SWG 100
bio-Ex

THE ZONE 2 ANALYSER

Stationary Biogas-measuring system for continuous measurements in Ex-zone 2

Ex II 3G Ex nA nC IIC T3 Gc

The complete, ready to use biogas analyser **SWG100** *bio-EX* is the industrial solution to be used with:

- municipal or industrial waste water treatment sites
- landfill sites
- biomethane (gas to grid) plants
- coal seam gas sites (coal bed methane)
- cogeneration heat and power engines (CHP)
- food and animal waste processing plants
- biogas (anaerobic digestion) plants

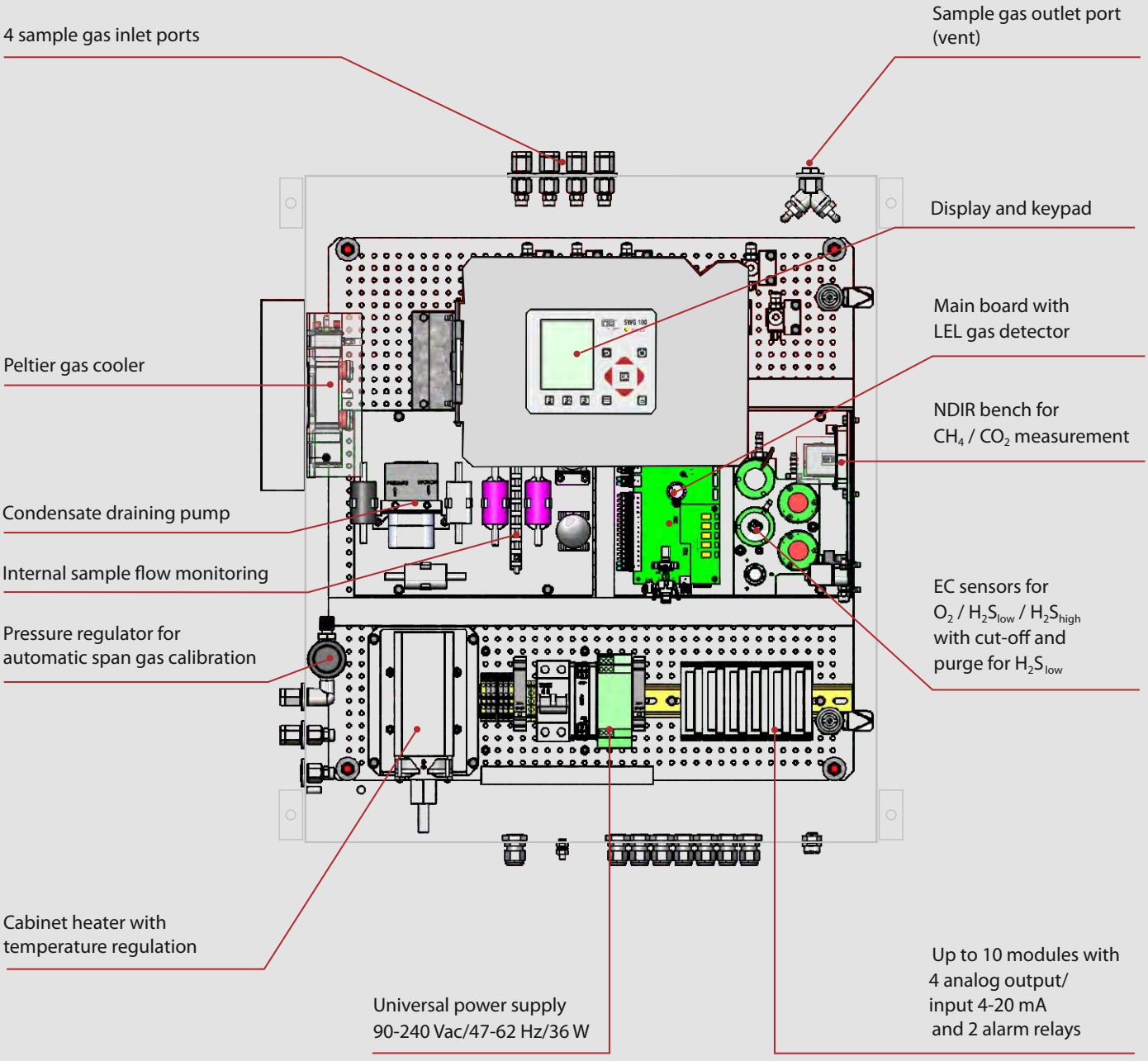
MRU AIRfair since 1984
EMISSION MONITORING SYSTEMS

THE ATEX CERTIFIED ANALYSER

for Biogas, Biomethane, Landfill Gas and Coalbed Methane

MRU biogas analyser of series SWG100 bio-Ex is designed for use in the hazardous zone 2 environment of different sites where biogas is produced.

