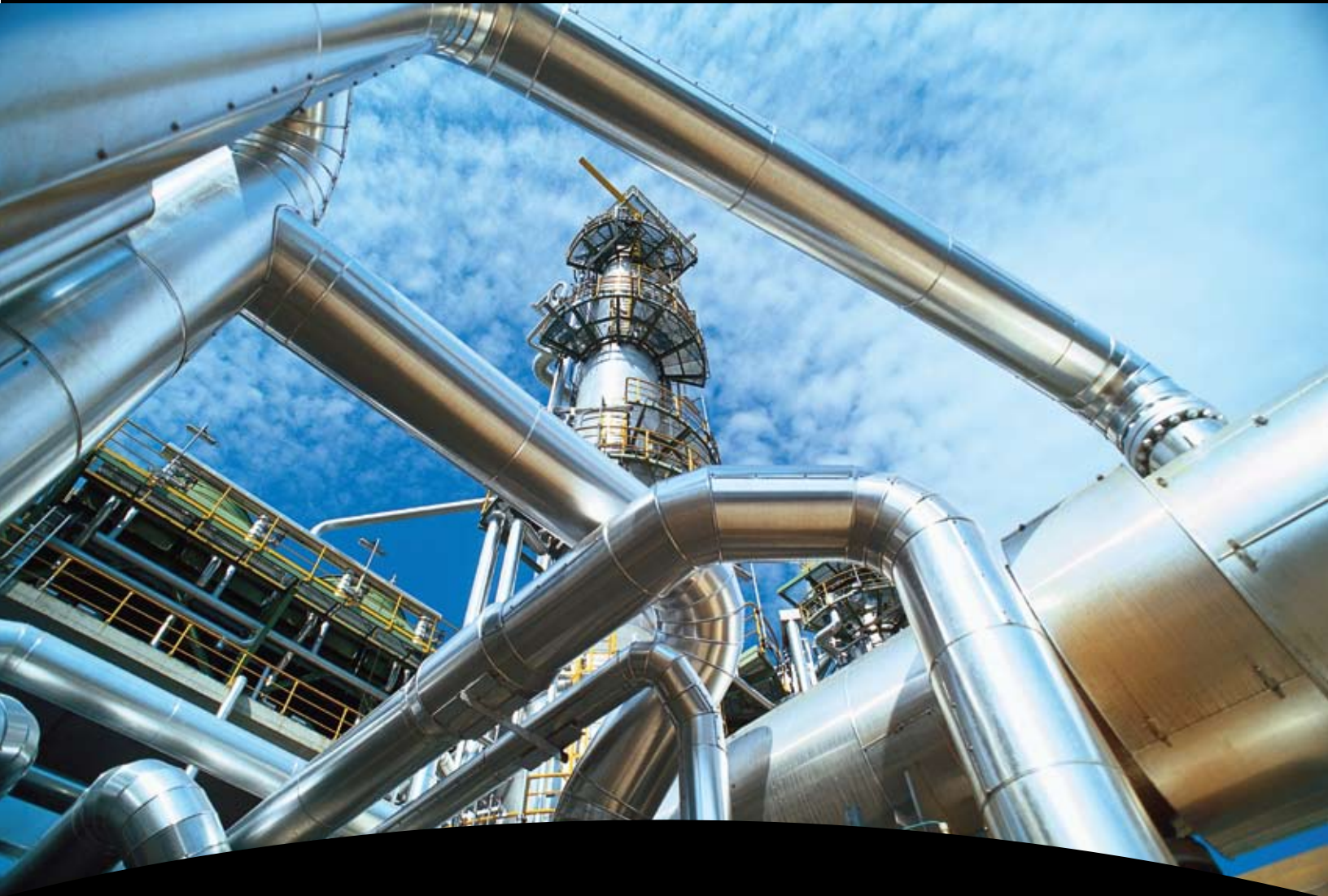


# Gas Detection for the Petrochemical Industry

**Honeywell**



**Improve Safety, Reliability, Productivity  
and Yield through a Standalone or Networked  
Gas/Flame Monitoring System**

# The Widest Range of Gas Monitoring Solutions to Meet Any Challenge, Large or Small



**In the petrochemical industry, flammable and toxic gas leaks are a problem that can undermine safety and business continuity. To find and fix leaks quickly, you need a trusted source of protection on your side: Honeywell Analytics.**

As manufacturer of the industry's most complete range of gas monitoring instrumentation, Honeywell Analytics offers a cost-effective, reliable solution for detecting all toxic or flammable gases at your site.

