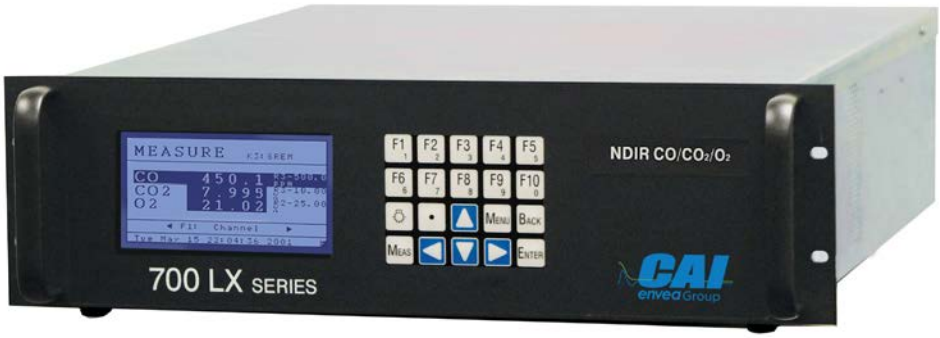
700 LX NDIR/O2 Analyzer

700 LX Series NDIR

NON-DISPERSIVE INFRARED (NDIR) ANALYZERS



CAI ENVEA Group's 700 LX NDIR O2 Analyzer measurements are based on the infrared absorption characteristics of gases. Using a single infrared beam to measure gas concentrations, they deliver highly stable and reliable results.

SPECIFIC FEATURES:

- Measures IR From Low ppm up to 100% Full Scale and Oxygen from 0-1% up to 0-100%
- Multi-Component—Up to Three IR Channels or Two IR Channels Plus Oxygen
- Auto Calibration and Ranging
- Fast Response Time
- Temperature and Pressure Compensation
- Robust and Rugged Linux based operating system
- Remote operation and control by external device via RS-232, TCP/IP, or Digital Inputs
- Comprehensive Diagnostics
- Standard Outputs: Voltage, Current, RS-232 AK Protocols,TCP/IP, MODBUS or AK Protocols

MAIN OPTIONS:

- Internal Sample Pump
- Sample Flow Control
- Multiple Sample Streams
- 19 inch Rack Mount Slides

MAIN APPLICATIONS:

- Combustion Efficiency
- Process Gas Analysis
- Fuel Cell Analysis
- Turbine/Generator Feedback Control
- Personnel Safety
- Vehicle Emissions

CE

ETL LISTED

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

700 LX Series NDIR/O_2 Analyzer

The CAI ENVEA Group's 700 LX Series NDIR O_2 analyzer is based on the infrared absorption characteristics of gases. Using a single infrared beam to measure gas concentrations, this analyzer produces highly stable and reliable results. A single infrared light beam is modulated by a chopper system and passed through a sample cell of predetermined length containing the gas sample to be analyzed. As the beam passes through the cell, the sample gas absorbs some of its energy.

The oxygen analyzer section utilizes either the paramagnetic or fuel cell method to determine the level of oxygen in the sample gas.

The attenuated beam (transmittance) emerges from the cell and is introduced to the front chamber of a two-chamber infrared microflow detector. The detector is filled with the gas component of interest and consequently the beam experiences further energy absorption. This absorption process increases the pressure in both of the chambers. The differential pressure between the front and rear chambers of the detector causes a slight gas flow between the two chambers. This flow is detected by a micro-flow sensor and is converted into an output signal.

The oxygen level is displayed in percent concentration.

MEASURING RANGES

CO / CO_2 / CH_4 / SO_2 / NO	NO is available with an external NOx converter
O_2 Ranges	0-1% (Paramagnetic Only) up to 0-100% O2 Full Scale, Four Definable Ranges

TECHNICAL SPECIFICATIONS

IR Analysis Method	Non-Dispersive Infrared (NDIR)
Detector Type	Microflow
NDIR Ranges	PPM to percent
Range Ratio	10:1
Response Time Fastest (IR)	90% of Full Scale in 2 Seconds (Depending on Cell Length, Flow Rate, and Time Constant) Contact Factory for Specific Configuration Response Times
O2 Response Time	T90—Typically 5 Seconds Paramagnetic, 16 Seconds Fuel Cell
IR Sample Cell	Stainless Steel
Resolution	Typically 0.1% of Full Scale
Repeatability	Better than 0.5% of Full Scale
Linearity	Better than 1.0% of Full Scale of Factory Calibrated Ranges)
Accuracy	Typically better than 1% Full Scale Range
Precision	Better than 1% Full Scale
Noise	Less than 1% of Full scale of Factory Calibrated Ranges
Zero & Span Drift	Less than 1% of Full Scale per 24 Hours
Zero & Span Adjustment	Via front panel, TCP/IP, RS-232 or Digital Input
Sample Flow Rate	0.5 to 2.0 LPM
Oxygen Analysis Method	Paramagnetic or Fuel Cell)
Standard Outputs	Voltage or Current, RS232 Protocol, TCP/IP Modbus, and AK Protocols
Discrete Control	Remote/Local Control, Range Change, Range Sense Mode (Ground True)
Assignable Contact Alarms and statuses (Adjustable Local and Remote)	General Fault, Calibration Failure, and Concentration (2 Each)
Digital Diagnostics	Temperature, Pressure, Volts, and Flow
Special Features	Auto Ranging, Data Streaming, Auto Calibration (adjustable through internal clock)
Display	3" x 5" LED LCD
Sample Temperature	Up to 50° C, (Non-condensing)
Ambient Temperature	5 to 40° C
Fittings	1/4 inch Tube
Power Requirements	115/230 (+/- 10%) VAC; 50/60Hz, 300 watts maximum
Dimensions (HxWxD)	5.25x19x23 in. (134 x 483 x 584 mm)
Weight	30-45 lbs. (Depending on configuration) (13.6 x 20 kg)

CAI ENVEA Group
1312 West Grove Avenue
Orange, CA 92865 US
☎ 714-974-5560
✉ SO.CAI@envea.global

Visit us on:
www.cai.envea.global