ONLINE MONITORING SOLUTIONS

FORTUNEXIS

ENVIROZONE®
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Effluent/Water Quality Monitoring
Stack Emissions
Ambient Air Quality

As per CPCB guidelines

TUV Certified

TÜVRheinland CERTIFIED

TÜV NORD CERT GmbH

MSME MICRO, SMALL & MEDIUM ENTERPRISES

MAKE IN INDIA

ISO 9001: 2015
ISO 14001: 2015

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Emission Monitoring System

The gas analyzers are based on NDIR/UV DOAS, which measures simultaneous and continuous concentration of up to 5 gases components, have excellent prolonged stability, compact size and simple operation. The sensors with low impedance has excellent noise resistance while with no moveable parts, is impervious to vibration and virtually unaffected by the interference of moisture.

- Remote Calibration
- Data Normalization

Sample Handling & Conditioning System

Hot & Wet Extraction: Sample is extracted and maintained above dew point using heated sample line to avoid condensation. It is further cooled and moisture removed before analyzing.

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

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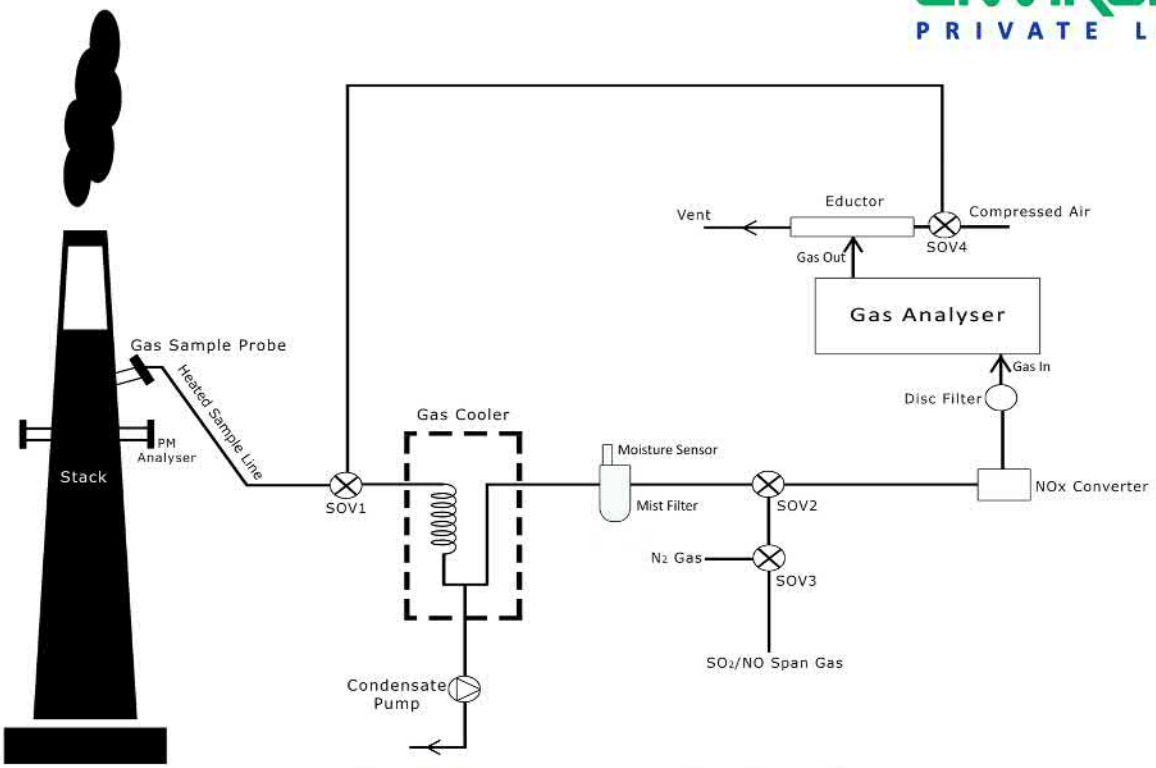

