>	100 - 240 VAC, 50 - 60 Hz (autoranging)
<b>Power consumption:</b>	255 VA (max at start-up) 180 VA (nominal)
<b>Dimensions:</b>	429 x 175 x 638 mm
<b>Rack Spacing:</b>	3.5 RU
<b>Weight:</b>	18.1 kg

## COMMUNICATION

- #1 RS232 port (supports all protocols\*)
- #2 RS232 port (supports all protocols\* and 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:

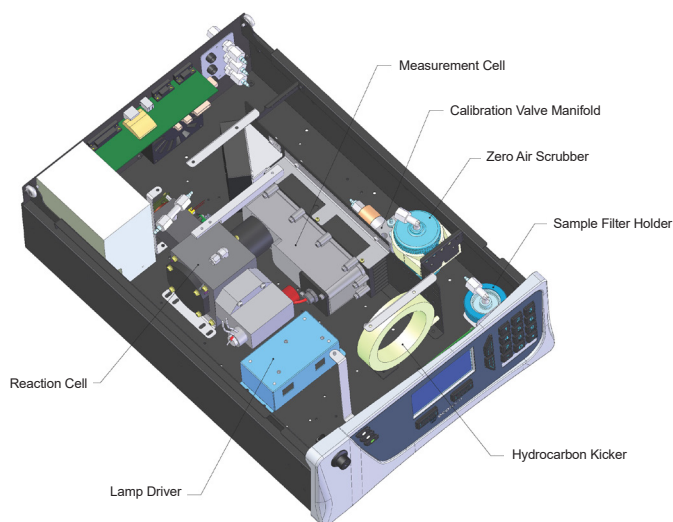
- 3 x analog outputs (current or voltage), 12 bit resolution user definable range (between two user specified points)  
Current range: 0 - 20 mA, 2 - 20 mA or 4 - 20 mA  
Voltage range: 0 - 5 V, 0 - 10 V (voltage offset of 0 V, 0.25 V or 0.5 V)
- 3 x analog inputs (scalable), 0 - 5 V, 16 bit resolution
- 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 and 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
- Dual Sample (particulate) Filter
- High Pressure Span (for direct cylinder calibration)
- High Pressure Zero (for direct cylinder calibration)
- Test Lamp (for PMT diagnostics)
- 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 the ACOEM Ecotech resources USB stick with each analyser).



ACOEM Ecotech  
1492 Ferntree Gully Road Knoxfield VIC 3180 Melbourne Australia  
+61 3 9730 7800 info.au@ecotech.com ecotech.com

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