



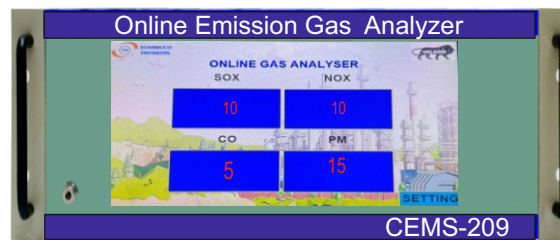
TM
**SOARM LICH
ENGINEERS**



Certified

ONLINE CONTINUOUS EMISSION MONITORING SYSTEM

SME-CEM-209-IR

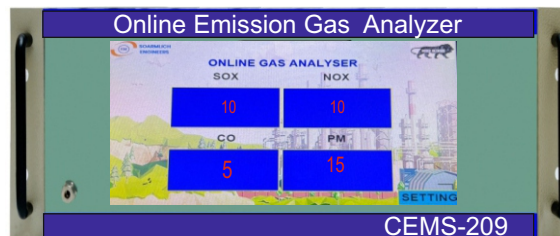


QAL-1 Certified



Advanced CEMS Dual Sensor Technology
for Accurate Measurement of Flue Gas Components
to meet today's regulatory requirements
ensures stable long term ultra - low drift operations.

CONTINUOUS EMISSIONS MONITORING SYSTEMS



DESCRIPTION

Gas Analyzer continuously monitors the concentration of gases ranging from 100%V/V down to PPM level. Feature includes a dual wavelength sensor, Remote Sampling, Graphics LCD Display, adjustable level relay output for alarm and 4-20mA output for control purpose and minimal maintenance.

Special gas sample Conditioning systems are used to clean and dry the gas sample for accurate and High performance operation. An Internal Pump draw gas sample into the sensor through a dust particle filter from an intake which can be located at distance up to 40 meter from the monitor.

The Sensor and Electronic component are housed in tough aluminium housing

For hazardous area applications the sensor may be mounted remotely in the hazardous area and safely connected via analyzer barrier to the electronics unit in the safe area. Alternatively the electronics unit can be supplied in an Explosion proof enclosure.

FEATURES

- ⦿ Fully integrated system up to 7 gases in a single compact analyzer.
- ⦿ Wide measurement range from 0 - 100 PPM up to 0 - 10,000 PPM.
- ⦿ Widely accepted, certified performance complies with the latest monitoring standards.
- ⦿ Simple installation & maintenance requires no specialist skills or training, all maintenance carried out on-site.
- ⦿ Highest measurement performance ultra - low drift measurement technology.
- ⦿ Measured Total NOx (NO+NO2) separate sensors for true NOx monitoring.
- ⦿ Record and store vital emission data internal data logging function.

APPLICATION

- ⦿ Gas turbines
- ⦿ Power plants
- ⦿ Boiler systems - coal, oil and gas fired
- ⦿ Incinerators - domestic, hazardous, Clinical and biological waste
- ⦿ Wood, sawdust, pellet and bark burners
- ⦿ Thermal oxidizers
- ⦿ Pulp and paper
- ⦿ Cement & lime manufacture
- ⦿ Gas pipeline compressors
- ⦿ Bio-fuel power generation
- ⦿ Petrochemical and refineries



ONLINE EMISSION MONITORING SYSTEM



CEM -209IR

Advanced CEMS Dual Sensor Technology for Accurate Measurement of Flue Gas Components to meet today's regulatory requirements

ensures stable long term ultra - low drift operations.

FEATURES

- Fully integrated system up to 7 gases in a single compact analyzer.
- Wide measurement range from 0 - 100 PPM up to 0 - 10,000 PPM.
- Widely accepted, certified performance complies with the latest monitoring standards.
- Simple installation & maintenance requires no specialist skills or training, all maintenance carried out on-site.
- Highest measurement performance ultra - low drift measurement technology.
- Measured Total NOx (NO+NO₂) separate sensors for true NOx monitoring.
- Record and store vital emission data internal data logging function.

