



PM4 Series Infrared Analyser



The PM range of infrared gas analysers has been developed for applications requiring a tough, easily transportable battery-powered gas analyser for routine sampling. With the use of probes and filters it provides a low cost analyser for the measurement of furnace atmospheres, stacks, internal combustion engine exhaust gases, controlled atmosphere chambers, etc.

The PM series is available for the measurement of a single gas such as carbon dioxide, carbon monoxide, hydrocarbons, and other gases at percentage levels. The unit incorporates a rechargeable battery with sufficient capacity to drive the analyser and pump for a period in excess of eight hours. A battery check facility and a 'low battery' warning indicator are provided on the front panel. A stand alone mains driven battery charger also enables the analyser and pump to be run continuously. Gas and electrical connections are at the rear of the instrument, with the user option of the pump being in or out of the gas circuit.

A nylon-pvc padded hold-all designed to carry the analyser and sample tubing is also available as an option.

- **Warm-up in less than 3 mins**
- **No moving parts in optical system**
- **Sample pump incorporated**
- **No consumable chemicals**
- **8 hours operation between charges**
- **Automatic battery protection**

Experts in Gas Analysis

Pure gas analysis
Waste incineration
Glass production
Refinery processes
Appliance testing and compliance
Solvent incineration
Power generation
Paper manufacturing
Cement production
Food processing
Pharmaceutical
Natural gas
Crematoria
Combustion control
Land fill gases
Clean Development
Mechanism (CDM)
Wood burning boilers
Particulate emissions

TECHNICAL SPECIFICATION

Measurement Technique:	Non-dispersive infrared absorption with solid state detectors. Double beam in space
Gases Measurable:	Hetero-atomic gases including CO, CO ₂ and CH ₄
Range:	Single range only
Maximum Range:	0-100% for all measurable gases
Minimum Range:	Dependent upon gas. Examples are: CO ₂ , 0-0.3% CO, 0-5%
Precision:	2% of full scale deflection (f.s.d.)
Analytical Response Time:	Typically 10 seconds to 90% of signal (T ₉₀)
Zero Stability:	+2% f.s.d. Over 24 hours
Ambient Temperature Effect (5-35C):	+0.2% f.s.d. Per 1C
Flow Rate:	Not critical, typically 0.4 l min
Flow Meter:	Calibrated 0.1 to 0.4 l min free flow, adjustable
Sample Pump:	Mounted internally, 0.5 l min free flow
Warm-Up Time:	3 min
Display:	Digital front panel display
Output:	0-1V (non-linear) standard 0-10mV, 100mV, 1V, 10V linear, 4-20mA (Optional)
Temperature Ranges:	Ambient 5-35C
Gas Connection:	Pump and cell connectors on rear panel. 'Push on' connectors For 4mm bore flexible tubing.
Battery:	Sealed lead acid 12V. Battery capacity 8-10 hours with continuous use of analyser and pump.
Electrical Connections:	All leads supplied
Additional Option:	Audible/Visual single point alarm
Front Panel Controls and Indicators:	Instrument & Pump on-off illuminated switches, Battery check switch with low battery warning, Directly calibrated display, Multiturn zero & span controls.
Rear Panel Fittings:	Cell pump gas connections, fuses, recorder output jack socket, pump flow control, charger/external 12V supply Socket, & internal-external power switch
Case Material:	Steel, epoxy texture finish

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