



Rapidox 2100-OEM-RSB

O₂ Gas Analyser

The Rapidox 2100-OEM-RSB range are special miniaturised 24V OEM versions of our existing high-performance zirconia oxygen (O₂) analyser.



The compact new design allows integration into the tightest of spaces with the exact same performance specs and features of our existing OEM analyser. The board is fitted with a robust cabled zirconia sensor, which is ideal for providing fast and accurate remote in-situ gas analysis over the full oxygen range 10⁻²⁰ppm to 100% O₂.

Zirconia oxygen sensors are extremely rugged and particularly suitable for monitoring inert atmospheres and aggressive industrial applications directly within manufacturing processes such as metal 3D printers, soldering ovens and furnaces. High temperature (650°C) and vacuum applications are particularly suited to this model. The OEM has auxiliary sensor and temperature (type K) inputs for connecting additional sensors such as pressure, vacuum and dewpoint and can also monitor local ambient temperature and humidity conditions for improved stability.



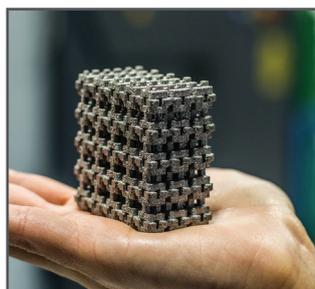
The analyser is supplied in four packages to meet the demands of any customer: a basic circuit board, a custom DIN rail version and a full metal DIN rail enclosure, with or without local display and keypad. The sensor cable can be made to any length up to 25m and there are a choice of sensor mounting options including aluminium and stainless manifolds as well as vacuum fittings (ISO-KF and CF).

Fully programmable analogue (voltage and current) outputs and alarm relays as well as RS232 / RS485 digital signalling are standard. Rapidox digital communications protocol and Modbus-RTU is included as standard. The analyser is designed specifically for seamless integration into PLC systems.

The Rapidox 2100-OEM-RSB has a compact design which allows integration into the tightest of spaces with high performance specifications; and a wide choice of options.

- Zirconia sensor supplied with bespoke cable
- Miniature circuit board with DIN rail mount enclosure options
- Fast and accurate measurement of oxygen
- Pre-calibrated sensors for uninterrupted service
- Analogue and Digital outputs
- Data logging software
- Two programmable alarms
- Type K thermocouple option
- 24Vdc 20W power

Applications



-  Additive Manufacturing
-  Glove Boxes
-  Research and Development
-  Metal Powder Processing
-  Inert Gas Blanketing
-  Manufacturing
-  Combustion Ovens
-  Solder Reflow Ovens
-  Forming Gas
-  Metal Heat Treatment

Scope of supply



1 Rapidox 2100-OEM-RSB



2 Rapidox 2100-OEM-DIN



3 Rapidox 2100-OEM-ENC



4 Rapidox 2100-OEM-INS

All versions are supplied with a zirconia sensor on a 2m cable as standard.

Specification

Voltage	24V VDC +/-0.1V
Power	30W
Enclosure Dimensions	132 x 80 x 70 mm
Circuit Board Dimensions	4.5" x 3" (114mm x 76mm)
Weight	<0.5kg in enclosure, OEM board 120g
Din Rail Option	Board & 2 enclosed options
Ambient Operating Temperature	5-35°C 0-95% RH non condensing
Ambient Operating Pressure	800 to 1200mbar absolute
Warm-up Time	1-2 minutes at 20°C
Sensor Cable	2m high temp as standard. Any length up to 25m available on request
Display	OLED display & keypad on enclosure version
Sample connections	Nipple or swagelok
O ₂ Sensor Range	10 ⁻²⁰ ppm to 100% zirconia version. 10 ⁻²⁶ extended range available on request
O ₂ Sensor Accuracy	±1% of the actual measured oxygen content OR 0.5ppm (whichever is the greater)
O ₂ Sensor Response	4 seconds for a T90 step change @1L per min flow
O ₂ Sensor Life Expectancy	>17,000 hours
Calibration	Any two or three gases - Pre calibrated Sensors Available
Voltage Outputs	0-5V (0-10V on request)
Current Outputs	4-20mA
Digital Outputs	RS232 / RS485 & Modbus RTU
Max Sample Gas Pressure	Up to 10 bar gauge (200bar burst pressure)
Max Sample Gas Temperature	650°C
Alarm	2 alarm relay circuits, fully user-configurable