



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.



SECTOR

Biogas

APPLICATIONS

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

FEATURES

- Certified: ATEX, IECEx, CSA, MCERTS and UKAS calibration (ISO17025)
- Robust design for market leading reliability
- CH₄ and CO₂ accuracy ± 0.5% after calibration
- Choice of user settings and simple gas reading function
- Measures % CH₄, CO₂ and O₂
- 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

OPTIONS (AVAILABLE AT PURCHASE OR LATER)

- H₂S to 0-5,000ppm or 0-10,000ppm
- Additional gases including H₂ and NH₃
- Gas Analyser Manager software for data download
- External flow devices: anemometer (ATEX) / Pitot tubes
- ATEX certified temperature probe

© Product designs and specifications are subject to change without notice. User is responsible for determining suitability of product.


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 ₂ S/H ₂ /CO/NH ₃ | 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 ₂ S | 0-50ppm | ±1.5% FS | |
| | H ₂ S | 0-200ppm | ±2.0% FS | |
| | H ₂ S | 0-500ppm | ±2.0% FS | |
| | H ₂ S | 0-1,000ppm | ±2.0% FS | |
| | H ₂ S | 0-5,000ppm | ±2.0% FS | |
| | H ₂ S | 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 ₂ S | ≤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 | | | |

© Product designs and specifications are subject to change without notice. User is responsible for determining suitability of product.

BIOGAS 5000

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 ptfе water traps |
| CERTIFICATION RATING | |
| ATEX MARKING |  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. | |



© Product designs and specifications are subject to change without notice. User is responsible for determining suitability of product.