Z4010 portable oxygen analyser

Features

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

The Z4010 zirconia oxygen analyser measures a wide range of oxygen concentrations from percentage levels to less than ppm in clean non-reactive gas mixtures. Its robust carrying case, fast warm up time and switchable supply voltage provide an ideal solution for on-the-spot oxygen monitoring applications.

A large multi-digit, autoranging LCD is used to display measured concentrations and also user-adjustable parameters for alarm and analogue output configuration. A programmable analogue output provides an easy means to log results where necessary.

Two alarms channels, user-configurable for high, low or off states and hysteresis, each provide one set of volt-free changeover contacts. They can be set to any concentration within the span of the instrument. A choice of two analogue outputs is available, 0 to 5V or 4 to 20mA, each with several pre-set ranges. Sample flow adjustment and monitoring are built-in, along with a sample pump for applications with a low sample pressure.

The sampling system is a simple needle valve and flowmeter. Options include: sample pump, fast flow loop system, syringe injection port. Hitech also supply a range of sample conditioning accessories to cater for most sample sources.

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
- Medical monitoring
SPECIFICATION

Display
Multi-digit LCD – character height 12.7mm

Ranges
0.1 ppm to 100% oxygen, autoranging

Display resolution
From 10% to 100%: 0.1%
From 0.50% to 9.99%: 0.01%
From 50ppm to 499ppm: 1 ppm
From 0.00ppm to 49.9ppm: 0.1 ppm

Accuracy
10% to 100ppm: ±2% of reading or better
99ppm to 10ppm: ±1 ppm
0.1 ppm to 9.99ppm: ±0.2 ppm

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

Sample flow
Between 100 and 250 ml/min for optimum operation.

Speed of response in clean inert atmospheres
Percentage levels: less than 0.5 s for 90% change
Levels from 1000 to 10 ppm: less than 5 s for 90% change
Levels less than 100 ppm: less than 30 s 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 4 s

Sample pressure
The vent pressure determines the pressure applied to the sensor. This should be atmospheric for quoted accuracies.

Sample inlet pressure
Maximum inlet pressure 6 barg.

Sample temperature (at analyser)
100°C maximum

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

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

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

Ambient temperature
45°C maximum

Power supply
110/120V, 50/60 Hz at 100 VA max. or
220/240V, 50/60 Hz at 100 VA max.
Selectable on front panel.

Mounting
Supplied in fully waterproof, carrying case to IP67

Sample pressure selection switch

Supply voltage

On/Off switch

Supply socket with 1.6A fuse

Vent with filter

Sample exhaust, ensure that sample is taken to a safe place if there is any risk of injury from the sample - e.g. oxygen depletion or toxicity.

Sample flowmeter in stowed position. Raise to upright position when in use.

Cooling fan and vent

DO NOT OBSTRUCT EITHER VENT

Z4010 Front Panel - Accessories and supply lead are stowed inside lid.

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