ENVIROZONE®
PRIVATE LIMITED

FORTUNEXIS
Automation Private Limited

ONLINE MONITORING SOLUTIONS

WATER QUALITY
STACK EMISSIONS
AMBIENT AIR QUALITY
PROCESS ANALYZERS

As per CPCB guidelines

TUV QAL1 Certified

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MSME MICRO, SMALL & MEDIUM ENTERPRISES

MAKE IN INDIA

ISO 9001: 2015
ISO 14001: 2015

PM ANALYZER
FOR STACK EMISSION

EZ320 TR is an optical instruments designed to measure dust, smoke and particulate concentration present in an exhaust gas in a duct or stack. It uses light transmission technique which measure change in the intensity of a light beam, using folded beam Transceiver/Reflector arrangement.
Increased dust or particulate density in the stack causes the amplitude of the signal to increase.

EZ320 LBS continuous emission monitoring system measures stack dust concentration using Laser Backward Scattering method. It is a type-approved device combines the advantages of the ideal measurement of very low to high dust concentrations. They are mostly installed on a stack or duct for the purpose of monitoring increase in Particle Density (mg/m3) caused by suspended particles (dust and smoke) passing through the light path.

The monitor is used in the industries including thermal power plants, metal processing, petrochemical industry, cement production, waste incineration, flue gas emission monitoring in all kind of power generating boilers, industrial kilns and industrial boilers, monitoring and control in Flue Gas Desulphurization (FGD) and dust removal process

FEATURES

1. In situ measurement directly in exhaust gas
2. Creating a stable, ambient-light-immune modulated LED/Laser source.
3. In situ zero and calibration check facility
4. Choice of interface option enabling easy integration
5. Utility software for PC based set-up, control and data logging.

