

SWG

300-1

CONTINUOUS EMISSIONS MONITORING SYSTEM

The Right System for Every Application

- 4-20mA
- RS 485
- MODBUS
- ALARM

Up to 5 sites monitoring via Time Sharing



- O₂
- CO
- CO₂
- NO
- NO₂
- NO_x
- SO₂
- °F



since 1984 ®

EMISSION MONITORING SYSTEMS

Over 30 years of innovative gas analysis!

- High Accuracy & Reliability
- Dry Extractive for the Toughest Applications
- Available in Standard, Weather-proof, Ex Enclosures
- Easy Service and Maintenance

COMPLETE CEM SYSTEM EMISSIONS MONITORING

PC Data Visualization Software



The multi-component gas analyzer SWG 300-1 is based on extractive, cold-dry method and uses NDIR modules, which measure continuously, selectively and highly accurately within the ppm range.

NO₂ is catalytically converted into NO for true NO_x measurements.

Oxygen analysis is based on zirconium oxide cell, paramagnetic cell or “long-life” electrochemical cell.

Control unit with display and keyboard



KEY FEATURES:

- Sampling probes for high temperature or high dust installations
- Single and Dual Heated Sample Lines
- Gas Conditioning Systems with heated acid mist catch
- 19” rack Main Control Unit
- Multi-stack sampling with auto or manual sequential switching
- Internal flow rate monitoring and alarming
- Auto Zero & Auto Calibration
- 8 Analog and RS485 Modbus outputs
- PC Data Visualization Software
- Easy access, lockable enclosures
- Rack, weather-proof, or Ex Zone 2
- Compliance level performance

Gas conditioning system



Air conditioning system



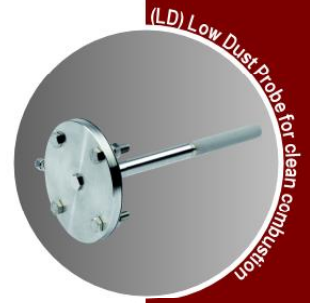
DESIGNED FOR THE TOUGHEST APPLICATIONS

- Boilers
- Refineries & Petro-Chemical
- Power Plants
- Blast Furnace Ovens
- Steel Reheating Furnaces
- Gas Incinerators



Easy to service!

The SWG 300 is easy to swing-open. All important parts are easy accessible and easily serviced.



Control unit with display and keyboard

Gas flow indicator

Ventilation filters

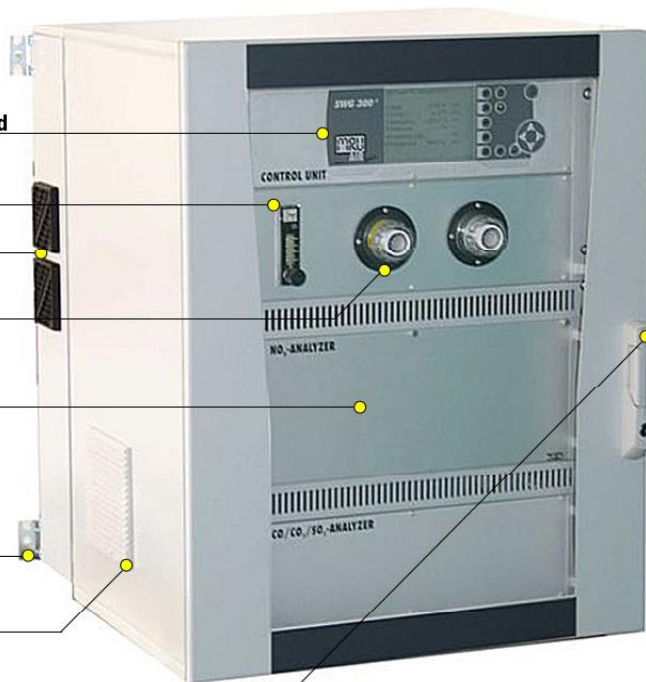
Sample gas filters

19" analyzer

Mounting eyelets

Ventilation filter

Lockable door



SWG-300 GEMS

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.	electrochemical
NO2	Nitrogen dioxide	catalytic conversion in NO min. 90% conversion efficiency (option)		
1-gas infrared bench		min. measuring range	max. measuring range	linearity error
CO	Carbon monoxide	0...100ppm	0.....500ppm	2 % of full scale
NO	Nitric oxide	0...200ppm	0....2,000ppm	2 % of full scale
SO2	Sulfur dioxide	0...100ppm	0....1,000ppm	2 % of full scale
2-gas infrared bench		min. measuring range	max. measuring range	linearity error
NO	Nitric oxide	0...2,500ppm	0...5,000ppm	3 % of full scale
NO2	Nitrogen dioxide	0.....500ppm	0....1,000ppm	3 % of full scale
3-gas infrared bench		min. measuring range	max. measuring range	linearity error
CO	Carbon monoxide	0...1,000ppm	0...30,000ppm	3 % of full scale
CO2	Carbon dioxide	0 ... 3 %	0 ... 30 %	3 % of full scale
SO2	Sulfur dioxide	0...1,000ppm	0.....5,000ppm	3 % of full scale
4-gas infrared bench		min. measuring range	max. measuring range	linearity error
CO	Carbon monoxide	0...200ppm	0....1,000ppm	2 % of full scale
CO2	Carbon dioxide	0 ... 4 %	0 ... 20 %	2 % of full scale
NO	Nitric oxide	0...200ppm	0....1,000ppm	2 % of full scale
SO2	Sulfur dioxide	0...200ppm	0....1,000ppm	2 % of full scale
CH4	Methane instead of SO2	0...200ppm	0....1,000ppm	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 = +3 °C		
Sample gas filtration		filtering particle size < 1µ		
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/3.28' (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. 88 lbs. ... 264 lbs. (40 ... 120 kg), depending on system configuration and construction		
Dimensions		(H x W x D) 39.83" x 23.61" x 22.63" (1012 x 600 x 575 mm) = steel enclosure for indoor mounting (H x W x D) 51.16" x 31.48" x 23.61" (1300 x 800 x 600 mm) = fiber glass enclosure for outdoor mounting		

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