

CONTINUOUS

EMISSIONS

MONITORING SYSTEMS



Applied Techno Systems

Model : ATS-208 A



Advanced CEM 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



ATS 208A

DESCRIPTION

Model ATS- 208A 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

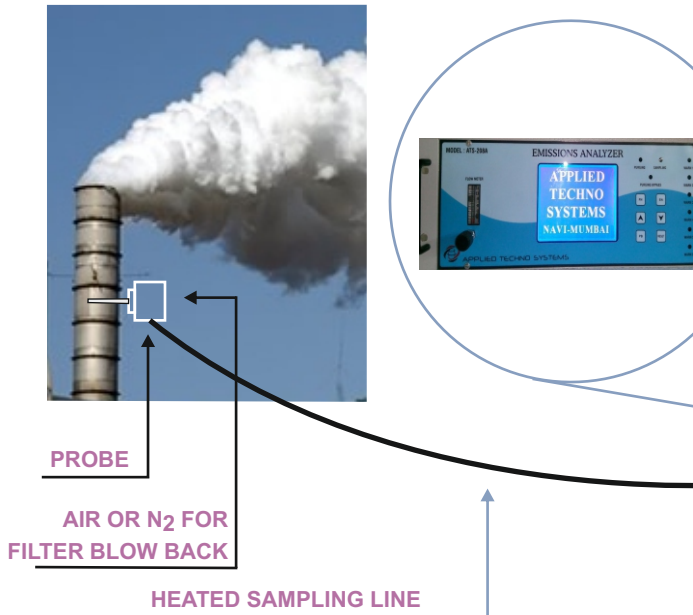
- ⊙ Fully integrated system up to 7 gases in a single compact analyzer.
- ⊙ Wide measurement range from 0 - 100 PPM up to 0 - 10,000 PPM.
- ⊙ Widely accepted, certified performance complies with the latest monitoring standards.
- ⊙ Simple installation & maintenance requires no specialist skills or training,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

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

Engineered for the future

- Excellent low level emissions capability
Wide range of sensor to provide the precision necessary for the level measurement required by legislative limits.
- Heated sample line not required in most applications
Sample gas is cooled & dried inside the sample measurement system



Data Acquisition and Reporting

Comprehensive data acquisition and analysis systems are available.

The PC-based software is a highly flexible and fully configurable data acquisition and reporting system for continuous emissions monitoring systems. This inherent flexibility enables it to meet the requirement of Environmental Regulation.

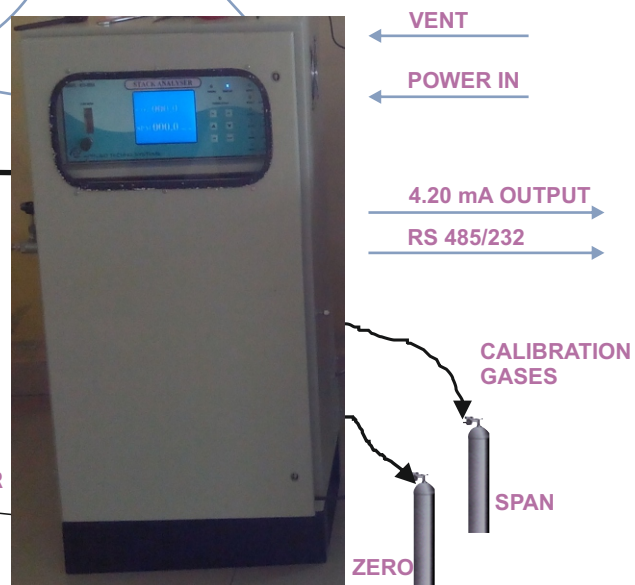
Probes and Sample Lines for all Applications

Our experience will help determine which probe and type of sample line will give the best possible results in your applications. A full range of heated and unheated probes, filters and sample lines is available to meet all requirements, and more importantly, to keep operating continuously and very efficiently, with the minimum of maintenance.

- Heated filter probes
- Ceramic probes for hot or acidic conditions
- Regulated and self-regulating heated sample lines
- Unheated sample lines

Operation

ATS 208A is an extractive sampling multi-gas analyzer system. The flue gas is extracted using a sample Probe. The gas is then transported via a sample line, to the cooler unit fitted inside the sample management system, where the moisture and particulates are removed before being directed into the measurement system. The measurement system is made up of pairs of sensor. Each sensor is fed alternately with sample gas and air. The sensors generate an electrical output in proportion to a specific gas component. Measured values are then displayed and output as analog signals (4-20mA).



Accurate & Reliable SO₂ Analysis

ATS 208A is an accurate and reliable SO₂ analyzer. Importantly, it is a low cost alternative to infrared or UV systems, using the latest Advanced Dual Sensor technology. The accuracy & reliability of the Analyzer in the measurement of SO₂ begins with the sample conditioning system. A cooler and acid resistant sample path ensure there is no significant loss during gas transportation. High accuracy sensors inside the analyzer produce a reliable, stable output.

Ideal for Low NO_x Measurement

Analyzer designed for very low NO_x measurement, importantly, the analyzer measures both NO and NO₂ separately, these are combined to give a true NO₂ measurement output. The inherent problems with catalytic NO₂ converters are therefore completely avoided.

SPECIFICATIONS

CALIBRATION

Calibration method	Manual or Automatic
	2-Point calibration span and zero

DISPLAY

Type	Graphics LCD
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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.	-40deg C to + 50deg 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 as (recommended)	1 bar / 15 psi; 2L/min approx
Calibration as type	Specific to each gas type & measurement span

DIMENSIONS (H x W x D)	430x260x150 mm
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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	Electrochemical NDIR	200 PPM, 2000 PPM, 10%, 100% V/V	1 PPM 0.1%	± 2%
CO2	Thermal Conductivity NDIR	100% V/V 0-5000 PPM - 100% V/V	0.1% 1 PPM (0.1)	± 2%
NO/NOX	Electrochemical NDIR	0.1999, 5000 PPM	1 PPM	± 2%
SO2	Electrochemical NDIR	200 PPM, 2000 PPM	1 PPM	± 2%
HF	Electrochemical	0-50 PPM	0.1 PPM	± 2%
HCL	Electrochemical	0-50 PPM	0.1 PPM	± 2%
CL2	Electrochemical	0-50 PPM	0.1 PPM	± 2%
CH4	Catalytic NDIR	5% V/V 100% (LEL)	0.1%	± 2%
H2	Catalytic Combustion Thermal Conductivity	4% 100%	0.1% 0.1%	± 2% ± 2%
VOC	PID	20/2000 PPM	0.1/1 PPM	± 2%
Ozone	Electrochemical	0-2 PPM	0.01PPM	± 2%
Efficiency Stack Loss	Calculated	0-100%	1%	± 2%

The above Parameter and Ranges are only for indication. Applied Techno Systems will build up and supply the analyzer with Parameters, range and features to any Practical Configuration.

Note : Specifications and eatures will vary with application. The above are established and validated during design, but are not to be construed as test criteria for every product. Due to Applied commitment to research, design and product improvement, specifications are subject to change without notice.