Reliably safeguard your most valuable resources.

Flame and Gas Safety Solutions

Integrated technologies to help keep people and assets safe.

EMERSON

Dependable safety solutions from Emerson.

No matter how extreme or demanding the conditions, your people and facilities come first. That is why Emerson is dedicated to offering the most comprehensive and advanced flame and gas detection technologies available. Our flame and gas detection systems are designed to excel under the toughest conditions to help you streamline day-to-day operations and, more importantly, keep your people safe.

In the United States, hydrogen sulfide is one of the leading causes of workplace gas inhalation deaths - at 46 worker deaths from 2011 to 2017.
- Bureaus of Labor Statistics (BLS)

"Fires and explosions were the fourth most common cause for severe injuries, after falls and being struck by objects [in the upstream oil and gas industry]."*
- E&E News

Explosions caused 14.5 percent of fatalities that occurred in the oil and gas extraction industry between 2014–2019.
- The Centers for Disease Control (CDC)

"Leak or break was a factor contributing to ignition for 28 percent of non-home structure fires starting with flammable gas."**
- National Fire Protection Association (NFPA)

** "Oil and Gas Industry Leads in Severe Injuries" E&E News*
*** "Fires Starting With Flammable Gas Fact Sheet" National Fire Protection Association (NFPA)*

Emerson’s full offering of industrial flame and gas detection products provides best-in-class specifications with low overall life cycle costs.

Gas detection solutions for safer working conditions

Toxic and combustible gas leaks create hazardous situations that can impact employee health and safety, and potentially lead to dangerous fires and explosions. Emerson offers wired and wireless point gas detection, open path gas detection and ultrasonic gas leak detection solutions to support an array of industries. These safety solutions are designed to continuously monitor and detect gas leaks before they lead to harmful conditions, helping to keep personnel and sites safer.

What's your challenge?

Some toxic gases are easily identified by smell, while others are not. By the time a person encounters a toxic gas they may have already been exposed at a life-threatening level. And if a combustible gas leak reaches an ignition source, the consequences can be devastating.

What's your opportunity?

Fast and reliable gas leak detection is critical to helping ensure worker safety. Emerson offers a variety of toxic and combustible gas leak detectors to help prevent dangerous situations.

Rosemount™ 925FGD Fixed Gas Detector

Using infrared (IR) technology, the Rosemount 925FGD Fixed Gas Detector provides early and continuous hydrocarbon gas detection within your processes, helping to keep workers and assets safe. This gas detector offers high performance detection with exceptional accuracy, response time, operating temperature ranges and zero drift specifications. Certified to SIL2, ATEX, Canada, US and IECEx safety standards.

Features:

- Simple, intuitive touch screen with no magnets
- Transmitter recognizes newly fitted sensor, automatically uploading its specific configuration profile
- Works with Rosemount 625ND Gas Sensor

Emerson.com/Rosemount925FGD

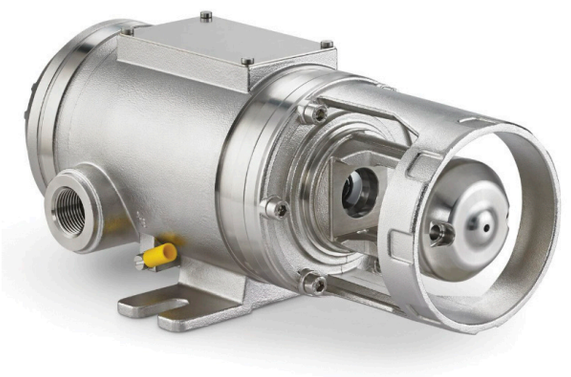
Rosemount 625ND Gas Sensor

The Rosemount 625ND Combustible Gas Sensor uses IR technology to provide early gas leak detection. The combustible gas sensor is approved to the latest hazardous area and performance standards for worldwide use.

Features:

- Sensor is pre-calibrated and can be periodically calibrated
- Fast response times
- Sensor features a replaceable IP filter
- Long-life sensor

Rosemount™ 625IR Fixed Gas Detector



The Rosemount 625IR Fixed Gas Detector is factory-calibrated for life, reducing maintenance complexity. The gas detector uses optical absorption detection technology to provide ultra-fast response times to detect hydrocarbon gases before they can create dangerous situations. Device approvals include: SIL2, SIL3, ATEX, US and IECEx safety standards.

The Rosemount 625IR Fixed Gas Detector is available with a wide range of accessories to help protect the detector from harsh environmental conditions, offer installation flexibility and more. See opposite page for details.

