



**CM4-P Pyrolyzing gas monitor for continuous detection of Nitrogen Trifluoride**

# CM4-P Pyrolyzing Gas Monitor for $\text{NF}_3$



## Feature

- Continuous Monitoring on 4 Points
- Chemcassette Technology
- Integral Freon<sup>®</sup> Scrubbers
- Analog and Serial Outputs
- 300' (90m) Sampling Distance
- Table, Wall or Rack Mount Versions
- High Temperature Pyrolysis
- Coiled Quartz Pyrolyzer Design
- Integral Audio and Visual Alarms

## Benefit

- Total surveillance all the time
- Reliable, interference free method provides physical evidence of events
- Scrubs commonly used Freons before pyrolysis ensuring only  $\text{NF}_3$  is detected
- Permits easy installation into virtually all annunciation and shutdown systems
- Monitors can be positioned conveniently with minimal fab intrusion
- Flexible to meet any requirement
- Ensures complete conversion of  $\text{NF}_3$
- Heating element does not contact sample, ensuring complete pyrolysis
- Easily identifies all events

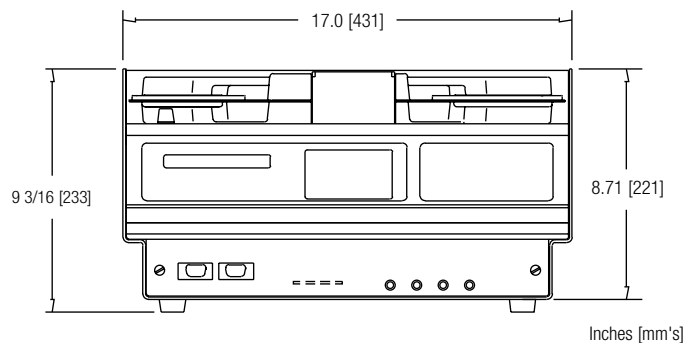
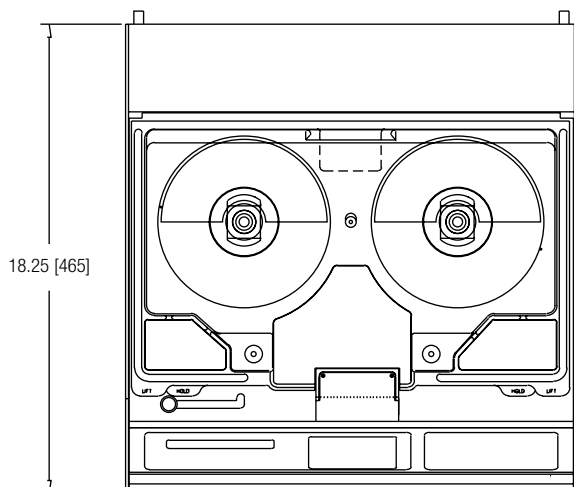
**CM4-P provides reliable, continuous detection of Nitrogen Trifluoride. The unit features an integral pyrolyzer that converts  $\text{NF}_3$  to Hydrogen Fluoride for detection on the mineral acids Chemcassette<sup>®</sup>. The unit features a variety of outputs. Chemcassette sensors provide 4 weeks or more of uninterrupted surveillance.**



# General Specification



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<b>Detection Technique</b>	Chemcassette® Technology via pyrolysis to HF						
<b>Gases Available</b>	Nitrogen Trifluoride						
<b>CM4-P Detectable Gases</b>	<table border="0"> <tr> <td></td> <td><b>Range</b></td> </tr> <tr> <td>Nitrogen Trifluoride (NF<sub>3</sub>)</td> <td>0-50 ppm</td> </tr> <tr> <td>LDL</td> <td>1.0 ppm</td> </tr> </table>		<b>Range</b>	Nitrogen Trifluoride (NF <sub>3</sub> )	0-50 ppm	LDL	1.0 ppm
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Nitrogen Trifluoride (NF <sub>3</sub> )	0-50 ppm						
LDL	1.0 ppm						
<b>Monitoring Points</b>	Four						
<b>Sampling Distance</b>	300 Ft (90m) 1/4" OD X 3/16" ID FEP grade Teflon® tubing only (Consult your local HA agent for longer distance requirements.)						
<b>Exhaust Tubing</b>	50 Ft 1/4" OD x 3/16" ID Polypropylene Longer distances possible with larger ID						
<b>Display</b>	20 character vacuum fluorescent status, alarm, and power LED's						
<b>Keypad</b>	16 key, sealed membrane style						
<b>Local Alarm Indication</b>	Audible and visual (LED) per point						
<b>Relay Outputs</b>	Relay contacts (500m A minimum) 2 Amps @120VAC, form C contacts. Programmable low and high levels, maintenance, watch dog, energized or de-energized, latching or nonlatching						
<b>Current Loop Outputs (per Point)</b>	4-20mA isolated, 4 Individual (optional) 4-20mA non-isolated, 4 individual (optional) 2-4mA range available (for fault indications)						
<b>Serial Output</b>	RS232 serial printer output (optional)						
<b>Serial Communications</b>	RS232, RS422, and RS485 (all optional)						
<b>Additional Protocols supported</b>	LonWorks®, (LonMark® compliant) Profibus (via 4-20mA to L2 bus)						
<b>GUIs Supported</b>	Intellution FIX-32, Wonderware, InTouch						
<b>Operating Temperature</b>	50° to 104° F (10° to 40°C)						
<b>Weight</b>	55 lbs (25 Kg)						
<b>Initial Warmup</b>	< 10 minutes						
<b>Operating Voltages</b>	100/110 VAC @ 50/60 Hz 230 VAC @ 50/60 Hz						
<b>Power Consumption</b>	5 Amps @ 110 volts (approximately) 4 Amps @ 230 volts (approximately)						



Inches [mm's]

# Honeywell Analytics Lines of Business



## Commercial

Gas detection from standalone units to fully engineered, multi-point systems, all offering cost-effective regulatory compliance

- » Applications: parking structures, chillers, mechanical rooms, office towers, commercial buildings, shopping centers, swimming pools, golf courses, schools and universities, laboratories

## Industrial

Renowned Sieger and Manning gas detection systems with advanced electrochemical, infrared and open path sensing technologies

- » Applications: oil and gas, cold storage, water/wastewater treatment, chemicals, engine rooms, plastics and fibers, agriculture, printing and light industrial

## Portables

Single or multi-gas Lumidor and other premium detectors with compact, lightweight designs ranging from simple alarm only units to advanced, fully configurable and serviceable instruments

- » Applications: underground utility and electricity ducts, boiler rooms, post-fire sites, sewers, industrial plants, industrial hygiene, first responder teams, remote fleets



## Find out more

[www.honeywellanalytics.com](http://www.honeywellanalytics.com)

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### Technical Services

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## High Tech/Government

A complete portfolio of gas and chemical detection instrumentation including infrared spectroscopy (MST) with no cross interference, to Chemcassette paper-based solutions (MDA Scientific) offering detection down to parts per billion

- » Applications: semiconductor manufacturing and nanotechnology, aerospace propulsion and safety, specialty chemicals industry, research laboratories, emergency response

### Europe, Middle East, Africa

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## Technical Services

24/7 global network includes post-sales service and Systems Integration teams

- » Emergency call out, service contracts, on/off-site repair, training and commissioning
- » Complete range of spares, consumables and accessories

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