



5100 Multigas Analyser

The Rapidox 5100 Multigas Analyser is a high specification portable instrument designed for the analysis, control and monitoring of gas in a wide range of applications including; biogas, syngas, anaerobic digestion and fermentation processes.



Up to six gases are simultaneously measured using a range of high precision gas sensors; each sensor is specially designed and calibrated to avoid cross interference effects with background process gas, Safety is ensured by the inclusion of flashback arrestors in the gas measuring circuit where required.

Measurable gases include oxygen (O_2), carbon monoxide (CO), carbon dioxide (CO_2), ozone (O_3), moisture (H_2O), hydrogen (H_2), hydrogen sulphide (H_2S), nitric oxide (NO), nitrogen dioxide (NO_2), nitrous oxide (N_2O), sulphur dioxide (SO_2), chlorine (Cl_2), methane (CH_4) and ethylene (C_2H_4).

When configured for applications where the gases contain energy (e.g. Biogas, Syngas) the calorific value of the gas sample is determined using thermodynamic calculations and simultaneously logged and displayed on-screen.

An optional pump enables two modes of operation. For samples that are taken from a gas source at atmospheric pressure or below, the pump is activated to draw a sample through the analyser. Alternatively, the pump can be deactivated when sampling from a source at a greater atmospheric pressure, allowing the gas to flow through the analyser. Gas flow is regulated manually via a rotary knob on the fascia and displayed electronically on the screen.

Please contact Cambridge Sensotec for further information or to discuss your requirements.



Though highly configurable to suit individual customer requirements, the Rapidox 5100 range possesses a number of standard features to enhance functionality.

- Bespoke sensor combination
- 7" full-colour touchscreen
- Lithium battery provides 8 hours of operation
- Heavy duty IP66 case
- Password protection
- Continuous data logging downloaded via USB
- Multi-language
- Charges on worldwide mains voltage
- Integrated thermal printer

Applications



Biogas



Emissions



Research & Development



Combustion



Gas



Syngas

Accessories



1



2



3



4



5



6

- 1 Calibration Kit
- 2 Calibration Service
- 3 Gas Recovery Bag
- 4 Sample Probe
- 5 Sample Probe Filters
- 6 Collapsible Sample Probe

Specification

Ambient Operating Temperature	-10°C to 40°C
Warm-up Time	3-4 minutes at 20°C
Measurement Time	Approximately 2-4 minutes (dependant on sensor configuration)
Battery Life	In excess of 8 hours (up to 500 cycles). 4-6 hour charge
Supply Voltage (Charging)	90-260VAC, 50/60Hz
Sample Connections	4mm ID/6mm OD Rectus style, closed coupled fittings
Data Output	Excel compatible data via USB memory stick
Data Storage	4GB internal data storage allowing for approximately 1 year of continuous monitoring
Optional Pump	0-1 litres per minute
Calibration	Zero and span calibration with two user selectable gas compositions
Display	7" (180mm) full-colour LCD with touchscreen operation
Printer	Thermal printer allows output of results on demand
Analyser Dimensions	180mm(H) x 480mm(W) x 360mm(D)
Weight	7kg

Rapidox 5100 Sensor Matrix

Gas	O ₂	CO ₂	CH ₄	CH ₄	H ₂ O	CO	CO	CO (H ₂ resist)	Cl ₂	NO	NO ₂	C ₂ H ₄	O ₃	H ₂ S	He/H ₂	NH ₃	SO ₂	SO ₂
Sensor Type	EC-E	IR	IR	TLD	CAP	IR	EC	EC	EC	EC	EC	IR	EC	EC	TCD	EC	IR	EC
Life Span (mth)	60	>60	>60	>60	>36	>60	24	24	12	12	12	>60	12	24	>60	24	24	>60
Cal. (mth)	12	12	12	12	12	12	12	12	6	6	6	12	6	12	12	12	12	12
0 - 100%																		
0 - 80%																		
0 - 60%																		
0 - 50%																		
0 - 30%																		
0 - 20%																		
0 - 10%																		
0 - 5%																		
0 - 3%																		
0 - 2%																		
0 - 1%																		
0 - 5,000ppm																		
0 - 3,000ppm																		
0 - 2,000ppm																		
0 - 1,000ppm																		
0 - 500ppm																		
0 - 250ppm																		
0 - 200ppm																		
0 - 100ppm																		
0 - 60ppm																		
0 - 20ppm																		
0 - 10ppm																		
-65°C to +20°C																		
-100°C to																		
0 to 5 bar																		
0 to 10 bar																		
-1 to 0 bar																		

Note: Not all sensor combinations are possible due to interference and cross-sensitivity effects. Please contact Cambridge Sensotec for advice.

Key: EC-E = Electrochemical % Sensor IR = Infra-Red Sensor TLD = Tunable Laser Diode CAP = Capacitance Sensor EC = Electrochemical Sensor TCD = Thermoconductivity Detector Type K = Thermocouple