The analyser can be installed in outdoor or indoor location, can sample dry or wet biogas, pressurized or low pressure gas and can be used from single point sampling up to max 4 sampling points.



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Instrument main features are:

- Industry compatible rugged design with stainless steel IP 65 cabinet
- ATEX certification according to II 3G Ex nA nC IIC T3 Gc
- Efficient sample gas preparation with peltier gas cooler and condensate draining pump
- Sampling from low suction up to high pressure gas
- No dilution of the sample gas, neither use of compressed air is required
- Direct and continuous/discontinuous measurement, with pressure and temperature compensation and event data logging
- Up to 4 sites monitoring (time sharing technique) with only one analyser
- Ready to run delivery, minimum installation work

SWG100 *bio-Ex*	standard	option
Basic analyzer for wall or rack mounting, IP65 stainless steel cabinet	●	
II 3G Ex nA nC IIC T3 Gc certification, flow restrictor orifice and cut-off gas supply, solenoid valve in case of alarm	●	
Electric gas cooler (Peltier) with automatic condensate draining pump	●	
Sample gas pump and internal sample flow monitoring with display and system alarm	●	
Solenoid valve for auto-zero with ambient air and calibration	●	
Auto-calibration using span gas mixture cylinder	●	
1/8" threads for all sample gas, zero gas and calibration gas inlets, fittings for DN6/4 mm tube	●	
3,5" TFT color, backlit display and keyboard, password protected operation	●	
RS 485 digital data transfer (Modbus RTU)	●	
115 or 230 Vac / 47 - 63 Hz / 36 W power supply	●	
CH_4 and CO_2 NDIR measurement	●	
O_2 measurement with long-life EC cell	●	
H_2S_{low} measurement with EC cell protection (cut-off and purge)		●
H_2S high measurement with EC cell		●
H_2 or CO measurement with EC cell		●
Combustible gas detector (% LEL) mounted inside analyser cabinet		●
Multiple sampling point switchover from 2 up to maximum 4 sites		●
Module with 4 channel analog outputs/inputs 4 - 20 mA and 2 alarm relays		●
Analyzer remote control using 4 external relay contacts		●
Converter module of RS 485 into Profibus or Ethernet		●
Cabinet heater for freeze protection		●

Product information:
see www.mru.eu

or scan adjacent QR-code

SWG 100 *bio-Ex*

TECHNICAL SPECIFICATIONS

Measured components	Method	Range	Resolution	Accurracy
Methane CH_4	NDIR	0 – 100 %	0,1 Vol%	± 0,3 Vol% or 3 % of reading**
Carbon dioxide CO_2	NDIR	0 – 100 %	0,01 Vol%	± 0,3 Vol% or 3 % of reading**
Oxygen O_2	ec, continuous	0 – 25 %	0,01 Vol%	0,2 % abs.
Hydrogen sulfide H_2S	ec, discont.	0 – 2.000/4.000 ppm*	1 ppm	± 10 ppm or 10 % of reading**
Hydrogen sulfide H_2S low	ec, discont.	0 – 200/1.000 ppm*	1 ppm	± 5 ppm or 10% of reading**
Hydrogen sulfide H_2S high	ec, continuous	0 – 10.000/50.000 ppm*	1 ppm	± 50 ppm or 5 % of reading**
Hydrogen H_2	ec, discont.	0 – 1.000/2.000 ppm*	1 ppm	± 10 ppm or 10 % of reading**
Calculated component	Calorific value: 0 – 50 MJ/m³; MJ/kg			

* overload measuring range
** the higher value applies

HMI human machine interface	3,5" TFT color display Backlit keyboard, password protected operation 4 x analog output 4-20 mA, floating, max. load 500R 4 x analog input 4-20 mA, passive inputs 2 alarm relays, potential free contacts 24 Vdc/5 A RS485 digital interface (Modbus RTU)
System safety components	Monitored cabinet atmosphere using the internal CO_2/CH_4 NDIR bench Stainless steel flow restrictor orifice Sample gas shut-down solenoid valve Additional LEL (CH4) monitoring inside cabinet (option)
Sample preparation	Stainless steel gas fittings with 1/8" ID threads Electric gas cooler (Peltier) Teflon particulate filter Monitored and regulated sample gas flow 40…60 l/h Sample gas inlet pressure: -100 mbar to + 300 mbar Sample gas venting: atmosphere pressure
Cabinet dimensions	700 x 600 x 210 mm (H x W x D) for wall or rack mounting
Weight / Protection	45 kg / IP65
Ambient temperature	+5°C…+45°C or -20°C…+45°C with cabinet heater
Installation site	Indoor or outdoor
Cabinet marking	Ex II 3G Ex nA nC IIC T3 Gc
Cabinet conditioning	Cabinet heater 200 W (option)

Data subject to change without notice
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MRU – sustainable analysing technology for more than 30 years!

MRU-representative:

MRU AIR fair since 1984 ®
EMISSION MONITORING SYSTEMS

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