



UV Photometric Ozone Analyzer

O342e



Adopt the no-screen version of the analyzer and avoid the pollution related to the screen manufacturing and recycling cycle:
The display is already in your pocket.

E-SERIES ADVANTAGES:

- > **Environmental friendly:**
 - Sustainable eco-design
 - Low carbon footprint
 - Over 95% of the analyzer can be recycled
 - Low power consumption
 - No use of Mercury lamp as excitation source
- > **Long lifespan, excellent accuracy**
- > **Reliable electronics**
- > **Economic, Easy and reduced maintenance**
- > **Common electronic boards: optimized spare parts stock**
- > **Interactivity: connected instruments**

COMPLIANCE WITH:

ISO 13964, 2008/50/EC, EN 14625, EN 15267
40 CFR PART 53 and 40 CFR PART 58



TÜV RHEINLAND
Certified to
EN 14625, EN 15267
Certificate N°
0000043106



U.S. ENVIRONMENTAL
PROTECTION AGENCY
APPROVAL
EQOA-0515-225

SPECIFIC FEATURES:

- Unique LED based UV photometry technology (Patent Pending)
- Eco-friendly & eco-innovative conception
- Provides accurate, extremely stable and repeatable O₃ measurements in the range of 0.2 ppb to 10 ppm
- Maximum efficiency, minimum size: compact, lightweight, offering the best metrological performances
- Service assistant inside: detects early signs of trouble, allows predictive maintenance, identifies the service needed and guides the service operations step by step
- Real-time calibration graph, animated synoptic, auto-diagnostic, control and maintenance data screens can be displayed while the instrument is operating
- Auto-ranging / user programmable ranges
- Simultaneous multi-screen remote emulation of the analyzer: minimizes training and on-site expensive expertise needs
- ESA Connect™ application for iOS and Android available for free download
- User-friendly: one click to perform zero, span or calibrations using O₃ gas generators
- Automatic recognition of plugged electronic boards or optional devices: plug and play principle. Automatic download of updated drivers when connected to internet
- Includes embedded Communication Protocol for XR® Management Software with automatic recognition and configuration
- SmartStatusLight™ power button on the front panel indicating if the instrument is ready to use or not (On/off, Alarm, Maintenance required...)
- Built-in USB ports and Ethernet connection

APPLICATIONS:

Continuous indoor and outdoor air quality monitoring • Stationary and mobile AQMS laboratories • Industrial fence-line monitoring • Continuous emissions monitoring (CEM) by dilution • Measurement Campaigns and Monitoring Studies • Laboratory and field studies on ozone effects...

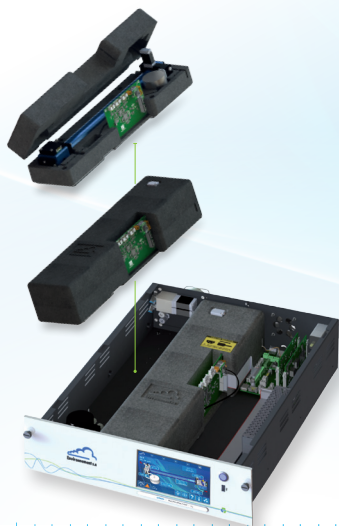


SPECIFICATIONS:

- Measurement Range: **0-10 ppm**, user selectable
- Detection limit (2σ): **0.2 ppb**
- Noise: **0.1 ppb**
- Zero drift: **<0.5 ppb/24h, <1 ppb/week**
- Span drift: **<0.5% /24h, <1% /week**
- Response time: automatic and programmable (min 20 s)
- Linearity: **1% (FS)**
- Pressure and temperature compensation
- Sample flow rate: **1 lpm**
- Internal sample pump
- Internal solenoid valve block for zero air and span gas
- Data storage: 1 year (1 minute data)
- Ethernet network connection (RJ45), 3 x USB ports, 2 dry contacts outputs included
- Integrated web-server with full remote emulation of the analyser
- Dimensions (mm, LxWxH): 483x545x133
- Chassis: 19" rack, 3U
- Weight: 9 kg (19.9 lbs)
- Operating temperature: 0-35°C
- Power supply: 115 V, 60 Hz - 230 V, 50 Hz
- Power consumption: 30 W

OPTIONS:

- 7" TFT colour touch screen
- WiFi module (in standard with the no-screen version)
- Serial interface (via USB port)
- External opto-isolated I/O interface with:
 - 4 independent analog inputs
 - 4 independent analog outputs
 - 4 remote control inputs
 - 6 dry contacts outputs
- Internal ozone generator for span check control; provides repeatable and stable O₃ molecules generation
- 24 VDC Power supply for on-board applications



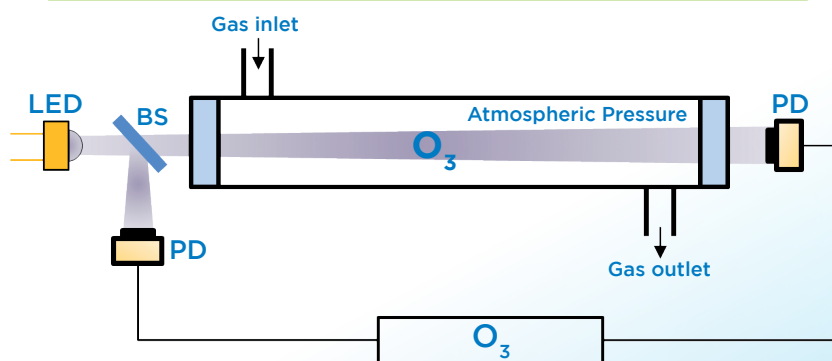
PRINCIPLE OF OPERATION:

The **O342e** combines patented optical technology with decades of expertise to ensure you get best ozone monitoring results available on the market, quickly, ecologically and reliably!

The monitor represents an absolute technological evolution as it implements in premiere LED based UV photometric technique (Patent pending). The innovative LED component replaces the Mercury lamp traditionally used as a spectroscopic source for ozone monitoring. Besides eliminating Mercury, which is heavily polluting, the LED technology offers also excellent stability of the measurement.

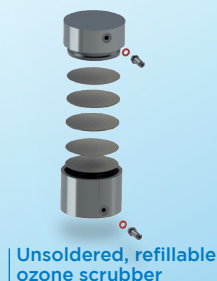
Applied to ozone measurement, the UV Direct Absorption (UV-DA) technique, based on the UV photometry principle, consists in measuring the UV light absorption by ozone molecules. The ozone concentration is deduced by applying a ratio between two different UV signals. One of the signals is determined when the air sampling passes through a new high quality ozone scrubber used as a catalytic converter, in order to eliminate completely the ozone molecule. The other signal passes directly through the measurement cell. Both signals are detected by a photodiode, offering accurate and stable signal detection. Finally, a ratio between the two detected signals, with a performance of pressure and temperature compensations, gives the ozone measurement.

O342e Operating Principle



The outcome is a very compact and lightweight (3U rack), easy-to-use analyzer, capable of measuring ozone concentrations down to 0.2 ppb levels.

Increased reliability and metrological performances, recyclability, extended life-time while reducing operational cost and maintenance have been the key values guiding our R&D department for the development of the new, eco-designed e-Series of analyzers.



Unsoldered, refillable ozone scrubber

The exclusive "inside the box" foam modular concept makes the product more robust, power saving, quieter in operation, simpler to service and eco-friendly.

Detailed information related in the specific e-Series brochure

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