

# PORTABLE MULTI GAS ANALYZER

## PMGA - 3152

A COMPLETE, VERSATILE, MULTI-FUNCTIONAL PORTABLE GAS ANALYSER FOR INSTANT AND ACCURATE DATA



WITH OPTIONS TO USE PC INTERFACE, DATA LOGGER, INTEGRAL PRINTER, DATE & TIME IDEAL FOR USE IN LABORATORY AND PLANT

EPC / PRODUCTS / APPLICATION / SOFTWARE / ACCESSORIES / CONSUMABLES / SERVICES

**Analytical Technologies Limited**

An ISO 9001 Certified Company

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## ►► SAMPLE FEATURES

- Portable, compact and rugged.
- Complete Automatic Operation.
- Backlit Graphic LCD displays messages and values through the operation of the analyzer.
- Self check facility and a special software ensures accurate analysis of data.
- Standard Fuels with their parameters are pre-programmed.
- Battery operating period of 8 hours.
- Inbuilt Buzzer announces various stages of operation.
- A mere Six key to operate the complete instrument.
- Visual alarms for Low Bat, Flow Fault and Sensor Fault.
- Automatic sampling & Analysis for specified periods at preset intervals.
- Completely unattended.
- Compact, Portable construction and simplicity of operation makes ATL Portable Gas Analyser a valuable aid for insitute use in constantly changing measurement sites.  
Its versatile modular design permits configuration and upgradation to suit specific needs. You determine the number of Sensors for your instrument from should your analyzer have a built-in printer or Output or a smoke test probe so you pay only for what you need.
- The highly upgradable **PMGA-3152** model can be AC Powered and/or Battery operated. It may include a chargeable battery, battery charger, Sampling Probe with condensate trap and an inline Micro Filter and an inbuilt Sampling Pump. It can be built to include upto 8 Nos. of Gas Sensors and Temperature Sensor, Draft/ Pressure besides the calculated parameters and have options of :
  1. Data Logger
  2. Integral Printer
  3. Output
  4. Date & Time
  5. Facility for Automatic analysis for specified periods at preset intervals.
- Self check of components and functions by special software ensures perfect functioning of the unit, thereby accurate analysis data. Any unacceptable deviation from the standard stored values is displayed as an indication “ FAULT”.
- Instant Printout (with Time and Date) confirms the displayed readings that have been measured and calculated at the point of test. The instrument may also be instructed to sample and analyze for specified periods at preset intervals completely unattended.
- Software Package to store and analyze the data in various manners with PC XT, AT, 386, 486.

## ►► SAMPLE TREATMENT

- A condensate & Dust Trap & a low porosity in line filter to condition the sample.
- Time Tested, Sturdy, High Suction inbuilt Pump.
- A supervisory Electronic Circuit to continuously monitor the pump against failures.
- Proven Sensor Technology : Special purpose long life Sensors with cross interference filters to achieve high accuracy. Oxygen Sensor guaranteed for 4 years and other Electrochemical Sensor for 2 years
- Volumetric (PPM), Quantitative (mg/m<sup>3</sup>) analysis of desired parameters with print-outs confirming displayed readings.
- Calculated Values for NOX, Fuel Efficiency, Lambda, CO<sub>2</sub> & Diff. Temp.
- Smoke Measurement - Analyzer samples a pre-calibrated volume of Flue Gas across a filter which can then be compared with the Bachrach Scal o determine the smoke density number.
- Customized Versions - Heated & other special probes and accessories available to measure and match customers special requirements.

## ►► DATA TREATMENT

- Complete & Instant Analysis of Data : The processor digitally processes, displays and logs the data instantly
- Simultaneous display of measured parameters
- A real time clock and memory to store data of analysis
- Automatic Sampling and analysis for specified period at preset intervals.
- Digital interface RS 232.
- Date and time stamp.
- Data can be printed on demand or transmitted through aseria I interface to an external personal computer for further analysis.
- Choice of printout of last sample or all samples stored.
- A normal Paper Impact type Printer to document the analysis results and time reference. Continuous and stable Automatic Display of concentrations ensures accuracy and stability.
- Instant & easy to read display of combustion, Emission or Process Analysis Data.
- Ambient and Emissions Monit
- Stack or Exhaust Gas Analysis in Boiler
- Power & Industrial Plants
- Process Analysis
- Fuel Efficiency
- Internal Combustion Engines
- Furnaces
- Quality Control Labs



