

Honeywell Industrial Fire Protection



HS81-HS Fire and Gas Controller

Honeywell

The HS81-HS Panel

What is it?

The HS81-HS panel is a programmable Fire and Gas Controller suitable for safety and security installations with a technologically high economic content.

What is useful for?

With the HS81-HS panel, fire & gas detection, intruder alarms and process control systems can be built into energy plants, in petrochemical industries, naval, military and public installations.

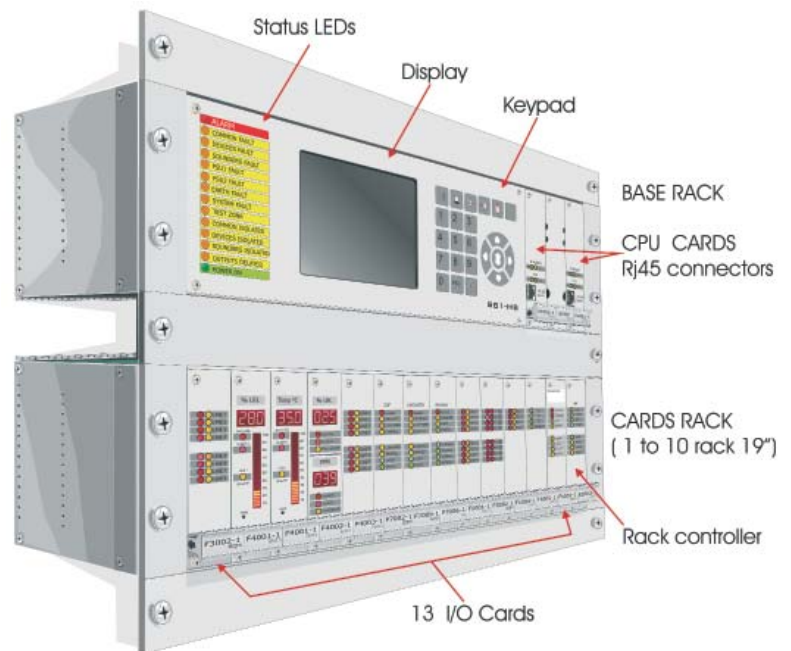
How is it composed?

Externally, the panel HS81-HS is similar to a safety PLC; it is composed of electronic PCB cards mechanically compatible, which are inserted in 19" racks. The panel HS81-HS can have from 1 to 10 racks, each rack has 13 card slots. In addition to the versions customizable for clients, the UL version has a case with 6 racks, while for the European market, 3 other versions are available:

- | | |
|--------------------|---|
| HS81-HS/1R | Base Rack + 1 card rack,
wall-mounting cabinet
L=600 H=700 P=400 mm |
| HS81-HS/2R | Base Rack + 2 card rack,
wall-mounting cabinet
L=600 H=1100 P=400 mm |
| HS81-HS/10R | Base Rack and up to 10
card racks, self-standing
cabinet
L=800 H=2100 P=800 mm |

About 20 different cards can be used, each dedicated to different functions such as firefighting, gas detection, intruder alarm, technologic control and communication with other systems and/or panels.

The HS81-HS panel has a dedicated rack for the operator's interface and consists of a large alphanumeric display, a keyboard and LED indications to show the system status. Each panel HS81-HS has its own AC feeder and battery charger, which allows the panel to work even without an external power supply.



Hot swap of cards and power supplies, with no need for panel shutoff

Features

The HS81-HS system has been designed to meet the heaviest functional reliability and availability requirements, particularly for the companies that operate in the field of energy production and transformation, where it shows excellent resistance to electromagnetic disturbances and a continuous operability in difficult environmental conditions. Its capability is demonstrated by the compliance with the requirements of fault tolerance set by the International Standards IEC 61508, and because of this compliance, it has obtained the level SIL3 (Safety Integrity Level 3) certified by a third party agency.

