

What it gives you...

- ◆ Gas measurement options from: Methane, Oxygen, Hydrogen Sulphide, and Carbon Dioxide
- ◆ Sensor life of up to 5 years giving low running costs
- ◆ ATEX Zone 2 compliance, already certified for use on landfill sites and biogas digestors
- ◆ Clearly displayed readings at all times with no menus to select or confuse
- ◆ Dedicated 4-20mA readings to determine carbon credits
- ◆ 4-20mA analogue output on all gases for easy connection to other control or plc monitoring systems
- ◆ Two volt free alarm setting points for each measured gas
- ◆ Easy calibration, no training required
- ◆ Sample systems can be included in the design, less work for you
- ◆ Robust double door enclosure design suitable for outside locations
- ◆ A simple complete system, designed for landfill and biogas applications

Typical Applications

- ◆ Landfill gas monitoring
- ◆ Flare stack monitoring
- ◆ Digester gas monitoring
- ◆ Biomass gasification
- ◆ Carbon credit determination



BS EN 60079-15:2005 for use in group II and category 3 G (Gas) locations

The GIR5000 is a purpose built gas analyser unit supplied in a weatherproof case for measuring the concentrations of typical gases produced from landfill and biogas operations.

Versions available:

2 gases	Methane and Oxygen
2 gases	Methane and Hydrogen Sulphide
3 gases	Methane, Oxygen and Carbon Dioxide
3 gases	Methane, Oxygen and Hydrogen Sulphide
3 gases	Methane, Hydrogen Sulphide and Carbon Dioxide

Sample conditioning in the basic unit is provided by an external coalescing filter and water catch-pot assembly. Water contamination has been prevented by fitting a hydrophobic filter which prevents water condensate from entering the analyser.

The sample flow is monitored and alarmed by an electronic flow meter. Adjustment and indication for the flow is provided by a front-panel-mounted indicator and needle valve arrangement. The system is suitable for sample pressures down to 20mbar gauge. A pump is available as an option for samples with a lower source pressure.

An IP54 weatherproof wall-mounting GRP enclosure is used to package the instrument. The displayed readings, alarm indicators and sample flow meter are clearly visible through the windowed door. Easy service access is provided by mounting the electronics and displays on an internal hinged door and the sample filter externally.

We can also provide customer specific gas sampling systems if required. Just ask us for more details.

Ease of use and reliability—a good combination.

SPECIFICATION

Display

3½ digit LCD for oxygen
4 digit LCD for methane, carbon dioxide and hydrogen sulphide

Ranges

0 to 25% oxygen
0 to 100% methane and carbon dioxide
0 to 5000ppm hydrogen sulphide

Stability

Better than 2% full scale deflection per year

Accuracy

Typically 2% of full scale deflection

Repeatability

+/- 0.5% of range

Sample temperature

(-)-20°C to 55°C: Must be non-condensing at the instrument ambient temperature

Sample pressure

Minimum 20mbar
Maximum 1 bar

Speed of response (typical)

30s (T90)

Temperature induced drift

+/- 0.1% of range, per °C movement

Power supply

110/120V or 220/240V ac, 50/60Hz. 50VA

ATEX Details

Certified to BS EN 60079-15:2005 for use in group II and category 3 G (Gas) locations

Sample flow

Between 100 and 300ml/min

Sample connections

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

Output - signal

4 to 20 mA, proportional to 0 to 100% of span for each gas measured. Maximum load 200ohms

Outputs - alarms

Two sets of volt-free, normally-energised (go to alarm condition on power failure) change-over relay contacts per gas. Two sensor fault relays and an alarm for sample flow failure(<75ml/min approx.). Contact rating 30v ac or dc at 0.5A max. Note these contacts are for signal applications only.

Ambient temperature

-5 to +40°C

Enclosure

Wall-mounting GRP enclosure to IP54, fitted with windowed door

Overall dimensions

745 mm (H), 535 mm (W) and 300 mm (D) .

Other Instruments to measure oxygen

Zone 1 EEx d option for G1010 oxygen analyser



G610 wall mounted, oxygen analyser



Z4010 Transportable zirconia based sensor oxygen analyser



Other instruments to measure flammables

IR600 for methane or carbon monoxide, wall mount configuration



K1550 for hydrogen or helium analysis



We also have a range of instruments suitable for the following applications:

- Workplace Safety
- Hydrogen and Helium measurement
- Power plant and generator cooling
- Inert gas blanketing
- Toxic and flammable gas measurement
- Oxygen deficiency monitoring
- Chlorine production
- Gas blending

Visit www.hitech-inst.co.uk for more information

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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