## MEASURING RANGES

Sr No.	PARAMETERS	SENSORS	RANGES	RESOLUTION	ACCURACY
1.	O <sub>2</sub>	Electrochemical / Paramagnetic	a) 0 - 2 % b) 25 % c) 100 %	0.1 %	0.5 %
2.	CO	Electrochemical Infrared	0 - 200, 4000 PPM, 10 % 5000 PPM, 5 %, 20 %, 50 %, 100 %	1 PPM, 0.1 %	± 2 %
3.	CO Sensor	Electrochemical	a) 0 - 200, b) 4000 PPM	1 PPM	± 2 %
4.	CO <sub>2</sub>	Calculated	0 - 25 %, 99.9 %	0.1 %	
5.	CO <sub>2</sub>	Thermal Conductivity	0 - 99.9 %	0.1 %	± 2 %
		Infrared	1000 PPM, 2000 PPM, 5000 PPM, 1 %, 5%, 25%, 100 %		
6.	NO	Electrochemical	0 - 1999, 5000 PPM	1 PPM	± 2 %
		Infrared	3000 PPM 1%, 5%, 25%, 100%		
7.	NO <sub>2</sub>	Electrochemical	0 - 100, 1000 PPM	1 PPM	± 2 %
8.	NOX	Electrochemical / Infrared	0 - 1999, 5000 PPM	1 PPM	± 2 %
9.	SO <sub>2</sub>	Electrochemical	0 - 20, 1999 PPM	1 PPM	± 2 %
		Infrared	2000 PPM, 8000 PPM, 5 %, 30 %, 100 %		
10.	CxHx	Catalytic pellistor	0 - 100 % LEL 0	0.1 % 0.01	± 2 %
		Thermal Conductive Infrared	- 30 % & 0 - 100 % 100 %	0.1 %	

	CH <sub>4</sub>	Infrared	100%		
11.	Excess Air (A)	Calculated	1 to INFINITY	0.01 m/s	
12.	Temp. Air (Ambient)	Semi conductor	0 -99 °C	1°C	0.5 %
13.	Temp. Gas	Tc. K.	0 - 1600 °C	1°C	0.25 %
14.	Temp. Differential	Calculated	0 - 1300 °C	1°C	
15.	Pressure / Draft / DIFF	Bridge	+/- 20 WG	0.01	2 %
16.	Gas Velocity	Pitot Tube	0 - 99.9 m/s	0.1 m/s	
17.	Efficiency / Stack Los	Calculated	1 - 99.9 %	0.1 %	
18.	Smoke	Paper Filter Method	0 - 9 Bachrach Scale	0.1 %	
19.	H <sub>2</sub> S	Electrochemical	0 - 500 PPM	1 PPM	± 2 %
20.	CL <sub>2</sub> , BR <sub>2</sub> , F <sub>2</sub>	Electrochemical	0 - 200 PPM	1 PPM	± 2 %
21.	HCL/ HBr/ HF/ HCN	Electrochemical	0 - 100 PPM	0.1 PPM	± 2 %
22.	H <sub>2</sub>	Electrochemical	0 - 2000 PPM	1 PPM	± 4 %
	H <sub>2</sub>	Catalytic/ Combustion	0 - 5 %	0.1%	± 2 %
		Thermal Conductive	0 - 100 %		
23.	Toxic (Organics)	Solid State/ Electrochemical/ PID	0 - 10, 2000 PPM	1 PPM	± 2 %
24.	NH <sub>3</sub>	Electrochemical	0 - 100, 1000 PPM	1 PPM	± 2 %
25.	Ethylene Oxide	Electrochemical	0 - 100 PPM	0.1 PPM	± 2 %

