

FORMALDEHYDE MONITORING INSTRUMENTS AND SYSTEMS



Formaldehyde (HCHO) is one of the most frequently encountered toxic gases, is a probable human carcinogen (Classification --B1, per U.S. EPA Integrated Risk Information System), and has been assigned low-concentration occupational exposure standards in many countries.

Yet, few practical methods existed to monitor this compound until Interscan developed its formaldehyde sensor in the 1980's.

Early applications included monitoring employee exposure to emissions occurring in the manufacture of engineered wood products. This led to the introduction of Georgia-Pacific's dynamic microchamber, that revolutionized how various types of board are evaluated for HCHO emissions prior to shipment.

From that base, Interscan formaldehyde instruments moved into health care, flavor and fragrance, specialty chemical processes, paper and textile treatment, and many other applications.

Field proven worldwide, Interscan formaldehyde instruments offer you...

- Excellent sensitivity, specificity, and accuracy
- Ease of use and reliability
- Unmatched performance and peace of mind

Trust your formaldehyde monitoring requirements to the industry leader - - Interscan.



interscan corporation

For more comprehensive information, visit us at:

www.gasdetection.com

Interscan offers a full range of monitoring instrumentation for formaldehyde, from portable survey instruments to complete permanently-installed (“fixed”) multipoint systems. And, all Interscan instruments can be provided with full data acquisition, archiving, and reporting capability.

Descriptions of our four basic instrument configurations follow, along with ordering information, specifications, and further technical details.

PORTABLE ANALYZERS

Rugged enough to stand up to the toughest field conditions, easy to use, and reliable for decades.

KEY FEATURES

- *Reliable sample-draw pump*
- *Adjustable audible and visual alarms*
- *0–100mV analog output*

POPULAR OPTIONS

- *Special ranges*
- *Intrinsically safe models*



Model Number	Measuring range (ppm)	Resolution (ppm)
4160-1999m	0-1999	1
4160-199.9m	0-199.9	0.1
4160-19.99m	0-19.99	0.01
4160-500b	0-0.5*	0.001

*Supplied as 0-500 ppb (parts-per-billion) range

4.5 lb (2.0 kg)

**4000 Series
Portable Analyzer**

SINGLE POINT AND TWO POINT CONTINUOUS MONITORING SYSTEMS

Interscan's LD Series offers the ultimate in continuous monitoring systems. Every component has been chosen based on years of experience in some of the most demanding environments imaginable. What's more, the units are easy and inexpensive to maintain. An impressive array of options lets you put together a system ideally suited to **your** application.

The two point version of our LD Series gives you two continuously operating monitoring channels in one convenient package. All the features of the single point unit are included—times two—with dual display controllers, dual pumps and rotameters, and dedicated alarm features for both channels.



LD Series Single Point System



LD Series Two Point System

KEY FEATURES

- *Super-rugged NEMA Type 4X fiberglass reinforced polyester enclosure for single point unit; NEMA type 12 steel enclosure for two point unit*
- *Analog output --0-1V (adjustable) and 4-20 mA, for each channel*
- *Two levels of alarm contacts, continuously adjustable through the full scale measuring range, activating dedicated relays*

POPULAR OPTIONS

- *Alternative packaging, including Type X or Type Z purged enclosures, explosion-proof enclosures, and RFI resistant enclosures*
- *Alarm signals*
- *Enclosure heating and cooling*
- *Special ranges*

RACK-MOUNTABLE ANALYZERS

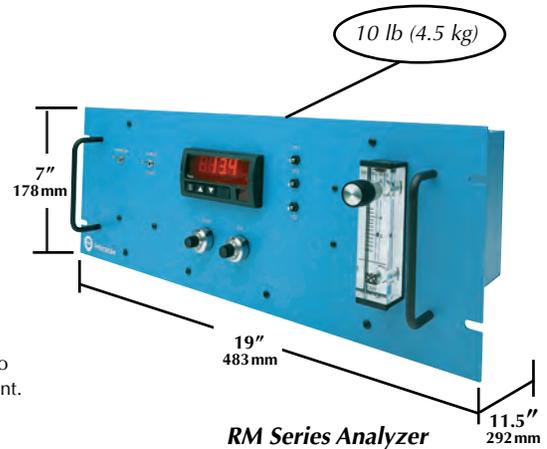
Interscan's RM Series rack-mountable analyzers are intended for those single point monitoring applications in which line power operation is desired (allowing continuous operation and the incorporation of heavier-duty alarm signals or alarm contacts), but in which the rigorous NEMA 4X packaging of the LD Series is not required.

Designed to be installed in a standard 19 inch (483 mm) rack or to be used on the bench, their open frame construction and use of standard electrical and pneumatic components allow easy incorporation of the units into a system. Many of the LD Series' features and options are available.

Single Point LD Series Model No.	Two Point LD Series Model No.	RM Series Model No.	Range (ppm)	Resolution (ppm)
LD16-1999m	LD216-1999m	RM16-1999m	0-1999	1
LD16-199.9m	LD216-199.9m	RM16-199.9m	0-199.9	0.1
LD16-19.99m	LD216-19.99m	RM16-19.99m	0-19.99	0.01
LD16-1999b	LD216-1999b	RM16-1999b	0-1.999*	0.001

*Supplied as 0-1999 ppb range

Special ranges available on request—The panel meter can be factory programmed to display any desired full scale range, within the measuring capability of the instrument.



CONTINUOUS MONITORING SYSTEMS FOR THREE OR MORE POINTS

Interscan's multipoint systems combine the latest in factory automation and gas sensor technology to give you the best possible functionality, with no compromise.

