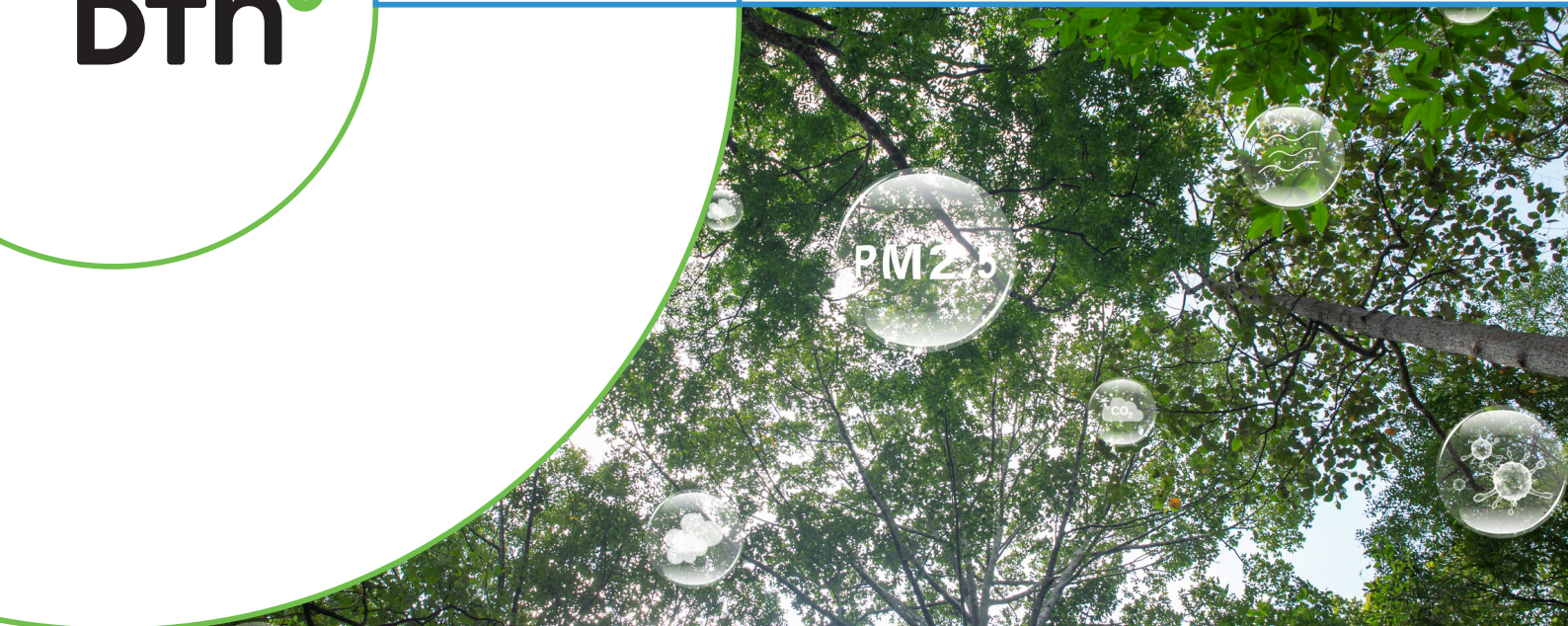




Chemiluminescence Nitrogen Oxides Analyzer – AC32e

DTN partners with ENVEA to provide organizations worldwide with the best technologies and systems and help different authorities and institutions, both public and private, to monitor air quality and achieve their goals and objectives.

Applications

- Continuous indoor and outdoor air quality monitoring
- Stationary and mobile AQMS laboratories
- Leakage detection in industrial applications
- Continuous emissions monitoring (CEM) by dilution
- Laboratory and field studies on pollution effects
- Background, rural, urban or sub-urban, industrial, traffic, roadside studies



Features

- Excellent metrological performances for NO, NO₂ and NO_x measurements with selectable display in ppb or µg/m³
- Innovative conception of the PM module for excellent sensitivity and signal stability
- Real-time calibration graph, animated synoptic, auto-diagnostic, control and maintenance data screens can be displayed while the instrument is operating
- Service assistance inside: detects early signs of trouble, allows predictive maintenance, identifies the needed service and guides service operations step by step: increased productivity on site, reduced downtime, more efficiency, less training
- Includes embedded Communication Protocol for XR[®] Software with automatic recognition and configuration
- Ultra low power consumption: an environmentally-friendly and cost-saving analyzer
- Breakthrough mechanical design for weight and power saving as well as thermal insulation and reliability
- Automatic recognition of plugged electronic boards or optional devices: plug & play principle
- Local and remote control through digital port (configuration, calibration, test and diagnosis parameters for maintenance support)
- Optional: 24V power supply and enhanced temperature range for mobile AQMS laboratories or solar powered air quality monitoring stations

The AC32e is a criteria pollution monitor based on the chemiluminescence, the standard method for the measurement of the concentration of nitrogen dioxide and nitrogen monoxide in ambient air (EN 14211). 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 (NO_x), 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 NO₂.



Options

- Wi-Fi module (standard with the no-screen version)
- RS232 or RS485 Serial interface (via USB port)
- External module for NH₃ measurement (0-1000 ppb)
- Built-in permeation bench with NO₂ tube
- Sample dryer
- 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 power supply and enhanced T° range up to 50°C for use without air conditioner

E-series advantages



- Environmental friendly: Low carbon footprint. Over 95% of the analyzer can be recycled. Ultra low power consumption.
- Economic, easy and reduced maintenance
- Service Assistant inside
- 7" TFT colour touch screen
- Interactivity: connected instruments
- SmartStatusLight™ power button for status of operation (On/Off, alarm, maintenance required)
- Common electronic boards: optimized spare parts stock

Compliance with:
ISO 7996, EN 14211
(2012), EN 15267
(2009), 40 CFR
PART 53 & PART 58



Tech specs

Measurement range	0-1 ppm / 0-10 ppm (user selectable or auto-ranging)
Detection limit (2σ)	<0.2 ppb
Noise	<0.1 ppb
Zero drift	<1 ppb / 24h
Span drift	<1 ppb / 24h
Response time	min. 40 s
Linearity	1% (of full scale)
Repeatability	1%
Sample flow-rate	0.66 l/min (1 l/min with sample dryer)
Memory capacity	1 year (15 min. average)
Output connectivity	Ethernet (RJ45 socket, UDP protocol, Modbus TCP), USB portal, external zero/span SV control
Dimensions	483 x 545 x 133 mm (L x W x H)
Chassis	19" rack, 3U
Weight	10.3 kg without external pump (4.6 kg)
Standard operating temp.	0°C to +40°C
Power supply	100-250 V, 50/60 Hz
Power consumption 220V (or optional 24V PS)	160 W/h (72 W/h without optional 24V PS)
Chamber pressure	200 hPa
NO _x converter	Molybdenum (regulated at 340°C)
Ozone scrubber	Heated catalytic
P.M temp.	Controlled at 0°C
Reaction chamber temp.	60°C
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	

AC32e Operating Principle – NO Cycle