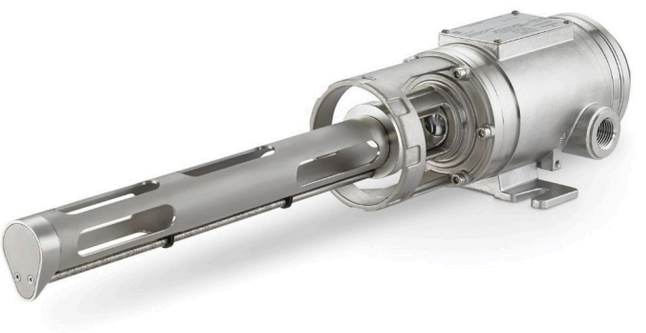
Features:

- Operates in ambient temperatures from -40 to +167 °F (-40 to +75 °C)
- Best-in-class performance specifications for hydrocarbon gases
- Heated optics to disperse any moisture from optical surfaces
- Factory-calibrated for propane or methane
- Multi-colored status indicator light at front of detector
- Ultra-fast response times
- Long-life sensor

Emerson.com/Rosemount625IR

Precise measurement from inside ducts

Accurate and reliable measurement within ducts is a critical safety need. A duct version of the Rosemount 625IR Fixed Gas Detector is available in two lengths – 15 cm (5.9 in) and 35 cm (13.8 in) – giving you even more confidence.



Accessories to protect from harsh environmental conditions

Environmental Shield

The environmental shield makes the detector more resistant to water and dirt building up on optical surfaces.

Mosquito Net

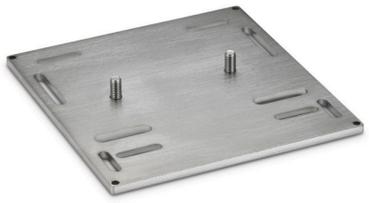
The mosquito net accessory prevents insects from blocking the detector's optics.

Sunshade

The sunshade helps protect the detector from exposure to direct sunlight, which can excessively heat the detector. The shade can also be used to keep snow, sand or other substances from accumulating on the detector.

Acccessories to provide installation flexibility

Adaptor Plate



An adaptor plate provides flexibility when installing the detector in place of other manufacturers' detectors without the need for new mechanical fixings.

Pole Mount Kit

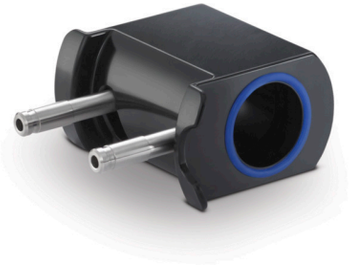
This kit helps ensure the detector is securely attached to a pole.

Duct Flanges

Two sizes of flanges help ensure the duct version of the detector is securely placed within a duct.

Accessories for function testing

Gas Aspirator Kit



The gas aspirator kit means the Rosemount 625IR Fixed Gas Detector can be used for extractive gas detection applications.

Gas Test Kit

The gas test kit can be used to quickly verify the functionality of the detector without having to remove the environment shield.

Remote Gas Test Box

The remote gas test kit is used to function test detectors in hard to reach locations.

Rosemount™ 928 Wireless Gas Monitor

The Rosemount 928 Wireless Gas Monitor continuously monitors for the presence of toxic gases in remote, difficult-to-reach locations. This wireless gas monitor enhances worker safety through early gas leak detection and eliminates the need for expensive wiring to remote locations. Device approvals include Intrinsically Safe, CSA Division 1, and ATEX/IECEx Zone 0.

Features:

- Common transmitter design
- Simple *Wireless*HART® network integration
- Extended battery life
- Wide operating temperature range
- Intuitive local indicator
- Tool-less battery and sensor replacement
- Hot-swappable gas sensor
- Works with Rosemount 628 Universal Gas Sensor

Emerson.com/Rosemount928

What's your challenge?

Conventional wired gas detectors can be expensive to implement in remote locations because of high costs of installing wiring for power and communication.

What's your opportunity?

You can eliminate expensive wiring by installing a wireless gas monitor instead of a traditional wired fixed point gas detector. This could save an estimated 60 percent in initial equipment installation cost and 90 percent in upfront installation labor cost.

Rosemount 628 Universal Gas Sensor

The Rosemount 628 Universal Gas Sensor easily connects to the Rosemount 928 Wireless Gas Monitor. Gas sensor types are hydrogen sulfide (H_2S), carbon monoxide (CO), and oxygen (O_2).