APPLICATIONS

- Gas turbines
- Power plants
- Boiler systems - coal, oil and gas fired
- Incinerators - domestic, hazardous, clinical and biological waste
- Wood, sawdust, pellet and bark burners
- Thermal oxidizers
- Pulp and paper
- Cement & lime manufacture
- Gas pipeline compressors
- Bio-fuel power generation
- Petrochemical and refineries

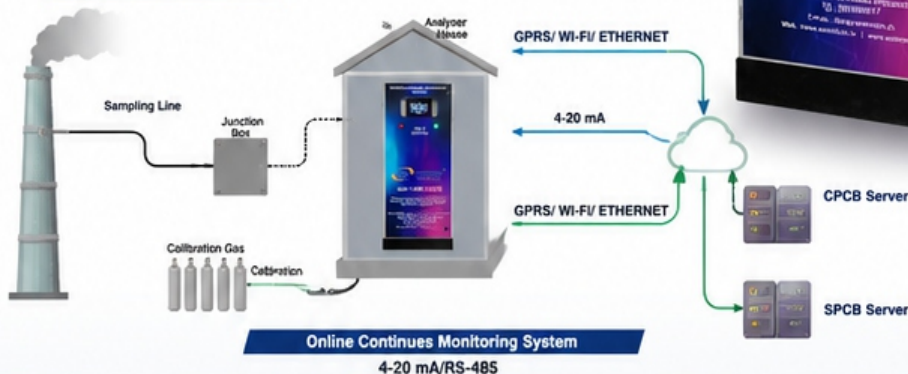
DESCRIPTION

SME-CEMS-209UV-IR Gas Analyzer continuously monitors the concentration of gases ranging from 100%V/V down to PPM level. Feature includes a dual wavelength sensor, Remote Sampling, Graphics LCD Display, adjustable level relay output for alarm and 4-20mA output for control purpose and minimal maintenance.

Special gas sample Conditioning systems are used to clean and dry the gas sample for accurate and High performance operation. An Internal Pump draw gas sample into the sensor through a dust particle filter from an intake which can be located at distance up to 40 meter from the monitor.

The Sensor and Electronic component are housed in tough aluminium housing. For hazardous area applications the sensor may be mounted remotely in the hazardous area and safely connected via an analyzer barrier to the electronics unit in the safe area. Alternatively the electronics unit can be supplied in an Explosion proof enclosure.

SYSTEM OVERVIEW



WHY CHOOSE OUR CEMS SYSTEM

1. Approved By TUV.
2. Supplied Over 150 Industries In India.
3. Cost-Effective Monitoring
4. High Performance Monitoring Of A Range Of Gases
5. Combined Multiple Stack With Single Analyzer if Approved by SPCB.
6. Online Calibration facility using DAC server.
7. Operates With A Minimum Of Maintenance.
8. Cross-Stack Measurements.
9. Remote Control Capabilities, Low Maintenance Cost.
10. High Sensitivity & High Accuracy

SPECIFICATIONS

DESCRIPTION		
CALIBRATION method	Calibration method	Manual or Automatic
DISPLAY	Type	7 inch Touch screen Display
OUTPUTS/INPUTS	Analogue outputs	Isolated current loops One per gas 4-20 mA
	Relays outputs	One per gas
	Relay rating	Isolated changeover contacts rated 0.5A @ 125V a.c. V d.c.
	Communications	RS 232 or RS 485 Modbus serial digital data bus (2 or 4 wire)
ENVIRONMENTAL	Enclosure	19" Rack
	Operating (ambient) Temp.	-20°C to +25°C
POWER	Power supply	200 to 240V a.c., 50-60 Hz
	Power consumption	400 w
GAS & AIR REQUIREMENTS	Instrument air (zero calibration)	4 bar / 60 sl min. clean dry & solvent free; 10 l/min
	Calibration gas (recommended)	1 bar / 15 psi; 2L/min approx
	Specific to each gas type & measurement span	
	Calibration gas type	570x500x370 mm
DIMENSIONS (H x W x D)		