Typical System Block Diagram

Specifications

Measurement Principle	NDIR/UV DOAS/NDUV/Zirconia
Measurable Gases	SO_2, NO_x, CO, CO_2, CH_4, O_2, and more
Measurable Range	0 - 1000 PPM (Other Range on 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

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PM Analyzer for Stack Emission

EZ320 LBS

EZ320 TR

FEATURES

- In situ measurement directly in exhaust gas
- Modulated LED/Laser source for long term stability and immunity to ambient light
- In situ zero and calibration check facility
- Choice of interface option enabling easy integration
- Free utility software for PC based set-up, control and data logging.

BENEFITS

- Simple installation
- Better accuracy
- Rugged design with no moving parts so low maintenance
- Latched head and lid design to enable ease of access for installation and maintenance

THE TECHNOLOGY

The **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 is an online dust monitoring system, employing laser backward scattering principle. It is used for continuous monitoring of PM emission from stack, which are prone to vibrations and misalignment.

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.

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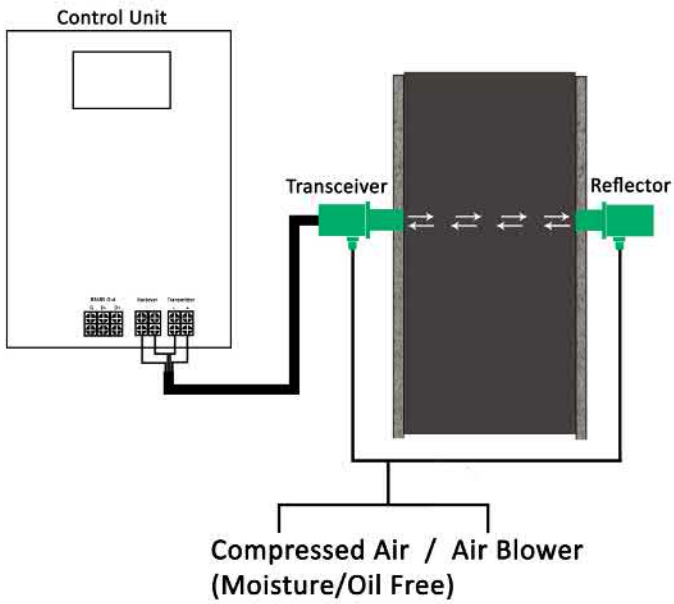
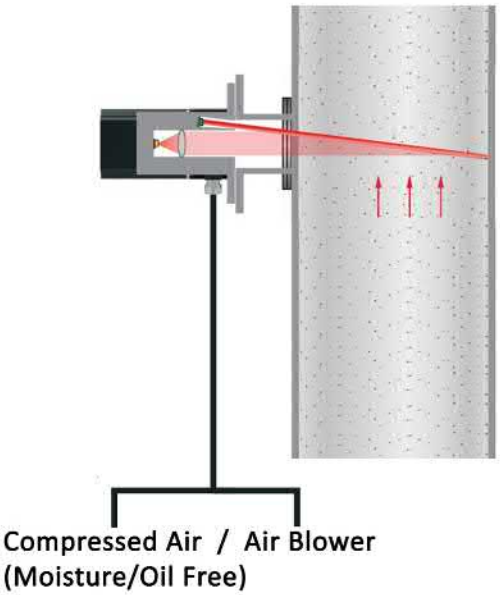


EZ320 TR



EZ320 LBS

Specifications

Specifications	EZ320 TR	EZ320 LBS
Measuring Principle	Light Transmission (Dual Pass)	Laser Backward Scattering
Operating Wavelength	510 - 550nm	650nm
Measurement Unit	mg/m3	mg/m3
Measurement Range	0-500, 0-1000, 0-2000 mg/m3 (User configurable)	0-1000 mg/m3 (User configurable)
Path Length	upto 5 Mtr.	upto 5 Mtr.
Accuracy	± 1%	± 1%
Power Rating	230VAC | 50W	230VAC | 50W
Cleaning	Oil & Moisture Free Air	Oil & Moisture Free Air
Output	RS485 Modbus 4-20 mA (Optional)	RS485 Modbus 4-20 mA
Ambient Temp.	-5 to 50°C	-5 to 50°C
Protection Class	IP65	IP65