Features:

- Tool-less hot-swappable smart sensor
- Lab calibration reduces labor costs
- Suitable for use in harsh environments
- Quick connect design

Emerson.com/Rosemount628

Wired Fixed Point Gas Detectors

Universal Transmitters

Millennium II Single Channel Gas Detector

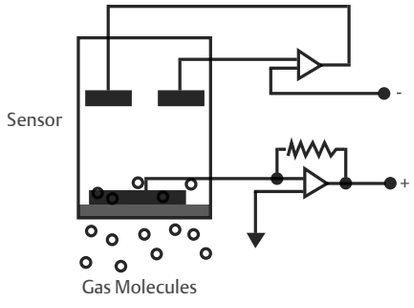
This single channel universal transmitter contains an easy to read OLED display. It is also HART® 7 capable with a full suite of diagnostics and intuitive menu system.

Millennium II Dual Channel Gas Detector

With dual channel measurements, a single universal transmitter can measure two different types of gases. This reduces upfront costs since only one transmitter device is installed and commissioned.

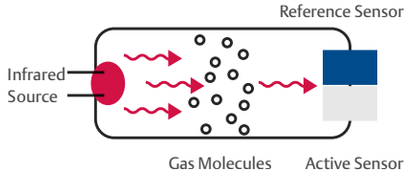
Universal Sensors

Millennium II ST3 XChem Toxic Gas Sensor



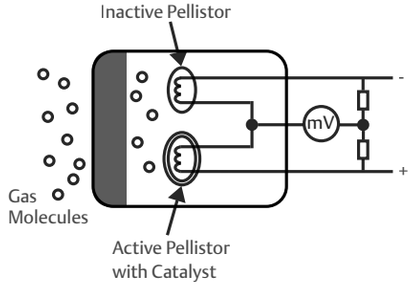
This dependable electrochemical sensor provides high specificity, fast response time, is easy to calibrate, and has a long life. This sensor produces more current as gas comes into contact with it.

Millennium II SC311 Infrared Combustible Gas Sensor



The SC311 uses infrared sensor technology based on Beer-Lambert law, which measures the light being absorbed by flammable gas. This sensor is designed for extreme industrial environments and can withstand long periods between calibrations.

Millennium II SC310 Catalytic Bead Combustible Gas Sensor



The SC310 provides versatile, robust, and field proven performance with the added feature of hydrogen gas detection. This catalytic bead sensor is self-compensating to environmental changes. Additionally, it is easy to install, calibrate, and operate.

Flame Detectors

Rosemount 975 Flame Detectors identify fuel and gas fires at long distances with a high immunity to false alarms. These detectors rely on direct view detection of the radiation emitted in the spectral bands to determine if a flame is real. Depending on the device, it can reliably detect hydrocarbon-based fuel and gas flames as well as hydrogen flames. All flame detector models feature heated optics, automatic built-in-test, high false alarm immunity, and real time diagnostics.

Emerson.com/FlameDetectors

What's your challenge?

Combustible material releases, if ignited, can quickly engulf a facility endangering personnel and damaging property. Many facilities contain a wide range of combustible substances with different fire properties that must be taken into account for a full protection scheme.

What's your opportunity?

Optical flame detectors detect hydrocarbon and hydrogen flames that may be present at a plant. Rosemount flame detectors are built with a high-speed response and can be configured to detect flames from a variety of fuel sources. Rosemount 975 Flame Detectors have an 80 percent decrease in response time and a 31 percent increase in area coverage compared to traditional devices.

Specifications

	Rosemount 975MR Multi-Spectrum Infrared Flame Detector	Rosemount 975UR Ultraviolet Infrared Flame Detector	Rosemount 975UF Ultra Fast Ultraviolet Infrared Flame Detector	Rosemount 975HR Multi-Spectrum Infrared Hydrogen Flame Detector
Detects Hydrocarbon Gas or Liquid Flames	●	●	●	●
Detects Hydrogen Flames			●	●
Detects Flames From Ammonia, Metal Oxides, Silane, and Other Non-Organic Fuels			●	
Unaffected by Solar Radiation	●	●	●	●
Immunity to False Alarms	●	●	●	●
5 s Response Time	●	●		●
2 s Response Time	●	●	●	●
20 ms Flash Fire Response Time			●	
50 ms Flash Fire Response Time	●	●		●
100° Horizontal / 90° Vertical Hydrocarbon Field of View	●	●	●	
80° Horizontal / 80° Vertical Field of View				●
Operating Temperature -76 °F to +185 °F (-60 °C to +85 °C)	●	●	●	●
Relative Humidity Range Up to 95% Non-Condensing	●	●	●	●
Maximum Detection Range	300 ft. (90 m)	93 ft. (28 m)	93 ft. (28 m)	300 ft. (90 m)


