



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 option¹
- Large and clear back-lit display
- 4-20mA outputs for each gas
- Modbus communication
- Optional Profibus communication
- Optional Profinet communication
- IP65 rated stainless steel enclosure
- ATEX certified for use in zone 2 areas
- Optional auto-drain pump for moisture removal

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
- Field proven equipment
- 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 | 100-240 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 |
| Cell lifetime | O ₂ cell is 3 years in air, all other cells 2 years in air | | | |

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, optional Profibus module, optional Profinet module |
| 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 |

¹ Continuous option will include a minimum 3 minute daily air purge