

Serinus® Cal 300

OZONE TRANSFER STANDARD



The Serinus® Cal 300 Ozone Transfer Standard is a precision ozone calibrator that meets US EPA requirements for operation as an ozone photometer and 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 measuring in the one unit.

Ozone generation and measurement are automatically corrected for gas temperature and pressure changes.

FEATURES

- Self contained transfer standard includes ozone photometer, ozone generator and zero air source within the one portable 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 as per US EPA recommendations
- 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, designed to US EPA standards, 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.

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, %.

Analog out:

- 0 to full scale from 0 - 0.05 ppm to 0 - 20 ppm with 0, 5 % and 10 % offset
- Auto-ranging between two user specified full-scale values.

Noise:

- < 0.25 ppb or 0.2 % of reading RMS whichever is greater, with Kalman filter active.

Lower detectable limit:

- 0.5 ppb with Kalman filter active.

Linearity: < 1 % of full scale

Precision: 1.0 ppb or 1 % of reading

Zero Drift: 24 hours: < 0.3 ppb
7 days: < 0.3 ppb

Span Drift: 7 days: < 0.5 % of reading

TEMPERATURE AND PRESSURE

Compensation:	Temperature/Pressure compensation
Temperature range:	0 to 40 °C
Relative humidity:	0 to 80 % non-condensing

OZONE GENERATOR (WITH FEEDBACK)

Flow rate:	3 to 5 LPM
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:

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

Digital output:

- RS232 port #1: Normal digital communication
- RS232 port #2: Multidrop port used for multiple analyser connections on a single RS232
- 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.

DATA LOGGING

8 Gb removable USB memory drive storing:

- Internal data logger
- Event log
- Automatic/manual configuration backup and list save.

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.



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