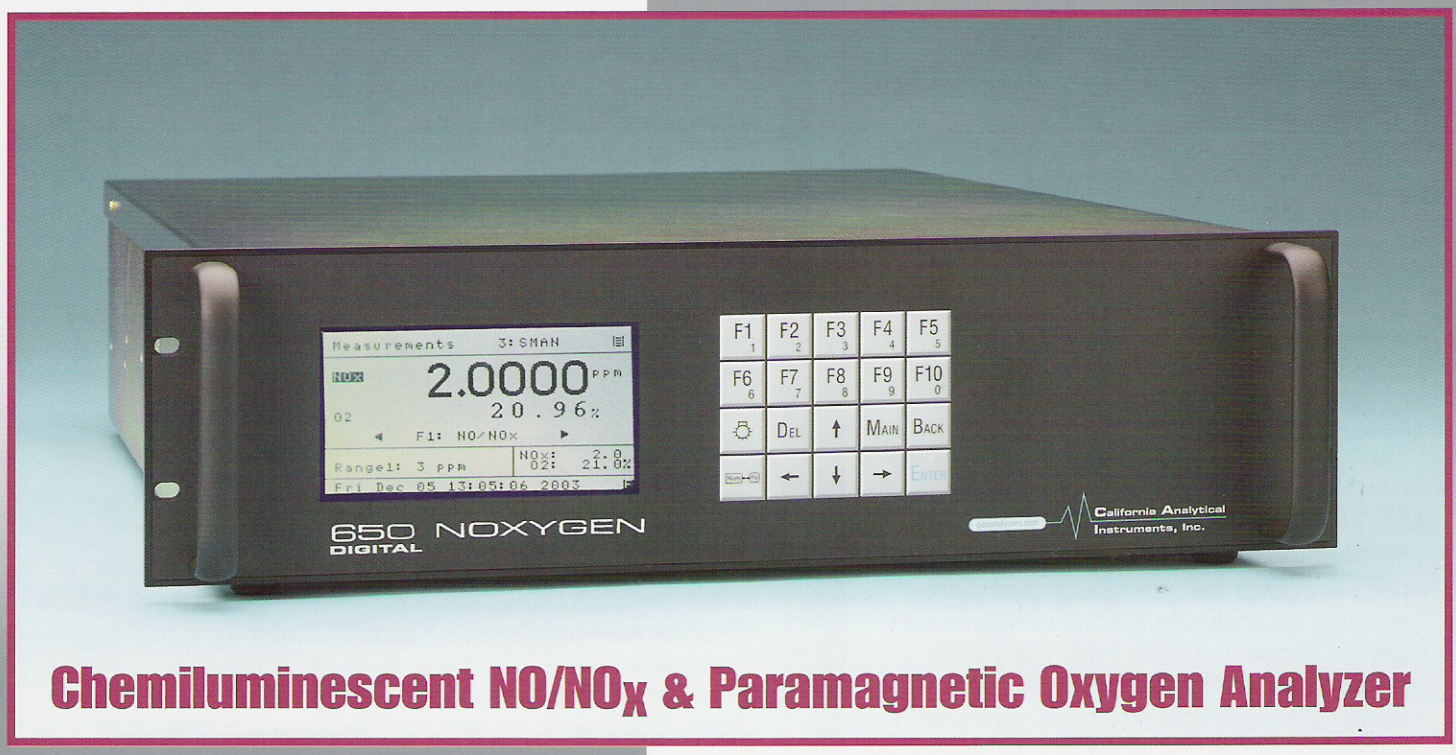
650 DIGITAL NOxygen



Chemiluminescent NO/NOx & Paramagnetic Oxygen Analyzer

APPLICATIONS

- Stack Gases (CEM)
- Scrubber Efficiency
- Turbine/Generator Feedback Control
- Process Chemical Gas Analysis
- Personnel Safety
- Power Plant Stack De-Nitrification
- Vehicle Emissions

OPTIONS

- Internal Zero/Span/Sample Valves
- 19" Rack Mount Slides
- Internal Sample Pump
- High Output Ozone Lamp
- *Other Custom Features available upon request*

FEATURES

- Measures from ppb to 3,000 ppm Full Scale (NO/NOx)
- Four User Definable Ranges from 0-1 ppm to 0-3,000 ppm (NO/NOx)
- Oxygen Range: 0 - 25%
- Fast Response Time
- Auto Ranging
- Auto Calibration
- Output Options: Analog (User Scalable), (RS232) using AK Protocol & TCP/IP
- Displays & Outputs: NO/NOx/NO2 & O2 with Adjustable Time & Hold, Diagnostics, Alarms & Preventative Maintenance
- Remote Monitoring and Control
- Electronic Proportional Pressure Control for Sample & Ozone Flow

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650 CLD
Paramagnetic Analyzer

650 NOxygen

DESCRIPTION

The California Analytical Model 650 CLD $NO/NO_X/O_2$ digital analyzer is designed around a state-of-the-art 16 bit microprocessor, with 16 digital inputs, 16 digital outputs, 16 analog inputs and 4 analog outputs. The analyzer can be manually operated from the keypad or remotely via TCP/IP, RS-232C communications and discrete inputs.

