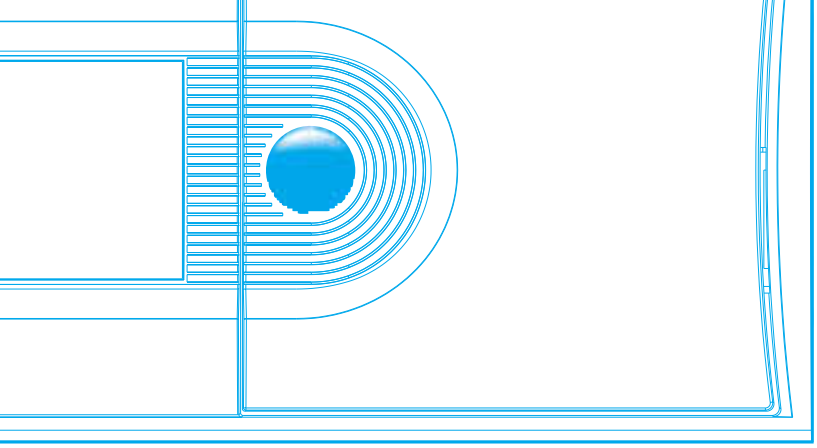
HORIBA

Explore the future

AIR POLLUTION MONITOR

AP-370 Series

Type approved by European agencies and US.EPA



These ambient air pollu
compact and easy to
precise and reliable me

Features

Automatic calibration

Troublesome calibration procedures have been reduced to the push of a function key. At the Auto-Interval Calibration (AIC) menu you can set the start time, the start range, and the interval for the automatic calibration. The system clock and calendar then assure that your calibration instructions are executed precisely. To make things even easier, remote auto-calibration can also be done from your own computer, via the monitor's RS-232C serial port (optional).

Auto-range function

An auto-range function that automatically switches to the range best suited to the object gas concentration for both momentary and average values is included as a standard feature. As an option, even when randomly set to any range (within 10 times the range ratio), the auto-range function can still be used. Switching over from auto-range to manual-range is a simple task.

Selective data output

For each component measured, the system provides four types of data: momentary values, integrated values, moving averages, and simple averages. Any two of theses may be output. Simultaneous output to any two external devices (e.g., PC, printer). The time-span for both average and integrated values may be specified (i.e.,when the momentary value has not been selected). With the simple average values, three different timesettings can be specified.

Storing data in memory

Four different values may be stored in memory: three simple averages and the integrated value.
For example:

- Average value #1 (3 min)→1,000 data sets
- Average value #2 (30 min)→1,000 data sets
- Average value #3 (3 h)→100 data sets
- Integrated value (1 h)→1,000 data sets

Ethernet(LAN) connection (option)

Compatible with LAN environment, data sharing and colle-ction are available. Standard LAN environment and Ethernet access port (option) are equipped and can meet in Network environment.

tion monitors are surprisingly
maintain for such sensitive,
asurements.

AIR POLLUTION MONITOR

AP-370 Series

Memory card for data management (option)

Possible to connect Conpact Flash.(CF) CF: Able to save hour of integrated value...etc. Possible to read in data to CF card and collect data. Suitable for data processing and remote maintenance. It's possible to conveniently utilize stand-alone.

Readout toggles to mg/m³, μg/m³

A touch of a button on the front panel is all that is needed to toggle the readout from ppm or ppb to mg/m³.
(Not available on Model APHA-360, where CH_4 values are displayed as ppm, NMHC and THC as ppmC.)

Pressure-compensation

Automatic compensation for ambient pressure assures reliable data regardless of the weather or the monitor's location.

Easy-to-read, 326×240 dots LCD readout display with touch panel screen.

Adoption of the touch screen of full graphic LCD. Easy-to-operate large display and user friendly, interactive type operation. Possible to save data of average value, integrated value alarm history and calibration history. Improve the maintain ability, for example, display the graph of intensity, hour meter function.

Minimal influence from interference components and ambient temperature

These monitors use Horiba's innovative detection technology and sampling method for outstanding sensitivity. The influence from interference components is minimal and results are very stable over long periods of measurement.

Input/output via RS-232C port (option)

The systems' RS-232C serial port can be used to transmit measured values, alarms, and other data to remote equipment. It can also be used to input changes to parameter settings and other data. A hard-copy printout of measured values can be produced by attaching a recorder to the RS-232C port.

At last—a small, compact system

A small, light-weight unit for each component to be measured fits neatly into a 19inch rack. This makes it easy to upgrade your system for multicomponent capabilities. This new design offers great savings in valuable lab space.

Ambient CO Monitor
APMA-370

According to EN14626 and VDI 4202/4203 (TUEV Rheinland, Germany)
U. S. EPA CONDUCTING FINAL REVIEW OF DESIGNATION NUMBER APPLICATION

Features

The cross flow modulation type, infrared-absorption technology eliminates the need for troublesome optical adjustments. For the user, this means very stable and sensitive (5 ppm F.S.) measurements.

