3100Z Multigas Gas Analyser

The Rapidox 3100-Z range includes precision single, dual and triple gas analysis instruments providing powerful functionality and extensive features. Designed for process, research and development applications, this gas analyser range has proven very popular with universities and research institutes worldwide.

Typical gas analysis configurations include a combination of oxygen and another gas. However, other compatible gas sensors arrangements can be specified. Measurable gases include oxygen (O_2), carbon dioxide (CO_2), carbon monoxide (CO), hydrogen (H_2), moisture (H_2O), ethylene (C_2H_4), chlorine (Cl_2), methane (CH_4), nitrous oxide (N_2O), nitric oxide (NO), ammonia (NH_3), sulfur dioxide (SO_2) and ozone (O_3) to suit the application.

The flow of test gas can be adjusted with the flow gauge/needle valve on the front panel. An optional powerful long-life pump draws a gas sample at a flow rate set by the user between 0-1 litres per minute. Alternatively, the pump can be independently switched off and the unit operated under flowing gas conditions.

Standard features on all models include four fully programmable alarm circuits (volt free contacts), programmable analogue outputs (0-10V and 4-20mA) for each sensor, easy calibration (user selectable gases), RS232 / RS485 / ModBus-RTU communications and complete data-logging software. A type K thermocouple input and sensor is included for independent temperature measurements up to 1250°C, with readings displayed and data logged simultaneously with the gas analysis. The Rapidox 3100 complies with EMC Directive 2004 / 108 / EC. UL/ETL Certification Number: UL-61010-1.

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

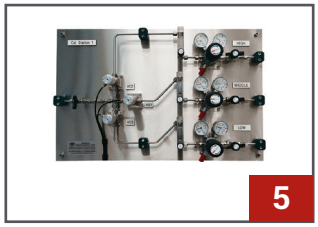
Though highly configurable to suit individual customer requirements, the Rapidox 3100-Z range possesses a number of standard features to enhance functionality.

- Bespoke sensor combination
- Fully configurable software
- Fast and accurate response
- Simple calibration procedure
- Fully programmable outputs
- Data logging
- Type K thermocouple
- Four programmable alarms
- Operates on worldwide mains voltage
- Password protection

Applications

- Biogas
- Chemicals
- Combustion
- Food
- Gas
- Glove Boxes
- Inert Gas Blanketing
- Manufacturing
- Medical & Pharmaceutical
- Metal Heat Treatment
- Research & Development
- Syngas

Accessories



1. Calibration Kit
2. Multiplex Sampling System
3. Gas Recovery Bag
4. Thermal Printer
5. Calibration Service
6. Gas Filters

Specification

Oxygen Sensor	$10E^{-20}$ppm-30% zirconia sensor. ±1% accuracy
Other Gas Sensors	For other sensors, see the sensor matrix
Temperature Sensor	0-1250°C range Type K thermocouple, ±1°C accuracy
Max Gas Temperature	60°C
Ambient Operating Pressure	900mbar to 1100mbar absolute
Ambient Operating Temperature	5°C to 35°C
Warm-up Time	2-5 minutes at 20°C as standard
Supply Voltage	90-260 VAC, 50/60Hz
Voltage Outputs	0-5V linear, user programmable
Current Outputs	4-20mA linear, user programmable
Digital Outputs	RS232 (RS485 option available): ModBus-rtu protocol data streamed on demand
Sample Connections	4mm ID / 6mm OD nipple type Rectus or Swagelock Front positioned
Display	Four line OLED display
Analyser Dimensions	150mm (H) x 350mm (W) x 263mm (D) Optional swing handle available
Weight	5kg as standard
Pump Option	0-1 litres per minute, user selectable

Cambridge Sensotec Limited. Unit 29 Stephenson Road,
St Ives, Cambs, PE27 3WJ, United Kingdom

+44 (0)1480 462142
www.cambridge-sensotec.co.uk
info@cambridge-sensotec.co.uk

cambridge sensotec

Rapidox 3100 Sensor Matrix

Gas	O_2	CO_2	CH_4	CH_4	H_20	CO	CO	Cl_2	NO_2	C_2H_4	N_2O	H_2S	He/H_2	NH_3	SO_2	SO_2	TC
Sensor Type	Zr	IR	IR	TLD	CAP	IR	EC	EC	EC	IR	IR	EC	TCD	EC	EC	IR	Type K
Life (Month)	24	>60	>60	>60	>36	>60	24	12	12	>60	>60	24	>60	24	24	>60	>36
Cal (Month)	12	12	12	12	12	12	12	6	6	12	12	12	12	12	12	12	N/A
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 - 2,500ppm																	
0 - 2,000ppm		■					■			■		■			■	■	
0 - 1,000ppm							■					■					
0 - 500ppm							■								■		
0 - 250ppm												■					
0 - 200ppm									■								
0 - 100ppm															■		
0 - 60ppm								■									
0 - 50ppm																	
0 - 20ppm									■								
0 - 10ppm																	
-65°C to +20°C					■												
-100°C to + 20°C					■												
0 - 1250°C																	■

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

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