



**CM4 toxic gas monitor, interference free and low maintenance of ownership solutions for the semiconductor, pharmaceutical and chemical industries**

# CM4 Toxic Gas Monitor



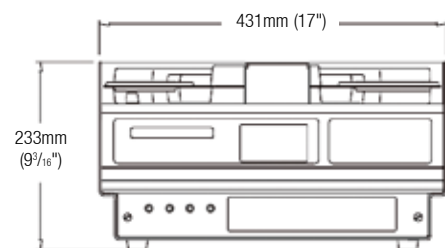
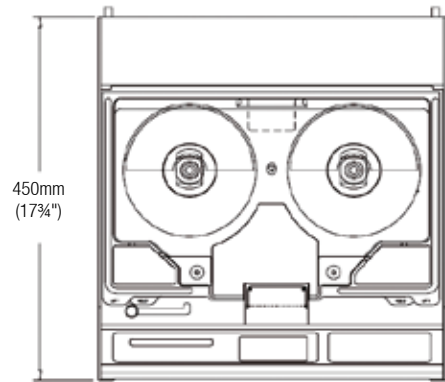
## Features

- **Continuous Monitoring on 4 Points**  
Total surveillance all the time
- **Chemcassette® Technology**  
Reliable, interference-free method provides physical evidence of events
- **Analog and Serial Outputs**  
Permits easy installation into virtually all annunciation and shutdown systems
- **300' (90m) Sampling Distance**  
Monitors can be positioned conveniently with minimal fab intrusion
- **Table, Wall or Rack Mount Versions**  
Flexible to meet any requirement
- **LonWorks® Interface Available**  
Permits peer to peer communication and low cost of installation
- **Serial Printer Option**  
Permits archiving of all important events and system configurations
- **Integral Audio and Visual Alarms**  
Easily identifies all events

**This CM4 unit represents the latest in interference free, low maintenance, low cost of ownership solutions for the semiconductor, pharmaceutical and chemical industries.**



This CM4 unit represents the latest in interference free, low maintenance, low cost of ownership solutions for the semiconductor, pharmaceutical and chemical industries. Its low profile 1/4" tubing minimises intrusion into process areas, ducts, gas cabinets, etc. A variety of signal outputs are available making CM4 a truly flexible product. It easily installs into most building alarm systems. An optional rack mount enclosure and printer fill out the product range, providing convenient housing and documentation capability. The unit is capable of detecting over 25 gases-some within the same family (hydrides, mineral acids, etc.)



# Technical Specification



Substance	Response Time to TLV	Range
<b>Amines</b>		
Ammonia II (NH <sub>3</sub> )	10	3-75ppm
Dimethyl Amine (DMA)	30	0.3-30ppm
Tetrakis Dimethyl Amino		
Titanium (TDMAT)	30	0.1-7.5ppm
Triethylamine (TEA)	10	0.3-35ppm
<b>Chlorine III (Cl<sub>2</sub>)</b>	20	0.05-5.0ppm
<b>Chlorine II (Cl<sub>2</sub>) Low Level</b>	20 @ 200ppb	7-2000ppb
<b>Chlorine Dioxide (ClO<sub>2</sub>)</b>	50	30-1000ppb
<b>Fluorine (F<sub>2</sub>)</b>	30	0.06-10ppm
<b>Hydrazines</b>		
Dimethyl Hydrazine (UDMH)	240	3-5000ppb
Hydrazine (N <sub>2</sub> H <sub>4</sub> )	60	0.7-1000ppb
<b>Hydrides</b>		
Arsine (AsH <sub>3</sub> )	10	5-500ppb
Arsine Dry (AsH <sub>3</sub> )	25	5-500ppb
Arsine (AsH <sub>3</sub> ) Low Level	11	0.3-25ppb
Diborane (B <sub>2</sub> H <sub>6</sub> )	30	15-1000ppb
Germane (GeH <sub>4</sub> )	240	100-2000ppb
Hydrogen Selenide (H <sub>2</sub> Se)	35	6-500ppb
Phosphine (PH <sub>3</sub> )	10	5-3000ppb
Silane (SiH <sub>4</sub> )	25	0.5-50ppm
Tertiary Butyl Arsine (TBA)	30	12-500ppb
<b>Hydrogen Cyanide (HCN)</b>	15	0.5-50ppm
<b>Hydrogen Sulphide (H<sub>2</sub>S)</b>	10	0.5-100ppm
<b>Hydrogen Sulphide (H<sub>2</sub>S) Low Level</b>	30 @ 500ppb	8-2000ppb
<b>Mineral Acids</b>		
Boron Trifluoride (BF <sub>3</sub> ) Low Level	80	100-1500ppb
Hydrogen Bromide (HBr)	20	0.3-30ppm
Hydrogen Bromide (HBr) Low Level	60 @500ppb	50-2000ppb
Hydrogen Chloride (HCl)	15	0.5-15ppm
Hydrogen Chloride (HCl) Low Level	20 @ 500ppb	80-8000ppb
Hydrogen Fluoride (HF)	25	0.3-30ppm
Hydrogen Iodide (HI)	20	0.1-25ppm
<b>Nitrogen Dioxide (NO<sub>2</sub>)</b>	15	0.3-30ppm
<b>Phosgene (COCl<sub>2</sub>)</b>	15	7-1000ppb