The APMA-370 uses an AS-type interference-compensating detector, and a flowing reference gas. The reference gas is generated by purging sample through an oxidation process, where an oxidizing catalyst burns the CO to CO_2. These features eliminate the interference effect of other elements, resulting in highly accurate measurements.

The APMA-370 does not use such components as reflecting mirrors, that attract foreign matter. This means the optical bench stays clean assuring you of stable results over long periods of time.

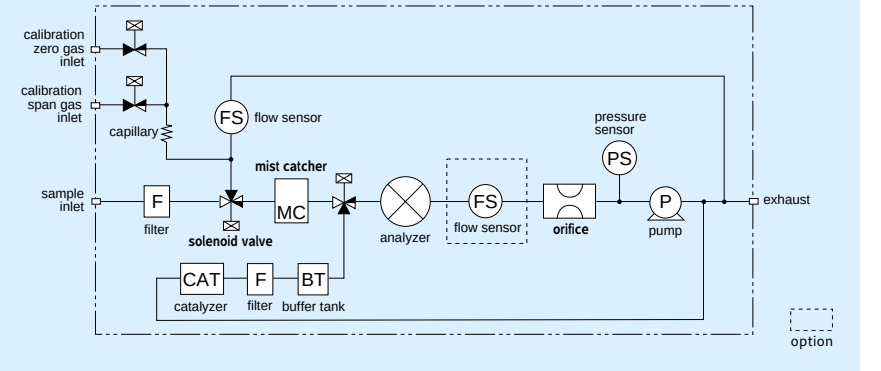
Principle

Cross flow modulation, inflared absorption technology (NDIR)

Conventional technology uses an optical chopper to obtain modulation signals. Instead of this, the APMA-370 uses a solenoid valve modulation. Fixed amounts of the sample gas and the reference gas are injected alternately into the measurement cell. With the cross flow-modulation method, if the same gas is used for both the sample gas and the reference gas (e. g., zero gas could be used for both), no modulation signal will be generated. This has the great advantage that, in principle, when analyzing minute amounts of gas there is no generation of zero-drift. An additional advantage is that the elimination of rotary sectors precludes the need for optical adjustment. These features assure greatly improved stability over long periods ofmeasurement. A further improvement is that in the front chamber of the detector, the measurable components, including interference components, are detected; in the rear chamber, interference components only are detected. By means of subtraction processing, the actual signal obtained is one that has only very little interference influence.

Specifications

Principle: Cross flow modulation, non-dispersive infrared absorption technology (NDIR)
Application: CO in ambient air
Range: Standard ranges: 0-10/20/50/100 ppm; 0-5/10/20/50 ppm; auto range ～ manual range selectable; can be operated by remote switching.
Optional (measurable) ranges: 4 ranges selectable from 0-100 ppm, within 10 times range ratio; auto range ～ manual range selectable; can be operated by remote switching.
Lower detectable limit: 0.02 ppm (3 sigma)
Repeatability: ±1.0% of F.S.
Linearity: ±1.0% of F.S.
Zero drift: <LDL/day at lowest range
<0.2 ppm/week at lowest range
Span drift: <LDL/day at lowest range
±1.0% F.S./week
Response time (T_{90}): Within 50 sec at lowest range
Sample gas flow rate: Approx. 1.5L/min
Indication: Measured value, range, alarm, maintenance screen
Alarms: During AIC, zero calibration error, span calibration error, temperature error in catalyzer, etc.
On-screen messages are available in four languages: English, German, French, and Japanese.
Input/output: • 0-1 V/0-10 V/4-20 mA, to be specified (2 systems: either (1) momentary value and integrated or (2) moving average value) • Contact input/output • RS-232C
Ambient temperature: 5-40 ℃
Power: 100/110/115/120/220/230/240 VAC, 50/60 Hz (to be specified)
Dimensions: 430(W)×550(D)×221(H) mm
Mass: Approx. 16 kg,



Ambient SO_2 Monitor
APSA-370

According to EN14212 and VDI 4202/4203 (TUEV Rheinland, Germany)
U. S. EPA CONDUCTING FINAL REVIEW OF DESIGNATION NUMBER APPLICATION

Features

The APSA-370 uses an innovative detector and a new optical system for low background, high sensitivity (0.05 ppm F.S.:), and greatly improved stability.

Fluorescent chamber design gives measurements with minimum influence from moisture.

The unit has built-in aromatichydrocarbon cutter with a selective transmission membrane. This reduces the influence of interference components. Coupled with Horiba's unique flow-path, it also makes it possible to extend the working life of the cutter and to take measurements free from influence from variations of sample flow.

In comparison with the FPD method, the APSA-370 design is (1) highly selective for SO_2, (2) requires no supplemental gas, and (3) gives linear output.

Compensation for the lamp's luminous energy guarantees prolonged span stability.

The sample inlet has a Teflon filter built-in.

Principle

UV fluorescence

The UV fluorescence method operates on the principle that when the SO_2 molecules contained in the sample gas are excited by ultraviolet radiation they emit a characteristic fluorescence in the range of 220-240 nm. This fluorescence is measured and the SO_2 concentration is obtained from changes in the intensity of the fluorescence.

