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HORIBA LIMITED - JAPAN





Ambient Air Quality Monitoring System 🖊



AP-370 Series Ambient Trace Gas Analyzer

This analyzer continuously measures components required by air pollution monitoring. In addition to air pollution monitoring, it best supports trace gas monitoring that requires continuous analysis with high accuracy.

- Nitrogen oxide
- Sulfur dioxide
- Carbon monoxide

Hydrocarbon

Ozone ● Carbon dioxide



APSA-370/CU-1 H₂S (hydrogen sulfide) Monitor

This monitor measures H_2S concentration by oxidizing H_2S and analyzing the resulting SO_2 gas. The monitor is best for monitoring H_2S atmosphere inside a clean room of a semiconductor plant or similar applications.

Hydrogen sulfide



APNA-370/CU-2 NH₃ (ammonia) Monitor

This monitor measures NH_3 concentration to monitor NO_χ from oxidation catalysis, which is suitable for monitoring exhaust gases from manufacturing plants and odors caused by naturally occurring ammonia gas.

- Ammonia
- Nitrogen oxide



PX-375
Continuous Particulate Monitor
with X-ray Fluorescence

Mass concentration and elemental concentration of particulate matter (PM) are measurable by this one single instrument, on-line and automatically. As a countermeasure of air pollution problem, it is possible to estimate the emission source of PM.

 Mass concentration and elemental concentration of particulate matter (PM2.5, PM10, TSP)





APDA-371 Ambient Dust Monitor

This Particulate matter contaminates our atmosphere in various ways. It can for instance be generated by different industrial production processes, waste combustion, coal mining or automobile exhausts. The APDA-371 automatically measures and records airborne particulate concentration levels (in milligrams or micrograms per cubic meter), using the industry-proven principle of beta ray attenuation.

- Particulate Matter (2.5)
- Particulate Matter (10)



Air Quality Monitoring System

The Air Quality Monitoring System (AQMS) is a facility to measure wind speed, direction, other weather parameters, concentration of air pollutants (such as SO₂, NO_x, CO, O₃, THC, etc), and particulate matters continuously all year round.



Mobile Air Pollution Monitoring Laboratory

This is an air pollution monitoring vehicle equipped with all necessary measuring equipment for environmental assessment and research on pollution problems at various locations.



GA-370 Trace Gas Monitor

This monitor provides constant, ultra high-sensitivity and high-precision monitoring of trace impurities (CO, CO₂ and CH₄) for quality control at gas manufacturing facilities.

- Carbon monoxide
- Carbon dioxide
- Methane





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Gas Measurement 🦯



ENDA-5000 Series Stack Gas Analyzer

This analyzer continuously measures stack gas with high accuracy; simultaneous measurement of five components in flue gas is also possible. Meets a wide range of needs such as measurement of emissions from waste incineration plants or boilers.

- Nitrogen oxide Sulfur dioxide
- Carbon monoxide
- Carbon dioxide
- Oxygen



ENDA-7000 Series Stack Gas Analyzer

This stack gas analyzers are designed to continuously measure the concentrations of NO_{χ_1} SO_{2} , CO, CO_{2} , O_{2} , and NH_{3} in stack flue gas streams. The model is offered in dozens of combinations based on your measurement.

- Nitrogen oxides
- Sulfur dioxide
- Carbon monoxide
- Carbon dioxide
- Oxygen
- Ammonia



ENDA-9000 Series Stack Gas Analyzer

This analyzer continuously measures the concentration of NO_x , SO_2 , CO, and O_2 in stack gases from the boilers and furnaces of thermal power plants, etc.

- Nitrogen oxide
- Sulfur oxide
- Carbon monoxide
- Oxygen



ENDA-C9000 Series Stack Gas NH₃/NO_x/O₂ Analyzer

This analyzer is for monitoring and controlling equipment at power plants that require management, for example, the monitoring of denitration catalyst degradation, the control of injected amounts of NH₃, and the prevention of ammonium sulfate crystallization.

- Ammonia
- Nitrogen oxide
- Oxygen



Continuous Emission Monitoring System

An integrated system to measure fuel flow, dust, and concentrations of air pollutants such as SO_2 , NO_x , CO, CO_2 , THC and O_2 in accordance with the applicable regulations for the emission source.



