

KG1550 dual-sensor gas analyser



Features

- ◆ Measures oxygen plus CO₂/H₂/Ar/He/Freon etc
- ◆ Programmable alarms and analogue output for each gas
- ◆ Microprocessor controlled
- ◆ Compact DIN panel-mounting enclosure



The Hitech KG1550 analyser combines accurate measurement of oxygen in mixtures that contain another constituent suitable for measurement by thermal conductivity. Other gases measured include carbon dioxide, helium and argon, giving the analyser a wide range of applications in both food and process industries.

Oxygen is measured by an electrochemical cell that is virtually maintenance-free. The oxygen concentration range can be from 0 to 100%, to 0 to 200ppm dependent upon the other constituents of the gas mixture.

The second gas is measured by a non-depleting, katharometer thermal conductivity cell which combines high stability and low mass to form a sensor with fast response, high sensitivity and vir-

tually no maintenance costs. By applying the power of a microprocessor to temperature compensation and linearisation, an accuracy and measuring range not usually associated with katharometers is provided. All suitable gases can be measured over 0 to 100%, with the maximum sensitivity being gas-dependent, and ranges from 0 to 10% for carbon dioxide to 0 to 5000ppm for hydrogen.

Measured values are presented on a large, clear LCD screen which also displays messages and prompts for the menu-driven configuration and calibration routines.

Two concentration alarms are provided for each gas and give visual (LED) indication and volt-free changeover contact outputs.

The user can configure the alarm function (high, low or off) as well as the hysteresis value.

The instrument is packaged in a standard DIN enclosure (96 x 144mm) with an optional locking cover with a rating of IP54.

For sampling, a variety of systems is available for any necessary pumps, filters and take-off tubes can also be supplied.

Typical Applications

- ◆ Food packaging
- ◆ Produce and fruit storage
- ◆ Hydrogenation processes
- ◆ Fermentation processes
- ◆ General process plant

SPECIFICATION

Display

Dot matrix LCD registering 2 or 4 lines of alphanumeric characters

Oxygen measurement

Range 0 to 100%

Resolution: 0.1%

Accuracy: $\pm 0.25\%$

Range 0 to 25%

Resolution: 0.1%

Accuracy: $\pm 0.1\%$ (5 to 100% of scale)

ppm level ranges also available, subject to application

Carbon dioxide measurement

Range 0 to 100%

Resolution: 0.1%

Accuracy: $\pm 1\%$

Range 0 to 10%

Resolution: 0.1%

Accuracy: $\pm 0.2\%$

Consult Hitech for other second gas ranges and for the effects of humidity on sampled gases

Sample flow

100 to 300ml/min for optimum performance

Sample temperature

-5°C to +40°C (non-condensing)

Sample pressure

Set by vent pressure which must be nominally atmospheric

Speed of response (typical) (T90)

Oxygen: 12s

Carbon dioxide: 20s

Sample connections

Inlet and outlet: captive seal compression fittings suitable for 0.25 inch (or 6mm) outside diameter tube

Output (signal) - each channel

4...20mA

Both outputs programmable between 20 to 100% of display span.

Outputs (alarm) - each channel

Two alarms: each user-configurable to OFF, HIGH or LOW

Hysteresis: user-configurable

Relay outputs: rated 48V ac or dc, 0.5A, normally energised

Ambient temperature

-5°C to +40°C

Power supply

110/120V or 220/240Vac, 50/60Hz

Power consumption, 12VA

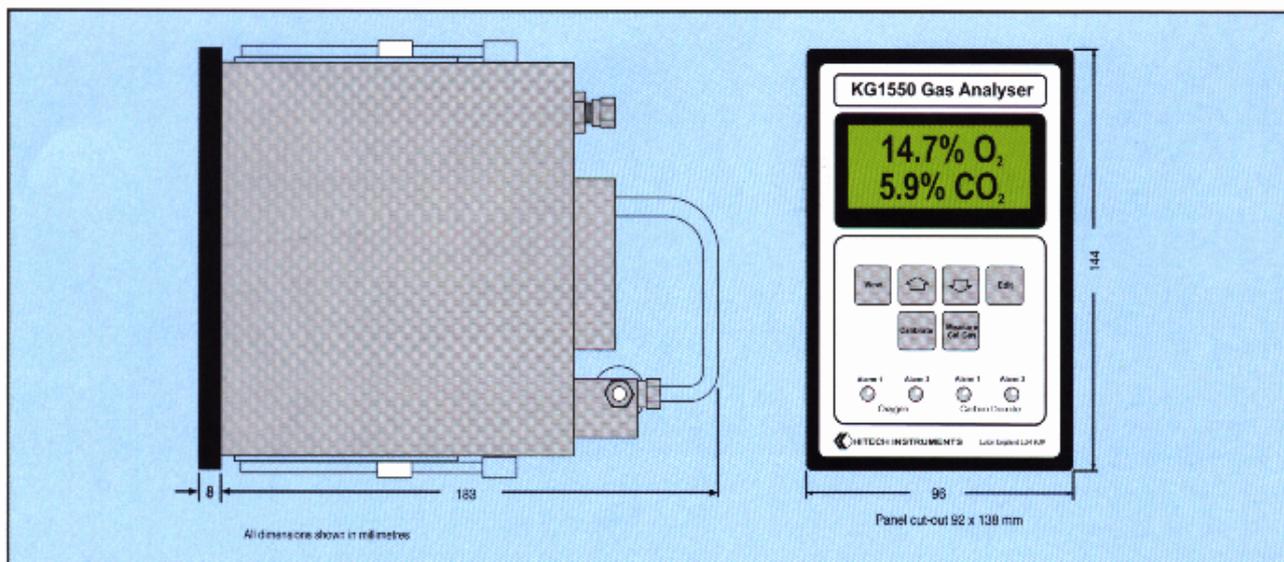
Mounting

Electronics unit: panel mounting with two clamps

Remote sensor unit: wall bulkhead (optional)

Materials

Enclosure: Glassfibre-reinforced Noryl to IP40 (IP54 locking door option)



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