

PORTABLE GAS ANALYZER

**FOR SINGLE OR MULTI GAS ANALYSIS
THE MOST POWERFUL, COMPACT, RUGGED & INTELLIGENT INSTRUMENT**



PA - 960

ITS SIMPLE AUTOMATIC OPERATION, CONTINUOUS, MEASUREMENT AND DISPLAY OF GAS CONCENTRATION AND OTHER PARAMETERS MAKES IT A VALUABLE AID FOR ANALYSIS IN NUMEROUS APPLICATION

APPLICATIONS

- In Quality Control Labs
- Process Analysis
- Stack Gas Analysis
- Fuel Efficiency Analysis
- Furnaces
- Underground Mines
- Ambient & Emission Monitoring
- Internal Combustible Engines
- Burner Performance Monitoring
- Boiler Corrosion
- Excess Air Measurement
- Atmosphere Monitoring
- Burner Flame Control

INDUSTRIES

- Power Generation
- Combined Cycle Gas Turbine Generators
- Petrochemicals
- Chemicals
- Process Industries
- Pharmaceuticals
- Incineration
- Cement
- Glass
- Steel
- Pulp and Paper
- Road Tunnels
- Furnaces

SPECIAL FEATURES

■ **Complete Automatic operation**

Complete Automatic operation including Calibration, "ON - OFF" & "SAMPLE" Keys only.

■ **Self diagnostic check**

Self diagnostic check & specific fault indication, Discrete LEDs for Sample Flow, Sensor Efficiency & Battery Condition.

■ **Self-integrity Check**

Continuous on-line full self-integrity check eliminates wrong measurements due to Instrument Faults.

■ **USER Friendly**

Visual Messages on status on functioning.

■ **Proven Sensor Technology**

Special purpose long life Sensors with Cross Interference filters to achieve high accuracy.

■ **Oxygen Sensor Guaranteed for 4 years.**

■ **Display of Concentrations**

Continuous, Stable & Automation display of concentrations - ensures maximum accuracy & reliability.

■ **Sensor Technologies**

Analyzer is built up using sensors technology to suit specific application.

■ **Batteries**

Long life rechargeable batteries.

■ **Diffusion or Suction with**

Time tested, sturdy, high suction in-built pump supervisory circuit continuously monitors the pump against failure.

■ **Disposable Cartridge Line Filter & Moisture Separator**

Low porosity, disposable cartridge line filter & moisture separator suitably conditions the sample.

■ **Calibration**

A built-in procedure allows easy and automatic span sensor calibration using standard gas cylinder. Periodic zero calibration is automatic on demand.

■ **Electronic Flow Meter**

An automatic built-in system measures a flow of sampling gas to obtain a constant sampling volume.

■ **Multi Fuel Selection**

The fuel efficiency analyzer can be programmed for selection up to 10 fuels for calculating combustion values.

■ **Gas Probes & Sampling System**

Flue gas sampling probes with different lengths, shapes and max, operating temperatures Upto 1600°C are available to match various requirements of different applications. A sintered pre-filter is suggested for severe and having dust loaded applications.

■ **Heated Sampling Hose**

A heated sampling Hose is available for high temperature applications. A heated hose allows flue gas sampling without condensation.

■ **Continuous Monitoring**

The industrial design and the advanced technology applied to the unit, allows it to perform long term gas analysis

■ **PROBES - APPLICATION SPECIFIC AVAILABLE**

■ **Ambient CO Probe**

An optional probe to monitor ambient CO concentration to keep the operator in a safe environment.

■ **Gas Sniffer Probe**

To detect and locate the precise position of a gas leak in a pipe network or equipment.

■ **Smoke Index**

Smoke Index measurement can be obtained using a special heated probe, supplied on request, and through a dedicated internal procedure that computes the required volume of gas sample flowing into the specific filter. The results can be obtained by comparison with the Smoke Index Table.

■ **Gas Velocity**

An internal procedure allows gas velocity measurements using the differential pressure inlet combined with a pitot tube.

■ **Report of Calibration**

Each instrument is factory calibrated and certified against Endee's Standard Gasses and shipped with a Report of Calibration stating the nominal and actual values and the deviation error.

■ **Quality System**

Research, development, production, inspection and certification activities are defined by methods and procedures of the Endee's System inspected for compliance and certified ISO 9001.

OPERATIONS

On start up, the instrument automatically goes through complete integrity check, calibration cycle before displaying its readings for sampling. With the press of sampling switch, the analyzer automatically extracts the sample, analyses and display the concentrations of various gases in cyclic order. To stop or for further sampling at different locations or clearing with fresh air before switch off, one has to press the sample switch again.

SPECIFICATIONS

Display	: High quality Alpha Numeric LCD
Calibration	: Automatic Zero On Start with fresh air sample
SPAN Calibration	: Automatic with calibration gas
Response Time	: Maximum 20 seconds at 95% variation
Power Supply	: Internal battery pack with external charger 220V / 50 Hz
Working Temperature	: -5 to 55°C
Storage Temperature	: -20 to 45°C
Case	: Aluminum
External Dimension	: 170 X 100 X 130 mm
Weight	: 1.5 kg approx.
Probe (Optional)	: (i) 8mm, Dia SS 600 mm length with 2 meter Hose Probes of other material & length available (ii) Sniffer Probe : To detect & locate the precise position of Gas leak in a pipe network
Accessories	: Leather case with shoulder strap, battery charger, operational manual

MEASURING RANGES

PARAMETERS	SENSORS	RANGES	RESOLUTION	ACCURACY
O2	Electrochemical	0-25%	0.1%	0.5%
CO	Electrochemical	0-4000	1 PPM	± 2%
CO (A) Sensor Comp. For H2	Electrochemical	0-4000 PPM	1PPM	± 2%
CO(B)	Electrochemical	0-10%	0.01%	± 2%
CO2	TCD/ NDIR	0-25% / 100% V	0.1%	± 2%
NO	Electrochemical	0-1999 PPM	1PPM	± 2%
NOX	Electrochemical	0-1999 PPM	1PPM	± 2%
NO2	Electrochemical	0-100 PPM	1PPM	± 2%
SO2	Electrochemical	0-1999 PPM	1PPM	± 2%
CxHx (Calibrated for methane)	Catalytic	0-100% LEL	1%	± 2%
	TCD/NDIR	or 0-5% V	0.1%	± 2%
Excess Air (A)	Calculated	0-100 %	0.1%	± 2%
Temp. Air (Ambient)	PT 100	0-99°C	1°C	± .5%
Temp. Gas	Tc K	0-1000°C	1°C	± 0.5%
Temp. Differential	Tc K	0-1000°C	1°C	± 0.5%
Combustion Efficiency	Calculated	0-99.9%	0.1%	± 0.1%
Smoke Index	Paper Filter Method	0-9 Bachrach Scale	0.1%	

Note : Images shown are indicative only. Specifications and Features will vary with application. There may be changes overtime due to continuous development process.
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