

# Z1110 oxygen analysers



## Features

- ◆ Measures from 100% to less than 1ppm
- ◆ Fast response time of less than 5s for 90% change
- ◆ Autoranging display
- ◆ Fully programmable analogue output
- ◆ Low cost with proven sensor technology



**The Z1110 zirconia oxygen analyser** measures oxygen concentrations from percentage levels to fractions of parts per million (ppm) in clean gases. Packaged in a robust wall mounting enclosure, it uses a zirconia oxygen sensor to provide accurate measurement with minimal interference from other gases. The unique cell and heater design gives a very fast warm-up time, rapid response, and long sensor life. A choice of sampling options is provided to produce virtually custom-built systems.

**A large multi-digit autoranging LCD** is used to display measured concentrations and the user-adjustable parameters in configuration mode.

**Two alarm channels** each provide one set of volt-free changeover contacts. They can be user-configured to any concentration within the span of the instrument, as well as function (high, low or off) and hysteresis. A choice of two analogue outputs is available, 0 to 5V or 4 to 20mA, fully programmable.

**The standard sampling system** comprises a metering valve and flowmeter. Standard alternatives are available to cover a wide variety of applications. Hitech also supply a range of sample conditioning accessories to cater for most sample sources.

## Typical Applications

- ◆ Air separation plants
- ◆ Nitrogen purged soldering systems
- ◆ Cylinder gas quality
- ◆ Pharmaceutical and food packaging and storing
- ◆ Purge gas monitoring
- ◆ Glove boxes

## SPECIFICATION

### Display

Multi-digit LCD, character height 12.7mm

### Range

0.01ppm to 100% oxygen, autoranging

### Display resolution

From 10% to 100%:	0.1%
From 0.5% to 9.99%:	0.01%
From 500ppm to 4999ppm:	10ppm
From 50ppm to 499ppm:	1ppm
From 5ppm to 49.9ppm:	0.1ppm
From 0ppm to 4.99ppm:	0.01ppm

### Accuracy

100% to 100ppm:	±2% of reading or better
99ppm to 10ppm:	±1ppm
0.1ppm to 9.9ppm:	±0.2ppm
0.01 to 4.99ppm:	±0.1ppm

### Stability

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

### Sample flow

Between 100 and 400ml/min for optimum operation

### Speed of response in clean inert atmospheres

% levels: less than 0.5s 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 inlet pressure (no pump fitted)

10mbar minimum  
8bar maximum

### Sample temperature (at analyser)

100°C maximum

### Sampling system materials

Materials include: nickel, brass, aluminium, stainless steel, platinum, zirconia, alumina, PTFE and nitrile-rubber

### Sample connection (located on back panel of unit)

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

### Analogue outputs

Standard: 0 to 5V  
Optional: 4 to 20mA  
Each user-programmable between 0 to 100% to 0 to 5ppm

### Alarm outputs

2 alarms: each user-configurable to OFF, HIGH or LOW status  
Hysteresis programmable from 0 to 10% of set-point  
Volt-free changeover relay contacts rated 48V ac or dc, 0.5A, normally-energised

### Ambient temperature

45°C maximum

### Power supply

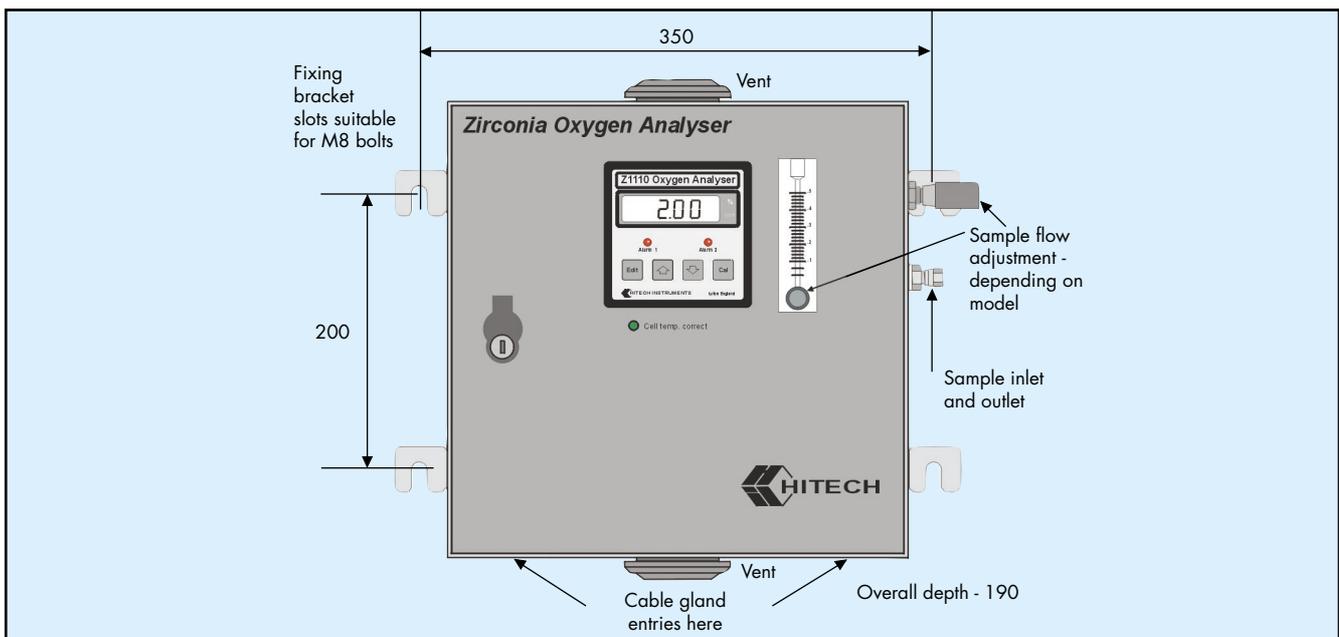
Please specify option required from the following:  
110/120V, 50/60Hz at 80VA max  
220/240V, 50/60Hz at 80VA max

### Mounting

IP55 wall mounting enclosure with lockable door:  
350mm wide x 300mm high x 190mm deep

### Options

Flow alarm  
RS232 output  
Integral fast flow sample loop systems  
Sample pump



In keeping with a policy of continuous development, Hitech Instruments Ltd reserves the right to change any part of this specification without notice

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