Confident flame detection to enhance facility safety.

Rosemount™ 975 Series Flame Detectors

Improve site safety by preventing catastrophic fire disasters with a range of sophisticated flame detector options.

EMERSON™

Effectively Recognize and Reject False Alarms with a Full Range of Flame Detection Technologies

It is important to detect fires as early as possible to minimize immediate consequences and prevent escalation. This is best accomplished by selecting and applying the proper detectors to spot flames while ignoring false alarm conditions.

Fires and explosions caused 14.3 percent of fatalities that occurred in the oil and gas extraction industry between 2003-2013.
- The Centers for Disease Control (CDC)

"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]."*
- Environment & Energy NEWS

"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)

"During a recent 15-year period, 17 large turbine building fires resulted in more than US$400 million in gross loss."***
- FM Global

** "Oil and Gas Industry Leads in Severe Injuries" Environment & Energy NEWS*
*** "Structure Fires Started by Hot Work" National Fire Protection Association (NFPA)*
**** "Turbine Generators: A Recipe for a Very Large Fire" Record Vol. 81, No. 4 FM Global*

Rosemount 975 Flame Detectors are effective in oil & gas applications, power generation facilities, chemical plants, petrochemical plants, and other extreme industrial environments.

Rosemount 975 Flame Detector

High False Alarm Immunity

- Multispectrum design
- Field of View diagnostics

Withstands Harsh Conditions

- Durable and weather resistant stainless steel body
- Heated optics eliminate condensation and icing

Performance You Can Rely On

- Flash fire response <20 ms
- Wide temperature range
- Vast coverage area

Product Overview

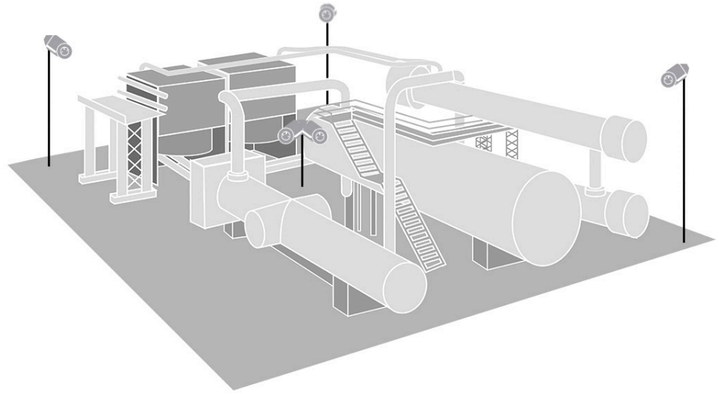
The Rosemount 975 Flame Detector Series detect fuel and gas fires at long distances with the highest immunity to false alarms. These detectors rely on line-of-sight detection of the radiation emitted in the spectral bands to determine if a flame is real.

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, false alarm immunity, and real time diagnostics.

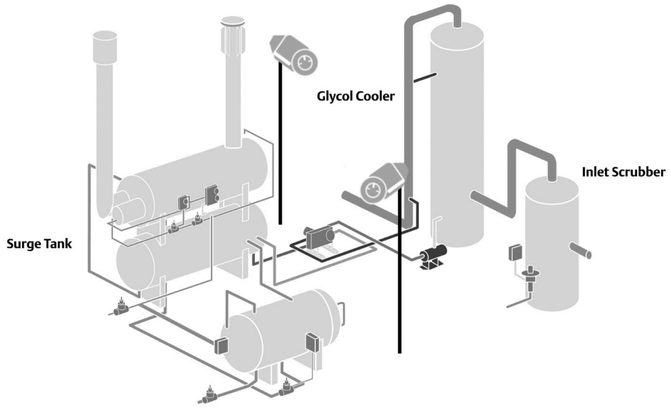
Emerson.com/FlameDetectors

Separator Process Module

Separator process modules include the separator, heat exchanger, and gas cooler. Flame detectors are installed at the corners and between the separator and heat exchanges to view most of the module.



