

Chemiluminescence Ammonia and nitrogen oxides analyzer

AIR QUALITY MONITORING SYSTEMS



SPECIFIC FEATURES:

- Combines the AC32e* chemiluminescence analyzer with the external NH₃→NO thermal converter module CNH3 for stable and repeatable multi-gas measurements at very low levels
- Selectable and independent NO, NO₂, NO_x, NH₃ ranges
- User programmable ranges and average time
- Excellent metrological performances
- Innovative conception for excellent sensitivity and signal stability
- Includes embedded Communication Protocol for XR® Software with automatic recognition & configuration
- Ultra low power consumption: an environment-friendly and cost-saving analyzer
- Breakthrough mechanical design for weight and power saving as well as thermal insulation & reliability
- Automatic recognition of plugged electronic boards or optional devices: plug & play principle
- Local and remote control through digital port (configuration, calibration, test and diagnostic parameters for maintenance support)
- 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

MAIN APPLICATIONS:

- › Leak detection and monitoring of fugitive emissions: quarries, storage facilities, mines, fertilizers plants
- › Odor monitoring: WWTP, recycling, pulp and paper manufacturing, composting...
- › Low level ammonia monitoring in ambient air
- › Environmental monitoring of clean rooms

4 SELECTABLE MODES:

- Continuous NH₃
- Continuous NO/ NO₂ / NH₃
- Continuous NO/ NO₂
- Continuous NO

*COMPLIANCE WITH:

ISO 7996, EN 14211 (2012), EN 15267 (2009),
40 CFR part 53 & part 58



QAL 1 CERTIFIED
N°0000053805



U.S. EPA APPROVED
RFNA-0118-249

Ammonia and Nitrogen Oxides Analyzer **AC32e CNH3**

PRINCIPLE OF OPERATION:

The AC32e-CN3 consists of 2 associated modules: the NH₃→NO converter (ref CNH3-S2) plus NOx analyzer (ref AC32e)

TECHNICAL SPECIFICATIONS - AC32e

| | |
|--|---|
| Measurement Range | 0-1 ppm / 0-10 ppm (user selectable or auto-ranging) |
| Measured parameter | NO, NO ₂ & NOx |
| Detection limit (2σ) | <0.2 ppb |
| Noise | <0.1 ppb |
| Zero drift | <1 ppb / 24h |
| Span drift | <1 ppb / 7 days |
| Response time | min. 40 s |
| Linearity | 1% (of F.S.) |
| Repeatability | 1% |
| Sample flow-rate | 0.66 l/min (1 l/min with sample dryer) |
| Memory Capacity | 1 year (15 minutes average) |
| Output connectivity | Ethernet (RJ45 socket, UDP protocol, Modbus TCP), USB port, External zero/span SV control |
| Dimensions L x W x H (mm) | 483 x 545 x 133 |
| Chassis | 19" rack, 3U |
| Weight | 10 kg without external pump (4.5 kg) |
| Standard operating temperature | 0°C to +40°C |
| Power supply | 100-250 V, 50/60 Hz |
| Power consumption | 160 VA (average) 250 VA (peak) |
| Chamber pressure | 200 hPa |
| NOx converter | Molybdenum (regulated at 340°C) |
| Ozone scrubber | Heated catalytic |
| P.M temperature | controlled at 0°C |
| Reaction chamber temperature | 60°C |
| Filter valve block for calibration control (zero & span) | |
| Integrated web-server with full remote emulation of the analyzer | |
| Pressure and temperature compensation | |

TECHNICAL SPECIFICATIONS - CNH3 MODULE

| | |
|---------------------------------|--|
| Measurement Range | 0.10 /0.25 /0.5 /1 ppm (user selectable ranges) |
| Measured parameter | NH ₃ |
| Lower detectable limit (2σ) | 0.001 ppm |
| NH ₃ to NO converter | Quartz, 980°C |
| Output connectivity | Ethernet network connection (RJ45) |
| Dimensions L x D x H (mm) | 483 x 545 x 133 |
| Operating temperature | +10°C to +35°C |
| Weight | 7 kg for the 230V version 9.6 kg for the 110V version |
| Power supply | 115 V, 60 Hz - 230 V, 50 Hz |
| Power consumption | 160VA |
| Digital output | RS 232 or RS 422 port |

MAIN OPTIONS:

for the AC32e:

- 7" TFT color touch screen on the AC32e
- WiFi module (in standard with the no-screen version)
- RS232 or RS485 serial interface (via USB port)
- 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
- 24V power supply interface & enhanced T° range for utilization without air conditioner

for the CNH3 module:

- A solenoid valve (NH₃ SV)
- rear panel to be equipped with 2 additional bulkhead unions
- a communication cable

