

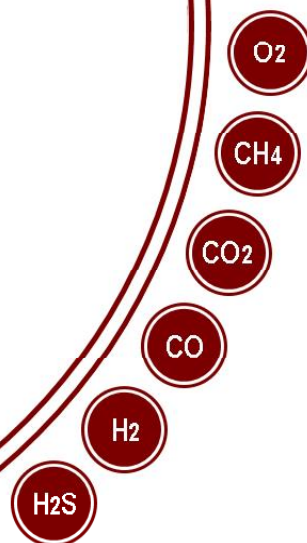
SWG 100 SYNGAS

THE SYNGAS ANALYZER

Continuous Syngas-Measuring-System



Up to 2
sites monitoring
via
Time Sharing



since 1984 ®

EMISSION MONITORING SYSTEMS

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

1.800.561.8187

www.itm.com

information@itm.com

TECHNICAL HIGHLIGHTS

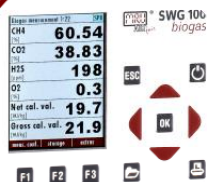
The MRU SWG100 Syngas analyzer is designed to be used in industrial safe areas or inside laboratories.

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

Direct-stand keypad and bright display



Customizable display with 6 or 2 values per screen

Sample measurement 012	
CH4	60.29
CO2	39.08
H2S	285
O2	0.3
Net cal. val.	19.6
Gross cal. val.	21.7

OPTIONAL with AUTO-Calibration



with gas cooler



MRU Online View Software for trending and data export



up to 2 sample gas inlet ports

Flow regulated sample gas pump

Peltier gas cooler

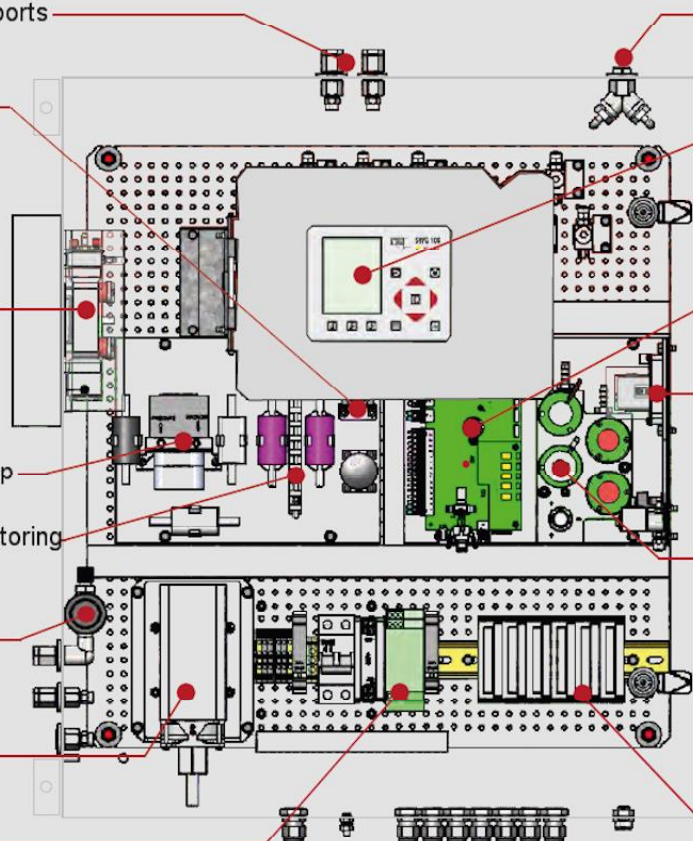
Condensate draining pump

Internal sample flow monitoring

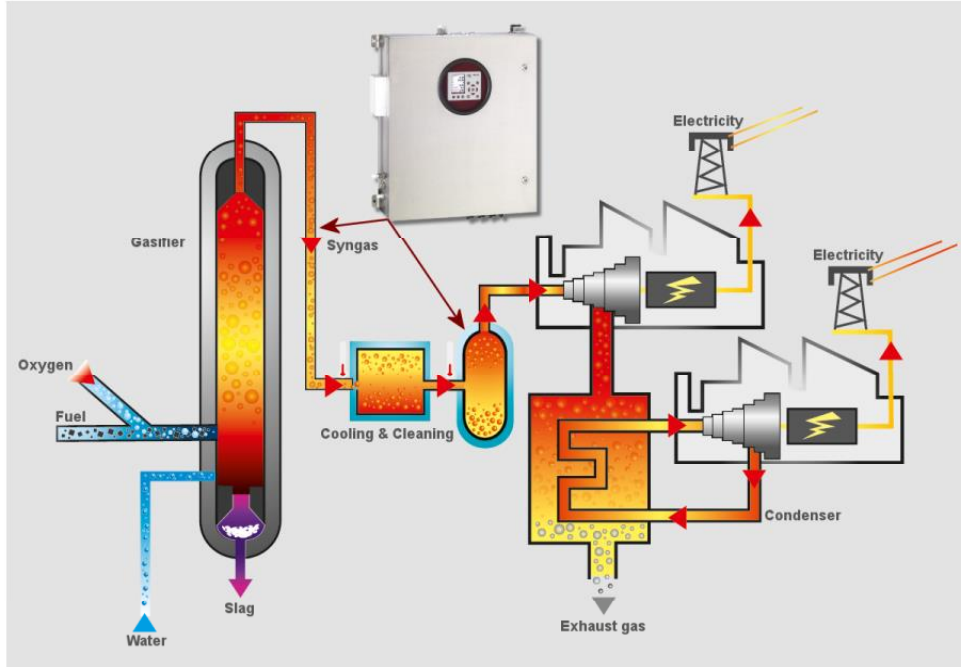
Pressure regulator for automatic calibration

Cabinet heater with temperature regulation

Universal power supply
90-240 Vac/47-62 Hz/60 W



FEATURES AND OPTIONS



Sample gas outlet port (vent)

Display and keypad

Main board with cabinet
LEL gas detector

NDIR bench for
CO / CH₄ / CO₂
measurement

TCD module for
H₂ measurement

EC sensors for
O₂ / H₂S
with cut-off and
purge for H₂S

Converter
RS 485 to Profibus or
RS 485 to Ethernet and
up to 3 modules with
4 analog output/
input 4-20 mA
and 2 alarm relays

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

1.800.561.8187

www.itm.com

information@itm.com

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 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/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
Weight / Protection	27.55" x 23.61" x 8.26" (700 x 600 x 210 mm) (H x W x D) for wall or rack mounting
Ambient temperature	99lbs (45kg) / IP65
Installation site	41°F ...113°F (+5°C...+45°C) or -4°F ...113°F (-20°C...+45°C) with cabinet heater
Cabinet conditioning	Indoor or outdoor (rain and sun shade is mandatory user scope of supply)
	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

Support and sales by:



MRU