



CH<sub>4</sub> | CO<sub>2</sub> | H<sub>2</sub>S | O<sub>2</sub> | H<sub>2</sub>

## SWG100 Biogas

The versatile  
biogas-analyser.



Continuous biogas analysis



# SWG100 Biogas

## Continuous biogas-analysis

**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 10 sampling points.**

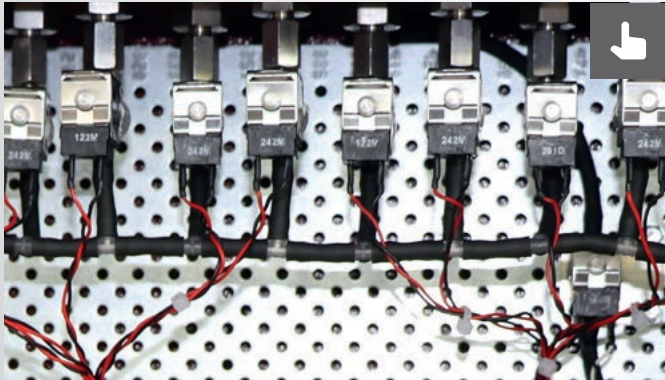
**We offer you these special advantages:**

- Biogas-measurement: CH<sub>4</sub>, CO<sub>2</sub>, O<sub>2</sub>, H<sub>2</sub>S, H<sub>2</sub>
- Industry compatible rugged design for harsh industrial environment
- Standard system safety included with continuously monitored fan ventilation of cabinet, gas flow restrictor orifice at gas inlet
- Efficient sample gas preparation for fast and reliable measurements
- Direct and continuous/discontinuous measurement, with pressure and temperature compensation and event data logging
- Up to 10 sites monitoring (time sharing technique) with only one analyser
- Ready to run delivery, minimum installation work



# The device in detail

## An overview of the special features



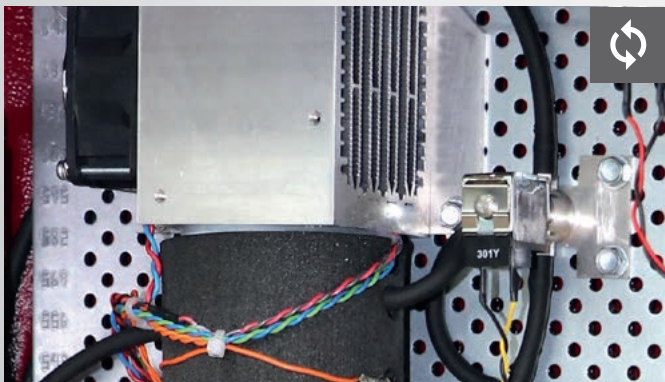
### Multifold-switching gas inlets

Up to 10 inlets in just one device



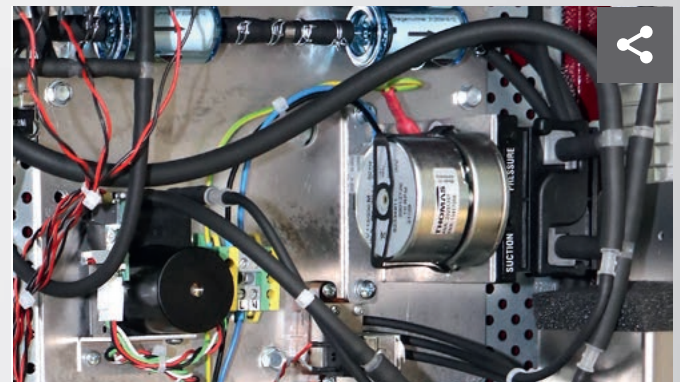
### Cabinet heating

Temperature regulated, for use in safe environment



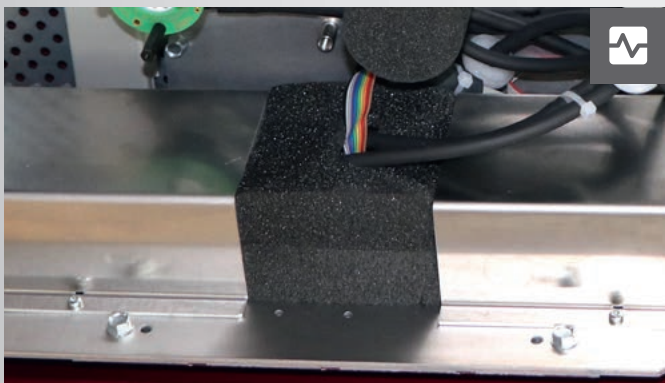
### Gas cooler

Electric Peltier gas cooler and condensate pump



### H<sub>2</sub>S-measurement with dilution system

for applications with very high H<sub>2</sub>S-concentrations



### NDIR-bench

for CH<sub>4</sub>/CO<sub>2</sub>-analysis, 0 ... 100%, for biogas-, biomethane and offgas measurements



