

HORIBA NH₃ Monitoring System

APNA-370 + NH₃ Converter CONV-02

Data Sheet

Abstract

Combined use of the APNA-370 NO_x Monitor and the NH₃ converter CONV-02 unit makes NH₃ measurement possible.

APNA-370

Our type approved instrument APNA-370 is a continuously operating analyzer for the determination of NO, NO₂, NO_x in the ambient air. Other applications exist in different areas of the process and trace analysis.

Overview

The measuring instrument HORIBA APNA-370 is a chemiluminescence monitor using the "crossflow" modulation principle. Sample gas and reference gas are alternately supplied to the measuring cell. Sample gas with eliminated NO_x concentration will be used as reference gas. This results in a low-maintenance operation and extremely stable measurements can be guaranteed. The analyzer is virtually interference-free and has an internal sample gas pump. Type approved according to EN 14211 (Continuous ambient air quality measurements in stationary use).

Features

- ✓ Approval according to EN 14211: TÜV 936/21204643/C
- ✓ Continuous measurement NO, NO₂, NO_x in ambient air
- ✓ The detector is a silicon - photodiode with a long lifetime
- ✓ "Cross Flow" Modulation principle for stable measurements
- ✓ Regenerative drying unit for ozone generator
- ✓ Pressure and temperature compensated
- ✓ Optimized components to reduce maintenance costs and power consumption
- ✓ Reduced weight design allows easier handling
- ✓ Internal sample gas pump
- ✓ Optional module for internal function control
- ✓ Large TFT touch-screen display
- ✓ Password protection against unauthorized access
- ✓ Remote software for an external operation
- ✓ High connectivity via RS232, Ethernet or analog (optional)
- ✓ Internal memory for different average values, calibration history and alarm history
- ✓ CF slot allows for memory expansion

Specifications

Principle	Chemiluminescence method (CLD)
Application	NO, NO ₂ , NO _x Measurement in ambient air
Range	Standard ranges: 0-0.1/0.2/0.5/1.0 ppm; auto range ~ manual range selectable; can be operated by remote switching. Optional: extension of range: 0-10 ppm, within 10 times range ratio;
Certified Range	NO: 0- 1200 µg/m ³ (0- 960 ppb) NO ₂ : 0- 500 µg/m ³ (0- 260 ppb)
Lowest Detection Limit (LDL)	0,5 ppb (3σ)
Repeatability	±1.0 % of F.S.
Linearity	±1.0 % of F.S. (± 0,62% of F.S. at NO ₂ according to type test)
Zero Point Drift	< LDL/Day, < LDL/Month (according to type test)
Span Point Drift	< LDL/Day, < 0,58 ppb/Month (according to type test)
Flow Rate	approx. 0,8 l/min
Response Time (T ₉₀)	< 90 sec. (minimum measurement range)
Indication	Large TFT touch-screen display with simultaneous display of all current values, and the status information of the instrument.
Readings	Concentration in ppm (ppb) or mg (µg)/m ³
Compensation	Pressure and temperature
Languages	English, German, French, and Japanese.
Interfaces	RS-232C (Bayern Hessen / HORIBA Protocol) Ethernet (HORIBA Protocol)
Options	Analog output 0-1/10 V or 0(4) - 20 mA Long-term data storage Calibration units Further options on request
Operating Temperature	0-40°C Note: The sample gas has to pass through the system without condensation
Power	230 VAC +/-10%, 50 Hz, ca.170 VA
Dimensions	430(B) x 550(T) x 221(H) mm (5HE)
Housing	19" incl. telescopic rails
Mass	approx. 21 Kg
Standard auxiliary equipment	Delivery includes rails and mounting brackets for 19 "rack mount, switching valve for sample gas / calibration gas, potential free contacts for control of SGG

NH3 Converter Unit CONV-02

Overview

The NH3 converter unit contains two types of catalyst tube: one which converts NH3 into NOx, and one which allows the NOx in the ambient air to pass through directly. The difference between these two values will be measured by the APNA-370 NOx Monitor for indication as NH3 concentration.



Specifications

Principle	NH3 is converted into NOx to measure as NH3
Application	NH3 in ambient air
Flow rate	About 1 l/min. depending on Analyser
Oxidation efficiency	90 % or more
Temperature NH3 converter	820°C
Output	Alarm: Temperature
Ambient temperature	0 - 40°C
Power	230 V AC, 50Hz Power consumption approx. 350 VA Power consumption during warming up approx. 550 VA
Dimensions	19"(W), 560 mm(D), 5HU(H)
Weight	Approx. 20kg