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EZ320 Series Laser Gas Analyzer

Tunable Diode Laser Absorption Spectroscopy (TDLAS)

EZ320-Series is a 19" mountable, tunable laser gas analyzer for industrial online analysis and environmental online monitoring. The analyzers use **TDLAS** technology and multiple reflection long optical path that can analysis a variety of gas including HCl, Cl_2, O_2, NH_3, H_2S, CO_2, CH_4, H_2O, HF. Reflected light can be customized according to the working condition demand.

SYSTEM COMPOSITION

Transmitter, receiver and gas cell are integrated into a 1U chassis which is moutable in a 19" rack.
Sample gas is filtered through filter probe. Further in the gas cell, it is exposed to laser emitted from the transmitter. The receiver calculates the gas concentration from the spectrum received.

Technical Specifications

Technical Indicators	
Measurable Gases:	HCl, HF, NH_3, CH_4, Cl_2, O_2, H_2S, CO_2, H_2O,
Linearity:	≤±1% F.S.
Repeatability:	≤1%F.S.
Span Drift:	≤±1%F.S./half year
Zero Drift:	≤±1%F.S./half year
Maintenance Cycle:	≤2-Times/Year (Related to the working condition)
Calibration Cycle:	≤2-Times/Year (Related to the working condition)
IP Rating:	IP54
Response Time:	≤30s (Related to the working condition)
Interface Signal	
Analog Output:	4-20mA (isolation, max load 750 ohm)
Digital Output:	RS485-Modbus RTU
Relay Output:	4 (Max Load: 10A-250VAC & 30VDC)
Operating Conditions	
Power Supply:	230±10%VAC, 50Hz
Ambient Temp.:	-20 degree C ~ 60 degree C

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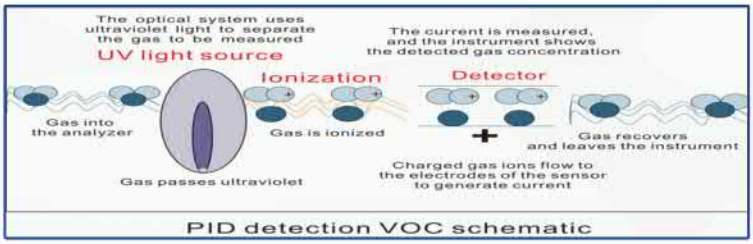
EZ320 Series VOC Analyzer

EZ320 VOC, 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 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.



PID detection VOC schematic

Technical Specification

Measuring Principle	Photoionisation (PID)
Measuring Gases	Benzene, Xylene, Naphthalene, Octane, Ethylene, Cyclohexane, Aceton, Propionaldehyde, Ethers, etc.
Range	0-50 PPM (Customizable)
Lower Limit	100 PPB
Drift/Repeatability	±1% ~ ±5%
Measurement Error	<±5% F.S.
Sample Flow	2L/min
Installation Method	Wall Mounted
Protection Level	IP55
Display	5-Inch Coloured Touch Display
Power	230±10%VAC, 50Hz,50W
Digital Output	RS485 Modbus RTU

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Ambient Air Quality Monitoring System

$PM_{2.5}$, PM_{10}, SO_2, NO_X, CO & O_3

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.

Poll-IQ

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

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.

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.

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EQMS-TOC Analyzer (UV Persulphate Method)

EZ L600 TOC is Online Water Quality Analyser to measure total organic carbon in water by non dispersive infrared spectroscopy after oxidation of organic matter using strong oxident Sodium Persulphate and UV light.

