

Gas Data GFM436

A simple 'state of the art' portable gas analyser and flow monitor for site investigations, landfill gas control and environmental regulation compliance monitoring.

The GFM436 is an ATEX accredited hand-held gas analyser with a number of additional features and functions to cover all of the gas monitoring parameters needed to complete a thorough site investigation.

1. Gas Analysis

A combination of infra-red and electrochemical sensors are used to determine the relative proportions of the components in the sample gas. The results appear in real time on the display – CH₄, CO₂ and O₂ are expressed in % while H₂S and CO are in ppm. The sample time is indicated on the display and low levels of CH₄ are displayed as LEL% when below the explosive range.

2. Vapour Measurement

Where sites have become contaminated with liquid fuels or oils, the vapour that results mixes with the CH₄ and distorts the analysis value causing it to be sent over range and therefore a value cannot be recorded. To avoid this problem and allow the user to collect meaningful site data the infrared sensor is also factory calibrated on hexane vapour. Hexane is chosen as its infrared characteristics are a similar match to those of common fuels and oils. The advantage is that the user can use this channel to record vapour levels consistently and with this data, determine if levels are falling, rising and locate areas of maximum/minimum contamination etc.

3. PID Factor

The use of a photo ionisation detector (PID) to look for low levels of volatile organic compounds (VOC) is common practice during site investigations. However, such measurements cannot be made without applying a correction factor (PID factor) based on the CH₄ content of sample gas. The GFM436 automatically calculates and displays this factor in real time.

4. Flow pressure temperature

To complete the site measurements, dedicated connection ports on the top of the instrument allow the physical parameters of the gas to be measured. These are the gas flow rate, its pressure and its temperature.

5. Data Logging

All measured values and manually entered water levels can be stored for later viewing and/or downloaded to a PC. When stored, the values are time stamped and labelled. The label has a three tier format and can be up to 24 alphanumeric characters long. The data is held in a non-volatile battery-independent FLASH memory with a capacity of over 3000 complete data sets.

Using Gas Data's SiteMan5 program data and labels can be easily transferred to and from a PC via the supplied USB connection cable. Data storage can be triggered manually or the internal real time clock can be programmed to take and store readings automatically while the instrument is left unattended.

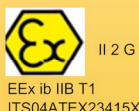
GFM436 Series Features

- Provides measurement of 6 gases
- Measurement of atmospheric, dynamic differential and static pressure
- Bi-directional measurement of instantaneous and peak borehole flow
- Second infrared scale referenced Hexane vapour to attempt to explain unusual methane results caused by fuel spills
- Intrinsically safe - ATEX certified
- SiteMan 5.xx PC software
- Manual entry of water levels from a Dip Meter taken at each borehole – 2 readings can be stored for each borehole location
- Manual data storage and programmable unattended data logging functions
- 3 tier hierarchical 24 character alphanumeric labels for the naming of stored reading sets
- Small portable design, easy to hold in one hand
- 8 hour battery life and 4 hour charge time maximum
- Supplied in a 'ready to go to site' kit
- 12 month recalibration interval



Technical Specification Table

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General		
Ex rating to	EEx ib IIB T1	
Ambient Temperature Range	-10 deg C to 40 deg C	
Aspiration Rate	300 ml/min minimum	
Protection Rating	IP65	
Dimensions	200mm x 100mm x 60mm (Approx)	
Standard Channels		
	Range (resolution)	Typical Accuracy
Gas Measurements		
Methane	0 to 100% (0.1)	0.3% @ 5% 3.0% @ 60% 3.0% @ 100%
Carbon Dioxide	0 to 100% (0.1)	0.3% @ 5% 3.0% @ 40% 3.0% @ 100%
Hexane	0 to 2% (0.001)	0.2%
Oxygen	0 to 25% (0.1)	0.2%
Hydrogen Sulphide	5,000ppm (10)	20ppm
Carbon Monoxide	2,000ppm (1)	20ppm
LEL	0 to 100% LEL (0.1)	4% LEL
Pressure Measurements		
Atmospheric	800 to 1200mbar (1)	2mbar
Static	-200mbar to 200mbar (1)	0.5mbar
Differential	+1250Pa to -1250Pa	3Pa to 250Pa (see calibration certificate)
Flow Measurements		
Instantaneous Flow	+100 to -60l/hr	0.5l/hr to 3l/hr (see calibration certificate)
Peak Flow Display	Yes	



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Gas Analysis and Control