TX-100 Tunable Laser Gas Analyzer

This analyzer uses a probe inserted in a stack to measure hydrogen chloride concentrations and moisture content. Suitable for monitoring refuse incineration facilities and controlling hydrogen chloride removal processes in cement and petrochemical industries.

- Hydrogen chloride
- Moisture content



GI-700 series Stack Gas Analyzer

This stack gas analyzer is designed to continuously measure the concentrations of nitrogen oxides (Nox), sulfur dioxide (SO₂), carbon monoxide (CO), carbon dioxide (CO₂), oxygen (O₂), and ammonia (NH₃) in stack flue gas streams.

- Nitrogen oxides
- Sulfur dioxide
- Carbon monoxide
- Carbon dioxide
- Oxygen
- Ammonia



PG-300 Portable Gas Analyzer

This portable gas analyzer measures each component in combustion gas with high accuracy.

- Nitrogen oxide
- Sulfur dioxide
- Carbon monoxide
- Carbon dioxideMethane
- Oxygen





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HORIBA
Process & Environmental



Gas Measurement 🦯



NZ-3000 **Zirconia O**₂ **Analyzer**

This analyzer measures oxygen concentrations by inserting a probe into the flue of a power plant boiler, packaged boiler, industrial furnace or various combustion equipment.

Oxygen



EM-D5100 Dust Concentration Opacity Meter

This meter continuously measures dust concentrations in combustion gas from thermal power plants or waste incineration plants.

- Dust
- Opacity



PLGA-1000 Process Laser Gas Analyzer

This Analyzer is designed to measure hydrocarbons and other gases contained in process gases at petrochemical plants. It measures low concentrations of acetylene (C2H2) and carbon dioxide (CO2) contained as impurities in high concentration methane (CH4) and ethane (C2H6).

- Acetylene
- Carbon dioxide



51 Series Explosion-Proof Process Gas Analyzer

This is a continuous gas analyzer best for analysis of combustible gases or analysis of gases in an explosive environment. Supports measurements in various chemical plants, such as petroleum refining plants.

- Carbon monoxide
- Carbon dioxide
- Methane
- Hydrogen
- Oxygen, etc.

Radiation Measurement



VA-5000 Series Multi Component Gas Analyzer

This analyzer meets diverse needs by analyzing different kinds of combustion gases to address environmental problems and by supporting energy development, etc.

- Carbon monoxide Carbon dioxide Nitrogen oxide
- Sulfur dioxide Methane
- Nitrous oxide Oxygen
- Ammonia, etc.



VA-5000 (Siloxane) Siloxane Analyzer

This Siloxane Analyzer continuously measures siloxane concentration in gases with high sensitivity. It is tunable according to the type of cyclic siloxane to be measured.

- Siloxane
- Carbon dioxide
- Methane



VA-5000 WM Series Multi-Component Gas Analyzer

Wall mounted type of Multi-Component Gas Analyzer VA-5000 series. Compact design enables installation in limited space. Embeddable into the customer's sampling systems and to the control devices.

- Carbon monoxide Carbon dioxide Nitrogen oxide
- Sulfur dioxide Methane
- Nitrous oxideOxygen
- Ammonia, etc.



Environmental Radiation Monitor

This is a portable monitor that allows easy and accurate measurement of gamma rays.

Y (gamma) rays





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Infrared Radiation Thermometer



IT-545 Series Handheld Type Non-Contact Infrared Thermometer

This is an easy-to-use portable thermometer with the highest level of accuracy in the industry. Useful for various experiments and maintenance, food temperature manage-ment, etc.

Temperature



Stationary Type Non-Contact
Infrared Thermometer

This infrared thermometer with industry-leading' accuracy can be used for the temperature control of production lines, devices and plants in various factories. It can also be used for a wide range of other purposes, including research and development and experiments, by connecting to a Windows' personal computer.

Temperature



IT-270 Built-in Type Infrared Thermometer

This built-in type Infrared thermometer with industry-leading* accuracy in a small footprint. Measurement temperature, wavelength selection and viewing charac-teristics can be customized to meet various needs.