The sample is injected in the Reactor. After adding hydrochloric acid, it is purged to blow off inorganic carbon. Sample is further heated to high temperature in reactor to combust and oxidizes the organic carbon into CO2 which is measured using NDIR detector. The amount of CO2 measured is proportional to Total Organic Carbon (TOC) present in the sample.

Feature

- Precesion peristaltic pumps to inject sample and reagents.
- Excellent stability of TOC using new NDIR detection technology.
- Direct conversion of TOC to COD & BOD to monitor online COD/ BOD in real time.
- 7" HD colored touch screen.
- Signal outputs: RS485, 4-20 mA

Specification

Method	UV Persulphate Method
Range	0-160 mg/l (Other Ranges on request)
Zero Drift	±3%
Span Drift	±3%
Linearity	±5%
Measurement Time	15 Minutes
Operating Temperature	5°C - 40°C
Power Supply	220VAC±10%, 50Hz, 300W
Outputs	RS485 Modbus RTU, 4-20mA (Optional)
Weight	40kg

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Effluent Monitoring System

COD/BOD/TSS/pH

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.

EZ L600
Extractive(Cabinet Type)

EZ L600
In-situ(Probe Type)

FEATURE

- No reagents required, can save the cost of operation and avoid secondary pollution.
- Fast response, suitable for the application with high requirement of real time such as industrial process analysis.
- Built-in turbidity compensation function can keep the sensor from interference of chloride ion.
- Full spectrum (200 - 800nm) scanning and stoichiometry algorithm, can measure COD/BOD/TSS simultanuously.
- Availability of spectral data acquisition, convenient for data analysis and troubleshooting.
- Controller which can realize online calibration, setting adjustment, light intensity checking, auto cleaning, connect with sensors for other parameters.

Specifications

Items	EZ L600-Extractive	EZ L600-In-situ
Measuring Method	UV-Vis Spectrophotometry (Dual Beam, Full Spectrum)	UV-Vis Spectrophotometry (Dual Beam, Full Spectrum)
Measurement Range	COD: 0-500 mg/l or 0-1000 mg/l	COD: 0-500 mg/l or 0-1000 mg/l
	BOD: 0-500 mg/l or 0-1000 mg/l	BOD: 0-500 mg/l or 0-1000 mg/l
	TSS: 0-200 mg/l or 0-1000 mg/l	TSS: 0-500 mg/l or 0-1000 mg/l
	pH: 0-14	ph: 0-14
Accuracy of Standard Sample Measurement	±10%	±10%
Measurement Repeatability	±2%	±2%
Measurement Interval	1 Minute (Configurable)	1 Minute (Configurable)
Zero Drift	±1% F.S.	±1% F.S.
Span Drift	±2% F.S.	±2% F.S.
Linearity	±2% F.S.	±2% F.S.
Online Calibration	Available	Available on request
Optical Path	3/5/10 MM	3/5/10 MM
Weight	25 kg	12 kg
Dimensions	600mm x 500mm x 250mm	Ø60mm x 480mm
Ambient Temp.	5-45°C	5-45°C
Operating/Storage Temp.	5-45°C	5-45°C
Power	230±10%VAC, 50Hz	230±10%VAC, 50Hz
Digital Output	RS485 Modbus RTU	RS485 Modbus RTU
IP Grade	IP65/IP68 (Optional)	IP66/IP68 (Optional)
Display	7-Inch, TFT colour touch screen	5-Inch, TFT colour touch screen

