

## **What it gives you...**

- ◆ **The ability to measure from % oxygen levels down to ppm oxygen levels with the same instrument**
- ◆ **Very fast response - from 20.9% to 1% in less than 5 seconds**
- ◆ **The instrument will never fail because of sensor consumption, giving you less downtime**
- ◆ **Fully programmable analogue output - you decide which part of the range to monitor**
- ◆ **Digital RS232 port (and USB option) providing a remote calibration facility and software to log and save results**
- ◆ **Low power consumption so it's less expensive to run**
- ◆ **Sensor is remotely mounted at the measuring point. You decide where to place the display**
- ◆ **From plug-in to readings in two minutes with simple connections and super-fast zirconia warm-up**
- ◆ **Alarms can be set and monitored remotely from a control room or a PLC system - easy to integrate into control systems**

### **Typical Applications**

- ◆ **Nitrogen generators**
- ◆ **Nitrogen purged soldering systems**
- ◆ **Gas mixers**
- ◆ **Glove boxes**



The Z1030 zirconia oxygen analyser measures oxygen concentrations from percentage levels to fractions of parts per million (ppm) in clean gases. This analyser is particularly suitable for Original Equipment Manufacturers (OEM) where accurate measurement of oxygen is a vital part of the manufactured product. Packaged in a panel mounting enclosure, it uses a remote mounted zirconia oxygen sensor to provide accurate measurement ensuring high quality of the process gas. The unique remote sensor and heater design gives a very fast warm-up time, rapid response and because the sensor is non-depleting it gives a very long sensor life. Combined with its low maintenance design, the instrument is trouble free and easy to use.

A fully bi-directional RS232 port is provided to allow the analyser to communicate with most proprietary micro controllers. In addition to the digital communications a fully isolated programmable 4 to 20mA analogue output is available. Two alarm channels provide volt-free changeover contacts, which can be user-configured to any concentration within the span of the instrument.

Using the supplied software the analyser can be controlled and configured remotely. Alarms can be set and monitored, calibration can be carried out, and analogue outputs configured.

**Ease of use and reliability—a good combination.**

## SPECIFICATION

### Display

Multi-digit LCD – character height 12.7mm

### Range

0.01ppm to 100% oxygen, autoranging

### Display Resolution

|                         |         |
|-------------------------|---------|
| From 10.0% to 99.9%     | 0.1%    |
| From 1.00% to 9.99%     | 0.01%   |
| From 0.100 to 0.999%    | 0.001%  |
| From 100ppm to 999ppm   | 1ppm    |
| From 10.0ppm to 99.9ppm | 0.1ppm  |
| From 0.00ppm to 9.99ppm | 0.01ppm |

### Accuracy

|                  |                          |
|------------------|--------------------------|
| 25% to 100ppm:   | ±2% of reading or better |
| 99ppm to 10ppm:  | ±1ppm                    |
| 0 ppm to 9.9ppm: | ±0.1ppm                  |

### Stability

Better than 2% of reading or 0.5ppm/month, whichever is greater

### Speed of response in clean inert atmospheres

% levels: less than 1.5s for 90% change  
Levels from 100 to 10ppm: less than 5s for 90% change  
Levels less than 100ppm: less than 30s for 90% change  
When the cell is stabilised/conditioned at low levels, response to changes at that level is of the order of 3 to 4s

### Sample flow

Between 100 and 300ml/min for optimum operation

### Sample inlet pressure

10mbarg minimum  
8barg maximum

### Sample temperature

100°C maximum

### Sample connection

Captive seal compression fittings suitable for 0.25inch (6mm) outside diameter tube

### Analogue outputs

Standard 4 to 20mA  
0 to 5 volts configurable  
User programmable between 0 to 25% to 0 to 5ppm

### Alarm outputs

Two alarms, each user-programmable for mode - HIGH, LOW or OFF  
Hysteresis programme from 0 to 10% of set point  
Volt-free changeover contacts rated at 48Va.c./d.c. max., 1A max., max power 48W, normally energised

### Ambient temperature

0 to 40°C (continuous operation)  
-5 to + 55°C (intermittent operation)

### Power supply

24V dc Separate PSU available as option

### Other Instruments based on zirconia technology

Z230 benchtop mounted



Z1110 Wall mounted



Z4010 Transportable



### Other instruments based on galvanic technology

G1010 panel mounted, % and ppm versions



G250 Benchtop, multirange



G610 wallmounted, remote mounted sensors available



We also have a range of instruments suitable for the following applications:

- Workplace Safety
- Hydrogen and Helium measurement
- Power plant and generator cooling
- Inert gas blanketing
- Toxic and flammable gas measurement
- Landfill / digester gas monitoring
- Chlorine production
- Gas blending

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