

Honeywell | Industrial Fire Solutions

FIRE SAFETY AT FULL STEAM

Honeywell helps one of the world's largest petrochemical plants enhance safety levels by upgrading to a reliable, SIL-certified fire and gas system.



OVERVIEW

When it comes to fire safety, there can be no compromise. The same rule applies for one of the world's largest steam crackers that transforms crude oil and natural gas into chemical building blocks for consumer and industrial goods.

The site's C4 Olefins Complex houses one of the world's largest extraction facility of Butadiene, used in the production of rubber and plastics. With various fire alarm solutions from different suppliers spread across the site, the facility required a modern and reliable fire system that would ensure consistent communication. Project officials turned to Vallen Distribution, Honeywell's channel partner, for a fire and gas system upgrade solution.



THE NEEDS

- Consistent communication between the site's fire and gas panels
- Single point of monitoring at the control room
- Reduced maintenance and life cycle cost
- Enhanced reliability through a SIL-2 level fire and gas system
- Shorter system turnover times
- Compliance with mandatory industry standards and regulations
- Seamless transition from old to new system



THE SOLUTION

The site's previous fire alarm systems were provided by various suppliers and contractors – lacking data consistency and causing communication issues with the control room. Because of this, project officials prioritized their search for a standardized and reliable communication solution for their control system. The initial request targeted a commercial addressable fire alarm panel with capability of analog inputs for flame and gas detection. Vallen presented multiple choices, but the communication feature and integrated fire and gas solution of the HS-81 panel took the spotlight.

Management officials decided to invest in the Honeywell HS-81 Industrial Fire SIL 2 systems, networked across the entire facility to the control room using Modbus, along with 4-20mA analog inputs for further use as gas detection. At first, multiple smoke detector protocol was a consideration because of the cost saving capabilities of the HS-81 but the final decision was to install new smoke detectors.

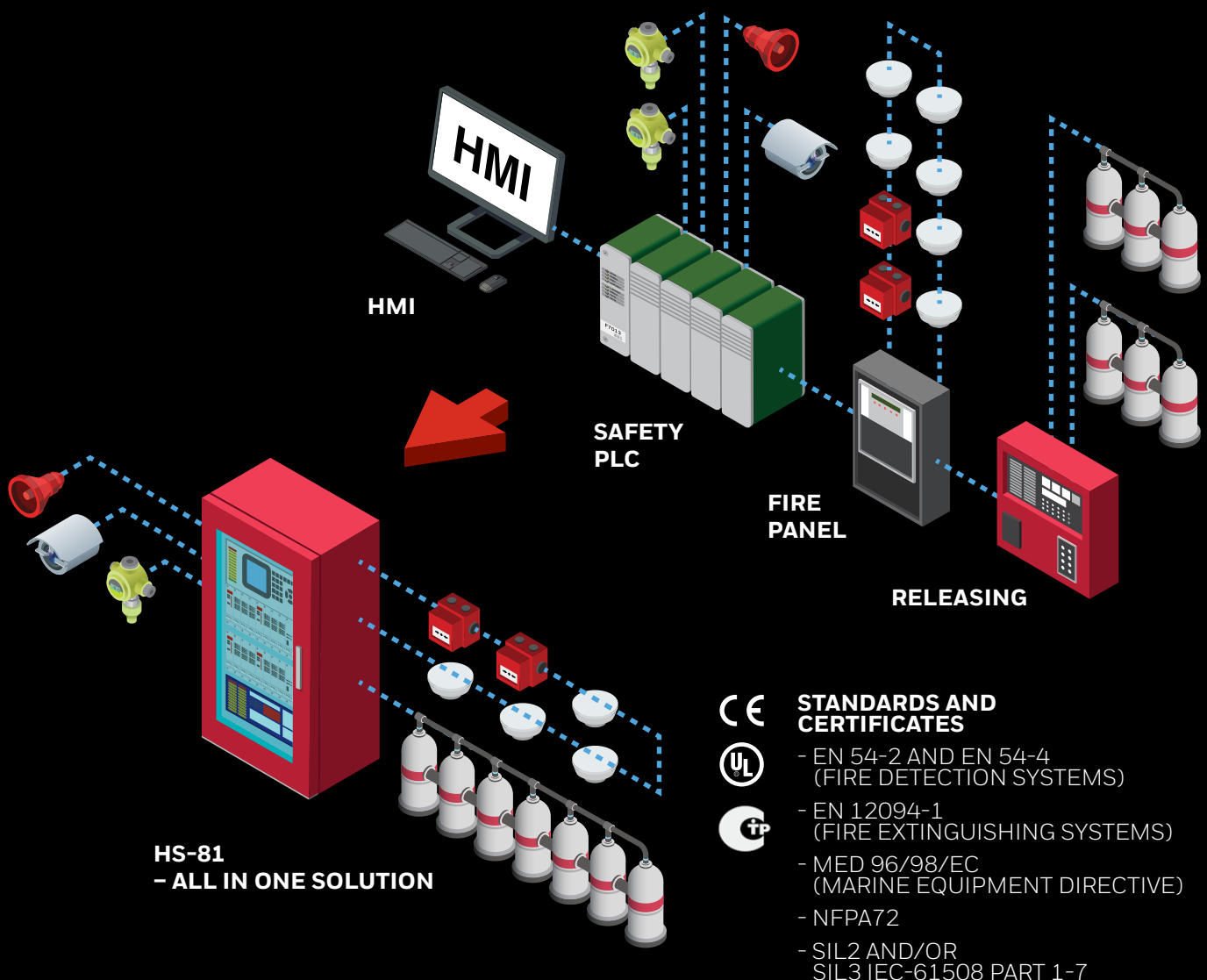
Because of the modularity of the HS-81 panel, the gas and flame detection could be installed and configured, after the gas cloud study was conducted. This flexibility made it possible to complete the installation in a shorter timeframe. Before deploying the solution within the facility, the systems had been pre-programmed and tested at factory and then shipped to Vallen who conducted installation, commissioning and a site acceptance test.

The installation was staged over eight weeks, replacing one system per week to ensure uninterrupted facility operations and to minimize the site's engineering and maintenance.

The HS-81 systems have enhanced the site's overall safety levels and delivered a highly compliant fire safety solution – resolving all previous communication interruptions and reducing service costs.

THE BENEFITS

- Reduced nuisance alarms with upgraded and consistent communication between fire panels
- Centralized monitoring to one station using Modbus communication
- Improved system reliability with SIL2 certified systems
- Expandable and flexible system for future gas detection addition after performance based testing is complete
- Effective project planning and execution with pre-programmed and tested solutions
- Ensured industry compliance with safety standards and regulations
- Reduced maintenance and service costs with one panel instead of 3 systems (Fire, Gas and Releasing)





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