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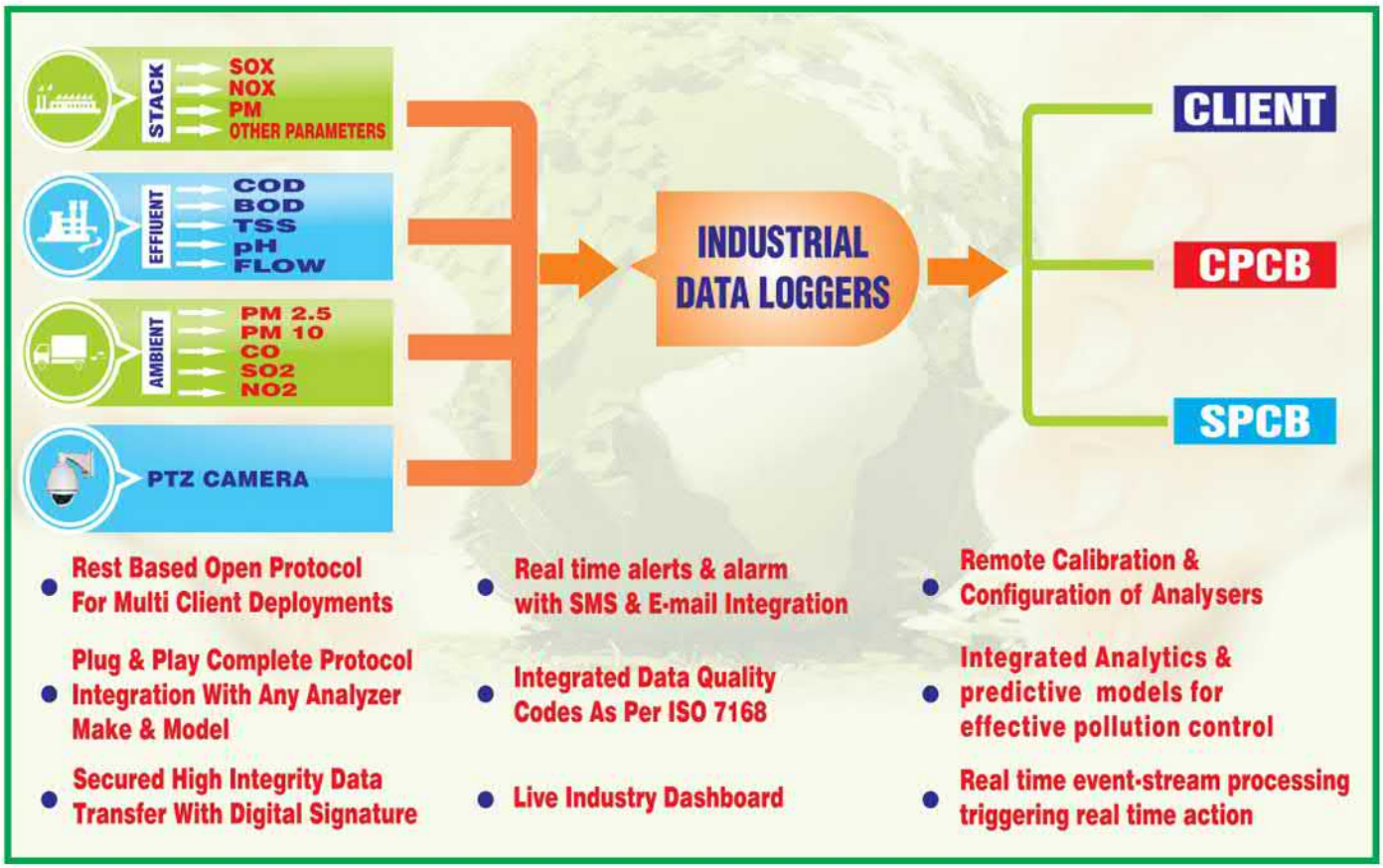
Realtime Data Transfer to CPCB / SPCB Server



- Rest Based Open Protocol For Multi Client Deployments
- Plug & Play Complete Protocol Integration With Any Analyzer Make & Model
- Secured High Integrity Data Transfer With Digital Signature
- Real time alerts & alarm with SMS & E-mail Integration
- Integrated Data Quality Codes As Per ISO 7168
- Live Industry Dashboard
- Remote Calibration & Configuration of Analysers
- Integrated Analytics & predictive models for effective pollution control
- Real time event-stream processing triggering real time action

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