The reactive mechanism is

(1) $SO_2+h\nu_1 \rightarrow SO_2^*$

(2) $SO_2^* \rightarrow SO_2+h\nu_2$

(3) $SO_2^* \rightarrow SO+(O)$

(4) $SO_2^*+M \rightarrow SO_2+M$

Here, (1) shows the excited state of the SO_2 molecules that have absorbed the amount of energy $h\nu_1$ by ultraviolet radiation. (2) shows the amount of energy, $h\nu_2$ emitted by the excited molecules as they return to the ground state. (3) shows the decomposition by the light emitted from the excited molecules. (4) shows the quenching, i.e., the energy lost by the excited molecules colliding with other molecules. The APSA-370 uses an Xe lamp as the light source, and the fluorescent chamber design minimizes scattered light. The optical system has been carefully designed with low background, making it possible to take measurements with a highly stable zeropoint. In addition, a reference detector monitors any fluctuation in the intensity of the light source. This allows the unit to calibrate itself automatically for sensitivity, resulting in greater span stability.

Specifications

Principle: UV fluorescence (UVF)

Application: SO_2 in ambient air

Range: Standard ranges: 0-0.05/0.1/0.2/0.5 ppm; auto range ～ manual range selectable; can be operated by remote switching.
Optional (measurable) ranges: 4 ranges selectable from 0-10 ppm, within 10 times range ratio; auto range ～ manual range selectable; can be operated by remote switching.

Lower detectable limit: 0.5 ppb(3 sigma)

Repeatability: ±1.0% of F.S.

Linearity: ±1.0% of F.S.

Zero drift: <LDL/day at lowest range
<LDL/week at lowest range

Span drift: <LDL/day at lowest range
<LDL/week at lowest range

Response time (T_{90}): Within 120 sec at lowest range

Sample gas flow rate: Approx. 0.7L/min

Indication: Measured value, range, alarm, maintenance screen

Alarms: During AIC, zero calibration error, span calibration error, temperature error in catalyzer, etc.

On-screen messages are available in four languages: English, German, French, and Japanese.

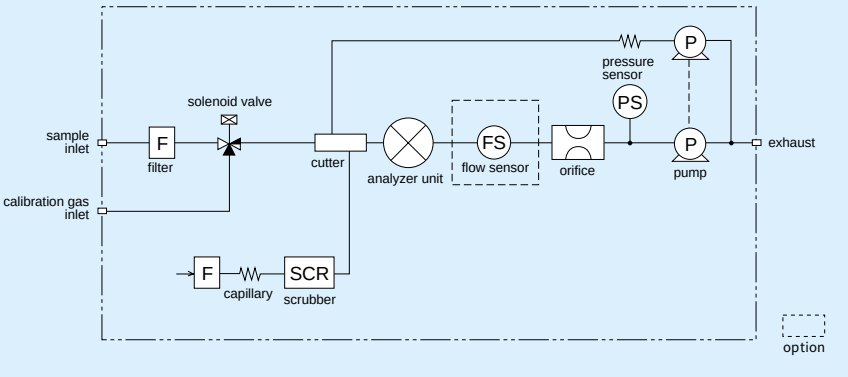
Input/output: • 0-1 V/0-10 V/4-20 mA, to be specified (2 systems: either (1) momentary value and integrated or (2) moving average value) • Contact input/output • RS-232C

Ambient temperature: 5-40 ℃

Power: 100/110/115/120/220/230/240 VAC, 50/60 Hz (to be specified)

Dimensions: 430(W)×550(D)×221(H) mm

Mass: Approx. 19 kg,



NOx

Ambient NOx Monitor
APNA-370

According to EN14211 and VDI 4202/4203 (TUEV Rheinland, Germany)
U. S. EPA CONDUCTING FINAL REVIEW OF DESIGNATION NUMBER APPLICATION

Features

The APNA-370 uses a combination of (1) the dual cross flow modulation type chemiluminescence principle and (2) the referential calculation method.
This gives it the advantages of the single-detector method plus the ability to do continuous measurements of NOx, NO, and NO_2. The design gives great stability and extremely high sensitivity (F.S. 0.1 ppm)

Standard equipment includes a drier unit with an automatic recycle function to provide dry ambient air as the ozone source. This makes longrun continuous measurements possible.

The detector uses a semiconductor sensor for compactness and long working life.

All the necessary features are built right into a single rack-sized unit, including a reference-gas generator, an ozone-source drier unit, an ozone decomposer, and a sampling pump. No supplemental gas is required.

