Avensys

CATALOGUE

AMBIENT

AQMS (Air Quality Monitoring Solutions)

EN

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PARTICULATE MONITORS & SAMPLERS

MP101M

ß-ray attenuation Analyzer

Particle concentration measurement of PM10, PM2.5 and PM1 using the Standard Reference Method

- Particle concentration measurement (µg/m³)
- Built-in reference gauge for calibration: no need for factory recalibration
- Temperature-regulated sampling tube
- True volumetric air flow control
- Rugged instrument, not sensitive to vibration or humidity
- Equipped with large, 7" colour touch-screen with animated, real-time display
- Interchangeable sampling heads PM10, PM2.5, PM1 and TSP

CPM

Continuous Hybrid Particulates Monitor

Simultaneous and real-time optical measurement of all types of particles PM1, PM2.5, PM10 using a single TSP inlet

- Real time optical indication and trends of the particles' concentration (µg/m³)
- Particle counting (nb/L)
- Automatic calibration of the optical module CPM to the reference measurement of the MP101M (ß gauge)
- Measurement of the size (0.5 to 40 µm) and quantity for each particulate size range
- Autonomous, automatic and capable of detecting short events with high precision
- Smart and automatic adjustment system integrated: no need for factory recalibration

PM162M

Automatic Sequential Particulate Sampler

Designed to automatically sample particulates on filters using a TSP, PM10, PM2.5 or PM1 inlet

- Compliant with the last EU CEN recommendations for PM2.5 sampling and measurement
- Large filter holder capacity allowing up to 3 weeks of unattended daily sampling of particulate matter
- True volumetric air flow control with atmospheric temperature and pressure sensors to avoid artifacts in the size fractionating inlet
- Unique temperature-regulated sampling tube eliminating artifacts on the filter (evaporative losses of semi-volatile particulates...)

SAMPLING INLETS

PM 10 - EN 12341
PM 2.5 - EN 14907

PM10 louvered
US-EPA

PM 2.5 VSCC adapter
US-EPA

TSP
US-EPA

Other sampling inlets for research or specific applications are available upon request, such as PM1 for Europe and US-EPA

SENSOR BASED AQMS MINI-STATIONS

CAIRNET

Multi-parameter & autonomous micro-monitoring stations

For the centralization of real-time fugitive emissions and air quality data, with wireless access to multi-location autonomous stations.

- Wireless transmission of data to a central interface: Radio, GPRS, 3G,...
- Plug and play: add another station at any time
- Easy to deploy and to use with independent solar panels.
- Monitoring very low levels concentrations of pollutants: H_2S, NH_3, SO_2, NO_2/O_3, VOC, PM10-PM2.5, ... on realtime basis.
- Does not require maintenance, and is calibration-free for 1 year of use.
- Harsh condition resistance design that can carry up to 4 sensors.

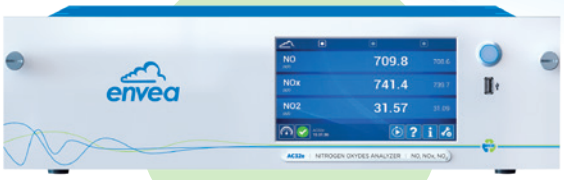
MAIN APPLICATIONS:

Fence Line Monitoring for Industry • Workplace Monitoring • Indoor Air Quality Monitoring • Mobile Hotspot Monitoring• Measurement Campaigns and Monitoring Studies...

«CairCLOUD» software included for data acquisition & processing

GAS MONITORS

e SERIES



e-Series analyzer (AC32e)

The e-Series of analyzers has been fully eco-designed, with a special consideration to the environmental impacts of the product during its whole life-cycle.

The exclusive «inside the box» foam modular concept makes the product more robust, power saving, simpler to service and eco-friendly.

ADVANTAGES:

- Environmental friendly: Low carbon footprint / Over 95% of the analyzer can be recycled / Ultra low power consumption / Common electronic boards: optimized spare parts stock
- SmartStatusLight™ power button for status of operation (ON/OFF, Alarm, Maintenance required...)
- Economic, Easy and reduced maintenance
- Service Assistant inside
- Interactivity: Smart connected instruments

TÜV Rheinland®
QAL1 CERTIFIED

U.S. EPA
APPROVAL

Adopt the no-screen version and avoid the pollution related to the screen manufacturing and recycling cycle.