Honeywell Analytics gas detection solutions do more than ensure personal safety. We protect process equipment and other plant assets from contamination, corrosion and other harmful effects.

Through Honeywell Analytics your company can increase its productive yield, maintain fixed operating costs and improve equipment reliability.

Put Honeywell Analytics to work for you now.

## Toxic/Flammable Gas Detection with Display



### XNX™ Universal Transmitter

- Works with Honeywell's full range of gas sensor technologies (Electrochemical, Infrared, Catalytic Bead)
- Expanded communications platform with standard HART® plus optional MODBUS, FOUNDATION Fieldbus™ (pending) or three relays (two alarm, one fault)
- Single interface provides complete diagnostic, alarm and gas concentration values
- Supports eight languages (English, Spanish, German, Italian, Portuguese, French, Russian, Chinese)
- Easy to install, operate and maintain
- Failsafe operation, fast response and long operating life
- Globally certified for hazardous areas
- UL, CSA (cUL), ATEX certifications



### Sensepoint XCD

- User friendly and intuitive tri-color backlit display with digits, bar graph and icons
- Fully configurable via magnetic switches
- Optional remote sensor mounting
- Selectable sink or source 4-20mA output
- Auto-inhibit during maintenance
- MODBUS multi drop option offers cabling savings, remote diagnostics/configuration
- Common transmitter platform
- Minimal training required
- Reduced spares
- Non-intrusive, one-man operation
- Plug-in sensor replacement



### Series 3000 MkII

- 2 wire 4-20mA output
- Surecell™ electrochemical sensors for hot & humid environments
- Explosion proof transmitter
- Reduced routine maintenance costs
- Long life sensing elements
- Permits 'hot swap' of replacement sensors reducing down time
- Onboard fault diagnostic software & display
- Patented Reflex sensing element verification diagnostics
- Easy menu / icon driven calibration
- UL, CSA (cUL), ATEX certifications

## Flame Detection



### FD Series Flame Detectors

- Available in three versions: UV, UV/IR and Triple IR
- Rugged, explosion-proof housing
- Standalone operation or networkable
- 120° field of view
- Two radiation wavelengths necessary for alarm — minimize false alarm events from lightning, welding, sunlight and radiation
- Manual and automatic testing of optical surfaces—monitors internal electronics
- Operating range of -50°C to +75°C of ambient temperature
- Fully adjustable swivel mount
- Built-in testing and diagnostics
- User-defined sensitivity and time delay settings
- 3 year electronics and 2 year sensor warranty





## Hazardous Gases by Industry

INDUSTRY	PROCESS CHEMICALS & FEEDSTOCKS USED
<b>Plastics, Fibers</b>	<b>Aromatics:</b> Benzene, Toluene, Xylenes, Styrene <b>Inorganic Chemicals:</b> Ammonia, Nitrogen, Chlorine, Sulfuric Acid, Sodium Hydroxide <b>Alcohols:</b> Methanol, Ethanol <b>Olefins:</b> Ethylene, Propylene, Polyolefins, Polymers
<b>Pharmaceutical</b>	<b>Aromatics:</b> Benzene, Toluene, Xylenes, Styrene
<b>Paint, Solvents, Inks, Coatings, Adhesives</b>	<b>Inorganic Chemicals:</b> Ammonia, Nitrogen, Chlorine, Sulfuric Acid, Sodium Hydroxide <b>Alcohols:</b> Methanol, Ethanol <b>Aromatics:</b> Benzene, Toluene, Xylenes, Styrene
<b>Agricultural</b>	<b>Inorganic Chemicals:</b> Ammonia, Nitrogen, Chlorine, Sulfuric Acid, Sodium Hydroxide
<b>Industrial Gases, Specialty Gases</b>	<b>Inorganic Chemicals:</b> Ammonia, Nitrogen, Chlorine, Sulfuric Acid, Sodium Hydroxide

