SWG 100 SYNGAS

THE SYNGAS ANALYZER

Continuous Syngas-Measuring-System

The complete, ready to use analyzer SWG100 Syngas is the industrial solution for:

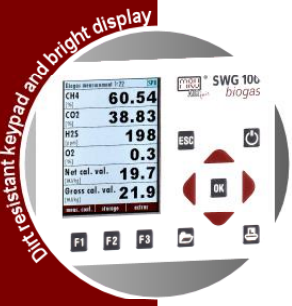
- **Biomass, coal and waste gasification plants**
- **Cogeneration heat and power engines (CHP) using syngas**
- **Small scale syngas analysis for research institutes and labs**

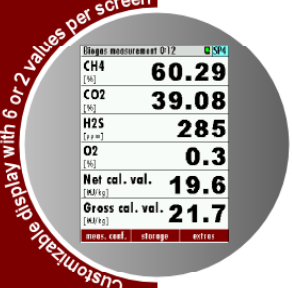
MRU AIR fair since 1984 ®

EMISSION MONITORING SYSTEMS

Over 30 years of innovative gas analysis!

TECHNICAL HIGHLIGHTS



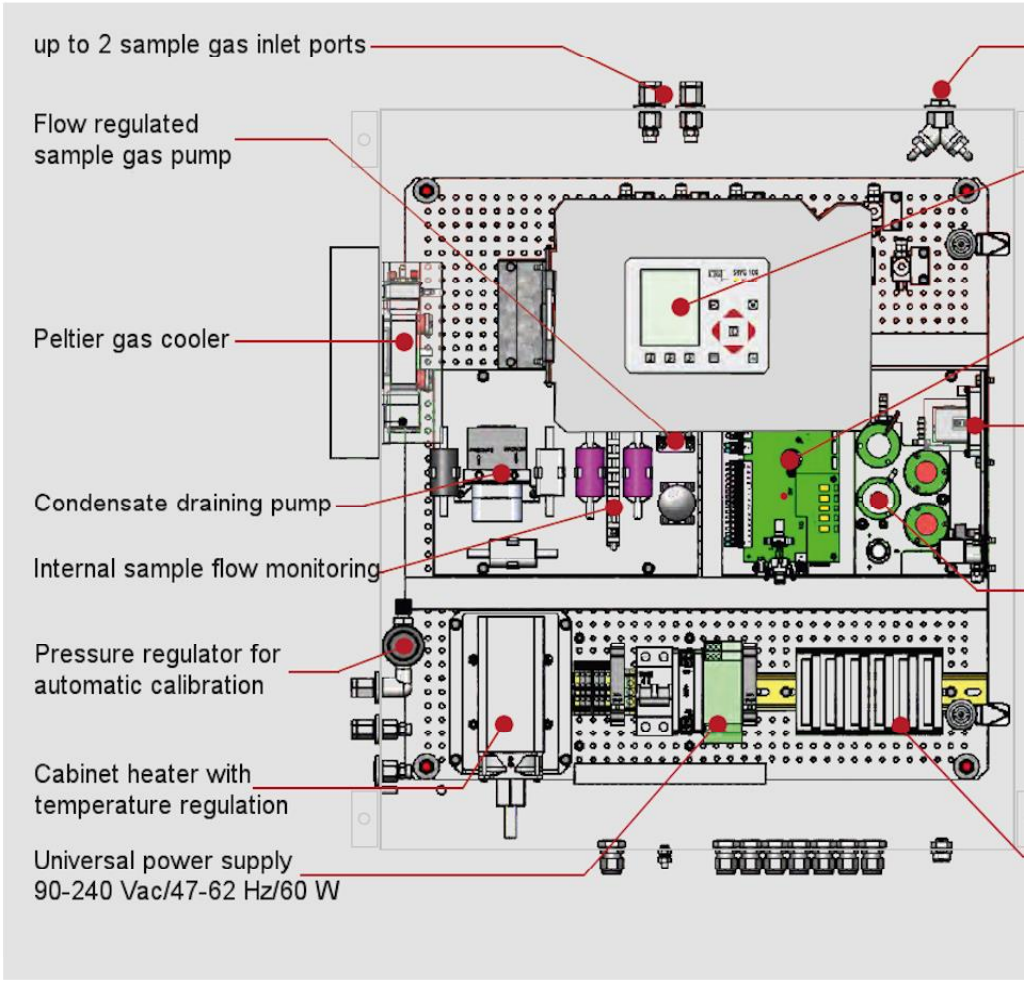


The MRU SWG100 Syngas analyzer is designed to be used in industrial safe areas or inside laboratories.

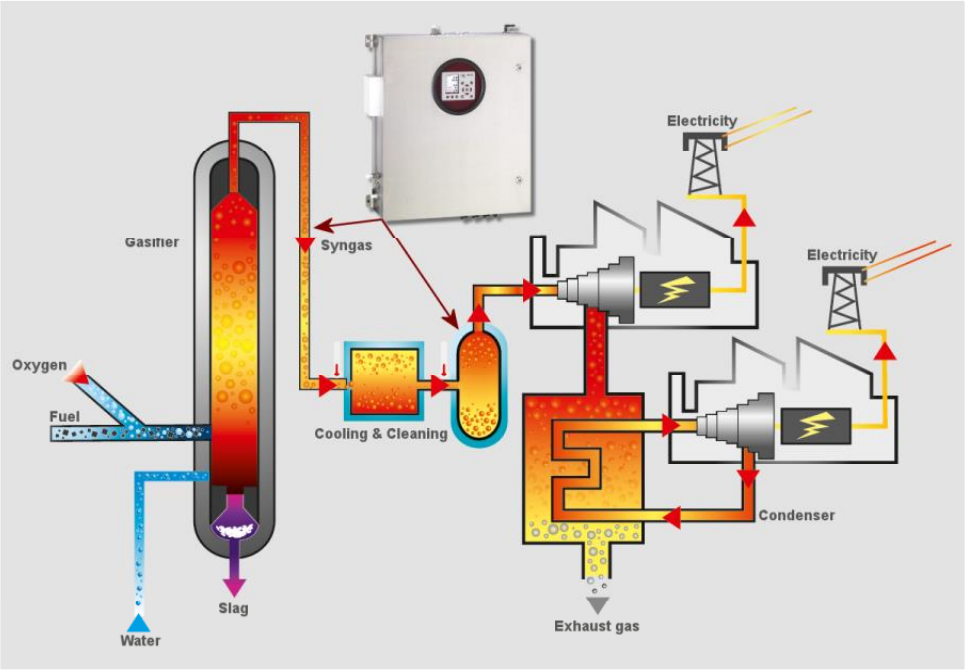
The analyzer can be installed in outdoor or indoor location, can sample dry or wet syngas, pressurized or low pressure gas and can be used from single or double sampling points.

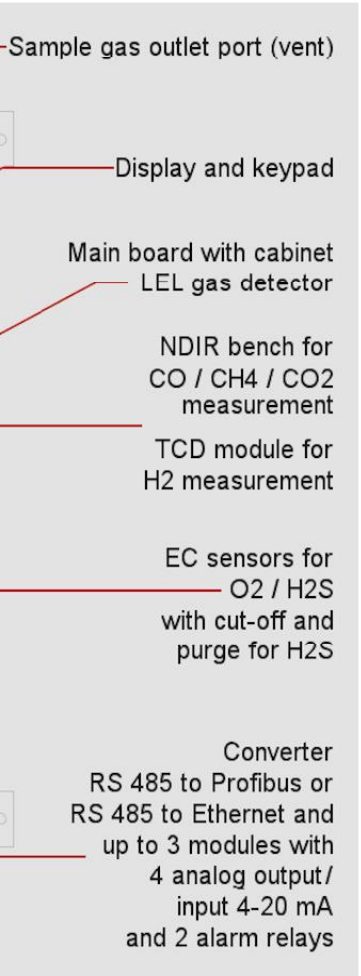
Instrument main features are:

- **for use in industrial safe area, or in laboratories with built-in increased level of safety**
- **IP 65 stainless steel cabinet, also for use in outdoor condition with sun and rain cover**
- **accurate measurements, using infrared and thermal conductivity technology**
- **sampling from low suction -100mbar up to high pressure +200mbar of gas pipe**



FEATURES AND OPTIONS





Instrument main features are:

- **no dilution of sample gas is required**
- **integrated gas cooler with condensate draining pump**
- **direct and continuous measurement, with pressure and temperature compensation**
- **multiple sampling point monitoring (up to 2 sites monitoring) with one analyzer**
- **flow restrictor orifice gas inlet for high pressure site**
- **with sample gas cut-off and power supply shut-off in case of alarm**
- **industry compatible rugged design, easy and fastest service design**
- **ready to run delivery, minimum installation work**

SWG 100 SYNGAS

TECHNICAL SPECIFICATIONS

Measurement components		Measuring method	Measuring range	Resolution	Accuracy
CO	**Carbon monoxide**	NDIR	0 – 100 %	0.01 Vol%	± 0.3 Vol% or 2 % of reading**
CH4	**Methane**	NDIR	0 – 100 %	0.01 Vol%	± 0.3 Vol% or 2 % of reading**
CO2	**Carbon dioxide**	NDIR	0 – 100 %	0.01 Vol%	± 0.3 Vol% or 2 % of reading**
O2	**Oxygen**	electrochemical, continuous	0 – 25 %	0.01 Vol%	0.2 % absolute
O2	**Oxygen**	paramagnetic	0 – 25 %	0.01 Vol%	0.1 % absolute
H2S	**Hydrogen sulfide**	electrochemical, discontinuous	0 - 2,000 / 5,000ppm	1 ppm	± 10 ppm or 10 % of reading**
H2	**Hydrogen**	TCD	0 – 10% / 100 %	0.01%	± 0.2 % or 2% of reading**

*** overload measuring range** **** the higher value applies**

Calculated values	
Nitrogen N2	difference to 100%
Calorific value	0 ... 50MJ/m³ or MJ/kg

HMI human machine interface	3.5” TFT color display Backlit keyboard, password protected operation 4x analog output 4-20 mA, floating, max. load 500R 4x analog intput 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/CO2/CH4 NDIR bench & TCD module Stainless steel flow restrictor orifice Sample gas shut-down solenoid valve Power supply cut-off in case of system alarm LEL (CH4) monitoring inside cabinet
Sample preparation	Stainless steel gas fittings with 1/8” ID threads Electric gas cooler (Peltier) with constant dew point +5° C Teflon particulate filter, internal Viton hosing Sampling syngas with condensate of max. 14ml/min Monitored and regulated sample gas flow 60 l/h Sample inlet pressure: -40 inH2O to +120 inH2O (-100 mbar to +300 mbar) Sample venting: atmosphere pressure
Cabinet dimensions	Aluminum with anti-corrosive structural painting 27.55" x 23.61" x 8.26" (700 x 600 x 210 mm) (H x W x D) for wall or rack mounting
Weight / Protection	99lbs (45kg) / IP65
Ambient temperature	41°F …113°F (+5°C…+45°C) or -4°F …113°F (-20°C…+45°C) with cabinet heater
Installation site	Indoor or outdoor (rain and sun shade is mandatory user scope of supply)
Cabinet conditioning	Continuous, monitored fan ventilation Cabinet heater 200 W (option)
Power supply	Universal 90 - 240 Vac / 47 - 63 Hz / 90 W (300 W with cabinet heater)

Data subject to change without notice

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