

SWG-200
process gas

PROFESSIONAL CONTINUOUS PROCESS GAS ANALYZER



since 1984®

AIR fair

EMISSION MONITORING SYSTEMS

Gas analysis for combustion processes
with high and low range concentrations



SWG-200

PROFESSIONAL CONTINUOUS MONITORING OF PROCESS GASES

The SWG 200 utilizes both IR and electrochemical sensors in one flexible platform.

This multi-gas analyzer is a cost-effective solution to a high-\$\$ CEMS.

This fixed analyzer system uses dual sensor technology (IR & EC) to continuously and precisely measure gas components in ppm (low) and % (high) ranges.

Standard hardware

Standardized 19" racks are mounted in a steel metal enclosure with mounting eyelets for wall mounting.

The enclosure is equipped with a lockable, transparent door, plus a main control unit with backlit graphical LCD and keyboard.

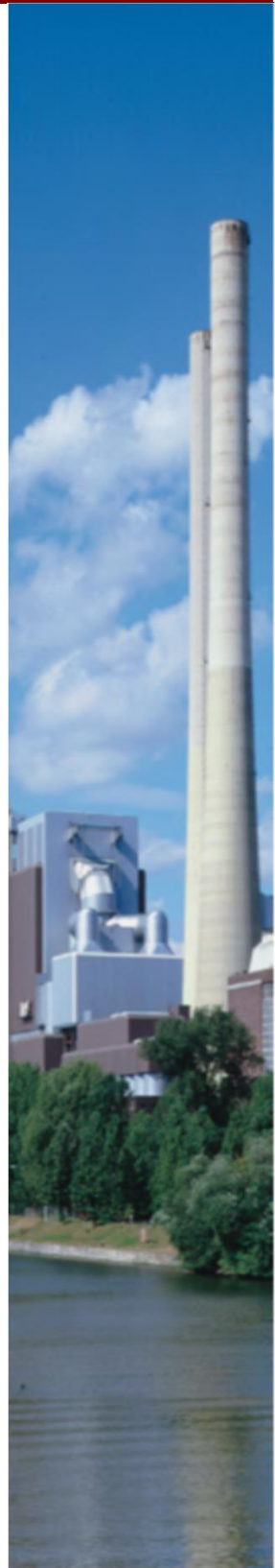
The complete gas conditioning system is processor-controlled and continuously monitored.

The SWG 200 uses a Peltier electric gas cooler with an automatic condensate draining pump; sample gas filtration with sample flow monitoring and alarm and auto-zero calibration.

RS 485 for data communication and 8 channel analog outputs 4... 20 mA.

Easy service!

The SWG 200-1 is easy to open.
All important parts are easily accessible
and therefore ideal to service.



SWG - 200

INNOVATIVE ECONOMICAL

Individual applications

- >> Ex-zone2 (special model)
- >> Up to simultaneous 7 gas components
- >> Weather proof enclosure IP 65
- >> Complete / partial air conditioning
- >> Automatic calibration with test gases
- >> Sample gas conditioning, also directly after the sampling point
- >> Easy to service and maintain
- >> Customized solutions on request

Gas sampling probes and lines

MRU offers industrial probes for high and low dust applications, for gas temperatures for up to:

- > 1,200°F (stainless steel)
- > 2,000°F (Inconel steel)
- > 3,000°F (ceramic)

Probes with and without heated filter element and probe tubes in several lengths.

See separate brochure for probes.



SWG-200

TECHNICAL SPECIFICATIONS

DATA SUBJECT TO CHANGE WITHOUT NOTICE

Measurement components		Measuring range	Accuracy	Measuring cell
O2	Oxygen	0 ... 25.0 Vol-%	± 0.2 Vol-% abs.	paramagnetic
O2	Oxygen	0 ... 25.0 Vol-%	± 0.2 Vol-% abs.	zirconium
O2	Oxygen	0 ... 21.0 Vol-%	± 0.2 Vol-% abs.	electro-chemical
CO	Carbon monoxide	0...4,000ppm (*)	± 20ppm or 5% of reading	electro-chemical
NO	Nitric oxide	0...1,000ppm (*)	± 5ppm or 5% of reading	electro-chemical
NO2	Nitrogen dioxide	0...200ppm (*)	± 5ppm or 5% of reading	electro-chemical
SO2	Sulfur dioxide	0...2,000ppm (*)	± 10ppm or 5% of reading	electro-chemical
H2S	Hydrogen Sulfide	0...500ppm (*)	± 5ppm or 5% of reading	electro-chemical

(*) with high measuring ranges a discontinuous measurement is recommended

1-gas infrared bench		min. measuring range	max. measuring range	linearity error
CO	Carbon monoxide	0...100ppm	0...1,000ppm	2 % of full scale
NO	Nitric oxide	0...200ppm	0...1,000ppm	2 % of full scale

3-gas infrared bench		min. measuring range	max. measuring range	linearity error
CO	Carbon monoxide	0...1,000ppm	0...100%	3 % of full scale
CO2	Carbon dioxide	0 ... 3 %	0...100%	3 % of full scale
CxHy	Hydrocarbons as CH4	0...1,000ppm	0...100%	3 % of full scale

Thermal Conductivity Detector				
H2	Hydrogen	0 ... 1 %	0...100%	2 % of full scale

Calculated values	mg/Nm3, reference to O2, NOx as mg/m3NO2
Repeatability	1 % of smallest measuring range
Response time T90	approx. 30 seconds of the analyzer sample gas inlet port
Detection limit	1% of current measuring range
Zero drift	with AUTOZERO: negligible
Span drift	without AUTOCAL(option): <2% of measuring range / 2 weeks
Temperature influence	max 2% of measuring range per 10°K
Measured value stability	The aforementioned data are valid on condition that ambient conditions (e.g. sample flow, air temperature and pressure) are constant.

General specification	
Warm-up time	1h minimum
Sample gas conditioning	integrated gas cooler with dew point = +5 °C
Sample gas filtration	filtering particle size < 2µ
Sample gas monitoring	flow regulation and supervision, 30 ... 50 l/h
Calibration	By software, calibration gases for every gas required, instrument air or clean ambient air for auto-zero
Operating temperature	41 °F ... +104 °F, max. 90 % rh, non condensing
Storage temperature	-4 °F ... +120 °F
Ambient conditions	no use in aggressive, corrosive or very high dust environments hazardous area use only with special equipment (on request).
Display	full graphic, backlit LCD display
Resolution	depends on range selection, ppm or %
Data transfer	8 channel analog output 4 ... 20 mA, RS 485 digital (modbus RTU)
Alarm relays	3x potential free NO contacts
Power supply	110 ... 230 Vac / 50 ... 60 Hz / 500 ... 750 W, with heated hose control (option) add 100 W/ meter
Internal main fuse	10 ... 32 A 10 ... 32 A (dependent upon length of the heated gas sampling line)
Protection class	IP 52 (IP 65 for outdoor mounting cabinet)
Weight	approx. 40 ... 110lbs, depending on system configuration and construction
Dimensions	(H x W x D) 19" x 24" x 22" = steel enclosure for indoor mounting (H x W x D) 31" x 40" x 24" = fiber glass enclosure for outdoor mounting

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