Built-in Type
Infrared Thermometer

Built-in type, non-contact infrared thermometer with industry-leading* accuracy. It contributes to improve process stabilization, for which requires high accuracy temperature measurement, such as semiconductor and FPD production.

Gloss Measurement 🥒



IG Series Gloss Checker

This gloss checker provides easy measurement of surface gloss levels, by quantifying the surface appearance visual inspection. Ideal for automotive coating inspections, floor waxing coating inspections, etc.

Gloss

Water Quality Monitoring



AH-151 **pH Meter with** Auto Calibration Function

The meter significantly saves efforts involved in maintenance work thanks to the automatic chemical washing and calibration of reference solutions. The amount of calibration solution needed is less than 1/5 of the amount used by HORIBA's conventional models, which helps reduce running costs.

● pH



TW-100 Water Distribution Monitoring

Installed at a water supply facility or at the end of a water supply pipe, this equipment automatically monitors daily water quality check items.

- Turbidity Chromaticity
- Residual chlorine
- Water pressure
- pH
- Electric conductivity
- Water temperature



T1-TOCADERO Series
On-line TOC Analyzer

This is the Highest analytical precision with short measuring time. Catalyst-free high-temperature process at 1200°C with "Fast Change Technology. Most modern hardware components. Minimal material requirements and support costs. Highest processing quality. Convincing cost of ownership.

Total Organic Carbon





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Water Quality Monitoring



HT-110 Online TOC-Analyzer

This analyzer is designed to measure total organic carbons in pharmaceutical water based on ultraviolet oxidation with differential conductivity. Conforming to United States Pharmacopeia (USP), it can continuously measure low-level TOC in water for injection, etc.

Total organic carbon



OCMA Series Oil Content Analyzer

This meter measures a wide range of electric conductivity, from that of manufacturing water up to 500 mS/cm, for advanced concentration management. The lineup of conductivity sensors includes conventional insertion sensors as well as flow-through sensors developed to have improved cleaning and sanitary properties.

Electric conductivity



U-50 Series
Multi-Parameter Water
Quality Checker

Many items can be measured simultaneously with one probe. This portable checker is best for outdoor use, such as measurements of river water, lake water, well water, and ground water.

- pH Dissolved oxygen
- Electric conductivity
- Turbidity Oxidationreduction potential ● Salinity
- Specific gravity of seawater
- TDS Water temperature
- Water depth GPS



48/96 Series
Panel Mount Type Water
Quality Analyzer

This is a panel mount type analyzer used inside a control room for monitoring water quality of sewage, industrial effluents, various manufacturing processes, etc.

- pH Electric conductivity
- Dissolved oxygen
- Electric resistivity
- Residual chlorine, etc.



Sanitary Conductivity Meter (Wide-Range Type)

This meter measures a wide range of electric conductivity, from that of manufacturing water up to 500 mS/cm, for advanced concentration management. The lineup of conductivity sensors includes conventional insertion sensors as well as flow-through sensors developed to have improved cleaning and sanitary properties.

Electric conductivity



HE-960CW 2-Channel Sanitary Conductivity Meter

This is an ideal conductivity meter for the quality control of water, from pure water to water with a conductivity of up to 2,000 pS/cm. The USP 645 water-quality determination function makes it ideal for the control of pharma-ceutical water, such as water for injection, in the pharmaceutical industry. The lineup of electric conductivity sensors includes flow-through sensors with improved cleaning and sanitary properties suitable for use In the pharmaceutical and food industries.

Electric conductivity



PM-96C Peracetic Acid Concentration Monitor

This is a measuring instrument for the continuous measurement of the concentration of peracetic acid used for sterilization in food and beverage processing.

It requires no reagent and no maintenance.

Concentration of peracetic acid





HA-961 Single-Wavelength Absorption Spectrometer

This spectrometer monitors impurities in chemicals. It enables the numerical control of changes in chemicals in terms of absorbance and also enables in-line measurements in equipment. It can be configured easily.

 Concentration of ozone in pure water





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Water Quality Monitoring



H-1 Series Industrial Water Quality Analyzer

This is an outdoor type analyzer supporting various water treatment processes from service water to waste water treatment.

