



# Z110 Oxygen Analyser

## Features

- ◆ Measures from 100% to less than 1ppm
- ◆ Fast response time of less than 5s for 90% change
- ◆ Fully autoranging
- ◆ Programmable alarms and analogue output



The Z110 zirconia oxygen analyser measures oxygen concentrations from percentage levels to a fractions of parts per million (ppm) in clean gases. Packaged on a 19" rack 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 very fast warm-up times, rapid response, and long sensor life. A wide 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 provided, 0 to 5V or 4 to 20mA, each with several pre-set ranges.

**The standard sampling system** is a simple needle valve and flowmeter. Standard options provide alternatives 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
- ◆ Workplace air monitoring

# SPECIFICATION

## Display

Multi-digit LCD, character height 12.7mm

## Range

0.1ppm 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

## Stability

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

## Sample flow

Between 100 and 300ml/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 fitting suitable for 0.25inch (6mm) outside diameter tube

## Analogue outputs

Standard: 0 to 5V  
Optional: 4 to 20mA  
Each user-programmable for the following spans:  
0 to 100%, 0 to 25%, 0 to 5%,  
0 to 5000ppm, 0 to 500ppm, 0 to 50ppm, 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

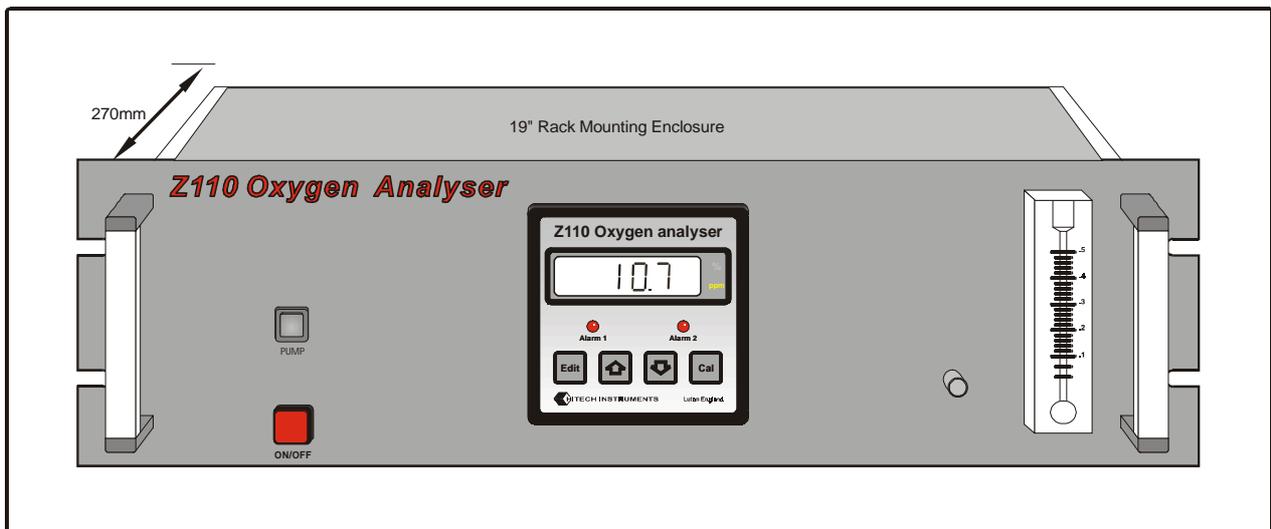
45°C maximum

## Power supply

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

## Mounting

19" Rack-mounting enclosure 3U high and 270mm deep



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

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