BIOGAS 5000

CH_4 CO_2 O_2 H_2S H_2

PORTABLE GAS ANALYSER | ANAEROBIC DIGESTION

Easy to use, calibrate and configure and enables consistent collection of data for improved analysis and accurate reporting, whilst helping to check the digester process is running efficiently.

FEATURES

- Certified: ATEX, IECEx, CSA, MCERTS and UKAS calibration (ISO17025)
- Robust design for market leading reliability
- CH_4 and CO_2 accuracy ± 0.5% after calibration
- Choice of user settings and simple gas reading function
- Measures % CH_4, CO_2 and O_2
- Modular and upgradeable
- 3 year warranty
- Stores and downloads readings
- User selected languages
- Event log
- Datalogging and profiling function
- Up to 6 gases monitored

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

SECTOR

Biogas

APPLICATIONS

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

OPTIONS (AVAILABLE AT PURCHASE OR LATER)

- H_2S to 0-5,000ppm or 0-10,000ppm
- Additional gases including H_2 and NH_3
- Gas Analyser Manager software for data download
- External flow devices: anemometer (ATEX) / Pitot tubes
- ATEX certified temperature probe

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TECHNICAL SPECIFICATIONS

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 4 hours from complete discharge			
GAS RANGES				
Gases measured	CH_4 and CO_2	By dual wavelength infrared sensor with reference channel		
	O_2	By internal electrochemical cell		
	$H_2S/H_2/CO/NH3$	By internal electrochemical cell		
Standard gas cells	Cell	Range	Typical accuracy (range : accuracy)	Typical accuracy (range : accuracy)
	CH_4	0-100%	0-70% : ±0.5% (vol)	70-100% : ±1.5% (vol)
	CO_2	0-100%	0-60% : ±0.5% (vol)	60-100% : ±1.5% (vol)
	O_2	0-25%	0-25% : ±1.0% (vol)	
Optional gas cells	Cell	Range	Typical accuracy	
	H_2S	0-50ppm	±1.5% FS	
	H_2S	0-200ppm	±2.0% FS	
	H_2S	0-500ppm	±2.0% FS	
	H_2S	0-1,000ppm	±2.0% FS	
	H_2S	0-5,000ppm	±2.0% FS	
	H_2S	0-10,000ppm	±5.0% FS	
	CO	0-500ppm	±2.0% FS	
	CO	0-1,000ppm	±2.0% FS	
	CO	0-2,000ppm	±2.0% FS	
	CO (H_2)*	0-2,000ppm	±1.0% FS	
	NH_3	0-1,000ppm	±10.0% FS	
	H_2	0-1,000ppm	±2.5% FS	
Typical accuracies	All typical accuracies quoted are after calibration			
*Hydrogen compensated carbon monoxide measurement	Hydrogen cross gas effect on carbon monoxide approximately 1%. Do not use where hydrogen is in excess of 10,000 ppm.			
Response time, T90	CH_4	≤10 seconds		
	CO_2	≤10 seconds		
	O_2	≤20 seconds		
	H_2S	≤30 seconds		
	CO	≤30 seconds		
	NH_3	≤90 seconds		
	H_2	<90 seconds		
PUMP				
Flow	550 ml/min typically			
Flow fail point	-200 mbar vacuum - user settable			
Maximum vacuum restart	-250 mbar approximately with flow rate of approx 250ml/min			

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TECHNICAL SPECIFICATIONS *CONTINUED*

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	±250 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	1.6kg
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 ptfe water traps
CERTIFICATION RATING	
ATEX MARKING	Ex II 2G Ex ib IIA T1 Gb (Ta = -10°C to +50°C)
MCERTS	MC/130240
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.	

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