## Leak Sources/Solutions Chart

APPLICATION	LEAK SOURCE	HONEYWELL ANALYTICS SOLUTION
<b>Distillation Columns</b>	Pipelines, reactors, valves	<b>Toxics:</b> XNX, XCD, S3000 <b>Flammables:</b> Optima, Excel <b>Flame:</b> UV, UV/IR, Triple IR
<b>Tank Farms</b>	Tanks, pipelines, valves	<b>Toxics:</b> XNX, XCD, S3000 <b>Flammables:</b> Optima, Excel <b>Flame:</b> UV, UV/IR, Triple IR
<b>Loading Stations</b>	Loading platforms, filling stations	<b>Toxics:</b> XNX, XCD, S3000 <b>Flammables:</b> Optima, Excel <b>Flame:</b> UV, UV/IR, Triple IR
<b>Processing Plants</b>	Tanks, pipelines, mixing and batching equipment, valves, compressors	<b>Toxics:</b> XNX, XCD, S3000 <b>Flammables:</b> Optima, Excel <b>Flame:</b> UV, UV/IR, Triple IR
<b>Specialty Chemical Batch</b>	Processing, mixing, drying drainage, tanks, pipelines	<b>Toxics:</b> XNX, XCD, S3000, CM4 and SPM for low-level detection of hydrogen fluoride, hydrogen sulfide, phosgene and isocyanates <b>Flammables:</b> Optima, Excel <b>Flame:</b> UV, UV/IR, Triple IR

## Infrared (Combustible) Solutions



### Searchline Excel

- Open path IR detector provides fast speed of response, early warning
- High sensitivity allows low alarm set points
- Alignment free design makes installation simple
- Duct flex and vibration tolerance keeps the system online
- Integral functional gas test facility allows for simple system check
- Contamination resistant optics reduce the need for unscheduled maintenance
- Not affected by interference from water vapor
- Immune to catalytic poisons
- Works in inert atmospheres
- Heated optics
- True alignment system
- Gassing cell
- Hand-held interrogator

### Optima Plus

- Point IR detector provides fast, accurate response to 100% LEL Methane, Ethane, Propane, Butane, Ethylene/Ethane
- Dual channel, fully compensated infrared optical configuration
- Heated stand offs and optics
- Failsafe operation
- Immune to catalytic poisons
- False alarm rejection with  $\sqrt{2}$  Software™
- Works in inert atmospheres
- Advanced integral fault diagnostics
- Optional Modbus RS485 multidrop output
- Calibrates for over 100+ gases & vapors

## Chemcassette® (Toxic) Instrumentation



### CM4

- Continuous Monitoring on 4 Points with flexible installations — table, rack or wall mount
- Chemcassette® technology provides physical evidence of leak
- Analog and serial outputs permit easy installation into virtually all annunciation and shutdown systems
- 300 in. (90m) tubing/sampling distance enables convenient positioning of unit with minimal intrusion into process areas
- LonWorks® Interface (optional) 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 identify all events

### SPM

- Single Point Monitor offers lightweight (40 lbs.), mobile/transportable ease
- Chemcassette® technology provides physical evidence of a gas leak
- Toxic gas sensitivity up to ppb levels
- Minimum maintenance with no calibration required
- NEMA 4X enclosure customizable for indoor/outdoor environments
- More than 50 gas types available
- AC or optional DC operation
- Built-in sample pump, alarm and digital/analog outputs

# 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

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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

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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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