

Hydrogen Fluoride

Process and Ambient Air Monitoring

Hydrogen Fluoride (HF) is used in a wide variety of processes in the refining, ceramic, steel, chemical, polymer, semiconductor and refrigerant manufacturing industries. To ensure final product quality and reduce waste, the HF concentration needs to be accurately monitored on a real-time basis.

Analyzing HF using on-line, automated wet chemical techniques or infrared spectroscopy is difficult at best, often requiring controlled temperature environments, special optics, elaborate sample conditioning and high operator support/maintenance. Measurement accuracy can be improved by sacrificing real-time results and taking grab samples from the process back to the laboratory for analysis. There is only one analyzer that will reliably and economically provide on-line both ppm measurement accuracy and real-time monitoring of HF - the ProSentry-IMS® Analyzer.

The ProSentry-IMS Analyzer is based on field-proven IMS technology that is highly selective and sensitive. Onboard analyzer “intelligence” provides for easy, user-friendly operation — with accurate, direct ppm measurement of HF in hydrocarbon streams. And, it is unaffected by changes in temperature and humidity. The process analyzer gives you the data you need to react instantaneously to changes in the concentration level of HF to ensure maximum processing efficiency and cost-effective utilization of raw material.

The ProSentry-IMS is designed and built for long-term continuous, unattended on-line monitoring, without the need for wet chemicals or paper tape. The electronics are completely solid state and there are no moving parts or optics that require realignment. You are assured of maximum operating uptime as the monitor requires little or no routine maintenance, even under the harshest environmental or hazardous operating conditions.

The ProSentry-IMS analyzer is just one of a family of products for HF monitoring applications. For fixed point ambient air monitoring, the AirSentry-IMS® will enable you to accurately measure ppb concentration levels of HF for OSHA compliance. For gross leak detection, the Shur-Shot® is available for monitoring up to 12 locations at distances up to 65 feet from the monitor. You are assured of accurate, continuous measurement of HF stack emissions with the StackMaster-IMS®. Whatever your HF monitoring application, we have the answer.

Wall Mount Unit



19" Rack Mount Unit

FEATURES

- On-line, real-time ppb and ppm measurements
 - Patented IMS technology and application
 - Solid-state electronics and no moving parts
 - Low maintenance for maximum uptime
 - Long-term stability and reliability
 - Continuous, unattended operation in harsh or hazardous environments
 - No reagents, paper tape, or other expensive consumables
 - Complete technical and service support
- Plus we guarantee that our Hydrogen Fluoride Analyzer will meet your specified application requirements.

Without measurement, there is no control.



Molecular Analytics
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Specifications

Hydrogen Fluoride

Description:	Process analyzer to continuously measure trace levels of HF in a variety of process streams such as light hydrocarbons and all chlorofluorocarbons. CE certified.
Principle of operation:	Ion Mobility Spectrometry. Requires no wet chemicals or consumables.
Standard range:	0-2 ppm, 1-10 ppm, 0-100 ppm (depending on application); other ranges available on request.
Resolution:	0.1% of full scale
Lower limits of detection:	1ppb or 0.1% of full scale

Analyzer Physical Specification

Dimensions (h, w, d):	Indoor/outdoor wall-mounted analyzer. NEMA 4X enclosure 20 x 20 x 9 in. (51 x 51 x 23 cm.) 19" Rack Mount Unit 17 x 8 x 20 in. (43 x 20 x 5 cm.)
Weight:	Approx. 50 lbs. (23 kg)

Operational Specification

Operating ambient temp:	-40°F - 122°F (-40°C - 50°C)
Outputs:	Digital display, 4-20 mA loop, 2 alarm relay, 1 fault relay, RS-232 w/MODBUS® protocol
Sample requirements:	Sample must be in the vapor phase delivered to the analyzer at atmospheric pressure at a minimum of 100 cc/min.
Maintenance schedule:	10 minute operation, every six (6) months

Utility Requirements

Power - voltage supply:	115 VAC, 50/60 Hz (230 VAC, 50/60 HZ)
Current consumption (peak):	5 amps (2.7 amps)
Instrument air:	-40°F (-40°C) dewpoint, oil free, 5 liters/minute (air clean-up unit is available). <i>Note:</i> Some applications require nitrogen.

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Particle Measuring Systems reserves the right to change specifications without notice.

AUTHORIZED REPRESENTATIVE



Registration applies to the Boulder, Colorado facility

ISO 9001:2000
FM 40574



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