

BA-2012 Gas Analyzer

BA-2012 Features:

- A gas analyzer in a black box
- Includes a pneumatic package
- Operated and controlled through your PC with InfraView Software



EASILY BUILD THIS COMPACT GAS ANALYZER INTO MULTIPLE APPLICATIONS

The BA-2012 is the first gas-analyzer-in-a-box from Infrared Industries. It includes an Infrared Industries NDIR optical bench and pneumatics package—pump to draw in the sample and filter to clean it—and is operated and controlled through the use of InfraView Software on your computer. Its compact size offers tremendous flexibility and opportunity to include a gas analyzer in countless applications.

The BA-2012 includes the Infrared Industries IR-510 NDIR Optical Bench, which is fast responding, highly accurate, and highly reliable. It offers great design flexibility due to its small size and low power consumption. The enhanced optics and electronics dramatically reduce zero drift after the initial warm-up period. Temperature and pressure compensation eliminate the major causes of span drift found in many other NDIR instruments.

The software and communications protocol are designed to make system integration simple and fast. The command set has the flexibility to provide a variety of output configurations including pneumatic controls, printers, measurement data, and selected displays. The system monitors and corrects for critical operating parameters that affect performance and provides real-time status of the overall integrity and quality of the gas measurement.

The BA-2012 interfaces to a PC for complete control, display, and graphing capability using InfraView Software. Recording of the output data within the bench itself allows the measurements to be replayed and analyzed at a later time.

The BA-2012 also has a protected detector for accuracy and long life, integrated DC pump and solenoid drivers, graphic LCD driver, quick-clean sample cell design, and is DC powered and portable.

Product Features/Benefits Measurement of Gases

Measure up to three gases—chosen from over 270 different gases—simultaneously with NDIR. Two auxiliary chem cell sensor inputs are also available. These can be customized by us at the factory.

Solid State Detector

Long life, rugged, insensitive to vibration. Low replacement cost.

Digitally Modulated

Solid state digitally modulated IR source utilizing no moving parts.

Imaging Optics

Eliminates the need for costly and fragile gold foil linings in the sample cells, reducing maintenance cost.

Solid State Electronics

Synchronous demodulation and automatic gain control minimize the influences of temperature and line voltage variations.

Easy Calibration

Semi-automated, requiring no tool or adjustments to make.

InfraView Software

InfraView Software is bundled with the BA-2012. It is a Windows-based program that allows remote control and display of up to eight different Infrared Industries gas analyzers or benches from one PC console. In addition to displaying current and logged results as raw data, the program offers full-featured graphical abilities.

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APPLICATIONS

- Combustion Analysis and Efficiency
- Burners and Boilers
- Commercial Ovens and Stove Emissions
- Controlled Atmospheres
- Greenhouse Gas Monitoring
- Landfill BTU Calculations
- Well Logging (CH₄, C₂H₆)
- Automotive Emissions Testing and Motorcycle Tuning
- Stack Gas Monitoring
- Safety Monitoring
- Food Processing
- CO₂ and O₂ Based Ventilation
- Hydrocarbon Monitoring
- Respiration Studies
- Hazardous Gas Detection
- Process Monitoring
- LEL Monitoring – Fuel Tanks and Gas Lines
- Chemical Plant Monitoring

SPECIFICATIONS

Output Data Interface

Digital: RS-232 (included)
Analog: 1, 5, or 10 VDC; 4-20 mA (optional module)
All available in playback mode

Accuracy

+ or - 1% of full scale

Repeatability

+ or - 1% of full scale

Zero Drift

+ or - 1% of full scale per 24 hours

Span Drift

+ or - 1% of full scale per 24 hours

Linearity

+ or - 0.5% of full scale fitted to theoretical curve

Noise Level

Less than 1% of full scale

Warm-Up

Ready for use in less than 1 minute; fully stabilized in 5 minutes

Response Time

Less than 5 seconds

Temperature Range

35 to 110 degrees F (2 to 46 degrees C)

Ambient Humidity

Up to 95% relative humidity (non-condensing)

Power

Internal Power: Rechargeable lithium ion battery pack (optional)
External Power: 11.5-16 VDC, less than 1A
Power Consumption: 0.9 watts average

Dimensions

6.25" H x 3.25" W x 1.5" D

Weight

1.5 pounds (680 grams)

Compliance

Meets or exceeds EN 14624

Warranty

12 months standard; extended warranty available

STANDARD GASES MEASURED UNDER NDIR

Ammonia	Freon 11
Benzene	Freon 114
Butane	Hexane
Butadiene	Hydrogen Sulfide
Carbon Monoxide	Methane
Carbon Dioxide	Nitric Oxide
Carbonyl Sulfide	Nitrogen Dioxide
Dimethylethylamine	Nitrous Oxide
Ethane	Propane
Ethylene	Propylene
Ethylene Oxide	Sulphur Dioxide
Ethyl Alcohol (Ethanol)	Water Vapor
Other gases under chem cell available	

To determine compatibility of multiple gases in one multi-gas bench, contact an Infrared Industries applications engineer.