Principle

Cross flow modulation type, reduced pressure chemiluminescence (CLD)

The chemiluminescence method uses the reaction of NO with O_3

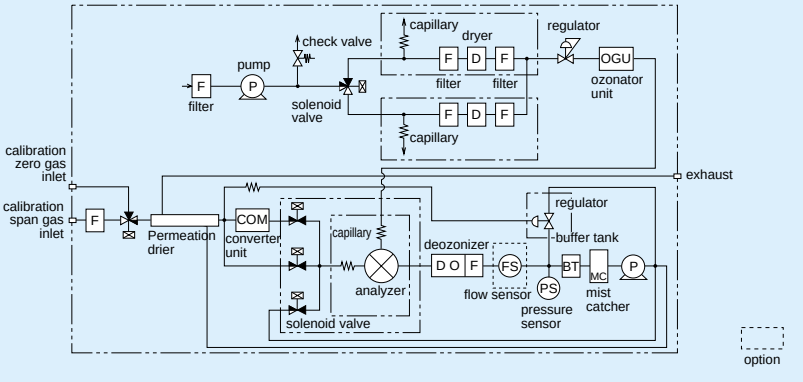
$NO+O_3 \rightarrow NO_2^*+O_2$

$NO_2+NO_2+h\nu$

A portion of the NO_2 generated as the result of this reaction becomes NO_2^*. As these excited molecules return to the ground state, chemiluminescence is generated in the range of 600 nm 3,000 nm. The light intensity is in proportion to the concentration of NO molecules and by measuring it we obtain the NO concentration of the sample. A deoxidation converter changes the NO_2 to NO, which is measured. In other words, the NO_2 concentration can be obtained by the difference between (1) the NOx concentration measured when the sample gas is directed through a converter and (2) the NO concentration measured when the gas is not run through the converter.

Specifications

Principle: Cross flow modulation type, reduced pressure chemiluminescence (CLD)
Application: NO_2, NO and NOx in ambient air
Range: Standard ranges: 0-0.1/0.2/0.5/1.0 ppm; auto range ~ manual range selectable; can be operated by remote switching.
Optional (measurable) ranges: 4 ranges selectable from 0-10 ppm, within 10 times range ratio; auto range ~ manual range selectable; can be operated by remote switching.
Lower detectable limit: 0.5 ppb(3 sigma)
Repeatability: ±1.0% of F.S.
Linearity: ±1.0% of F.S.
Zero drift: <**LDL**/day, at lowest range
±1.0 ppb/week at lowest range
Span drift: <**LDL**/day at lowest range
±1.5 % of F.S./week
Response time (T_{90}): Within 90 sec at lowest range
Sample gas flow rate: Approx. 0.8L/min
Indication: Measured value, range, alarm, maintenance screen
Alarms: During AIC, zero calibration error, span calibration error, temperature error in converter, etc.
On-screen messages are available in four languages: English, German, French, and Japanese.
Input/output: • 0-1 V/0-10 V/4-20 mA, to be specified (2 systems: either (1) momentary value and integrated or (2) moving average value) • Contact input/output • RS-232C
Ambient temperature: 5-40 ℃
Power: 100/110/115/120/220/230/240 VAC, 50/60 Hz (to be specified)
Dimensions: 430(W)×550(D)×221(H) mm
Mass: Approx. 21 kg,



THC

Ambient THC Monitor
APHA-370

Features

The APHA-370 uses a combination of (1) the flame ionization detection method (2) and selective-combustion. This gives it the advantages of the single-detector method plus the ability to do continuous, zero-drift free measurements of THC, NMHC, and CH_4. The design gives great stability and high sensitivity (F.S. 5 ppm)

The APHA-370 has a relativesensitivity correction function for CH_4 and NMHC.

A catalytic unit for generating reference gas and auxiliary combustion air is standard equipment in the APHA-370.

All the necessary features are built right into a single rack-sized instrument, including a catalytic unit for selective combustion (i.e., an NMHC cutter); a cataytic unit for generating reference gas and auxiliary combustion air; and a sampling pump. The only supplemental gas required is H_2.

Principle

Flame ionization detection method (FID) with selective combustion

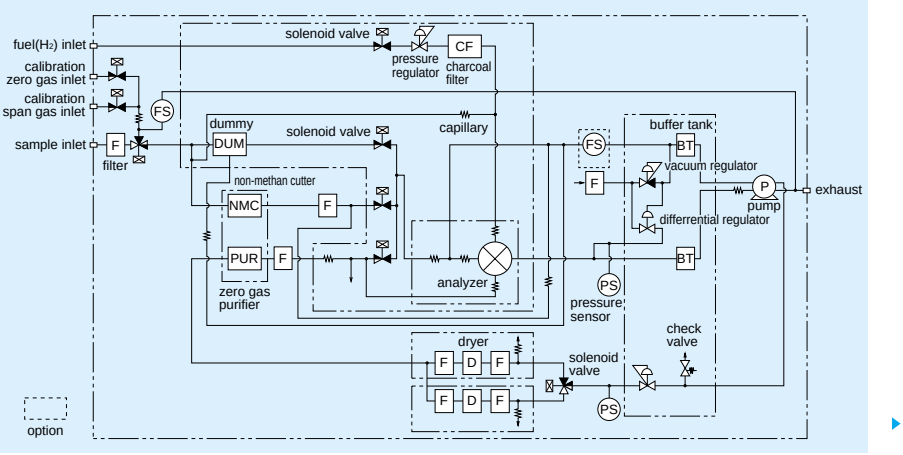
The flame ionization detection method (FID) — used in combination with the selective-combustion system — utilizes the ionization that occurs as the result of the high-temperature energy from combustion at the tip of the burner jet when organic carbon compounds are introduced into the hydrogen flame. The hydrogen flame is located between two electrodes.

