



Anaerobic digestion

Applications

- Farm digester gas monitoring
- Food processing biogas monitoring
- Waste water biogas monitoring
- Methane recovery

Benefits

- Enables consistent collection of data for improved analysis and accurate reporting
- No need for self-certification of anemometer
- Easy to use and calibrate
- User configurable operation
- Helps check digester process is running efficiently

Features

- Certified: ATEX, IECEx, MCERTS (applied for), CSA and UKAS calibration (ISO17025)
- Robust design for market leading reliability
- CH₄ and CO₂ accuracy $\pm 0.5\%$ after calibration
- Measures % CH₄, CO₂ and O₂
- Modular and upgradeable
- 3 year warranty
- Stores and downloads readings
- User selected languages
- Event log

Options (available at purchase or later)

- H₂S to 0-5,000ppm or 0-10,000ppm
- Gas Analyser Manager software for data download
- External flow devices: anemometer (ATEX) / Pitot tubes
- ATEX certified temperature probe



Technical specifications

BIOGAS 5000

POWER SUPPLY

Battery type	Rechargeable nickel metal hydride battery pack (not user replaceable)
Battery life	Typical use 8 hours from fully charged
Battery Charger	Separate intelligent battery charger powered from mains supply (100 - 240V)
Charge time	Approximately 3 hours from complete discharge

GAS RANGES

Gases measured	CO ₂ and CH ₄	By dual wavelength infrared sensor with reference channel			
	O ₂	By internal electrochemical sensor			
	H ₂ S (optional)	By internal electrochemical sensor			
Oxygen cell lifetime	Approximately 3 years in air				
H ₂ S cell lifetime	Suitable for sampling applications - not for continuous use				
Range	CH ₄	0 - 100%			
	CO ₂	0 - 100%			
	O ₂	0-25%			
	H ₂ S	0-5,000ppm or 0-10,000ppm			
Typical accuracy - after calibration	CH ₄	0-70%	±0.5% (vol)	70-100%	±1.5% (vol)
	CO ₂	0-60%	±0.5% (vol)	60-100%	±1.5% (vol)
	O ₂	0-25%	±1.0% (vol)		
	H ₂ S	0-50ppm	± 1.5% FS		
		0-200ppm	± 2.0% FS		
		0-500ppm	± 2.0% FS		
		0-1,000ppm	± 2.0% FS		
	0-5,000ppm	± 2.0% FS			
	0-10,000ppm	± 5.0% FS			
Response time, T90	CH ₄	≤ 10 seconds			
	CO ₂	≤ 10 seconds			
	O ₂	≤ 20 seconds			
	H ₂ S	≤ 30 seconds			

PUMP

Flow	550 ml/min typically
Flow fail point	-200 mbar vacuum - user settable
Maximum vacuum restart	-375 mbar approximately with flow rate of approx 80ml/min

Technical specifications

BIOGAS 5000, cont'd.

FACILITIES

Temperature measurement	-10°C to +75°C with optional probe
Temperature accuracy	±0.5°C with optional probe
Flow measurement	Via Pitot tube, orifice plate, or anemometer
Alarm	User selectable alarms
Communications	Via USB lead or wireless Bluetooth *
Relative pressure measurement	±500 mbar
Relative pressure accuracy	±4 mbar typically (should be zeroed before reading) to ±15 mbar max
Barometric pressure measurement	500 to 1500 mbar, ±5 mbar accuracy
Available memory	10 IDs*, 500 readings

ENVIRONMENTAL CONDITIONS

Operating temperature range	-10°C to +50°C
Atmospheric pressure range	700 to 1200 mbar
Relative humidity	0-95% non condensing
Case seal	IP65

PHYSICAL

Weight	1.6 kilograms
Size	L 220mm, W 155mm, D 60mm
Case material	ABS / polypropylene with rubber over-moulding
Keys	Alpha-numeric keypad with "tactile" membrane
Display	Ultra-clear high resolution 4.3" full colour TFT
Connections	Colour coded gas inlet, outlet and pressure ports. Waterproof USB port, anemometer and charger / temperature probe connections.
Gas sample filters	External user changeable 2.0µm ptfе water traps.

CERTIFICATION RATING

ATEX	II 2G Ex ib IIA T1 Gb (Ta = -10°C to +50°C)
MCERTS	Applied for
ISO17025	Calibration to UKAS certificate number 4533
CSA	Ex ib IIA T1 (Ta= -10°C to +50°C) (Canada), AEx ib IIA T1 (Ta= -10°C to +50°C) (USA)

* Gas Analyser Manager software required.

Important note: The information in this document is correct at the time of generation. We do however, reserve the right to change the specification without prior notice as a result of continuing development.

