

700 LX Series HCLD NOx Analyzer

PROCESS & EMISSIONS GAS PHASE ANALYZER



SPECIFIC FEATURES:

- Measures From 3 ppm up to 3,000 ppm Full Scale
- Three Measurement Modes—NO, NOx and NO/NO2/NOx
- Heated Oven Allows Hot/Wet Sampling
- Auto Calibration and Ranging
- Fast Response Time
- Robust and Rugged Linux Based Operating System
- Electronic Sample and Ozone Flow Control
- Does Not Require Vacuum Pump
- Comprehensive Diagnostics

MAIN APPLICATIONS:

- > Combustion Efficiency
- > Fuel Cell Analysis
- > Turbine/Generator Feedback Control
- > Ammonia Slip
- > Process Chemical Gas Analysis
- > Personnel Safety
- > Pharmaceutical Processes
- > Vehicle Emissions

MAIN OPTIONS:

- Internal Sample Pump
- Internal Calibration Solenoid Valves
- Internal Ozone Pump
- Low Flow
- Low Pressure
- 19 Inch Rack Mount Slides



Conforms to UL STD
61010-1, Certified to
CAN/CSA C22.2 STD
No. 610610.1



U.S. EPA COMPLIANCE
40 CFR PART 1065

ECE 49-06
Compliant

700LX Series HCLD NOx Analyzer

The CAI 700 LX Series HCLD Analyzer utilizes the principle of chemiluminescence for analyzing the NO or NOx concentration within a gaseous sample. In the NO mode, the method is based upon the chemiluminescent reaction between ozone and nitric oxide (NO) yielding nitrogen dioxide (NO₂) and oxygen. This reaction produces light which has intensity proportional to the mass flow rate of NO₂ into the reaction chamber.

The light is measured by means of a photodiode and associated amplification electronics. In the NOx mode, NO plus NO₂ is determined as above, however, the sample is first routed through the Internal NO₂ to NO converter which converts the NO₂ in the sample to NO. The resultant reaction is directly proportional to the total concentration of NOx.

MEASURING RANGES

NO/NOx	0-3 to 0-3,000 ppm	Higher ranges available upon request
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TECHNICAL SPECIFICATIONS

Detector	Photodiode
Response Time	Typically < 3 Seconds to 90% Full Scale
Repeatability	Better than 0.5% of Full Scale
Linearity	Better than 1% of Full Scale
Accuracy	Better than 1% Full Scale
Precision	Better than 0.5% Full Scale
Noise	Less than 0.5% of Full Scale
Zero & Span Drift	Less than 1% of Full Scale per 24 Hours
CO₂ Effect	Less than 2% with 10% CO ₂
H₂O Effect	Less than 1% with 1% H ₂ O
Interference Data:	CO, HCN, SO ₂ , NH ₃ , N ₂ O not Detectable at 100 ppm
Flow Control	Electronic Proportional Pressure Controller.
Sample Flow Rate	Typically 1.5 to 2.5 LPM (0.6 LPM with Low Flow Option)
Converter	Carbon Material @ 205 C; 95 to 100% Efficiency
Ozonator	Ultraviolet Lamp
Air or O₂ Requirements	Dry Air less than 0.01 ppm NOx at 350 cc/Min. @ 25 psig (Dew Point < -10°C)
NO/NOx Control	Manual/Remote/Auto Cycle
Standard Outputs	Voltage, Current, RS-232 AK Protocol, TCP/IP MODBUS and AK Protocol
Assignable Contact Alarms and Statuses	15 Assignable Contact Closures
Digital Diagnostics	Temperature, Pressure, EPC Volt %, and Flow
Display	3" x 5" LED
Sample Temperature	85-100°C
Oven Temperature	85°C Standard, 100°C Upon Request
Ambient Temperature	5 to 40°C
Ambient Humidity	Less than 90% RH (Non-condensing)
Warm Up Time	1 Hour
Fittings	1/4 Inch Tube
Power Requirements	115/230 VAC; 50/60 Hz; 560 Watts
Dimensions (HxWxD)	5.25 H x 19 W x 23 D (In.)
Weight	45 Lbs.