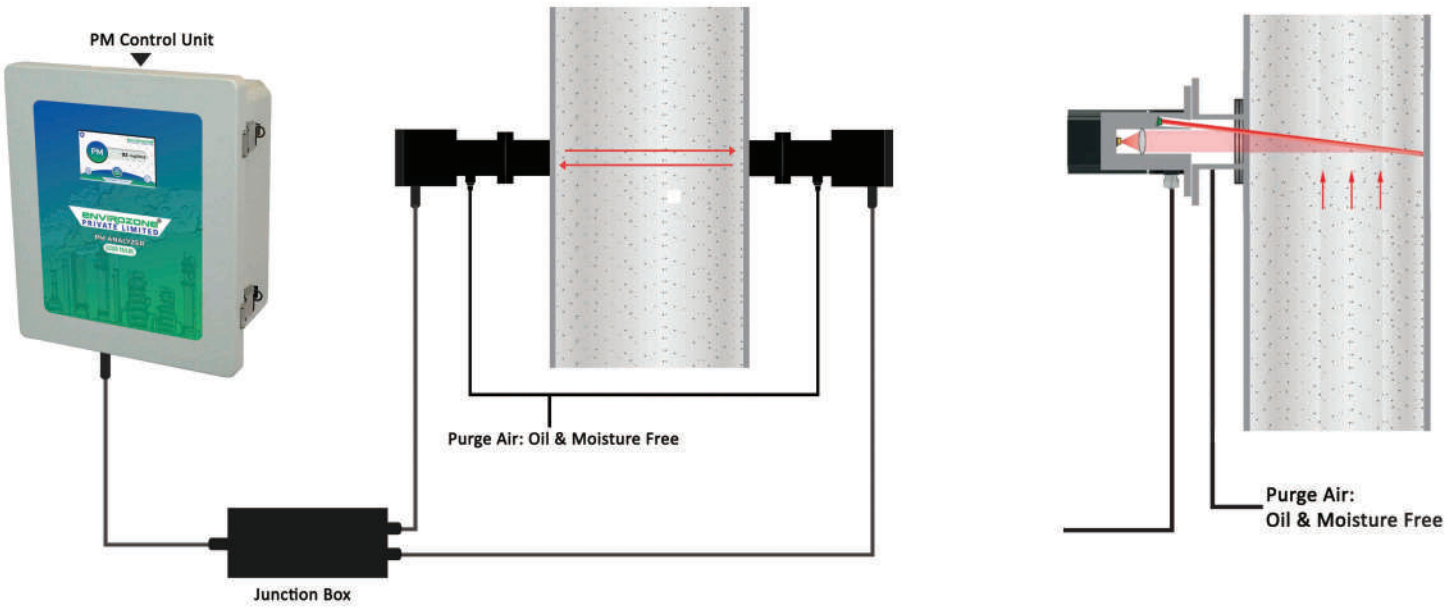
TECHNICAL SPECIFICATON

SPECIFICATION	EZ320 TR	EZ320 LBS
Measuring Principle	Light Transmission (Dual Pass)	Laser Backward Scattering (LBS)
Operating Wavelength	510 ~ 550nm	650nm
Measurement Unit	mg/m3	mg/m3
Measurement Range	0~2000 (User Configureable)	0-1000 (User Configureable)
Path Length	upto 5M	
Accuracy	±1%	
Cleaning	Oil & Moisture Free Air	
Output	RS485 & 4-20mA (Optional)	
Ambient Temperature	-5 ~ 50°C	
Protection Class	IP65	
Power Rating	230±10%VAC, 50W	

BENEFITS

1. Simple Installation
2. Better Accuracy
3. Rugged design with no moving parts so low maintenance
4. Latched head & lid design to enable ease of access for installation & mainenance

EZ320 TR & LBS: Installation



GAS ANALYZERS
FOR STACK EMISSIONS

The gas analyzers employ NDIR/UV DOAS technology to enable concurrent and uninterrupted measurement of the concentration of up to five gases. These analyzers exhibit outstanding long-term stability, a compact form factor, and straight-forward operation. The sensors, characterized by low impedance, demonstrate superiornoise resistance. Moreover, as they lack movable parts, they are immune to vibration and exhibit remarkable resilience to moisture interference.

SAMPLE HANDLING & CONDITIONING SYSTEM

Hot & Wet Extraction: Sample is extracted from the stack using heated sample probe, trasnfered to the sanalyzer using heatrace line to avoid condensation. Further sample is cooled and moisture is removed before analyzing.

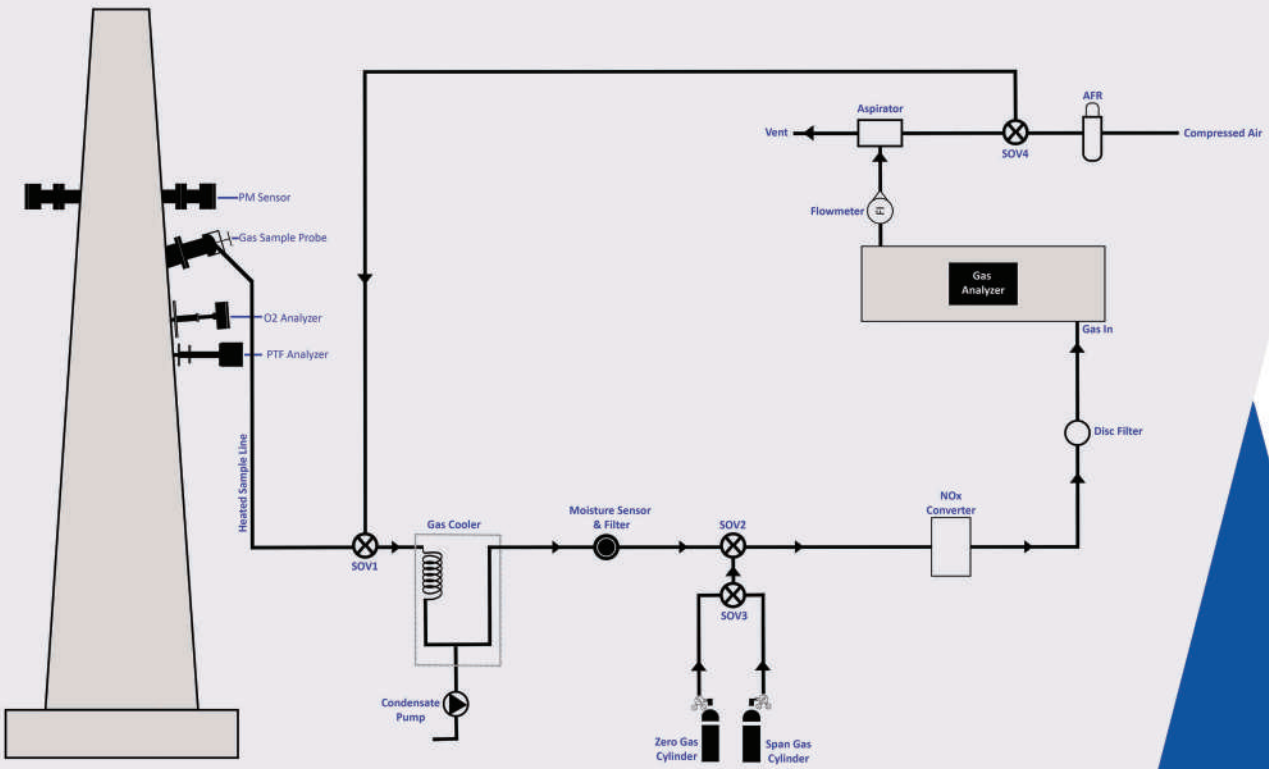
Cold & Dry Extraction: Sample is extracted, cooled,moisture removed at the sampling point itself and transported to the analyzer using simple PTFE line.