When an electrical voltage is applied across these electrodes a minute ion current proportional to the hydrocarbon concentration is produced. This current is monitored by a low leakage amplifier, giving a voltage readout for THC. To measure CH_4 the sample gas is passed through the selective catalytic combustion unit (the NMHC cutter), which oxidizes NMHC without oxidizing CH_4. This is shown as *A* below. *B* represents the THC concentration measured without passing the gas through the NMHC cutter. Thus *B*- *A* will give the concentration of NMHC. The final concentration value is calculated using a relative-sensitivity correction coefficient, *k*, as shown below.

CH_4 Concentration *A*
NMHC Concentration *k* (*B* - *A*)
THC Concentration *A* + *k* (*B* - *A*)

Specifications

Principle: Flame ionization detection (FID) with selective combustion
Application: THC, NMHC, and CH_4 in ambient air
Range: Standard ranges: 0-5/10/20/50 ppmC; auto range ～ manual range selectable; can be operated by remote switching.
Optional (measurable) ranges: 4 ranges selectable from 0-100 ppmC, within 10 times range ratio; auto range ～ manual range selectable; can be operated by remote switching.
Lower detectable limit: 0.022 ppmC(3 sigma)
Repeatability: ±1.0% of F.S.
Linearity: ±1.0% of F.S.
Zero drift: <**LDL**/day at lowest range
±0.05 ppmC/week at lowest range
Span drift: <**LDL**/day at lowest range
±0.5 % F.S./week
Response time (T_{90}): Within 60 sec at lowest range
Sample gas flow rate: Approx. 0.9 L/min
Indication: Measured value, range, alarm, maintenance screen
Alarms: During AIC, zero calibration error, span calibration error, temperature error in zero gas purifier, ignition failure error, etc.
On-screen messages are available in four languages: English, German, French, and Japanese.
Input/output: • 0-1 V/0-10 V/4-20 mA, to be specified (2 systems: either (1) momentary value and integrated or (2) moving average value) • Contact input/output • RS-232C
Ambient temperature: 5-40 ℃
Power: 100/110/115/120/220/230/240 VAC, 50/60 Hz (to be specified)
Dimensions: 430(W)×550(D)×221(H) mm
Mass: Approx. 33 kg,
Notes: ppmC is shown as symbol, not as unit.



Ambient O_3 Monitor
APOA-370

According to EN14625 and VDI 4202/4203 (TUEV Rheinland, Germany)
U. S. EPA CONDUCTING FINAL REVIEW OF DESIGNATION NUMBER APPLICATION

Features

The APOA-370 uses the cross flow modulation type, ultra-violetabsorption method in conjunction with the comparative calculation method.
This permits continuous measurement with great stability and high sensitivity (F.S. 0.1 ppm)

Horiba's innovative heated deozonizer provides reference gas by decomposing the O_3 found in the sample gas. This has the advantages of (1) reducing the influence from interference, (2) making the monitor insensitive to great changes in moisture content, and (3) prolonging the working life of the monitor.

All gas connections are either Teflon or glass.

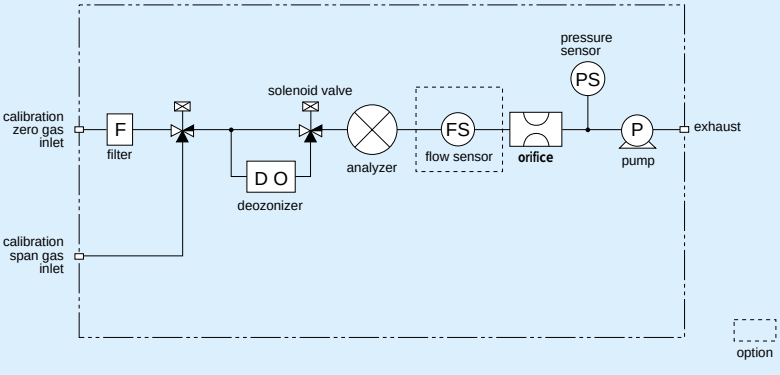
Principle

Ultra-violet-absorption method (NDUV)

The ultra-violet-absorption method works on the principle that ozone absorbs ultra-violet rays in the area of 254 nm. Measurements are taken from continuous, alternate injections of the sample gas andthe reference gas into the measurement cell, controlled by a long-life solenoid valve. The cross flow modulation method is characteristically zero drift-free. All fluctuations in the mercury-vapor light source and in the detector are automatically compensated for by a comparative calculation circuit. This means that, in principle, the APOA-370 makes it possible to carry out zero-span driftfree, continuous measurements. In addition, HORIBA'S unique de-ozonizer for the comparison gas line is unaffected by interference elements or moisture retention, prolonged, stable measurement is possible.

