



Anaerobic digestion
Biogas
Landfill gas

GA3000 PLUS

The ATEX certified GA3000 PLUS builds on field-proven, robust gas analysis technology to offer cost effective online monitoring with local data outputs.

Features

- CH₄, CO₂ and O₂ measurement
- Optional H₂S, H₂ and CO measurement
- Multi-point sampling (up to 3 gas sample points)
- H₂S ranges from 0-50ppm to 0-10,000ppm
- Monitor before and after desulphurisation
- Continuous monitoring option
- Clean air purge
- Large and clear back-lit display
- 4-20mA outputs for each gas
- Modbus communication
- Gas return to process as standard
- IP65 rated stainless steel enclosure
- ATEX certified for use in zone 2 areas

Benefits

- No training required
- Low cost of ownership
- Calibration accredited to ISO 17025
- Quick and easy self-installation
- Compact self-contained system
- Moisture removal included as standard
- Zero service downtime
- Clear servicing schedules
- Field-proven equipment
- Start-up configuration wizard
- Simple user calibration



Technical specifications

GA3000 PLUS

GENERAL SPECIFICATION

Number of sampling points	1-3
Gases to be monitored	CH ₄ , CO ₂ and O ₂ with optional H ₂ S, H ₂ and CO (choice of up to 5)
Reading intervals	User definable, with a continuous CH ₄ , CO ₂ and O ₂ option available
Operating temperature range	0°C to +50°C without heater, -20°C to +50°C with heater

POWER

Mains options	110-230 VAC 50/60 Hz
Consumption	0.2A ± 5% without heater, 0.42A ± 5% with heater
Instrument backup memory	Lithium manganese backup battery for memory retention

GAS RANGES

Gases measured	CH ₄ and CO ₂ O ₂ H ₂ S/H ₂ /CO	By dual wavelength infrared cell with reference channel By internal electrochemical cell By internal/external electrochemical cell		
Range	CH ₄ CO ₂ O ₂ H ₂ S H ₂ CO	0-100% 0-100% 0-25% 0-50ppm, 0-200ppm, 0-500ppm, 0-1,000ppm, 0-5,000ppm or 0-10,000ppm 0-1,000ppm 0-1,000ppm		
Typical accuracy - after calibration*	CH ₄ CO ₂ O ₂	<u>0-5% vol</u> ±0.5% (vol) ±0.5% (vol) ±1.0% (vol)	<u>5-15% vol</u> ±1.0% (vol) ±1.0% (vol) ±1.0% (vol)	<u>15% FS</u> ±2.0% (vol)** ±2.0% (vol) ±1.0% (vol)
H ₂ and CO typical accuracy - after calibration	H ₂ CO	0-1,000ppm 0-1,000ppm	±1.5% FS +3.0% FS	
H ₂ S typical accuracy - after calibration*	H ₂ S H ₂ S H ₂ S H ₂ S H ₂ S H ₂ S	0-50ppm 0-200ppm 0-500ppm 0-1,000ppm 0-5,000ppm 0-10,000ppm	±1.5% FS ±1.5% FS ±2.0% FS ±2.0% FS ±100ppm or 5% of reading (if greater) ±200ppm or 5% of reading (if greater)	

*plus accuracy of calibration gas used

**when above 70% of concentration between temperatures of 41°C and 50°C the accuracy is up to +3.8%

Response time, T90	CH ₄ CO ₂ O ₂ H ₂ CO	≤20 seconds ≤20 seconds ≤20 seconds <50 seconds <40 seconds	H ₂ S (0-50ppm) H ₂ S (0-200ppm) H ₂ S (0-500ppm) H ₂ S (0-1,000ppm) H ₂ S (0-5,000ppm) H ₂ S (0-10,000ppm)	≤30 seconds ≤35 seconds ≤35 seconds ≤35 seconds ≤40 seconds ≤40 seconds
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Cell lifetime O₂ cell is 3 years in air (except in continuous systems where the cell lifetime is approximately 1 year in air), all other cells 2 years in air



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Technical specifications

GA3000 PLUS continued

PUMP

Flow	300ml/min typically
Flow-fail point	-375 mbar vacuum
Maximum vacuum restart	-375 mbar

COMMUNICATIONS

Output channels	Up to four analogue 4-20mA output channels plus Modbus digital output
Alarm notifications	2 user-definable alarms can be triggered when above or below a set value, recovery values can also be defined. (Alarm option only available on single sample point systems)
Relay outputs	Single pole changeover 6A 250V relay volt free

PHYSICAL

Weight	36.5kg
Size	650 x 600 x 210mm (with supplied wall mounting brackets)
Enclosure	Stainless steel, 600 x 600 x 210mm, IP65 rated
Operation keys	Membrane panel keypad
Display	Liquid crystal display, 40 x 16 characters Fibre optic woven back-light for low light conditions
Moisture removal filters	User replaceable microfibre filter
Heater option	Optional 100W mains powered ATEX certified heater

CERTIFICATION RATING

ISO17025	Calibrated under UKAS accreditation (certificate number 4533)
ATEX	 II 3 G Ex nA IIA T1 Gc (-20°C ≤ Ta ≤ +50°C)
BS EN 61010	Safety requirements for electrical equipment for measurement, control, and laboratory use
BS EN 50270: 2006	Electromagnetic compatibility - electrical apparatus for the detection and measurement of combustible gases, toxic gases or oxygen