Nitrogen Trifluoride (NF<sub>3</sub>) available, see separate datasheet on CM4-P

## Technical Data Specifications

<b>Detection Technique</b>	Chemcassette Technology
<b>Gases Available</b>	See chart above
<b>Monitoring Points</b>	Four
<b>Sampling Distance</b>	90m (300ft) ¼" OD x 3/16" ID FEP grade Teflon® tubing only. (Consult your local HA agent for longer distance requirements.)
<b>Exhaust Tubing</b>	15m (50ft) ¼" OD x 3/16" ID Polypropylene. Longer distances possible with larger ID exhaust tubing
<b>Display</b>	20 character vacuum fluorescent status, alarm, and power LEDs
<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 (500mA minimum) 2A @ 120VAC, form C contacts. Programmable low and high levels, maintenance, watch dog, energised or de-energised, latching or nonlatching
<b>Current Loop Outputs (per Point)</b>	4-20mA isolated (optional) (2-4mA range available for fault indicators)
<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 optional) Profibus (via 4-20mA to L2 bus optional) ~ Supported Intellution, FIX 32, Wonderware, InTouch, Cimplicity
<b>Operating Temperature</b>	10C° to 40°C (50F° to 140°F)
<b>Shipping Weight</b>	24.95kg (55lbs)
<b>Operating Voltages</b>	100 / 110VAC @ 50 / 60Hz, 230VAC @ 50 / 60Hz
<b>Power Consumption</b>	≈3A @ 110V ≈2A @ 230V

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# Our Product Range



## Fixed Gas Monitoring

Honeywell Analytics offers a wide range of fixed gas detection solutions for a diverse array of industries and applications including: Commercial properties, industrial applications, semiconductor manufacturers, energy plants and petrochemical sites.

- » Detection of flammable, oxygen and toxic gases (including exotics)
- » Innovative use of 4 core sensing technologies – paper tape, electrochemical cell, catalytic bead and infrared
- » Capability to detect down to Parts Per Billion (ppb) or Percent by Volume (%v/v)
- » Cost effective regulatory compliance solutions

## Portable Gas Monitoring

When it comes to personal protection from gas hazards, Honeywell Analytics has a wide range of reliable solutions ideally suited for use in confined or enclosed spaces.

These include:

- » Detection of flammable, oxygen and toxic gases
- » Single gas personal monitors – worn by the individual
- » Multi-gas portable gas monitors – used for confined space entry and regulatory compliance
- » Multi-gas transportable monitors – used for temporary protection of area during site construction and maintenance activities

## Technical Services

At Honeywell Analytics, we believe in the value of great service and customer care. Our key commitment is providing complete and total customer satisfaction. Here are just a few of the services we can offer:

- » Full technical support
- » Expert team on hand to answer questions and queries
- » Fully equipped workshops to ensure quick turnaround on repairs
- » Comprehensive service engineer network
- » Training on product use and maintenance
- » Mobile calibration service
- » Customised programmes of preventative/corrective maintenance
- » Extended warranties on products

### Find out more

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