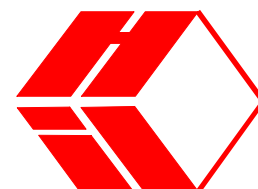
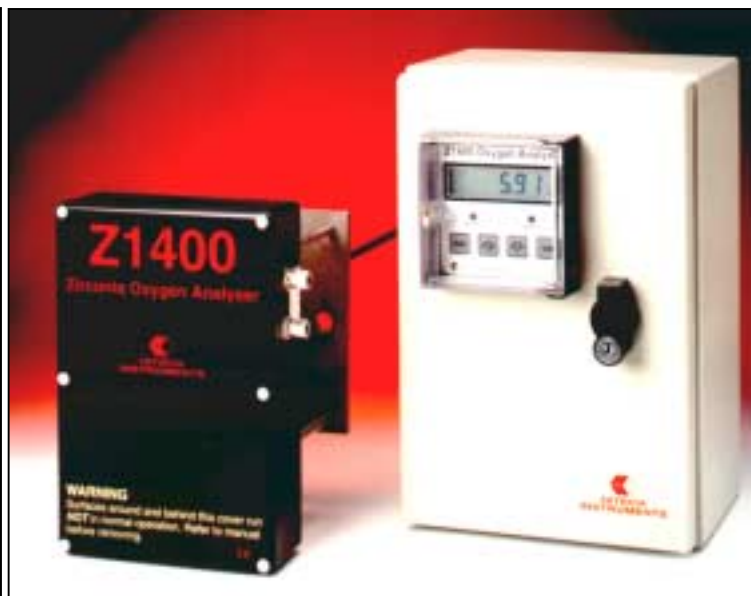


Z1400 Combustion Oxygen Analyser



Features

- ◆ Samples up to 1750°C
- ◆ Long-life zirconia sensor
- ◆ Very easy, non de-mounting servicing
- ◆ Programmable analogue output and alarms
- ◆ Response time less than 0.5 seconds



The **Z1400 zirconia oxygen analyser** uses a high temperature, long-life zirconia oxygen sensor to measure the oxygen content of flue gases in all types of combustion process. It can be used for samples with temperatures up to 1750°C and dew points up to 200°C. The sensor unit is close coupled to the flue ducting, and an integral air powered aspirator extracts a continuous sample of the flue gas. Once analysed, the sample together with the small amount of aspirator air is returned to the flue duct. This technique avoids the need to insert the sensor into the flue. This both extends the life of the cell and simplifies maintenance. The associated electronic display module can be located at up to 50 metres from the sensor unit (or more with a standard option). Results are displayed on a large LCD and the two concentration alarms and analogue output are user programmable.

Combustion process efficiency is most directly measured by monitoring the oxygen content of the waste gases from the combustion heating processes. With suitable control equipment the Z1400 enables the close control of burners to optimise their efficiency over their entire firing range.

SPECIFICATION

Electronics Unit

Display

Multi digit LCD - character height 12.7mm

Display ranges

Display range 0.1ppm to 100%. Resolution: 0.1% from 10.0% to 100%; 0.01% from 0.50% to 9.99%; 10ppm from 500ppm to 4999ppm; 1ppm from 50ppm to 499ppm; 0.1ppm from 0ppm to 49.9ppm

Stability

Better than 2% of full-scale per month

Analogue outputs

0 to 5 volts standard, 4 to 20mA option - user programmable to 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 programmable for: **Mode** - HIGH, LOW or OFF; **Level** - over full range of instrument and **Hysteresis** - 0% to 10% of set point.

Volt free C/O contacts rated at 48v ac or dc, 0.5A, normally energised.

Sensor head

Aspirator air requirements

Minimum 2 kg cm² (30 psi) at 3 l/min.

Maximum sample pressure

3.5kg cm² (50 psig)

Maximum sample temperature

750°C for standard stainless steel probe; ceramic probes available for use up to 1750°C

Materials in contact with the sample

Zirconia, alumina, platinum, nichrome, stainless steel

Main body

Stainless steel, with die-cast enclosure to IP55 (when suitably glanded) for electrical and gas connections

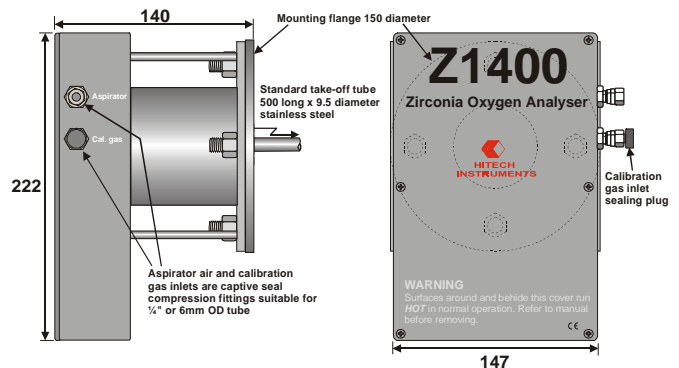
Maximum ambient temperature

60°C

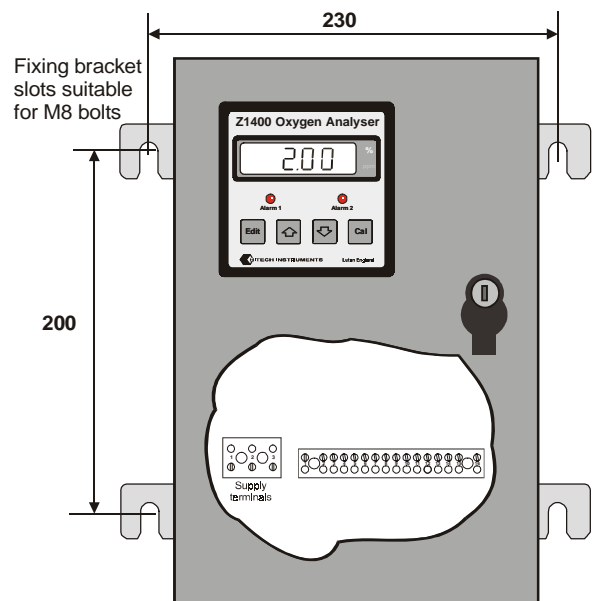
Weight: 3.1 kg without mounting plate

Note

The sample should be free from all combustible materials. If combustibles are present they will cause an error by consuming some of the oxygen present when they pass through the hot zone of the analyser. The magnitude of the error produced will depend on the amount of combustibles and oxygen present. In extreme cases, where the ratio of combustibles to oxygen forms an explosive mixture, dangerous "flash backs" could occur.



Sensor Unit



Electronic Unit