Specifications

Principle: Ultra-violet-absorption method (NDUV)
Application: O_3 in ambient air
Range: Standard ranges: 0-0.1/0.2/0.5/1.0 ppm; auto range ～ manual range selectable; can be operated by remote switching.
Optional (measurable) ranges: 4 ranges selectable from 0-10 ppm, within 10 times range ratio; auto range ～ manual range selectable; can be operated by remote switching.
Lower detectable limit: 0.5 ppb(3 sigma)
Repeatability: ±1.0% of F.S.
Linearity: ±1.0% of F.S.
Zero drift: <**LDL**/day at lowest range
<**LDL**/week at lowest range
Span drift: <**LDL**/day at lowest range
<**LDL**/week at lowest range
Resposnse time (T_{90}): Within 75 sec at lowest range
Sample gas flow rate: Approx. 0.7 L/min
Indication: Measured value, range, alarm, maintenance screen
Alarms: During AIC, zero calibration error, span calibration error, temperature error in ozone separator, light intensity error, etc.
On-screen messages are available in four languages: English, German, French, and Japanese.
Input/output: • 0-1 V/0-10 V/4-20 mA, to be specified (2 systems: either (1) momentary value and integrated or (2) moving average value) • Contact input/output • RS-232C
Ambient temperature: 5-40 ℃
Power: 100/110/115/120/220/230/240 VAC, 50/60 Hz (to be specified)
Dimensions: 430(W)×550(D)×221(H) mm
Mass: Approx. 20 kg,



H_2S/TRS Measurement

Features • Principle

Combined use of the H_2S converter unit and the APSA: SO_2 Monitor makes H_2S measurement possible. The H_2S converter unit contains two types of catalyst: SOx scrubber and H_2S converter. SOx is removed by the SOx scrubber, and then the H_2S that has passed through is converted into SO_2 by the H_2S converter. This SO_2 is then measured by the APSA: SO_2 Monitor for display as H_2S concentration.

Specifications

Range: 0.1-0.1/0.2/0.5/1.0 ppm
Power: 100/110/115/120/220/230/240 VAC, 50/60 Hz
Dimensions: CU-1: 430(W)×550(D)×221(H) mm
APSA: 430(W)×550(D)×221(H) mm
Mass: CU-1: Approx. 10 kg
APSA: Approx. 25 kg

NH_3 Measurement

Features • Principle

Combined use of the NH_3 converter unit and the APNA: NOx Monitor makes NH_3 measurement possible. The NH_3 converter unit contains two types of catalyst tubes: one which converts NH_3 into NOx, and one which allows the NOx in the ambient air to pass through directly. The difference in NOx value between the two is measured by the APNA: NOx Monitor for display as NH_3 concentration.

Specifications

Range: 0-1/2/5-10 ppm
Power: 100/110/115/120/220/230/240 VAC, 50/60 Hz
Dimensions: CU-2: 430(W)×550(D)×310(H) mm
APNA: 430(W)×550(D)×221(H) mm
Mass: CU-2: Approx. 20 kg
APNA: Approx. 26 kg

Calibration Equipment

HORIBA offers various calibration products for optional use with the AP-370. HORIBA's calibration equipment support mainly the following methods:

Option	APMA	APSA	APNA	APHA	APOA
Internal or external permeation device for SO_2, H_2S, BTX, NO_2 and many more		●	●		
External gas phase titration for NO/NO_2			●		
Ozone generation with an internal or external O_3 generator based on UV radiation					●

All calibrators can be equipped with thermal mass flow controllers or pressure regulators and capillaries depending on the precision requirements and avaiable budgets. Stationary and portable single components as well as multi-component calibrators are available upon client's specification. Corresponding interfaces as well as calibration and QC protocols can also be supplied.

Digital Calibrator

Features

HORIBA's MCC-1000 is designed to calibrate gas analyzers manually, remotely controlled or automatically, installed in air pollution monitoring stations, for quality assurance in the laboratory and also for the production of gas analyzers.
A special feature of HORIBA's MCC-1000 is the big size touch screen panel, for ease of operation. Characteristic of operation of HORIBA's MCC-1000 is the intuitive, simple and user friendly menu. (Flow rate, mg/m³, ppb/ppm, automatic cycles etc.) Via the touch screen it is e.g. possible to enter span gas concentrations or to start autmatic routines like multi point calibration cycles.

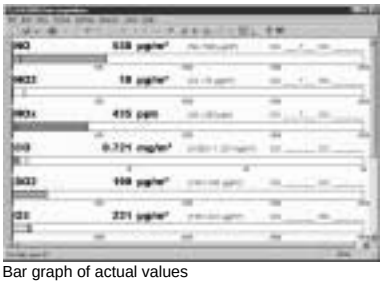
Specifications

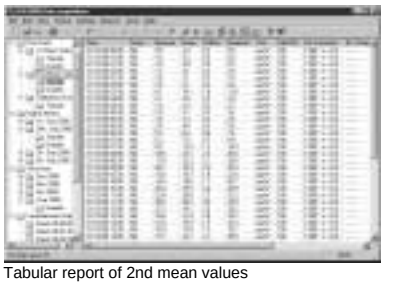
Principle: Dynamic generation of zero-and span-gas with mfc's
Mass- Flow-Controller(MFC): With polynomial calibration
Power: 230 VAC **±10%**, 50 Hz(other on request), 50 VA
Dimensions: 430(W)×400(D)×120(H) mm (19") with brackets
Mass: Approx. 10 kg

