



700 SERIES

700-GLEL Fast Response LEL Analyzer



FEATURES

- Measures 0~100%LEL Full Scale
- Auto Calibration and Back Flush
- Fast Response Time
- Electronic Flow Control
- Heated Sample System
- Automatic Fuel/Air Shut-off
- Comprehensive Diagnostics
- Output Options: Voltage, Current, RS-232, TCP/IP, MODBUS

- CE Mark and ETL Listed—
Conforms to UL STD 61010-1,
Certified to CAN/CSA C22.2 STD
No. 610610.1
- Meets 1065 Requirements
- Certified to SIL2

APPLICATIONS

- RTO/RCO Feed Gas Monitoring
- Combustion Safety Monitoring
- Turbine/Generator Feedback Control
- Process Chemical Gas Analysis
- Personnel Safety

OPTIONS

- Internal Heated Sample Pump
- Internal Zero and Span Solenoid Valves
- Wall Mounted

700 Series Fast Response LEL Analyzer

HFID

DESCRIPTION

The California Analytical Instruments' 700-GLEL Explosive limit level Analyzer is designed to continuously measure explosive limit level within a gaseous sample. The analyzer exhibits superior sensitivity and response time.

The 700-GLEL Gas Analyzer utilizes the principle of Flame Ionization Detection (FID) to determine the Flammable gas within a gaseous sample. The 700-GLEL analyzer has a heated oven (140°C) which contains a burner and an optional heated pump. The small flame of the burner is elevated and sustained by the regulated flows of air and pure hydrogen. The split ring detector contains 2 electrodes. One electrode is negatively polarized using a precision power supply and the other electrode, known as the "collector" is connected to a high impedance, low noise electronic amplifier. The two electrodes establish an electrostatic field. When a gaseous sample is introduced to the burner, it is ionized in the flame and the electrostatic field causes the charged particles (ions) to migrate to their respective electrodes. The migration creates a small current between the electrodes. This current is measured by the precision electrometer amplifier and is directly proportional to the hydrocarbon concentration of the sample. The LEL is calculated based on the hydrocarbon concentration and flame temperature.

SPECIFICATIONS

Detector: Flame Ionization Detection
Ranges: 0-100%LEL
Response Time: 90% Full Scale in 1 Seconds
Resolution Detection Limit: 0.10 ppm Carbon
Repeatability: Better than 1% of Full Scale
Linearity: Better than 1% of Full Scale
Zero Drift: Less than 1% of Full Scale per year
Span Drift: Less than 5% of Full Scale per year
Flow Control: Electronic Proportional Pressure Controller
Sample Flow Rate: Typically 2.0 LPM
(Consult factory for other flow rates)
Fuel Requirements: 100% H₂ (40cc/min)
Fuel Inlet Pressure: 25 psig
Air Requirements: Less than 1ppm Carbon purified or Synthetic air (220cc/min for H₂/He; 300 cc/min for H₂)
Air Inlet Pressure: 25 psig
Fuel & Air Control: Electronic Proportional Pressure Controller
Readout: As ppm C₁ and %LEL
Analog Outputs: Voltage or Current
Communications: RS232, TCP/IP and Modbus
Discrete Alarms: General Fault/ TTL Logic (Ground True)
Calibration Failure/ TTL Logic (Ground True)
High Concentration (2 each)/ TTL Logic (Ground True)
Diagnostics: Oven Temperature, Burner Temperature, Sample/Fuel/Air Pressures, Flow Rates And EPC Control Voltages
Keypad Displays: Factory Settings, TCP/IP Address, Passwords (4), Scalable Analog Output Voltages, Full Scale Range Select, Auto Cal Times
Special Features: Auto Ranging, Auto Calibration (adjustable through internal clock)
Ignition: Local, Remote or Automatic
Display: 3" x 5" Back lit LCD
Sample Temperature: Up to 191°C, Non-condensing (HFID)
Oven Temperature: 190/140°C HFID
Ambient Temperature: -20 to 60°C
Ambient Humidity: Less than 90% RH (Non-condensing)
Warm-Up Time: 1 Hour (Typical)
Fittings: 1/4 Inch Tube
Power Requirements: 115/230 (±10%) VAC; 50/60 Hz, 750 Watts max.
Dimensions: 5¼ H x 19 W x 23 D (Inches)
Weight: 50 lbs.

Specifications subject to change without notice.



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