AC32e

CHEMILUMINESCENCE **NITROGEN OXIDES ANALYZER**

envea
Elevating standards. For life.

The chemiluminescent based analyzer capable of measuring nitrogen oxides has been fully eco-designed, to consider the environmental impact throughout its life-cycle

FEATURES AND BENEFITS

- Excellent metrological performances for NO, NO_2 and NOx measurements
- Innovative conception of the photomultiplier module for excellent sensitivity and signal stability
- Real-time calibration graph, animated synoptic, auto-diagnostic, control and maintenance data screen displayed while instrument is operating
- Service assistance inside: detects early warning signs, allows predictive maintenance, identifies the needed service and step by step guides for service operations
- Automatic recognition of plugged electronic boards or optional devices: plug & play principle
- Includes embedded communication protocol for all DAS with automatic recognition & configuration
- Local and remote control through digital port (configuration, calibration, test and diagnosis parameters for maintenance support)

e-Series analyzers are fully eco-designed, with consideration to minimise carbon footprint through the whole lifecycle:

- Ultra low power consumption: an environmentally-friendly and cost-saving analyzer
- Breakthrough mechanical design for weight and power saving as well as thermal insulation & reliability
- Modular concept makes the product more robust, and simpler to service



MCERTS CSA MC250453/00
TÜV Rheinland N°0000053805
RFNA-0118-249

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TECHNICAL **SPECIFICATIONS**

Measurement range	0-1 ppm / 0-10 ppm (user selectable or auto-ranging)
Measurement units	ppm, mg/m³, ppb, µg/m³, ppt, (user selectable)
Detection limit (LDL)	<0.1 ppb (or HA*: 20 ppt on request)
Zero noise **Span noise**	<0.05 ppb (or HA*: 10 ppt on request) 0.2% of reading (0.05 ppb minimum)
Zero drift	<0.4 ppb / 24h (or HA*: 100 ppt on request) <0.4ppb / 7 days
Span drift	<1 ppb / 24h <1% of reading / 7 days
Response time	<20 s
Repeatability	0.2% of reading (0,05ppb minimum)
Linearity	1% of F.S
Sample flow rate	0.66 l/min. 1 l/min with sampler dryer
Power supply	100-250 VAC, 50/60 Hz, 24 VDC (option)
Power consumption	230VAC power supply: 230W at start-up, 140W nominal 24 VDC power supply: 170W at start-up, 70W nominal
Connectivity	Ethernet (RJ45 socket) USB Port, serial RS232/RS485 (optional)
Optional analog output	External opto-isolated I/O interface with: • 4 independent analog inputs • 4 independent analog outputs • 4 remote control inputs • 6 dry contacts outputs
Communication Protocols	Modbus (TCP-IP, RTU/Jbus), Mod4, UDP, Baeyrn. Gas Inlet/Outlet: External Zero, Span, SV control
Data storage	1 year (15 minutes average) Measured channels (with the selected period), status codes (data, voltage, Analog output, Operating Temperature, etc.)
Dimensions	483 x 545 x 133 L x W x H (mm)
Chassis	19" rack, 3U
Weight	10.3 kg without external pump (4.6 kg)
Standard operating temperature	5°C to +40°C
Chamber pressure	200 hPa
NOx converter	Molybdenum (regulated at 340°C)
Ozone scrubber	Heated catalytic
PM temperature	Controlled at 0°C
Reaction chamber temperature	60°C

*HA: AC32e High Accuracy.

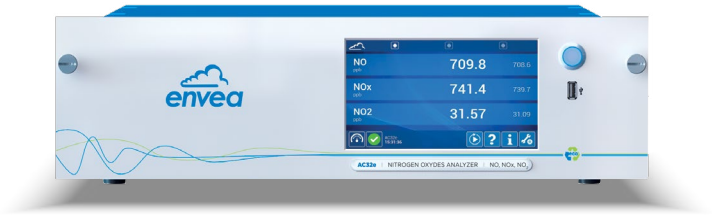
PRINCIPLE OF **OPERATION**

The **AC32e** is a criteria pollution monitor based on chemiluminescence, the standard method for the measurement of nitrogen dioxide and nitrogen monoxide concentrations in ambient air.

The chemiluminescence method for gas analysis of oxides of nitrogen relies on the measurement of light produced by the gas-phase titration of nitric oxide and ozone.

This light is measured using a photomultiplier tube (PM). To measure total oxides of nitrogen (NOx), the sample passes over a heated catalyst to reduce all oxides of nitrogen to NO.

The instrument performs the automatic switching of the catalyst in and out of the sample path so that the resulting signals are compared to indirectly measure NO_2.



MAIN **OPTIONS**

- External module for NH_3 measurement (0-1000 ppb)
- Built-in permeation bench with NO_2 tube
- Sample dryer
- 24 VDC power supply & enhanced T° range up to +50°C for use without air conditioner
- Communication protocol for XR® Software
- External pump assembly
- Filter valve block for calibration control (zero & span)
- Built-in web-server with full remote emulation of the analyzer
- Pressure and temperature compensation

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AC32e Datasheet

AC32e Chemiluminescence nitrogen oxides analyzer - Specifications subject to change without notice.

ISO 45001:2018
ISO 14001:2015
ISO 9001:2015
CERTIFICATION

www.envea.global