IR400 Combustible Gas Detector
Is Performance-Verified For Ethylene Monitoring

Ideal For Olefin Production Lines and Other Petrochemical Products

LAKE FOREST, CA—May 10, 2011—The advanced IR400 Combustible Gas Detector from General Monitors sets a new industry standard as the first combustible point infrared (IR) ethylene monitor to achieve dual FM and CSA performance verification, meeting FM 6310, FM 6320 and CSA C22.2 requirements.

With a precision IR point sensing element, the Model IR400 Point IR Combustible Gas Detector reliably protects people, equipment and facilities against the hazards of ethylene gas vapors. The IR400 features a true fail-to-safe design for dependable gas detection performance. Its heated optics eliminate condensation, and a dirty optics indicator helps discriminate between true alarms and maintenance needs.

Ethylene is one of the most widely produced organic chemicals worldwide and a major building block for the production of polymers and other materials. It has thousands of applications, with diverse industrial uses ranging from plastic, textile, and detergent production to its properties as a fruit ripening agent. Ethylene is combustible over a wide concentration range and an asphyxiant, requiring high-accuracy monitoring in order to protect workers and plants.

The microprocessor-based, low maintenance IR400 continuously monitors combustible gases in the lower explosive limit (LEL) range and provides a 4 to 20 mA analog signal proportional to the 0 to 100 percent LEL concentration. The detector also monitors other conditions such as supply voltage and optical path integrity. Its electronics are contained within a rugged, explosion-proof housing so that detector information can be processed locally.

Using only 4.8 W of power and featuring advanced diagnostics to help prevent unplanned plant shutdowns, the Model IR400 Point IR Combustible Gas Detector is designed for operational efficiency.

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and system problem-detection capability. Additionally, the detector requires no routine calibration, a feature that reduces demand for field technician time.

The IR400 operates by measuring the absorption of infrared radiation passing through a volume of gas using a dual beam, single detector method. The IR detector measures the intensity of two specific wavelengths, one at an absorption wavelength and another outside of the absorption wavelength. The gas concentration is determined by comparing these two intensities.

The IR400 Detector can be configured for analog output, Modbus, and HART. The IR400 provides a two-wire RS-485 addressable communication link, which supports the Modbus protocol, and is used to monitor status and settings in order to simplify installation and maintenance. Warning and alarm and maintenance events are available via Modbus or HART, as well as diagnostics and correction action capabilities. The IR400 has CSA, FM, ATEX, and IECEx approvals, the CE Marking, and is suitable for use in SIL 3 systems.

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