- pH Oxidation-reduction
 potential (ORP) Dissolved
 oxygen Fluoride ion
 concentration Electric
 conductivity Electric
 resistivity Activated sludge
 (MLSS) Turbidity
- Residual chlorine, etc.
- Ammoniam



CODA-500 Automatic COD Monitor

This monitor measures chemical oxygen demand (COD) of industrial effluents, river water, lake water, seawater, etc. Thanks to the small amount of reagent* necessary to run the device, running costs have been reduced.

Chemical oxygen demand

* 1/10 (as compared to our conventional product)



OPSA-150/CW-150 Organic Pollutant Monitor

This monitor supports a wide range of uses, from monitoring organic pollutants in industrial effluents or source water to monitoring organic matter in process lines. Outputting converted COD values is also possible.

Organic pollutant

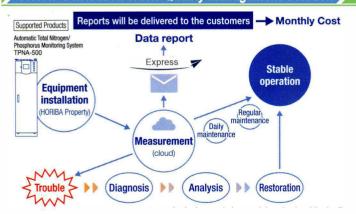


TPNA-500 Automatic Total Nitrogen/ Phosphorus Monitoring System

This system measures total nitrogen and total phosphorus in industrial effluents, river water, lake water, enclosed coastal seawater, etc. Combination with a UV monitor enables simultaneous measurement of three components - total nitrogen, total phosphorus and chemical oxygen demand (COD).

- Total nitrogen
- Total phosphorus

A New Generation Water Quality Management Solution



The equipment will be installed at the customer's designated site, and the obtained "value" will be reported to the customer. As HORIBA monitors the equipment status regularly, conduct daily maintenance, and perform troubleshoot to resolve and restore the system when errors occur, the measurement value obtained will be highly reliable. In addition, all the customer has to do is to receive the report submitted by HORIBA. As a result, the manifestation of an efficient water quality management becomes hassle-free.





GRIMM BY DURAG GROUP - GERMANY







DUST MONITOR

- Fully automatic monitoring system with remote access
- Approvals: PM10 (MCERTS, ...), PM2.5 (US-EPA, MCERTS, ...)
- Both fixed and Mobile Real-time monitoring of PM values (PM10, PM2.5, PM1), total counts (TC), and particle number distribution



NANO PARTICLE COUNTER

- Airmodus PSM allowing expansion of SMPS+C measurement range to the smallest nanoparticles and clusters
- Studies on nanoparticle growth, coagulation and transport
- Nanotechnology process monitoring
- Suitable for engine emissions for EURO 5 and 6 certificates



AEROSOL NEUTRALIZER

- Compatible with GRIMM SMPS+C and SMPS+E systems
- Aerosol neutralizer for SMPS systems
- Neutralizer for particle generators
- Fundamental aerosol research
- Investigation of particle charging



TOTAL MERCURY ANALYZER

- Lowest certified measuring range 0 ... 15 μg/m3
- Measuring principle allows separate determination of elemental and oxidized mercury
- Automatic control functions via internal reference gas generator
- Low consumption of energy and instrument air







LSI LASTEM - ITALY







METEOROLOGICAL SENSORS

Range of sensors for the measurement of the most typical meteorological quantities such as
Temperature
Rainfall
Wind Speed and Wind Direction Solar Radiation Snow Level Sensor Storm Front Distance Rain and Wetness Presence



GEORESTIVIMETER FOR TIME LAPSE ANALYSIS (G.Re.T.A.)

Georesistivimeter for Time Lapse Analisys for measuring the alteration over time of the soil's resistivity profile.



DATA LOGGERS

Range of data loggers for environmental applications for fix/portable, outdoor/indoor uses. Wide number and type of inputs. Low power consumption.





LSI LASTEM - ITALY







INDOOR ENVIRONMENT SENSORS

Range of sensors to measure physical and chemicals quantities in the thermal environments, environmental quality and air quality applications in confined spaces.



SENSORS FOR COMPOSITE MATERIAL INSTRUMENTS

Range of sensors for monitoring the compost material during the bio-oxidation process, bio-filter and other materials in the waste treatment process.



WATER LEVEL AND QUALITY SENSORS

Range of sensors for continuous measurements of water level, temperature and water quality inside reservoir and rivers.



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