### I/O-module

with 4-channel, 4 ... 20 mA analogue output and 2 alarm relays (NO contacts)

# SWG 100 biogas

## Technical specifications

Measured components	Measuring method	Range	Resolution	Accuracy
<b>Methane CH<sub>4</sub></b>	NDIR	0 ... 100%	0,01 Vol.-%	±0,3 Vol.-% or 3% of reading**
<b>Carbon dioxide CO<sub>2</sub></b>	NDIR	0 ... 100%	0,01 Vol.-%	±0,3 Vol.-% or 3% of reading**
<b>Oxygen O<sub>2</sub></b>	EC	0 ... 25%	0,01 Vol.-%	±0,2% abs.
<b>Hydrogen sulfide H<sub>2</sub>S low</b>	EC	0 ... 50 / 250 ppm* 0 ...	1 ppm	±2 ppm or 5 % of reading** (0 ...50 ppm)
<b>Hydrogen sulfide H<sub>2</sub>S</b>	EC	2.000/4.000 ppm* 0 ...	1 ppm	± 5 ppm or 5% of reading** (0 ... 2.000 ppm)
<b>Hydrogen sulfide H<sub>2</sub>S high</b>	EC	5.000/10.000 ppm*	1 ppm	± 5 ppm or 5 % of reading**
<b>Option dilution</b>	each H <sub>2</sub> S-sensor mentioned above, with a dilution factor of 1:50 applied , can handle up to 50.000 ppm			
<b>Hydrogen H<sub>2</sub></b>	EC	0 ... 1.000/2.000 ppm*	1 ppm	± 10 ppm or 10 % of reading** (>1.000 ppm)

Calculated components	Range	Resolution
<b>Nitrogen background N<sub>2</sub></b>	0 ... 100%	0,1%
<b>Gross calorific value</b>	0...40 MJ/m <sup>3</sup> / 0...56 MJ/kg	0,1%
<b>Calorific value</b>	0...36 MJ/m <sup>3</sup> / 0...50 MJ/kg	0,1%
<b>HMI / interfaces</b>	3,5" TFT color display dirt resistand keypad, password protected calibration 4 x analog output 4 ... 20 mA, galvanically isolated max. load 500R 2 Alarm relais, potential free contacts 24 Vdc / 5 A RS485 digital interface (Modbus RTU) RS485 to USB-, Ethernet-, ProfiBus-converter	
<b>System safety components</b>	Monitored cabinet ventilation fan Stainless steel flow restrictor orifice and sample gas shut-down solenoid valve LEL (CH4) monitoring inside cabinet (option)	
<b>Sample preparation</b>	Stainless steel gas fittings with 1/8" ID threads Electric gas cooler Teflon particle filter Sampling biogas with condensate of max. 14ml/min Monitored and regulated sample flow 40...60 l/h Sample inlet pressure: -100 mbar to + 200 mbar Sample venting: atmosphere pressure	
<b>Cabinet dimensions</b>	700 x 600 x 210 mm (H x W x D) for wall or rack mounting	
<b>Weight / Protection class</b>	25 kg / IP54	
<b>Installation site</b>	Indoor or outdoor (rain and sun shade is mandatory user scope of supply)	
<b>Ambient temperature</b>	+5° C ... +45° C or -10° C ... +45° C with cabinet heater	
<b>Cabinet conditioning</b>	Continuously monitored cabinet ventilation with alarm anti freeze heater 300W (Option)	
<b>Power supply</b>	Universal 90 ... 240 Vac / 47 ... 63 Hz / 90W (390W with heater)	

SWG 100  
Bio-Ex for  
Ex-Zone 2



OPTIMA Biogas  
handheld device



**MRU – Competence in gas analysis. Since 1984.**

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