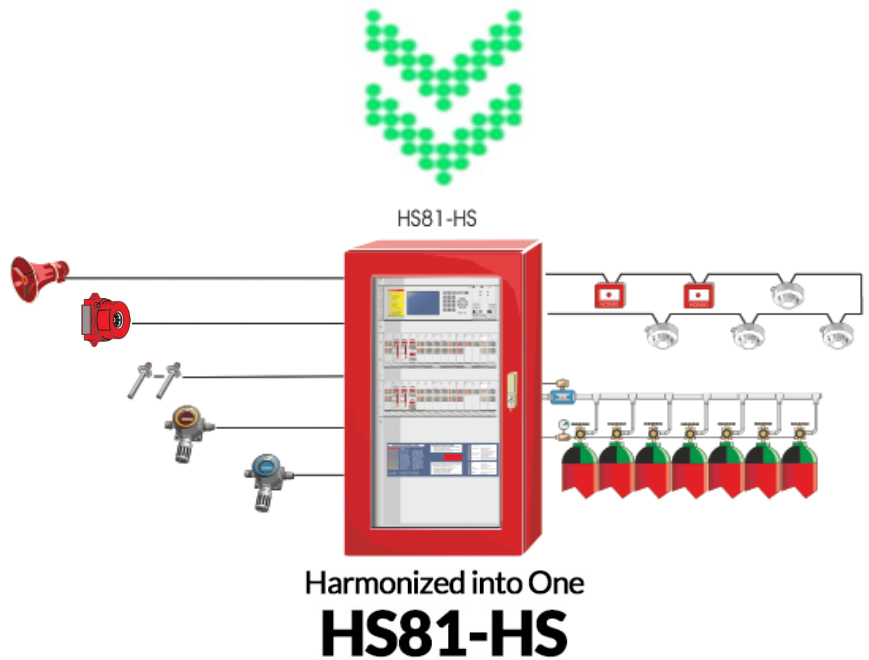
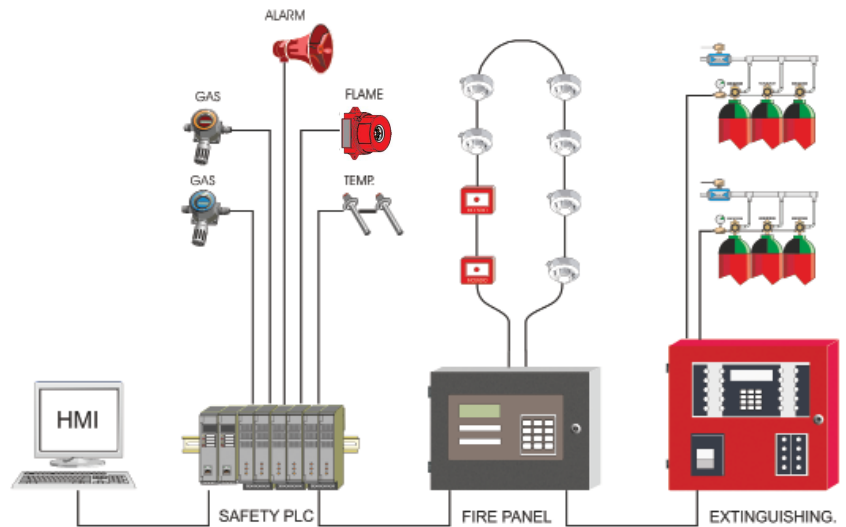
In order to achieve this result, the HS81-HS has been manufactured with some beneficial features:

- Hot backup redundant CPU's
- Hot swappable redundant power supplies
- Hot swap of all cards, including CPU's, with automatic reconfiguration
- Redundant and looped communication bus between cards and CPU's
- Automatic testing of card inputs and outputs
- Self-diagnostics and fault signalling of card and CPU
- Automatic safety disabling of malfunctioning cards
- CEI EN 50130-4 immunity requirements (EMC)
- The card can be redundant in Fire & Gas applications
- The HS81- HS fulfills all functions that are generally carried out by several systems

On the right, there is an example where the HS81-HS carries out all functions that several devices would typically fulfill:

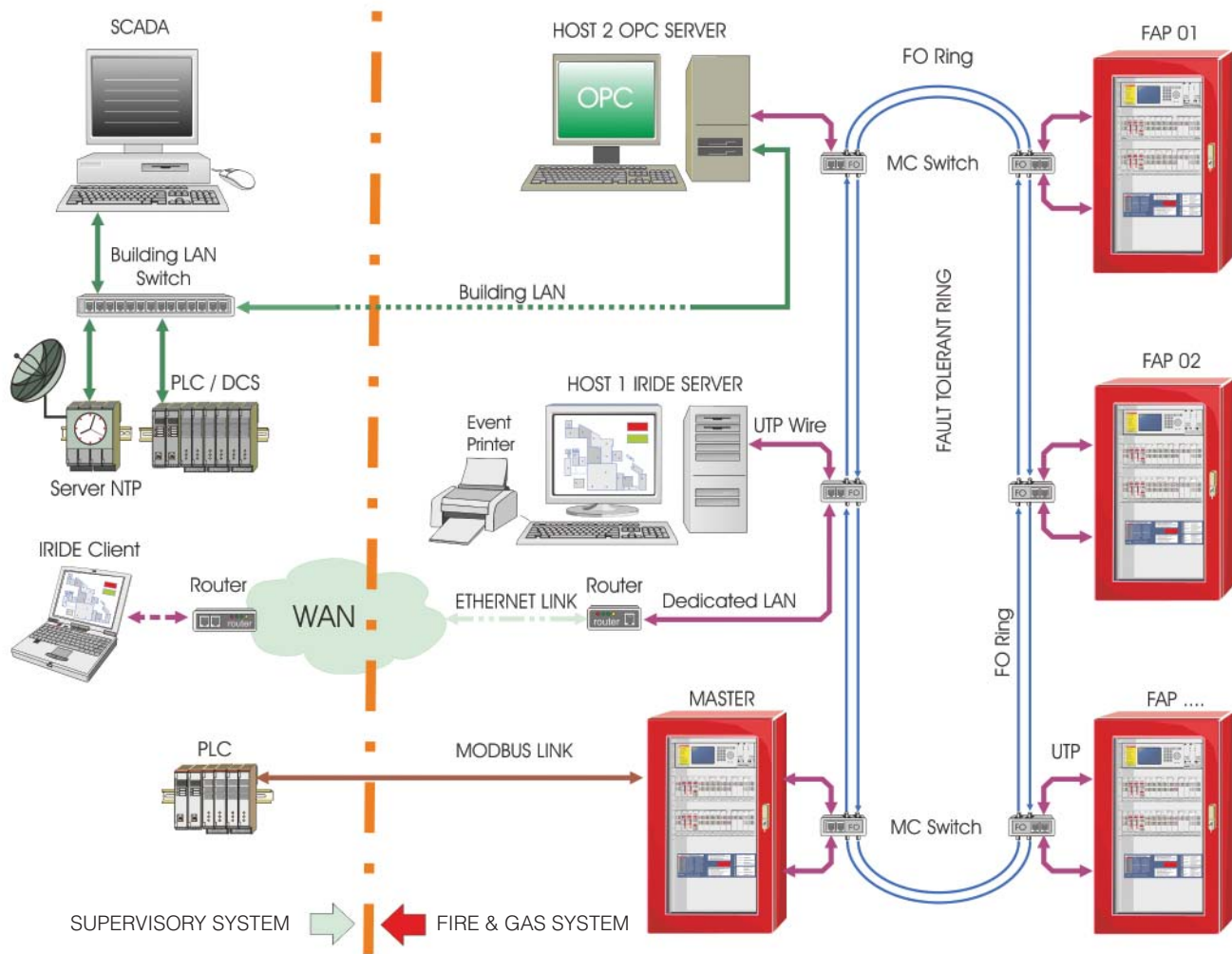
- a Safety PLC for the F&G detection
- an addressable fire detection panel for buildings
- a panel for fire extinguishing
- a HMI interface

The HS81- HS can control addressable detection systems of multiple protocols.



Communication systems

The panel HS81-HS has been designed to communicate with other devices of the same type and with supervisory systems and SCADA through multiple protocols, such as Ethernet TCP/IP, Modbus and OPC Server.



Supervisory Program

The HS81-HS can be connected to a supervisory program with graphic maps called IRIDE which allows easy management of the system from a remote location. The program IRIDE is installed on one or more PCs, which are connected to the panel via LAN network or serial cable.



Typical applications

The HS81-HS is used for:

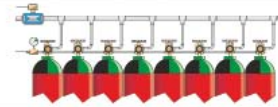
- Automatic fire extinguishing systems
- Addressable analog detection systems with multiple protocols
- Integrated systems (fire extinguishing, CCTV, alarm, etc...)
- Network systems among panels or with DCS and SCADA through Modbus, Ethernet and OPC Server
- Gas detection systems

All functions and features described above can coexist in the same system or be customized according to the customer's needs.



MODULAR CONTROL PANEL
(PLC) S81-HS

FIRE EXTINGUISHING



FIRE DETECTION



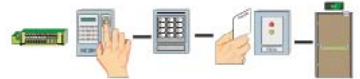
FIRE & GAS



BMS CONTROLS



ACCESS CONTROL



SECURITY



CCTV CAMERAS



CCTV DVR



SUPERVISION (IRIDE)



PLC, OPC SERVER & SCADA



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