MEASURING RANGE

Parameters	Sensors	Range	Resolution	Accuracy
O ₂	Electrochemical	100/2000 PPM	1 PPM	± 0.5%
CO	Paramagnetic	0-25 / 100%	0.1%	± 2%
CO ₂	NDIR	0-1000 PPM	0.1%	± 2%
NO/NOx	NDUV	0.01 to 1.0% O ₂	1 PPM	± 0.5%
SO ₂	NDIR	200 PPM, 2000 PPM, 10%, 100% V/V	0.1%	± 0.5%
HF	Thermal Conductivity	100% V/V	1 PPM	± 0.5%
HCL	NDIR	0-5000 PPM - 100% V/V	0.1%	± 0.5%
CL ₂	NDUV	0.1999, 5000 PPM	1 PPM	± 0.5%
CH ₄	NDIR	200 PPM, 2000 PPM	1 PPM	± 0.5%
H ₂	NDIR	0-50 PPM	0.1 PPM	± 0.5%
VOC	FTIR	0-50 PPM	0.1 PPM	± 0.5%
Efficiency	Calculated	5% V/V 100% (LEL)	0.1%	± 0.5%
Stack Loss	Calculated	4%	0.1%	± 0.5%

Note: Range & specifications are customizable as per customer requirement.

SPECIFICATIONS



CERTIFIED

EN ISO 9001

Certificate No. 20100213012828

TÜV AUSTRIA CERT GMBH

CALIBRATION

Calibration method Manual or Automatic

DISPLAY

Type 7 inch Touch screen Display

OUTPUTS/INPUTS

Analogue outputs Isolated current loops

One per gas 4-20 mA

Relays outputs One per gas

Relay rating Isolated changeover contacts rated 0.5A @ 125V a.c; V d.c

Communications RS 232 or RS 485 Modbus serial digital data bus (2 or 4 wire)

ENVIRONMENTAL

Enclosure 19" Rack

Operating (ambient) Temp. - 20deg C to + 250deg C

POWER

Power supply 200 to 240V a.c, 50-60 Hz

Power consumption 400 w

GAS & AIR REQUIREMENTS

Instrument air (zero calibration) 4 bar / 60 si min. clean dry & solvent free; 10 l/min

Calibration gas (recommended) 1 bar / 15 psi; 2L/min approx

Calibration gas type Specific to each gas type & measurement span

DIMENSIONS (H x W x D) 570x600x370 mm

MEASURING RANGE

Parameters	Sensors	Range	Resolution	Accuracy
O2	Electrochemical Paramagnetic Zirconia	100/2000 PPM 0-25 / 100% 0-1000 PPM 0.01 to 1.0% O2	0.1% 1 PPM 0.1%	± 2% ± 0.5% ± 2%
CO	NDUV NDIR	200 PPM, 2000 PPM, 10%, 100% V/V	1 PPM 0.1%	± 0.5%
CO2	Thermal Conductivity NDIR	100% V/V 0-5000 PPM - 100% V/V	0.1% 1 PPM (0.1)	± 0.5%
NO/NOX	NDUV NDIR	0.1999, 5000 PPM	1 PPM	± 0.5%
SO2	NDUV NDIR	200 PPM, 2000 PPM	1 PPM	± 0.5%
HF	FTIR	0-50 PPM	0.1 PPM	± 0.5%
HCL	FTIR	0-50 PPM	0.1 PPM	± 0.5%
CL2	NDIR	0-50 PPM	0.1 PPM	± 0.5%
CH4	NDIR	5% V/V 100% (LEL)	0.1%	± 0.5%
H2	NDIR	4%	0.1%	± 0.5%
	Thermal Conductivity	100%	0.1%	± 0.5%
VOC	PID/FID	20/2000 PPM	0.1/1 PPM	± 0.5%
Efficiency Stack Loss	Calculated	0-100%	1%	± 0.5%

TM



Works:- Unit No. 101, Buld No. 27, HDIL Industrial Park, Chandansar, Virar (E), Vasai-Virar, Maharashtra-401305

Contact No. 08048986577/+91 7977304808 E-mail: nitesh@soarmlich.in / info@soarmlich.in Website : www.soarmlich.in