- REMOTE CALIBRATION
- DATA NORMALIZATION

TECHNICAL SPECIFICATON

Measuring Principle	NDIR/UV DOAS/NDUV/ZIRCONIA
Measureable Gases	SO_2, NO_x, CO, CO_2, CH_4, O_2, & more
Measureable Range	0~1000PPM (other range of request)
Linearity	±1%F.S.
Zero Drift	±1% ~ ±2%F.S./Week
Span Drift	±1% ~ ±2%F.S./Week
Response Time	Within 60 sec (90% response from gas inlet) varies depending on the components to be measured and the measurement range
Display	LCD with Backlight/Color Touch Screen
Power	230VAC, 50Hz

CEMS Pneumatic Scheme



LASER GAS ANALYZER

BASED ON TDLAS (Tunable Diode Laser Absorption Spectroscopy)

The **EZ320-Series** represents a 19" mountable, tunable laser gas analyzer designed for industrial online analysis and environmental monitoring applications. Utilizing Tunable Diode Laser Absorption Spectroscopy (TDLAS) technology, these analyzers employ a multiple reflection long optical path, enabling the precise analysis of various gases such as HCl, Cl2, O2, NH3, H2S, CO2, CH4, H2O, and HF. The configuration of reflected light can be customized to meet specific operational requirements.

SPECIFICATION		
Measurable Gases	HCl, HF, NH_3, CH_4, Cl_2, O_2, H_2S, CO_2, H_2O	
Linearity & Repeatability	≤±1%F.S.	≤1%F.S.
Zero & Span Drift	≤±1%F.S./Half Year	≤±1%F.S./Half Year
Maintenance & Cal. Cycle	≤2 Times/Year	≤2 Times/Year
Output	RS485 Modbus RTU, 4-20mA (Optional)	
Relay Output	4 (Max. Load: 10A, 250VAC & 30VDC)	
Cleaning	Oil & Moisture Free Air	
Output	RS485 & 4-20mA (Optional)	

The system seamlessly integrates a transmitter, receiver, and gas cell within a compact 1U chassis, facilitating convenient mounting in a standard 19" rack. The sample gas undergoes filtration through a dedicated probe filter. Within the gas cell, the gas is subjected to laser emissions from the transmitter. Subsequently, the receiver processes the received spectrum to precisely calculate the gas concentration.

VOC ANALYZER

BASED ON PID (Photoionization Detection)

EZ320 PID, Continuous Emission Monitoring System uses **Photoionization** (PID) principle for gas detection. The ultraviolet light generated by the UV lamp is irradiated on the target gas. The target gas is ionized after absorbing sufficient ultrviolet light energy. The concentration of the target gas is detected by measuring the current generated due to gas ionization.
The system consists of sampling unit, sensor unit and the display unit. The sample gas enters the PID gas detector through suction pump. The detector transmit the processed concentration signal to the display unit.

VOC/ TOC/ THC ANALYZER

BASED ON FID (Flame Ionization Detection)

EZ320 VOC/TOC/THC Gas Analyzer uses Gas Chromatography (GC) combined with Flame Ionization Detection (FID) for accurate measurement in gaseous samples. In this system, gas-phase organic compounds are separated by the GC column, then ionized in the FID's hydrogen flame. The ionization current generated is directly proportional to the organic carbon content.

This method provides highly sensitive and specific detection in industrial emissions, ambient air, and process gases. The system includes a sample preparation unit, GC column, FID detector, and a display unit for real-time gas monitoring.