26.	Phosphine / Arsi- ne Phosgene	Electrochemical Electrochemical	0 - 1 PPM 0 - 5 PPM	0.01 PPM 1 PPM	± 2 %
27.	VOC	PID/Solid state	0 - 100 / 2000 PPM	1 PPM	+/- 2 %
28.	C <sub>2</sub> H <sub>2</sub> Acelelen	Infrared	0 - 20 VOL % 0-1000 PPM	1 PPM	± 2 %
29.	C <sub>2</sub> H <sub>4</sub> Ethelyne	Infrared	0 - 20 VOL % 0-1000 PPM	1 PPM	± 2 %
30.	Propane	Infrared	0 - 20 VOL % 0-1000 PPM	1 PPM	± 2 %
31.	N <sub>2</sub> O	NDIR	0 - 1000 PPM	1 PPM	± 2 %
32.	H <sub>2</sub> O	Capacitive	0 - 100 % RA	0.1 PPM	± 2 %

## ►► SPECIFICATIONS

Display	Graphic LCD
Sampling	Inbuilt Sampling Pump
Zero Calibration	Automatic at instrument start up with fresh air sample
SPAN Calibration	Automatic span areas 1) Fresh air for oxygen
Response Time	30 Seconds at 95% variation.
Power Supply	110 V or 220 V & AC Ni-cad battery pack with integral charger.
Working Temperature	-5 to 55°C
Storage Temperature	-20 to 50°C
Probe Length	SS 600 mm length standard (900 & 1200 mm optional)
Probe Diameter	8mm (12mm optional)
Connection Hose (Probe Unit)	2.0 meters, special lengths on demand.
Battery Life	6 Hours continuous operation.
Data Memory	500 readings for each gases.

<b>Printer</b>	Impact type 24 columns.
<b>Printing Speed</b>	0.75 lines / seconds.
<b>Alarms</b>	Visual and audible, 4 Alarms
<b>Digital Interface</b>	RS 232
<b>Case : Aluminum</b>	Aluminum
<b>External Dimensions</b>	280 x 210 x 185 mm
<b>Weight (Gross)</b>	< 5 kg. with batteries (approximately)
<b>Interference Filters</b>	Provided with Sensors
<b>Line Filter</b>	Replaceable 5 microns
<b>Accessories</b>	Moisture Trap
<b>Pre-programmed Fuels</b>	Light & Heavy Diesel Oil, Gas, Coal, Furnace Oil, Wood Special Fuels - preprogrammed on request.

NO OF SENSORS	NO OF PARAMETER	EXTRA
		1. With Smoke Measurement 2. Condensate Trape

TYPE OF PROBES	POWER	CONFIGURATION
0 - NIL	1. 220 V AC	0. BASIC UNIT ONLY
1 - 600 mmt	2. 110 V AC	1. PRINTER + DATA LOGGER
2 - 900 mmt	3. CHARGEABLE BATTERIES	2. DATA LOGGER + RS 232
3 - 1200 mmt	4. 220 V AC & CHARGE-ABLE BATTERIES	3. PRINTER + DATA LOGGER + RS 232
4 - 1000 °C PROBE	5. 110 V AC & CHARGE-ABLE BATTERIES	4. PRINTER
5 - PILOT TUBE		



## ►► Regulatory compliances



## ►► Corporate Social Responsibility

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# Analytical Foundation

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3. ANALYTICAL FOUNDATION aims to DETOXYFY human minds, souls and body by means of Yoga, Meditation, Ayurveda, Health Care, Awards, Media, Events, Camps etc.

## ►► Reach us @



 **Analytical**<sup>®</sup>  
Technologies Limited

HPLC Solutions   MultipleLabs   Analytical Bio-Med   Analytical Distributors   Analytical Foundation (Trust)

**Corporate & Regd. Office:**  
Analytical House, # E67 & E68,  
Ravi Park, Vasna Road, Baroda,  
Gujarat 390 015. INDIA

T: +91 265 2253620  
+91 265 2252839  
+91 265 2252370  
F: +91 265 2254395

E: [info@hplctechnologies.com](mailto:info@hplctechnologies.com)  
[info@multiplelabs.com](mailto:info@multiplelabs.com)  
[info@analyticalgroup.net](mailto:info@analyticalgroup.net)  
[info@analyticalbiomed.com](mailto:info@analyticalbiomed.com)

W: [www.ais-india.com](http://www.ais-india.com)  
[www.analyticalgroup.net](http://www.analyticalgroup.net)  
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