ESA Connect™
Free Apps
iOS / Android

Connected your device (computer, tablet or smart-phone). Simultaneous multi-screen remote access via Wifi or Lan

AC32e

Chemiluminescence Nitrogen Oxides Analyzer | NO, NO_2 & NOx

CLD based analyzer offering superior metrological performances for NO, NO_2 and NOx measurements in the range 0-1 ppm or 0-10 ppm

- Option: external module for NH_3 monitoring (Max 1 ppm)

O342e

UV Photometric Ozone Analyzer | O_3

Provides accurate O_3 measurements in the range of 0,2 ppb to 10 ppm

- Option: internal O_3 generator (span check)

CO12e

IR-GFC Carbon Monoxide Analyzer | CO

IR-GFC analyzer designed for high sensitivity monitoring of low CO concentrations in the range of 40 ppb to 300 ppm

- Option: CO_2 measuring module (max 2000 ppm)

AF22e

UV Fluorescence Sulfur Dioxide Analyzer | SO_2

Uses UV radiation to measure SO_2, with excellent performance, for a range from 0.4 ppb to 10 ppm

- Option: module for H_2S or TRS monitoring (max 1 ppm), special configuration for TRS measurements in CO_2 matrix

HC51M

FID Hydrocarbons Total VOC Analyzer | THC

Uses the principle of flame ionization detection to measure the concentration of hydrocarbons

- Option: THC / CH_4 / nmHC (Total Hydrocarbons, methane & non-methane hydrocarbons)

VOC72M

Gas Chromatography PID Volatil Organic Compounds Analyzer | VOC BTEX

BTEX automatic analyzer based on gas chromatography (GC)coupled with a photo-ionization detector (PID) for 0-300 ppb measurements range (Benzene)

- Option: up to 40 other VOC compounds(max 2000 ppm)

AS32M

CAPS Spectrometry Nitrogen Dioxide Analyzer | NO_2

Designed to provide the most accurate value for 0-1 ppm NO_2 concentrations

- Option: Built-in permeation bench with NO_2 tube

UT-3000

Total Gaseous Mercury (TGM) Mercury Ultratracer | Hg

Total Gaseous Mercury (TGM) measurement in the air at ultratrace levels based on the Cold Vapor Atomic Absorption Spectrometry (CVAAS) method (EN 15852).

A compact and reliable measuring tool with a specialized trapping system – Mercury GoldTrap Amalgamation module:

- Offers excellent long-term stability of measurement.
- Enhances sensitivity of the analyzer and dismisses the necessity of a long optical cell for the detection phase.
- A high frequency electrodeless mercury low pressure lamp as a UV light source provides high sensitivity, precision and stability.
- Unlike with the fluorescence detection method, the analyzer does not require expensive operation gases, nor suffer from negative interferences caused by the quenching effect.
- The analyzer offers sensitivity and detection limits superior to other mercury analyzers on the market using similar technologies.

MGC 101

Multi-gas Mass Flow Dynamic Calibrator

- Manual or remote multi-point generation of gas concentrations from one to several high concentration span gas cylinders
- Internal ozone generator : Standard or Photometer for GPT mode
- Meets all US EPA requirements
- Built-in permeation benches, for most of the certified permeation tubes disposable type (SO_2, NO_2, H_2S, NH_3...)

ZAG 7001

Pure air generator

- Check of zero point for ambient air gas analyzers
- Supply of dilution air for calibration systems and zero air for dilution-based samplers
- *Option:* CO & HC internal heated catalytic scrubber

Purity: › CO < 25 ppb
› NO_2, SO_2, O_3, H_2S < 0,5 ppb
› HC (including CH_4) < 20 ppb

XR® SOFTWARE: DATA ACQUISITION & MANAGEMENT SYSTEM

Fully compliant with constantly changing international guidelines and standards, the XR® software suite provides breakthrough features:

› Acquisition, processing and display of any type of environmental data: gas and dust analysers, meteorological sensors, samplers, ...
› Advanced tools for statistics, validation and reports
› Exclusive system of automatic data validation
› Advanced control of the measurement chain
› Input and import of analysis results
› Traceability and high availability of the raw and validated data

COMPLIANCE WITH:

- European Directive 2008/50/CE
- AFNOR NF X 06-044 norm
- ISO 7168-1: 1999

RECAP BOARD

REFERENCE MONITORS	AC32e	O342e	CO12e	AF22e	HC51M	VOC72M	AS32M	UT3000	MP101M
Measured pollutant (option)	NO-NO_2-NOx (NH_3)	O_3	CO-CO_2 (CO_2)	SO_2 (H_2S/TRS)	Total HC (CH_4)	BTEX	NO_2	Hg	PM 10 PM 2.5
Ranges user selectable & programmable (ppm)	0-1 / 0-10	0-1 / 0-10	0-50 / 0-300	0-1 / 0-10	0-10 / 0-1000	max. 1	0-1	0-10	0-10
Detection Limit (2σ) (ppb)	< 0.2	0.2	50	< 0.4	50	≤ 0.05 (benzene)	0.1	0.1	0.5 (/24h)
19" rack enclosure	3U	3U	3U	3U	4U	3U	3U	3U	6U
Weight (kg)	10	9	7.1	9.5	27	12.5	12.5	9	15

MICRO-SENSORS	O_3 / NO_2	NO_2	CO	NH_3	SO_2	COVnM	H_2S / CH_4S	PM 2.5 & 10
Resolution (ppm)	0-0.25	0-0.25	0-20	0-25	0-1	0-2 0-16	0-1	0-1
Detection Limit (2σ) (ppb)	20	20	50	500	50	500 200	10	N/A

Our monitoring solutions are European QAL 1 certified and in compliance with the latest international regulations & standards.