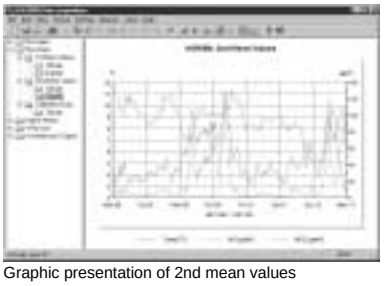
Intelligent Data Acquisition System

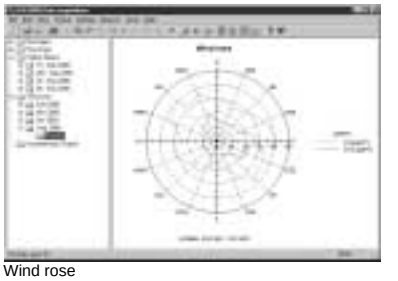
HORIBA IDA-2000

HORIBA's IDA-2000 is an intelligent data acquisition system (DAS) using a desktop or industrial PC, designed for fully automatic monitoring stations. The entire data capture and mean value calculation as well as control of the analyzers is executed by 32 bit multitasking software, running in a state-of-the-art Windows environment. It combines the power of a 32 bit multitasking workstation with the ease of use, compatibility and productivity of a personal computer. The measured values as well as operating and error status messages are gathered in a 5-second interval from the analyzers. They are converted into engineering units, checked for plausibility and synchronously converted into two different averages. Automatic calibration routines in predefined intervals as well as can be started either from the station computer or through a remote host computer. The DAS also supports the manual execution of calibration sequences as well as remote maintenance operations.


Bar graph of actual values


Tabular report of 2nd mean values


Graphic presentation of 2nd mean values

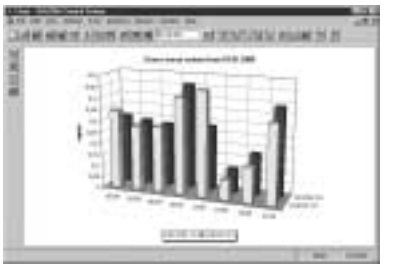

Wind rose

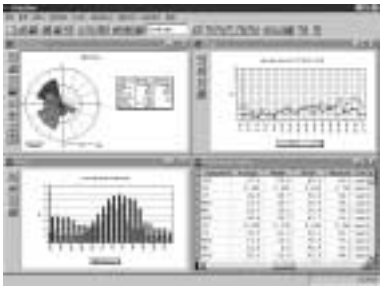
Data Management and Reporting Software

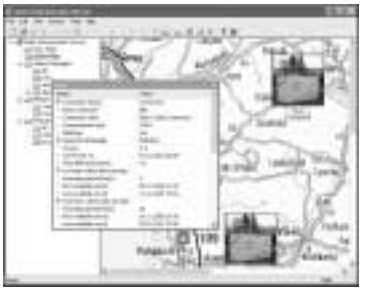
HORIBA IDA-ZRW

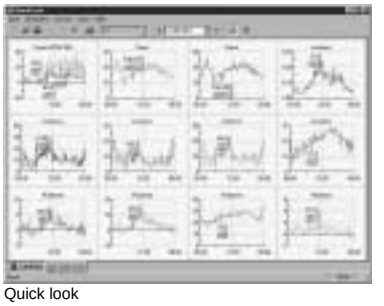
HORIBA's IDA-ZRW is a data management and reporting software for use in Ambient Air Quality and Meteorological monitoring. The software package provides data collection, management, analysis and reporting. Measured data and related information is stored in a high-end relational SQL database. The software can be used stand-alone or run on several machines in a network environment operating in Microsoft Windows environments. Communication between Central & Remote Stations works with a wide variety of communication links, such as direct connections, short haul modems, telephone (including cellular) and multi-drop. Data can be transferred to and presented in Internet pages according to customers requirements.


Report preview


3D-column chart of 3h-means


Example of various reports


DCS main


Quick look


Quick look

Complete Integrated System

HORIBA designs, assembles, calibrates and tests complete integrated systems for simultaneously measuring multiple pollutants. A system for monitoring five pollutants can typically fit into one 19-inch rack. Rack-mounted systems can be installed in equipment rooms, stand-alone shelters, trailers, vans, large trucks, or aboard vessels. HORIBA can integrate products into existing monitoring systems, or design and build a new system.