FID Based

PID Based

AMBIENT AIR QUALITY MONITORING SYSTEM

$PM_{2.5}$, PM_{10}, SO_2, NO_2, CO, O_3, TVOC, etc (Based on Laser Scattering & ECD Method)

DustCount

Dustcount is an Online Particulate Monitoring System for Ambient applications. It is capable to monitor various particulate matter like PM1, PM2.5 &PM10. Dustcount is an ideal choice for applications like construction sites, mines, quarries, port, research projects, etc.

OdoCount

Odocount is the Real-time Odour Emission Tracking Solution. Odocount detect, measures and monitors the odourful gases and gaseous contaminants on a continuous basis like Ammonia (NH3), Hydrogen Sulfide (H2S), Volatile Organic Compounds (TVOCs), Methyl Mercaptan (CH3SH), Meteorological Parameters, and many more.

Poll-IQ

Poll-IQ is an Ambient Air Quality Monitoring System (AAQMS). It is capable to monitor PM2.5, PM10, SO2, NOx, CO, O3 and many more.

AQ1

AQ1 is an industrial grade single parameter air quality monitor with automation capabilities. This product range consists of critical parameters and toxic gases like Total Volatile Organic Compound (TVOC), Ammonia (NH3), Hydrogen Sulfide (H2S), Methane (CH4), Carbon Monoxide (CO), Formaldehyde (CH2O), Particulate Matter, Ambient Noise.

AMBIENT AIR QUALITY MONITORING SYSTEM

USEPA Approved Analyzers

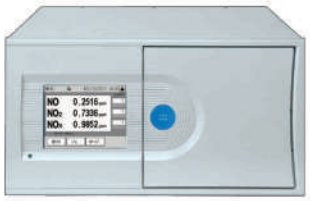
$PM_{2.5}$ & PM_{10}

Beta ray attenuation technology measures PM10 and PM2.5 levels by detecting the reduction in beta radiation as it passes through airborne particle samples. Using a beta radiation source and detectors, this method provides accurate assessment of particle concentration, ensuring reliable air quality and environmental monitoring.

SO_2

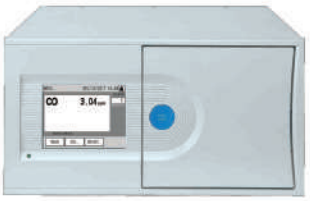
UV fluorescence technology continuously monitors atmospheric SO2 by exposing the air sample to UV light. SO2 molecules absorb the light and emit fluorescence, which is measured to determine the concentration. This sensitive, real-time method is crucial for environmental compliance and assessing air quality.

NO_x



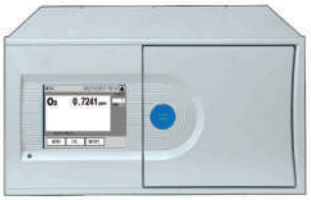
The **cross-flow modulated semi-decompression chemiluminescence** method measures NOx in ambient air by inducing a chemiluminescent reaction between nitrogen oxides and ozone. Controlled modulation of air and reagent flow rates enhances sensitivity. The emitted light is detected and measured, providing an accurate assessment of NOx concentrations for environmental monitoring.

CO



The analyzer continuously monitors CO concentrations using Non-dispersion Cross Modulation Infrared Analysis. Its internal dry-method sampling ensures high sensitivity, precise measurements, and minimal maintenance, making it ideal for atmospheric pollution monitoring.

O_3



The analyzer uses cross-flow modulated UV absorption to continuously monitor atmospheric ozone levels. Its internal dry-method sampling ensures high sensitivity, accuracy, and low maintenance, making it ideal for atmospheric pollution monitoring.

AMBIENT AIR QUALITY MONITORING SYSTEM

BTEX Analyzer

This instrument uses chromatographic separation and pre-concentration to analyze CH4 and NMHCs in ambient air. The sample is quantified, separated in a CH4 column, and detected by an FID detector. NMHCs are enriched via an adsorption tube and analyzed by high-temperature thermal desorption in the FID.

HC/NMHC Analyzer

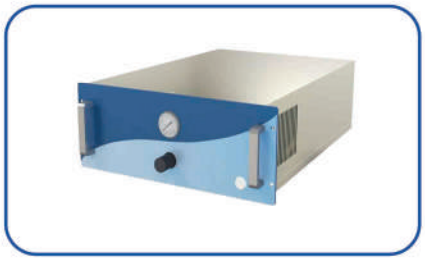
This instrument uses chromatographic column separation and pre-concentration technology to analyze CH4 and NMHCs in ambient air. The sample is quantified in a loop, separated in the CH4 analysis column, and detected by the FID detector. NMHCs are enriched in an adsorption tube and analyzed by high-temperature thermal desorption in the FID.