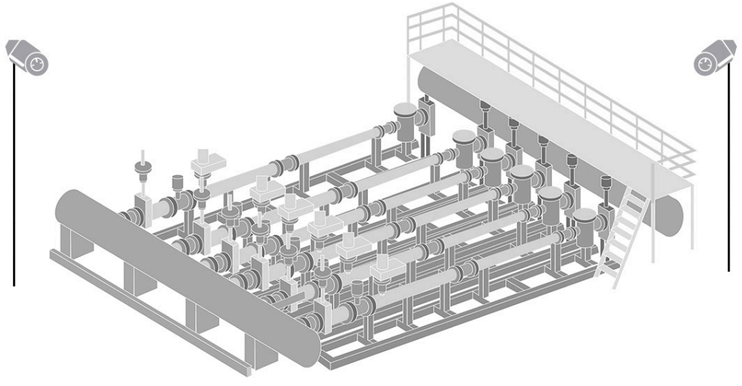
Absorption Tower and Reboiler



Flame detectors should view all modules and all major items of the plant. A common arrangement is to locate detectors at the corners of an area or module such that the detectors' field of view covers areas where fires may occur. Computer aided design tools should be used to optimize area coverage at the design stage. To increase detection effectiveness, no area should be completely dependent on a single device.

Metering Skid

Measurement of process fluids being transferred to other plants takes place in metering skids. The primary variable to be measured is mass flow rate. Main components include the structure frame and supports, pipework, process equipment like flow meters and process gas chromatographs, and local control system. For illustration, we assume the process fluid is pipeline quality dry natural gas. Depending on size and degree of obstruction, one or several flame detectors may be necessary to supply adequate area coverage for the skid. In this example, two detectors are placed on opposite corners.



Specifications

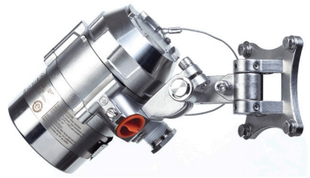
	Rosemount 975MR Multi-Spectrum Infrared Flame Detector	Rosemount 975UR Ultraviolet Infrared Flame Detector	Rosemount 975UF Ultra Fast Ultraviolet Infrared Flame Detector	Rosemount 975HR Multi-Spectrum Infrared Hydrogen Flame Detector
Detects Hydrocarbon Gas or Liquid Flames	●	●	●	●
Detects Hydrogen Flames			●	●
Detects 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)

Optional Accessories

Flame Simulator Kit

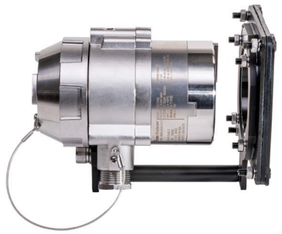
- Model No. FS
- Proof tests flame detector to verify reliable operation of detector

Tilt Mount



- Part No. 00975-9000-0001
- Allows detector to be oriented toward intended fire detection area to maximize coverage

Duct Mount



- Part No. 00975-9000-0018
- Allows detection in high temperature areas or in cases where the detector cannot be installed inside the area

Pole Mount Adapter

- Part No. 00975-9000-0007 (2 in. / 5.08 cm)
- Part No. 00975-9000-0008 (3 in. / 7.62 cm)
- U-bolt mount is available to facilitate pipe mounting for various pipe sizes

USB RS-485 Harness Kit

- Part No. 00975-9000-0011
- Enables user to connect to any PC or laptop to re-configure settings or perform diagnostics

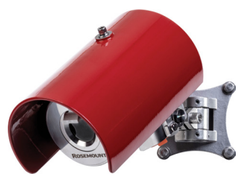
Air Shield

- Part No. 00975-9000-0019
- Allows installation in environmental conditions where detectors may be exposed to particulate matter

Plastic Weather Cover

- Part No. 00975-9000-0020
- Designed to protect the detector from rain, snow, and direct sun exposure

Stainless Steel Weather Cover



- Part No. 00975-9000-0021
- Designed to protect the detector from rain, snow, and direct sun exposure

Fast responding flame detectors are key to an effective fire protection system.

00803-0100-4974 Rev AD

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