



Non dispersive Infra Red CO analyzer CO12e



ESA Connect™



Adopt the no-screen version of the analyzer and avoid the pollution related to the screen manufacturing and recycling cycle: The analyzer is connected with your device (PC, smartphone or tablet)

E-SERIES ADVANTAGES:

- > **Environmental friendly:**
 - Sustainable eco-design
 - Low carbon footprint
 - Over 95% of the analyzer can be recycled
 - Ultra low power consumption
 - No use of heavy metals (eg. Mercury)
- > **Long lifespan, excellent accuracy**
- > **Reliable electronics**
- > **Economic, Easy and reduced maintenance**
- > **Common electronic boards: optimized spare parts stock**
- > **Service Assistant inside**
- > **Interactivity: connected instruments**

COMPLIANCE WITH:

EN 14626, EN 15267, ISO 4224,
40 CFR PART 53 SUB B & SUB C 40 CFR PART



SPECIFIC FEATURES:

- Superior metrological performances for CO measurements in the range 0-300 ppm
- Breakthrough mechanical design for weight and power saving as well as thermal insulation & reliability
- Innovative conception of the optical module for excellent sensitivity and signal stability
- Automatic or programmable response time adjustment, ensuring efficient monitoring of low concentration levels of CO
- Acquisition synchronized to the correlation wheel rotation for great accuracy and repeatability
- Real-time calibration graph, animated synoptic, auto-diagnostic, control and maintenance data screens can be displayed while the instrument is operating
- Service assistant inside: detects early signs of trouble, allows predictive maintenance, identifies the service needed and guides the service operations step by step: increased productivity on site, reduced downtime, more efficiency, less training
- Simultaneous multi-screen remote access via Wifi or LAN using the dedicated application ESA Connect™ for control, diagnostics, software update...
- ESA Connect™ application for iOS and Android available for free download
- Ultra low power consumption (50 W) means environment-friendly and cost-saving analyzer
- Includes embedded Communication Protocol for XR® Management Software with automatic recognition and configuration
- Automatic recognition of plugged electronic boards or optional devices: plug and play principle
- SmartStatusLight™ power button on the front panel indicating if the instrument is ready to use or not (ON/OFF, Alarm, Maintenance required...)

MAIN APPLICATIONS:

Continuous indoor and outdoor air quality monitoring • Stationary and mobile AQMS laboratories • Industrial fence-line monitoring • Continuous emissions monitoring (CEM) by dilution • Background (urban or suburban), Rural, Traffic, Kerbside measurement campaigns and monitoring studies • Laboratory and field studies on CO effects...

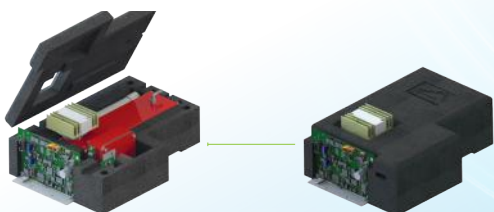


SPECIFICATIONS:

- Measurement Range: **0-300 ppm**, user selectable and programmable
- Detection limit(2σ): **0.035 ppm**
- Noise: **0.015 ppm**
- Zero drift: **<0.3 ppm/3 months**
- Span drift: **<15% /month**
- Response time: automatic and/or programmable (min 35 s)
- Linearity: **1%** (of the reading value)
- Pressure compensation
- Sample flow-rate: **1 l/h**
- Internal sampling 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 analyzer
- Dimensions (mm, LxDxH): 483x545x133
- Chassis: 19" rack, 3U
- Weight: 7,1 kg (15.6 lbs)
- Operating temperature: 10-40°C
- Power supply: 115 V, 60 Hz - 230 V, 50 Hz
- Power consumption: 50 W

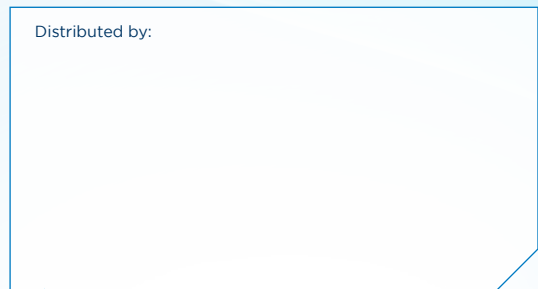
MAIN OPTIONS:

- 7" TFT colour touch screen
- Wireless Stick (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
- 24 V DC Power supply for on-board applications



CO12e measuring module

Distributed by:



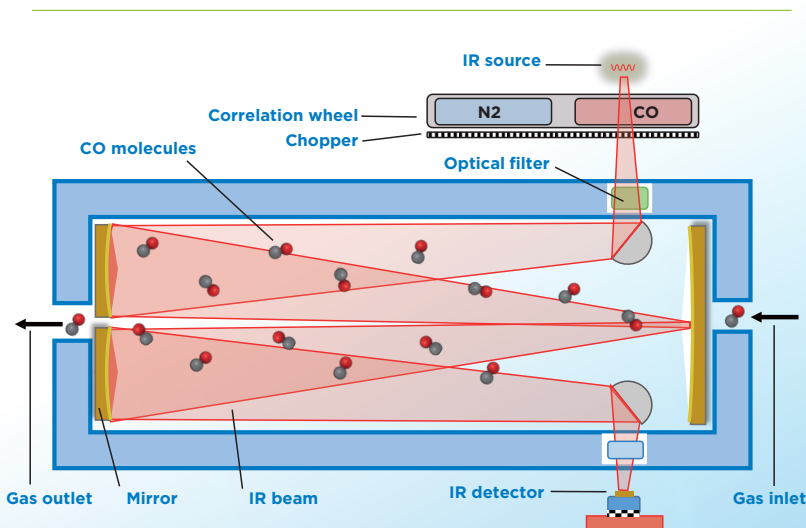
PRINCIPLE OF OPERATION:

The **CO12e** is a continuous carbon monoxide analyzer with a detection limit of 0.035 ppm. Its measurement principle is based on carbon monoxide detection by absorption of infrared light.

The CO sample concentration is determined by measuring the quantity of infrared light the sample gas absorbs as it flows through a multi-reflection chamber. As the absorption spectrum is not continuous, a gas filter, named correlation wheel, is used in conjunction with the optical filter for highly selective sample gas measurement. The correlation wheel consists of two-sealed and equal volume compartments, one being filled with carbon monoxide (CO), the other with nitrogen (N₂). As the wheel turns round, the light beam passes alternatively through the CO cell and the N₂ cell and then through interference optical filters before reaching the detector. If the sample contains CO, the reference beam will not be attenuated because it was already attenuated by the CO of the reference cell.

The measuring module and correlation wheel being set in the enclosed foam box for stable temperature and no interference from external conditions, the CO12e offer excellent accuracy and reliability. Using state-of-the-art optical and electronic technologies, the analyzer offers countless advantages while requiring only limited maintenance.

CO12e Operating Principle



The e-Series of analyzers has been fully eco-designed, with a special consideration to the environmental impacts of the product during its whole lifecycle. 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 e-Series brochure

Environnement S.A. has a policy of continuous improvement of its products and we reserve the right to upgrade or change specifications without prior notice.

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