

## FGA4000XDS Gas Analyzer

Accurate • Portable • Fast • Dynamic

### FGA4000XDS Features:

- Quick 2 second sampling rate
- Six large LED displays
- Measures 5 gases: HC, CO, CO<sub>2</sub>, O<sub>2</sub>, and NOX\*
- Measures RPM\* for 2 or 4 stroke engines
- Calculates AFR and Lambda
- Built-in real-time clock and data recorder
- Internal/External printer

\*Optional Equipment



### ALL-IN-ONE FAST PERFORMING DIAGNOSTIC TOOL

When you need a reliable gas analyzer that can accurately speed up your emissions, tune-ups, and diagnostics testing, the FGA4000XDS is the perfect answer. By offering immediate results in seconds, the FGA4000XDS Gas Analyzer is the **fastest machine** on the market. Certified to BAR and OIML standards, this gas analyzer provides a portable, accurate, and quick solution for every tune-up and automotive mechanic shop.

The FGA4000XDS measures up to five gases, including Hydrocarbons (HC), Carbon Monoxide (CO), Carbon Dioxide (CO<sub>2</sub>), Oxygen (O<sub>2</sub>), and optionally Oxides of Nitrogen (NOX). The analyzer's six super-bright, oversized LED displays make it easy to see and read. The FGA4000XDS can be read from 25 feet away in both dark and sunlit environments. The features in the FGA4000XDS allow you to diagnose or tune virtually any fuel-related issue quickly and accurately, maximizing the efficiency of your technician and minimizing your customer's down-time.

The FGA4000XDS instantaneously displays gas readings and calculates Air to Fuel Ratio (AFR), Lambda ( $\lambda$ ), and Grams per Mile (GPM) or Grams per Kilometer (GPK) in real time. With the optional tachometer attached, engine speeds of up to 30,000 RPM can be read and recorded. The optional printer allows shop owners to print their customer's test results or diagnostic findings onto a customizable print-out. The print-out displays your company's name, information, date, time, and all of the gas readings, providing a permanent record for both you and your customer.

For those shops providing performance tuning, an optional analog output allows the connection of a dynamometer, chart recorder, or data acquisition console to conveniently display all essential information on to a single monitor.

The FGA4000XDS can measure exhaust gases from two tail pipes and gives you the average reading, or can set up an exhaust dilution. This feature will not only warn you when there is a leak in your exhaust system, it will also alert you when the exhaust probe is not fully inserted in the tailpipe.

The FGA4000XDS is portable. Plug it into a cigarette lighter or accessory jack and view real-world engine performance and driving conditions on a road test. For extended in-shop use, the analyzer can be plugged into a standard 110 or 230 VAC. You can use the internal record feature to store all eight values and download the information to a PC when you return or replay the information directly to the analyzer display. Instead of spending hundreds or thousands of dollars for a dynamometer or test cell, you can now achieve real-world results right from the driver's seat of the car.

The FGA4000XDS is a cost-effective, all-in-one performer, which makes it the perfect trouble-shooting tool for your diagnostic needs. Automotive, motorcycle, or any exhaust emissions are ideal applications where detection of up to 5 gases is required.

Infrared Industries was the first company to develop a gas analyzer for automotive use. This patented revolutionary analyzer was used exclusively by Sun, Bear, Allen Test, and other companies throughout the 1970s and 1980s. With over 40 years experience in developing and manufacturing gas analyzers for the industrial, automotive, petroleum, utilities, analytic, and environmental industries, you can be assured that Infrared Industries has the knowledge and know-how to produce the finest automotive analyzer available today.

# FGA4000XDS Gas Analyzer



The FGA4000XDS Gas Analyzer features a dual-filtering system that filters both heavy and light contaminants and water, allowing the analyzer to perform well in the harshest environments.

## FGA4000XDS Highlights:

- Dual exhaust measurement
- Exhaust dilution warning
- Auto-zero for maintaining high accuracy
- Flow indicator
- Pump switch for gas purging
- Custom print-outs with user-selectable header text (optional)

## SPECIFICATIONS

### Gases and Ranges (within 1% full-scale accuracy)

|                 |                         |   |
|-----------------|-------------------------|---|
| HC              | Hydrocarbons (n-Hexane) | 0-10,000 PPM                                    |
| CO              | Carbon Monoxide         | 0-10%   |
| CO <sub>2</sub> | Carbon Dioxide          | 0-20%   |
| O <sub>2</sub>  | Oxygen                  | 0-25%   |
| NO <sub>X</sub> | Oxides of Nitrogen      | 1-5,000 PPM                                     |
| TACH            | Tachometer              | 0-30,000 RPM<br>(Displayed as kRPM = 1,000 RPM) |
| AFR             | Air to Fuel Ratio       | 0-50%   |
| λ               | Lambda                  | 0-5   |
| GPM             | Grams per Mile          |   |
| GPK             | Grams per Kilometer     |   |

### Display

Six windows with 0.8" super-bright 4-digit LEDs  
Displays HC, CO, CO<sub>2</sub>, O<sub>2</sub>, NO<sub>X</sub>, AFR, λ, kRPM, and GPM user-selectable

### Principle

HC, CO, CO<sub>2</sub> – Non-dispersive Infrared (NDIR)  
O<sub>2</sub>, NO<sub>X</sub> – Electrochemical Cell

### Accuracy

BAR-90 certified  
Meets BAR-97 performance specifications  
Canada's AirCare Certified  
Meets or exceeds OIML Class I Gas standards

### Warm-Up Time

Five minutes or less

### AC Power

110 VAC / 220 VAC +/- 10%, 50/60 Hz  
0.5A / 0.3A max  
AC voltage range 90V - 240V

### DC Power

10 VDC - 16 VDC  
1.5A nominal, 3.5A max

### Weight

9 Lbs. (4.1 kg)

### Size (W x L x D)

13.2" x 10.8" x 6.5"  
33.5 cm x 27.4 cm x 16.5 cm

### Temperature

2°C to 45°C (35.6°F to 113°F) Operating  
-40°C to 75°C (-40°F to 167°F) Storage

### Interface

Eight analog outputs 0-1 VDC, 0-5 VDC, or 0-10 VDC – Specify when ordering  
RS232 with custom protocol  
DLL provided upon request

### Warranty

One year standard  
Extended warranty available

### Accessories

#### Included

Oxygen sensor  
Flexible probe  
25' Sampling hose  
AC power adapter  
Owner's Manual  
Quick Reference Guide

#### Optional

Internal/External printer  
NO<sub>X</sub> sensor  
Inductive tachometer pick-up  
12 VDC cable  
2-shelf rolling cart

### Motorcycle Fittings

2, 4, and 6 cylinder manifolds  
6mm fitting for Honda, Yamaha, or Kawasaki  
10mm fitting for Ducati

### Optional Software

Dynamic Link Library (DLL) for custom software development  
Menus in plain English  
Easy-to-use, menu-driven, Windows-based software