Custom designed to meet your exact needs, yet reasonably priced, our systems will perform for you, providing protection and peace of mind—as they have in thousands of installations all around the world.

KEY FEATURES

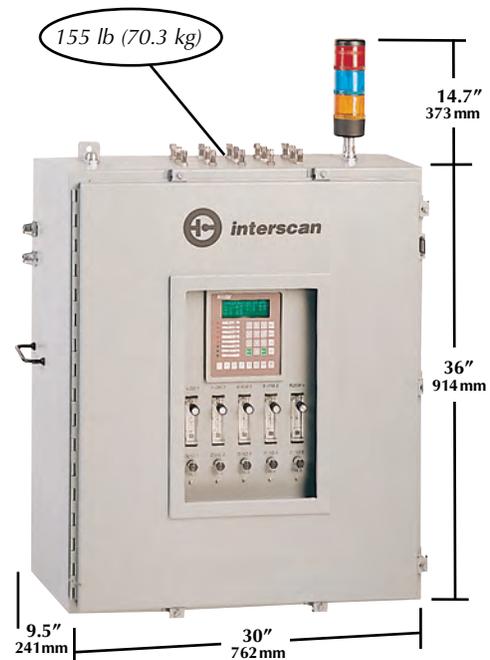
- Dedicated sensor, sample pump, and stainless steel rotameter for each point
- All control and display functions at easy-to-use operator interface
- User adjustable low and high alarm set points, activating dedicated relays for each monitoring channel
- Stackable tower lights for low, high, and fault alarms, and piezoelectric horn for high alarm, common to all channels
- 4-20 mA analog output, for each channel

POPULAR OPTIONS

- Alternative packaging, including Type X or Type Z purged enclosures and RFI resistant enclosures
- Enclosure heating and cooling
- Special ranges

ORDERING INFORMATION

Generally, a quotation is issued, after a thorough review of your application.



5-Point Continuous Monitoring System

COMMON SPECIFICATIONS

Specification parameters are defined per ISA's S5.1 Committee and SAMA's RC-20-11-1964 standard. Performance of a particular model may vary from these specifications, and may also be influenced by environmental factors. For further data, please consult the factory. The zero and span drift specifications assume that the analyzer is equilibrated, and is at constant temperature, with a properly maintained sensor. Drift is defined as an undesired change in output over a period of time, which change is unrelated to input, operating conditions or load.

Accuracy: ±2.0% of reading, ±1 least significant digit
(Limited to accuracy of calibration standard)

Repeatability: ±0.5% of full scale

Minimum Detectability: 1.0% of full scale

Linearity: ±1.0% of full scale

Zero Drift: ±1.0% of full scale (24 hours)

Span Drift: Less than ±2.0% of full scale (24 hours)

Calibration: Against standard gas mixture, or via INTERSCAN's Electronic Calibration Service

Lag Time: Less than 1 second

Rise Time: 30 seconds to 90% of final value, 8 seconds to 50% of final value

Fall Time: 30 seconds to 10% of original value

INTERFERING GAS DATA - The chart below details the approximate concentration in parts per million of interfering gas required to cause a 1 ppm deflection on any model of formaldehyde analyzer. In many cases, specificity can be improved.

CH ₃ CHO	17	glutaraldehyde	200	isopropanol	1000	NH ₃	300
acetone	>10 ³	H ₂	>10 ⁴	CH ₃ OH	625	NO	500
Cl ₂	7	H ₂ S	3 §	methyl ethyl ketone	>10 ³	NO ₂	35
CO	5600	HCl	35	n-butanol	3200	phenol	>10 ³
ethanol	127	SO ₂	3 §	n-propanol	2000	propionaldehyde	160

§ = scrubber available = negative interference

DATA LOGGING AND ARCHIVING PRODUCTS

(Highly recommended, to document your formaldehyde monitoring results)

NOMAD DATA LOGGER

The Nomad is a self-contained data logger that connects to any instrument with an analog output, and samples and stores its output at a rate adjustable from once per second to once every 10 hours. The unit is supplied with all necessary cables and excellent software, that produces a variety of reports and allows export of the data files.

ARC-MAX® DATA ACQUISITION, ARCHIVING, AND REPORTING PACKAGE

Arc-Max® continuously stores input from all kinds of workplace sensors, and produces reports of employee exposure to toxics, automatically. Built around a powerful SCADA (Supervisory Control and Data Acquisition) engine, alarm logs, live and historic trending, and specialized reports--Shift Reports--giving key occupational health information, are available at the click of a mouse. Up to four independent shifts per day can be assigned, to better analyze exposure data. The shifts can overlap. The Shift Reports can be programmed to print automatically at the end of each shift, or on-demand at any time. Historical Shift Reports are readily available, as well.

YOUR NEXT STEP

In your evaluation of a supplier for your formaldehyde monitoring requirements, consider the advantages of Interscan.

- We are specialists in toxic gas detection, with over 25 years of experience, and thousands of installations.
- We are virtually the only independent company left in the industry, and gas detection is our only business, so we have to do a better job.

WE LOOK FORWARD TO WORKING WITH YOU ON YOUR FORMALDEHYDE MONITORING PROJECT.



interscan corporation

P.O. Box 2496

Chatsworth, CA 91313-2496

Toll Free 1 800 458-6153 (U.S. and Canada)

Fax (818) 341-0642

Phone (818) 882-2331

Website <http://www.gasdetection.com>

e-mail info@gasdetection.com