DO NOT OPEN WHILE ENERGIZED
ROSEMOUNT

Open Path Gas Detectors

Rosemount Open Path Gas Detectors provide continuous monitoring for combustible and toxic gases, even in harsh environments where dust, fog, rain, snow or vibration can cause a high reduction of signal. Worldwide approvals for these devices include ATEX, IECEx, FM/CSA, INMETRO, TR CU, and SIL 2 (TÜV).

Features:

- Accurate, high-speed response (T90 is < 3 seconds)
- High immunity to false alarms
- Heated optics for use in extreme environments
- Built-in data logger (records up to 100 events)
- Real time diagnostics
- Reduced cross sensitivity
- Factory calibrated gas settings

Rosemount 935 Open Path Combustible Gas Detector

- Detects hydrocarbon gases
- Utilizes infrared technology
- Long range detection up to 660 ft (200 m)

Emerson.com/Rosemount935

Rosemount 936 Open Path Toxic Gas Detector

- Detects H_2S, SO_2 or NH_3
- Meets performance standards required by ANSI / ISA 92.00.04-2014 for ammonia
- Utilizes ultraviolet technology
- Long range detection up to 200 ft (60 m)

Emerson.com/Rosemount936

What's your challenge?

Fence line monitoring with point gas detectors can be costly and highly affected by environmental conditions.

What's your opportunity?

You can decrease device costs by purchasing fewer open path detectors for a large coverage area. This provides a substantial amount of equipment savings and requires fewer devices to be maintained. It also reduces electrical wiring time and cost.

Rosemount™ Incus Ultrasonic Gas Leak Detector

The Rosemount Incus Ultrasonic Gas Leak Detector is specifically designed to detect gas leaks at the speed of sound while providing wide area coverage. The technology works by responding to the ultrasonic noise created by a pressurized gas leak. Common high-pressure applications include air cooled heat exchangers, compressor stations, generators, gas metering skids, well bay areas, and separators. This device is unaffected by inclement weather, wind, leak direction, and gas dilution. Device approvals include IECEx, ATEX, c FM us, EAC, KOSHA, INMETRO, ABS, and DNV.

Emerson.com/RosemountIncus

What's your challenge?

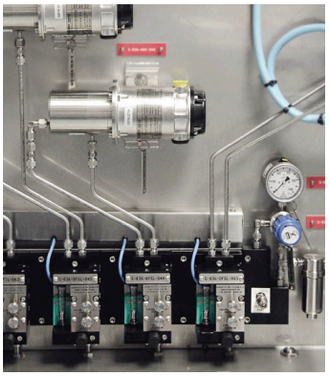
Rapid detection of leaks in high pressure processes, such as pipeline monitoring or gas compressor stations, is critical for safe operation. These applications are often exposed to environmental conditions and located in remote areas.

What's your opportunity?

Ultrasonic gas leak detectors provide rapid detection response time for pressurized gas. Because these devices monitor for ultrasonic noise, they are unaffected by wind, rain, or other conditions.

Gas & Smoke Aspirator System

The Gas & Smoke Aspirator System is a unique solution to accurately monitor gas and/or smoke ingress in areas where it is not practical to place a detector. Aspirator systems extract a sample from a duct and pass it through various detectors for measurement. External monitoring provides higher reliability than the in situ approach because the instrument sensor and transmitter are mounted outside of the duct. This reduces the cost of the measurement device and extends the life of the instrument's sensor since it is not exposed to high heat or humidity.



Features:

- Requires only instrument air to operate
- Compatible with wide range of detectors
- Simplified plumbing and compact design

Emerson.com/RosemountAspirator

What's your challenge?

Gas sensors inserted into extreme environments, such as high heat, may lose sensitivity and response speed over time. As a result, these sensors often need to be replaced before a facility can continue to operate, leading to unplanned shutdowns.

What's your opportunity?

With an aspirator or piping system, sample gas may be pulled to a remote gas detector after the sample is conditioned. As a result, the sensors operate for longer and do not require unplanned shutdowns during replacement.

Engineered to perform in the most challenging conditions every single day.

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