

Model 6042 NH3 Analyzer

Overview

The Model 6042 NT/NH3/NOX Analyzer provides accurate measurement of NT (Total Oxides of Nitrogen), NH3 (Ammonia) and NOX (Oxides of Nitrogen) gas in air or low source levels from industrial processes. The Model 6042 NH3 analyzer uses the same optical bench and electronics as the Model 6040 NO/NO2/NOX Analyzer and will be referred to as the NOX analyzer. The Model 6042 uses the chemiluminescence method for measurement.

An efficient external high temperature NH3/NOX oxidizer/converter thermally converts all oxides of nitrogen and NH3 to NO (Nitric Oxide) gas. NO gas that may be present in the sample gas passes through the NH3/NOX converter unaffected. The NH3/NOX oxidizer/converter is plumbed to the rear of the NOX analyzer. NH3 and NOX gas combined in the sample gas is NT (Total Oxides of Nitrogen) gas. A second low temperature NOX oxidizer/converter, housed in the NOX analyzer, only converts nitrogen dioxide (NO2) gas to NO gas. Again, NO gas that is present in the sample gas passes through the low temperature NOX converter unaffected.

A three-way sample valve in the NOX analyzer is used to sequentially allow sample gas to be pulled through the analyzer detector assembly through each of the two converters. The microprocessor in the NOX analyzer controls the sample process and tracks each sample run. Once each sample run is complete, a calculation is performed to determine the concentration of NT, NH3, and NOX gases, essentially: NT – NOX = NH3 gas.

Standard Features

- ▶ Ranges: 0-50 ppb to 10,000 ppb user set
- ▶ Large color TFT LCD display
- ▶ Various user interface options including touch screen, front panel keypad, external keyboard and mouse
- ▶ Menu driven software
- ▶ Ethernet, USB and RS-232/485 ports
- ▶ Front panel USB connections for peripheral devices and firmware updates
- ▶ Automatic temperature and pressure compensation
- ▶ Comprehensive internal data logging
- ▶ Modbus protocol



SPECIFICATIONS

Specifications subject to change without notice

Ranges	0-50 ppb to 10,000 ppb user set
Noise	<0.0005 ppm
Lower Detectable Limit	< 1 ppb
Zero Drift	<±0.003 ppm per 24 hours
Span Drift	<±1 % URL per 24 hours
Cycle Time	1 sample/second
Precision	<1 % of URL
Linearity	<1 % of URL
Sample Flow Rate	0.4 to 0.8 LPM
Operating Temperature	5° to 40° C
Power Requirements	200 Watts (depends on analyzer)
Voltage Output Ranges	0.1V, 1V, 2V, 5V, 10V, user-selectable
Input/Output Ports	Rear Panel: Ethernet, USB Device, USB Host (2), RS-232/485 (2)
Physical Dimensions (HxWxD)	5.25 in. x 17 in. x 22.5 in. (133 x 432 x 571.5 mm)
Weight	25 lbs. (10.3 kg)
Certification - NOX Bench	US EPA: RFNA-0418-250