South african bureau of standards

Various Types of Fixed Stations and Mobile Laboratories

HORIBA designs and builds complete solutions precisely tailored to customer's requirements

●Fixed monitoring stations for continuously measuring air pollutants

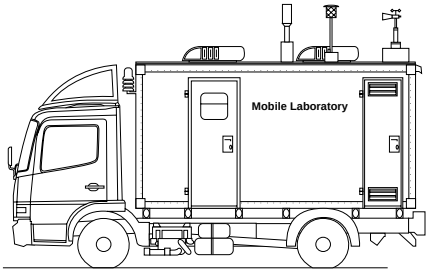
Reykjavik environment / Iceland

Agency for environmental Federal State of Bavaria
Mobile laboratory with detachable shelter

●Mobile laboratories to investigate the geographic distribution of air pollution

Professional association for civil engineering

These vans and trucks are just some of the projects we've done for customers in Europe

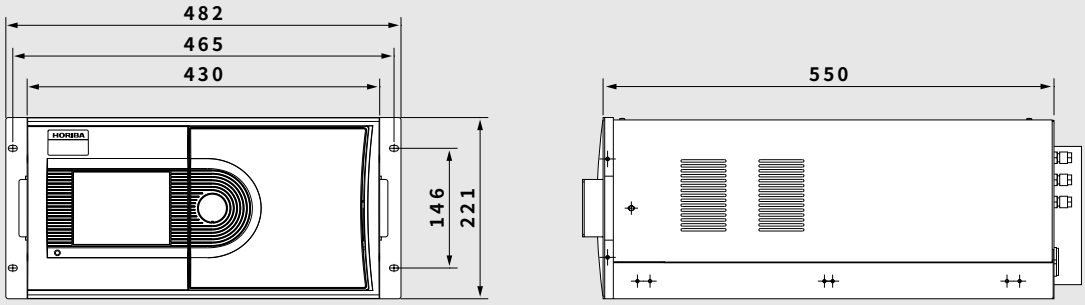


Standard 19-inch Packages

Each HORIBA AP-370 Series Monitor is packaged in a light metal enclosure with sliding chassis suitable for either a table-top set-up in a research laboratory or mounting on a standard 19-inch rack for permanent installation. All the controls and serviceable components are accessible from the front for easy maintenance while the plumbing and cable connections are neatly arranged at the back.

■ **Dimensional Outline** **Unit: mm**

APMA-370/APSA-370/APNA-370/APHA-370/APOA-370



Horiba contributes to the preservation of the global environment through analysis and measuring technology.

Please read the operation manual before using this product to assure safe and proper handling of the product.

- The contents of this catalog are subject to change without prior notice, and without any subsequent liability to this company.
- The color of the actual products may differ from the color pictured in this catalog due to printing limitations.
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http://www.horiba.com

●HORIBA, Ltd.
Head Office
Miyanohigashi, Kisshoin
Minami-ku, Kyoto, Japan
Phone: 81 (75) 313-8123
Fax: 81 (75) 321-5725

Tokyo Sales Office
1-7-8 Higashi-Kanda
Chiyoda-ku, Tokyo, Japan
Phone: 81 (3) 3861-8231
Fax: 81 (3) 3861-8259

●HORIBA TRADING CO., Ltd.
Shanghai Office
Room 1103, United Plaza,
1468 Nanjing Rd. West,
Shanghai, 200040, China
Phone: 21-3222-1666
Fax: 21-6289-5553

Beijing Office
Room 609, Jin Bao Plaza,
89 Jin Bao Street,
Dongcheng District, Beijing,
100005 China
Phone: 10-6522-7573
Fax: 10-6522-7582

●HORIBA KOREA Ltd.
112-6 Sogong-Dong
Choong-ku, Seoul, Korea
Phone: 82 (2) 753-7911
Fax: 82 (2) 756-4972

●HORIBA INSTRUMENTS Pte. LTD.
10 Ubi Crescent
#05-11/12, Ubi Techpark
Singapore 408564
Phone: 65 6745-8300
Fax: 65 6745-8155

●HORIBA INSTRUMENTS INCORPORATED
Irvine Facility
17671 Armstrong Avenue
Irvine, CA 92614, U.S.A.
Phone: 1 (949) 250-4811
Fax: 1 (949) 250-0924

●HORIBA GmbH
Kaplanstrasse 5
A-3430 Tulln,
Austria
Phone: 43 (2272) 65225
Fax: 43 (2272) 65230

HORIBA CZECHIA
Organizachi slozka Praha
Petrohradska 13
CZ-101 00 Praha 10, Czech Republic
Phone: 420 (2) 717-464-80
Fax: 420 (2) 717-470-64

●HORIBA INSTRUMENTS LIMITED
Kyoto Close
Summerhouse Road
Moulton Park, Northampton
NN3 6FL, U.K.
Phone: 44 (1604) 542500
Fax: 44 (1604) 542699

●HORIBA EUROPE GmbH
Head Office
Hans-Mess-Str.6
D-61440 Oberursel/Ts.
Germany
Phone: 49 (6172) 1396-0
Fax: 49 (6172) 137385

Leichlingen Facility
Julius-kronenberg Strasse
D-42799 Leichlingen
Germany
Phone: 49 (2175) 8978-0
Fax: 49 (2175) 8978-50

HORIBA FRANCE
Rue L. et A. Lumière
Technoparc
F-01630 St-Genis-Pouilly
France
Phone: 33 (4) 50-42-27-63
Fax: 33 (4) 50-42-07-74

HORIBA FRANCE
Les Ulis Office
12 Av.des Tropiques Hightec Sud,
F-91955 Les Ulis
France
Phone: 33 (1) 69-29-96-23
Fax: 33 (1) 69-29-95-77

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