

SWG 100 Biocompact

Fixed gas analyser



Fixed Gas Analyser for monitoring of O₂, CH₄, CO₂, H₂S from small/medium scale AD plants

The biogas analyser can be configured to measure Oxygen (O₂%), Methane (CH₄%), Carbon Dioxide (CO₂%) and Hydrogen Sulphide (H₂S) from a single or dual sampling point.

The system automatically measure up to 24 times a day (with user defined intervals) or on demand by simply pressing a button. This features allow the operator to take additional gas readings as required outside the timed measurement sampling programme.

Benefits and key features:

- Single or dual sample point
- O₂, CH₄, CO₂% and H₂S measurements
- Timed and manual sampling
- Integrated gas pump and water trap with auto-drain function
- Data logging and storage
- 4-20 mA, modbus, profibus and profinet outputs
- Plug and Play pre-calibrated user replaceable sensors
- Low cost of maintenance, easy to operate
- User calibration function

Applications



Small AD plants



CHP engine protection



Farm-based AD plants



Food waste AD plants

Features

	Standard	Optional
Wall mounting, IP 54 suitable for indoor or outdoor installations	●	
Internal % LEL gas detector (alarm threshold on CH ₄)		●
Auto-zero solenoid valve for Auto-Zero in air	●	
Sampled or manual operation	●	
Universal Power Supply 90-240 Vac	●	
3.5" TFT color display with password protected menu	●	
RS 485 and Modbus communications	●	
CH ₄ % and CO ₂ % NDIR measurements	●	
O ₂ measurement with long life sensor	●	
H ₂ S measurements (0-5000 ppm)		●
Integrated water-trap with automatic moisture removal pump	●	
Multi sampling point up 2 sites		●
Multiple 4 x 4-20 mA output/inputs modules with 2 x "fail/ safe" alarm relay		●
Profibus, Ethernet, Profinet communications		●
Web enabled remote access and data logging		●
Cabinet heater		●

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Specifications

Measurement components				
Gas	Range	Type	Accuracy	Method
CH4	0-100 %	NDIR	± 0,3 % Vol or 3% m.v	Sampled or on-demand
CO2	0-100 %	NDIR	± 0.3 % Vol or 3% m.v	Sampled or on-demand
O2	0-25 %	EC	± 0,2% Vol	Sampled or on-demand
H2S	0-2000 ppm/4000 ppm	EC	± 5 ppm	Sampled or on-demand
Barometric pressure	850 to 1150 mbar	Piezo	n/a	
Calculated vale	Calorific value: 0-50 MJ/m3; MJ/Kg			
Sampling Points	1-2			
Display	3.5" TFT color display, back light			
Keyboard	Tactile keypad password protected menu			
Output communications/industrial interface				
Analogue	Up to 12 x 4-20 mA output/input analogue channels (self powered), individually configurable for each gases, with hold last reading function and delay resume function (user selectable)			
Alarms	Multiple alarm relay outputs free contact 24VDC/5A			
Industrial Interfaces	Modbus RTU as standard, optional ethernet, profinet, profibus dp and web enabled remote access			
Data logging	On internal memory with data export to SD			
Event logging	Record of alarms/event to SD card			
Sample				
Gas inlet	Stainless steel gas fittings with 1/8" ID thread			
Water Trap	Integrated water trap with condensate draining pump(auto-drain)			
Filter	Teflon particulate filter, Internal Viton hosing			
Flow	40...60 l/h			
Pressure	Sample Inlet Pressure -100 mbar trough 300 mbar			
Safety				
	LEL% (CH4) internal gas detector			
	Sample gas shut-off solenoid valve			
	Stainless steel flow orifice flow restrictor			
Physical				
Dimension	400 x 500 x 300 mm (H x W x D) wall mounting			
Weight/protection	14 kg/ IP54			
Operating temperature	+5 to 45 °C (-10 to 45 °C with optional heater)			
Installation	Indoor or outdoor,			
Heater	Cabinet heater 200 W			
Mains/power	Universal 90-240 VAC/ 47...63 Hz, 42W.....242W with cabinet heater			