



## 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
- CH<sub>4</sub> and CO<sub>2</sub> accuracy  $\pm 0.5\%$  after calibration
- Measures % CH<sub>4</sub>, CO<sub>2</sub> and O<sub>2</sub>
- Modular and upgradeable
- 3 year warranty
- Stores and downloads readings
- User selected languages

### Options

- H<sub>2</sub>S to 0-500ppm 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 <sub>2</sub> and CH <sub>4</sub>	By dual wavelength infrared sensor with reference channel	
	O <sub>2</sub> and H <sub>2</sub> S	By internal electrochemical sensor	
Range	CH <sub>4</sub>	0 - 100%	
	CO <sub>2</sub>	0 - 100%	
	O <sub>2</sub>	0-25%	
	H <sub>2</sub> S	0-500ppm, 0-5,000ppm or 0-10,000ppm	
Typical accuracy - after calibration	CH <sub>4</sub>	0-70%	±0.5% (vol)
	CO <sub>2</sub>	0-60%	±0.5% (vol)
	O <sub>2</sub>	0-25%	±1.0% (vol)
	H <sub>2</sub> S	0-500ppm 0-5,000ppm 0-10,000ppm	± 2.0% FS ± 2.0% FS ± 5.0% FS
Response time, T90	CH <sub>4</sub>	≤ 10 seconds	
	CO <sub>2</sub>	≤ 10 seconds	
	O <sub>2</sub>	≤ 30 seconds	
	H <sub>2</sub> 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

#### ENVIRONMENTAL CONDITIONS

Operating temperature range	-10°C to +50°C
Relative humidity	0 - 95% non condensing
Case seal	IP65
Barometric pressure	±500 mbar from calibration pressure, accuracy ±5 mbar typically

## 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
Visual and audible alarm	User selectable alarms
Communications	Via USB lead or wireless Bluetooth *
Relative pressure	±500 mbar from calibration pressure
Relative pressure accuracy	±4 mbar typically (should be zeroed before reading) to ±15 mbar max
Available memory	10 IDs*, 500 readings

#### PHYSICAL

Weight	1.5 kilograms
Size	L 220mm, W 155mm, D 60mm
Case material	ABS / polypropylene with rubber over-moulding
Keys	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	II 2G Ex ib d IIA T1 Gb (Ta = -10°C to +50°C)
MCERTS	Applied for
ISO17025	Calibration to UKAS certificate number 4533

\* 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.