They are also approved and certified by various laboratories and organizations around the world such as: US EPA, TÜV, GOST, CEN, JQA, CNEMC, JMOE, KTL, CNSA, LCSQA...

CUSTOM-TAILORED DESIGN & ENGINEERING OF YOUR AQMS PROJECTS

We design, assemble, calibrate and operate complete integrated systems for simultaneous and continuous measuring of multiple pollutants (gases & particulates). We operate on a worldwide basis with hundreds of active real-time environmental monitoring sites.

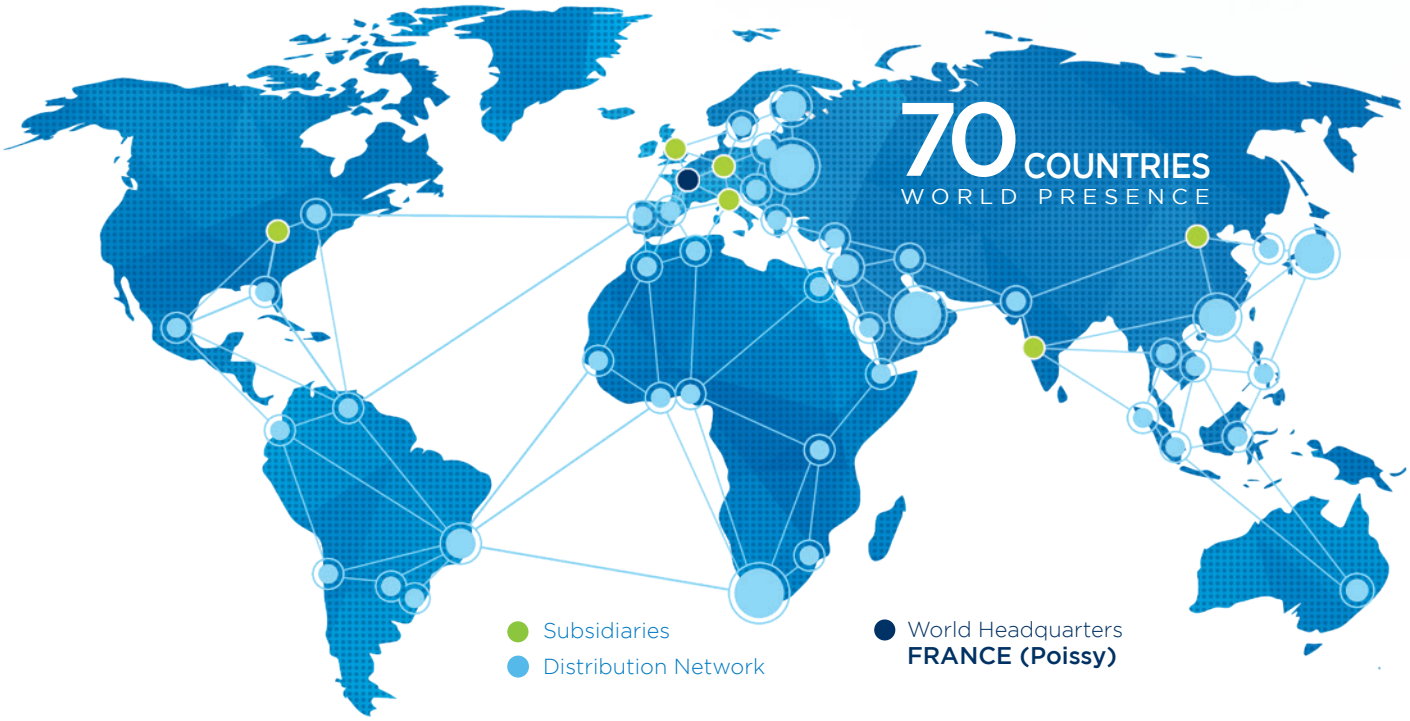
Integrated instruments and customized systems

› Fixed monitoring stations for continuous measurements and analysis of gases and air pollutants

› Mobile laboratories that help examine the air quality at various locations, as well as the geographic distribution of air pollution.

A STRONG GLOBAL PRESENCE

Faithful to the principles on which it was founded – innovation & quality, social responsibility & shared values – the **ENVEA** group is committed to providing you with solutions and assistance at the highest standards in order to comply with applicable regulations; as well as the optimization of industrial processes for an improved efficiency, significant savings of raw materials & energy, the reduction of environmental impacts...



Our worldwide references guarantee a perfect understanding of your needs and ability to manage a vast range of applications:

More than 35 000 air quality monitors are measuring the pollution of cities worldwide: Rio de Janeiro, Istanbul, Seoul, Mecca, Delhi, Hanoï, Paris, Budapest, Abu Dhabi, Bangkok, Dakar, Beijing...

Over 25 000 emission sources & processes are monitored worldwide across a broad range of industries such as: cement plants, glass manufacturing, metal factories, paper mills, engine manufacturers, waste to energy plants...

Process - Emissions - Ambient
monitoring solutions

Avensys

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