The analyzer display includes screen presentation of all analyzer alarms. Four levels of password protection are provided. For precision measurements, the analyzer's accuracy is increased by entering calibration curve fit polynomials. Automatic calibrations may be activated locally or remotely or at preset times. The analyzer may also display NO, NO_X, NO_2 and O_2 via selectable time and hold commands.

METHOD OF OPERATION

The California Analytical Inc. Model 650 CLD Analyzer utilizes the principle of chemiluminescence for analyzing the NO or NO_X occurs between ozone and nitric oxide (NO) yielding nitrogen dioxide (NO_2*) and oxygen. This reaction produces light which has an intensity proportional to the mass flow rate of NO into the reaction chamber. The light is measured with a photodiode and associated amplification electronics. In the NO_X mode, NO plus NO_2 is determined as above, however, the sample is first routed through the internal NO_2 to NO converter which converts the NO_2 in the sample to NO. The resultant reaction is then directly proportional to the total NO_X concentration. Local operation is simplified using the 20-button alphanumeric keypad with data presented on a backlit LCD display. All local operations may be performed remotely via RS-232 and/or TCP/IP.

METHOD OF OPERATION - O_2

The California Analytical oxygen analyzer section utilizes the paramagnetic method to determine the percent level of oxygen contained in the sample gas. The oxygen level is displayed on the LCD panel in engineering units.

SPECIFICATIONS

Detectors: Chemiluminescence (CLD) Photodiode / Paramagnetic (O_2)
NO/NO_X Ranges: 0-1 to 3,000 ppm NO or NO_X (Four user definable ranges) (Higher ranges available)
Oxygen Range: 0 - 25%
Response Time (IR): T90 <2 Seconds to 60 Seconds Adjustable (Depending on configuration)
Resolution Detection Limit: 30 ppb NO/NO_X (Displays 5 Significant Digits)
Repeatability: Better than 0.5% of Full Scale
Linearity: Better than 1% of Full Scale
Noise: Less than 0.5% of Full Scale
Zero & Span Drift: Less than 1% of Full Scale per 24 Hours
Zero & Span Adjustment: Via front panel, TCP/IP or RS-232
CO_2 Effect: Less than 0.5% with 10% CO_2
Converter: Carbon Material @ 205°C; 98 to 100% Efficiency
Ozonizer: Ultraviolet Lamp
Air or O_2 Requirements: Dry Air less than 1 ppm NO_X at 250 cc/Min. @ 25 PSIG
NO/NO_X Control: Manual/Remote/Auto Cycle (Remote NO_X mode by dry contact closure)
Outputs available: TCP/IP, RS232, Four Scalable Analog 0-10V / 4-20mA (Allows Offset & Expandable Range DC Analog Outputs)
Discrete Alarms: General Fault/TTL Logic (Ground True)
Calibration Failure/ TTL Logic (Ground True)
High Concentration (2 each)/TTL Logic (Ground True)
Digital Diagnostics: Converter Temperature, Cell Temperature, Photodiode Temperature, Air Pressure, Flow Rate & EPC Control Voltage, Sample Pressure, Flow Rate & EPC Control Voltage
Keypad Displays: Factory Settings , TCP/IP address, Passwords(4), Scalable Analog Output Voltages, Full Scale Range Select, Auto Cal Times
Special Features: Calculated NO_2 values from empirically derived NO_X converter efficiencies, Data Streaming, Auto Ranging, Auto Calibration (Adjustable through internal clock)
Display: Back lit LCD
Sample Temperature: 50°C, Non-condensing
Chamber Temperature: 85°C
Ambient Temperature: 5 to 45°C
Ambient Humidity: Less than 90% RH(Non-condensing)
Fittings: 1/4 inch Tube
Power Requirements: 115/230 (±10%) VAC; 50/60Hz, 560 Watts
Dimensions: 5-1/4"H x 19"W x 23"D
Weight: 48 lbs.

Specifications subject to change without notice.

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