Serinus® Cal 300

OZONE TRANSFER STANDARD

The Serinus® Cal 300 includes an in-built ozone generator and internal zero-air source, as well as a compact reference photometer, providing precise feedback control for accurate ozone generation and measurement in the one unit.

Ozone generation and measurement are automatically corrected for gas temperature and pressure changes,and can be displayed in units of ppm, ppb, ppt, ug/m3, mg/m3, ng/m3.

FEATURES

- Self contained transfer standard includes ozone photometer, ozone generator and zero air source within the one unit
- Capable of measuring and generating accurate ozone calibration levels (Photometer accuracy: 1.0 ppb or 1 % of reading, ozone generator output 40 to 1000 ppb at 4 LPM)
- Up to 16 sequences including 32 discreet points
- Allows users to perform inter-station calibrations without disrupting station plumbing
- Includes its own zero air generator and inbuilt ozone generator
- Capable of measuring internally generated ozone or externally generated ozone enabling station ozone generators to be easily calibrated
- Generation of ozone concentrations through internally stored calibration curve when feedback is disabled
- Ensures repeatable and accurate readings by automatically compensating for temperature, pressure and flow variations
- Integral output gas manifold, allows up to 4 instruments to be calibrated simultaneously
- USB memory stick for data storage which can be retrieved via RS232, USB interface or the optional Ethernet connection
- Programming, viewing, downloading and emailing of data is made even simpler using Bluetooth connectivity, combined with the 'Ecotech Serinus® Remote' Android app.

SPECIFICATIONS

Range:

- 0 - 3000 ppb ozone.

User interface:

- Full numeric keypad on front panel or remotely via computer
- Large graphic LCD display, with unit selection, ppm, ppb, ppt, ug/m3, mg/m3, ng/m3.

Noise:

- < 0.25 ppb or 0.1 % of reading RMS whichever is greater, with Kalman filter active.

Lower detectable limit:

- 0.5 ppb with Kalman filter active.

Precision:

- <0.25 ppb or 0.1 % or reading RMS whichever is greater, with Kalman filter active.

Linearity:	< 1 % of full scale or 1 ppb
Zero Drift:	24 hours: < 1 ppb
	7 days: < 1 ppb
Span Drift:	7 days: < 0.5 % of reading

TEMPERATURE AND PRESSURE

Compensation: Temperature/Pressure compensation

Temperature range: 0 to 35 °C

Relative humidity: 0 to 80 % non-condensing

OZONE GENERATOR (WITH FEEDBACK)

Flow rate: 2 to 5LPM (External zero air)

          3 to 5LPM (Internal zero air pump)

Ozone output: 40 to 1000 ppb at 4 LPM

Accuracy: 1 ppb or 1 % of reading

Repeatability: 1 ppb or 1% of reading

COMMUNICATION

Programmable calibrations:

• 16 separate programmable sequences

• 32 separate programmable points.

Analog output:

• 1 x menu selectable current or voltage output

• User scalable and auto-ranging between two user editable full scale values

• Menu selectable current output of 0 - 20 mA, 2 - 20 mA or 4 - 20 mA

• Voltage output of 0 - 5 V, with menu selectable zero offset of 0 V, 0.25 V or 0.5 V, 12 bit resolution

• Voltage output of 0 - 10 V configured using jumpers (JP3) on rear panel PCA.

Analog input:

• 3 x analog inputs (scalable), 0 - 5V, 16 bit resolution.

Digital output:

• RS232 port #1: Normal digital communication (supports all protocols*)

• RS232 port #2: Multidrop port used for multiple analyser connections on a single RS232 (supports all protocols*)

• USB port connection on rear panel

• 25 pin connector with discrete status and user control

• USB stick memory (front panel) for data logging, event logging, parameter storage and configuration

• 8 Digital Outputs, open collector max 400 mA each @ 12 VDC (max total output 2 A)

• 8 Digital Inputs, 0 - 5 VDC, CAT I rated

• 1 Diluent Control. + 12 V output

• Optional: TCP/IP (supports all protocols*).

* Available protocols: Modbus (RTU/TCP), Bayern-Hessern, EC9800, or Advanced.

DATA LOGGING

8 Gb removable USB memory drive storing:

• Internal data logger

• Event log

• Automatic/manual configuration backup

• Internal data logger can store up to 12 of 200+ available parameters.

VOLTAGE AND CONSUMPTION

• 100 - 240 VAC 50/60 Hz (Auto-ranging)

• Consumption max 177 VA, Operating 87 VA.

DIMENSIONS AND WEIGHT

• Case Dimensions (Rack Length front to rear): 597 mm (23.5")

• Total length (w/latch release): 638 mm (25.1")

• Chassis width: 418 mm (16.5")

• Front panel width: 429 mm (16.9")

• Chassis height: 163 mm/uses 4RU (6.4")

• Front panel height: 175 mm (6.9")

• Weight: 26 kg.