GIR5000 landfill gas monitoring system

Features

- **Measures oxygen, methane and carbon dioxide**
- **Alarms for all measurements and sample flow**
- **4 to 2OmA outputs for all measurements**
- **Optional safety alarm and shut-down system**

The GIR5000 is a gas analyser unit for measuring the concentrations of oxygen and methane in landfill gas and biogas. As an option, the concentration of carbon dioxide can also be monitored.

Sample conditioning in the basic unit is provided by an external coalescing filter and water catch-pot assembly. When the external temperature is below 35°C (the internal temperature of the analyser) this technique is the most economic. For situations where the sample temperature at source is significantly higher than the ambient temperature, and the sample is saturated with water, an optional sample cooler can be fitted.

Analogue outputs and alarms are provided for all gases measured.

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 2Ombar gauge. A pump is available as an option for samples with a lower source pressure.

Enhanced safety is provided by an optional flammable gas detector and shut-down system. When this option is fitted, any leakage of a flammable gas within the analyser's enclosure is detected, causing the power to be shut off from the instrument, and simultaneously causing a solenoid valve to stop the sample flow. A set of volt free relay contacts is used to indicate this situation. For further security the system must be reset manually from this condition.

An IP667-rated wall-mounting GRP enclosure is used to package the instrument. The LCD, alarm indicators and sample flow meter are clearly visible through the windowed door.

Easy service access is provided by mounting the electronics and parts of the sample handling system on an internal hinged door, and the sample filter externally.

Other Hitech products for **landfill gas monitoring** include the G1010 for oxygen measurement and the IR600 Series for methane and carbon dioxide. See data sheets HPS129 and HPS105 respectively for more details of these devices.

Applications:

- Flare stock monitoring
- Generator set control
- Landfill gas monitoring
- Biogas monitoring

SPECIFICATION

Display
3½ digit LCD for oxygen
4-digit LCD for methane and carbon dioxide option

Ranges
0 to 25% oxygen
0 to 100% methane and carbon dioxide option

Stability
Better than 2% fsd/month

Accuracy
1% fsd

Sample **flow**
Between 100 and 300ml/min for optimum performance

Sample temperature
Maximum 100°C

Sample pressure
Minimum 10mbar
Maximum 30mbar

Speed **of** response (typical)
30s (T90)

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

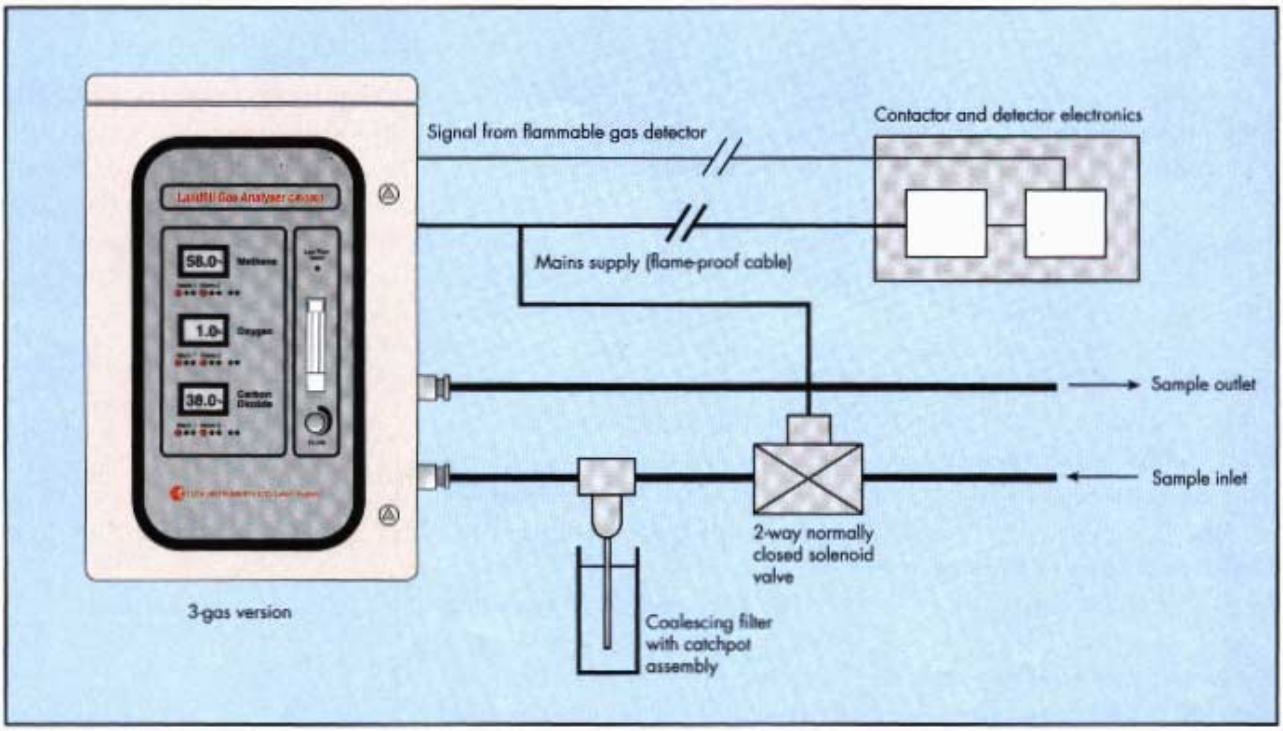
Output - signal
4 to 20 mA, proportional to 0 to 100% of span for each gas measured. Maximum load 4001k.

Outputs - alarm
Two sets of volt-free, normally-energised, change-over relay contacts per gas and for sample flow (<75ml/min approx.). Rating for resistive loads: 0.4A at 1 25V 50/60Hz; 2A at 30Vdc

Ambient temperature
-5 to +40°C

Power supply
110/120V or 220/240V ac, 50/60Hz. Maximum power consumption 250W.

Enclosure
Wall-mounting GRP enclosure to IP669, fitted with windowed doors.
Overall dimensions: 675mm high x 470mm wide x 282mm deep.



20 Titan Court, Laporte Way, Luton, Bedfordshire, England LU4 8EF
Tel: +44 (0)1582 *456900* Fax: +44 (0)1582 400901
Internet home page http://wwwmtl-inst.com/

A member of The MU. Instruments Group plc

HITECH INSTRUMENTS LIMITED