Weather Sensor

The Ultrasonic Weather Monitoring Sensor is a high-tech device providing real-time data on key environmental parameters. It measures wind speed, wind direction, temperature, humidity, barometric pressure, rainfall, UV index, and illumination. Utilizing ultrasonic technology and precision sensors, it delivers accurate data for agriculture, energy, and climate research applications.

Dynamic Calibrator

H2 Gas Generator



Zero Gas Generator

EFFLUENT QUALITY MONITORING SYSTEM

COD, BOD, TSS, TOC, PH, etc

The EZL600 Effluent Water Quality Analyzer have an integrated control unit and sensors/probes. It is designed for continuous online measurement of absorbtion spectra (**UV-VIS Spectrophotometry**). The analyzers can be operated either directly immersed in liquid media (In-situ) or in Extractive flow cell setup. It is capable of making a simultaneous measurement for various parameters and is perfect use for water quality measurement and inspection of river water, groundwater, effluent and municipal waste water etc.

SPECIFICATION	EZL600-Extractive & EZL600-In-situ
Measuring Principle	UV-Vis Spectrophotometry (Dual Beam, Full Spectrum)
Measurement Range	COD & BOD: 0~500mg/l, 0~1000mg/l | TSS: 0~200mg/l, 0~1000mg/l TOC: 0~500mg/l, 0~1000mg/l | pH: 0-14
Accuracy	±10%
Repeatability	±2%
Zero Drift	±1%F.S.
Span Drift	±2%F.S.
Linearity	±2%F.S.
Digital Output	RS485 Modbus RTU
IP Grade	IP65/IP68 (Optional)
Dsiplay	7" Coloured Touch Screen
Power	230±10%VAC, 50Hz

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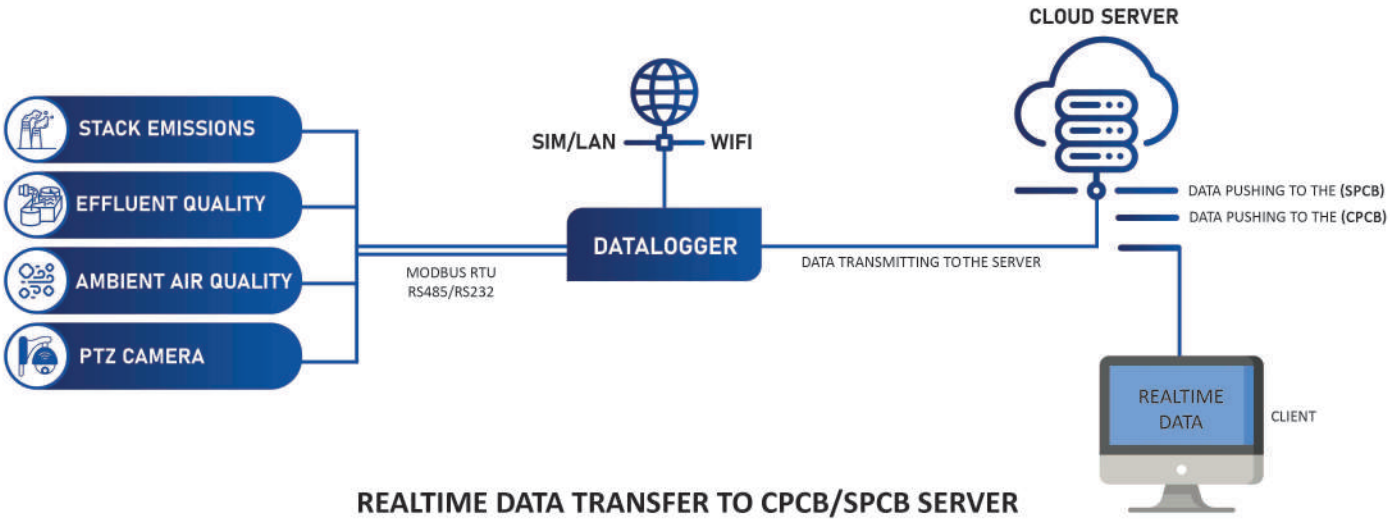

REALTIME DATA TRANSFER TO CPCB/SPCB SERVER

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