


S81HS

MULTIFUNCTIONAL PANEL

Certified
SIL2&SIL3
CPD EN-54
UL Listed
GOST-R

SAFETY/SECURITY - FIRE FIGHTING
INTEGRATED SYSTEMS

SCAME SISTEMI

Standards and certifications

In order to be used in fire fighting systems, the panel S81-HS has been certified in an harmonised European laboratory, which is necessary to fulfil the norms for the product construction conformity CPD e CPR, and in UL laboratories, necessary for the US standard UL864.

The panel S81-HS has the following certifications:

Construction products Norm EN 12094-1:2003	European product conformity: • 0051-CPD-0137/138/139
Fire detection EN 54-2, EN 54-4+A1:2002	Certificate of conformity and use of IMQ mark • CA12.00956/957/958
Intruder alarm CEI 79-2:1998 CEI 79-2; AB:2000	Certificate of conformity and use of IMQ mark • CA12.00953/954/955
Functional safety SIL2 and/or Sil3 IEC-6158 1-7	SIL certification • 05SM00505 Fire&Gas Central Unit S81-HS
NFPA 72 (UL 864)	Emergency Alarm System control units, Control Units, releasing Device
Fabrication process control and surveillance FPC	Production process (FCP) Certified ISO 9001:2000
GOST R	Product conformity Certificato n° POCC IT. AB24.B01128
Marine Equipment Directive MED 96/98/EC	Harmonized standards for marine and off-shore Certification in progress with ABS

Features

The S81-HS system has been designed to meet the heaviest functional reliability and availability requirements, particularly of 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 capacity is demonstrated by the compliance with the requirements of fault tolerance set by the International Standards IEC 61508, and thanks to this compliance, it has obtained the level SIL3 (Safety Integrity Level 3) certified by a third party agency.

In order to achieve this results, the panel S81-HS has been manufactured with some particular features:

- Hot backup redundant CPU's
- Hot swap of all cards, including CPU's, with automatic reconfiguration
- Redundant and looped communication bus between cards and CPU's
- Periodical automatic testing of card inputs and outputs
- Self-diagnostics and signalling of card and CPU fault
- Automatic safety disabling of malfunctioning cards
- CEI EN 50130-4 immunity requirements (EMC) widely exceeded (IMQ report)
- The cards of interface with devices can be redundant

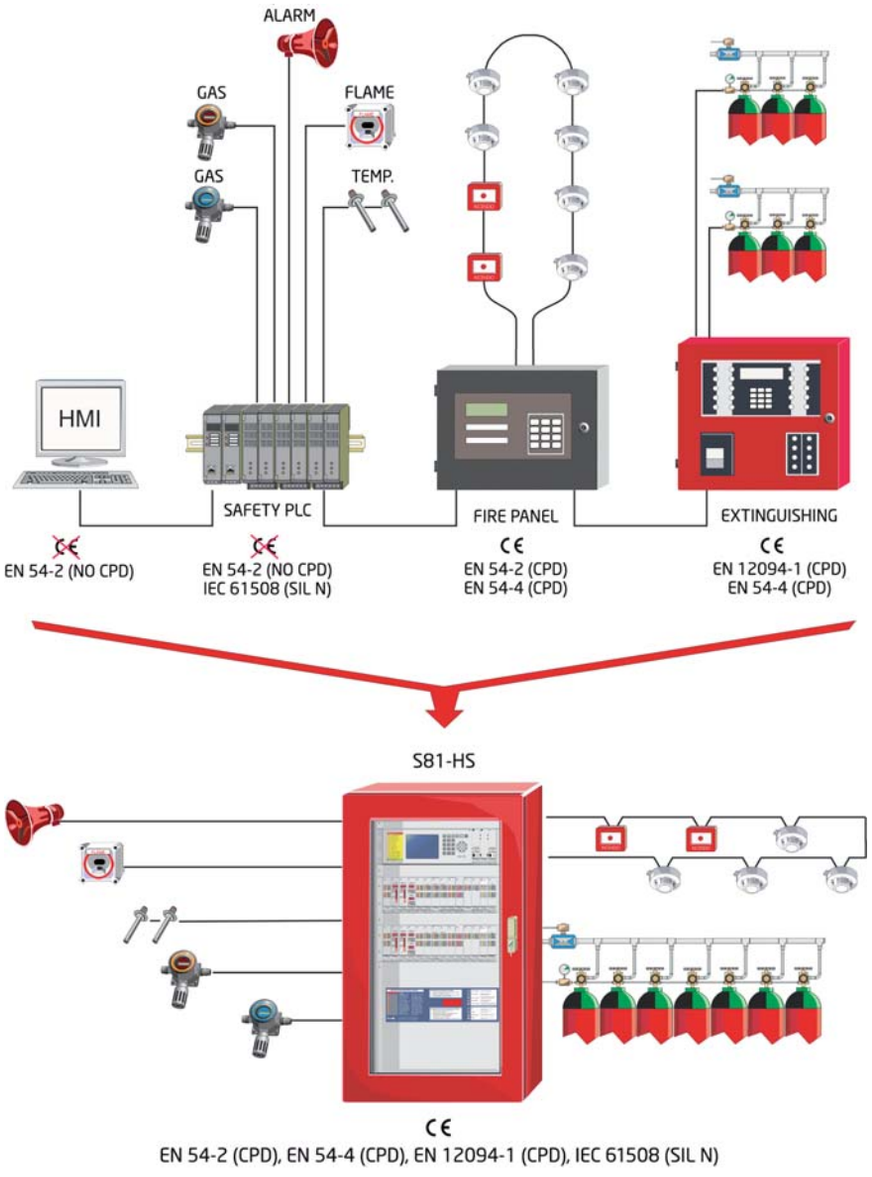
In Fire & Gas applications, the panel S81-HS fulfills all functions that generally are carried out by several systems.

On the right, there is an example where it can be seen that the panel S81-HS carries out by itself all functions that several devices would fulfill:

- a Safety PLC for the F&G detection
- a detection panel for buildings
- a panel for fire fighting
- a HMI interface

It must be noted that generally solutions with PLCs and HMI are declared as in compliance to the indications of norms EN 54-2 but are not certified CPD and so, they cannot have the CE mark.

The panel S81-HS can control also addressable detection systems of different brands and protocols.

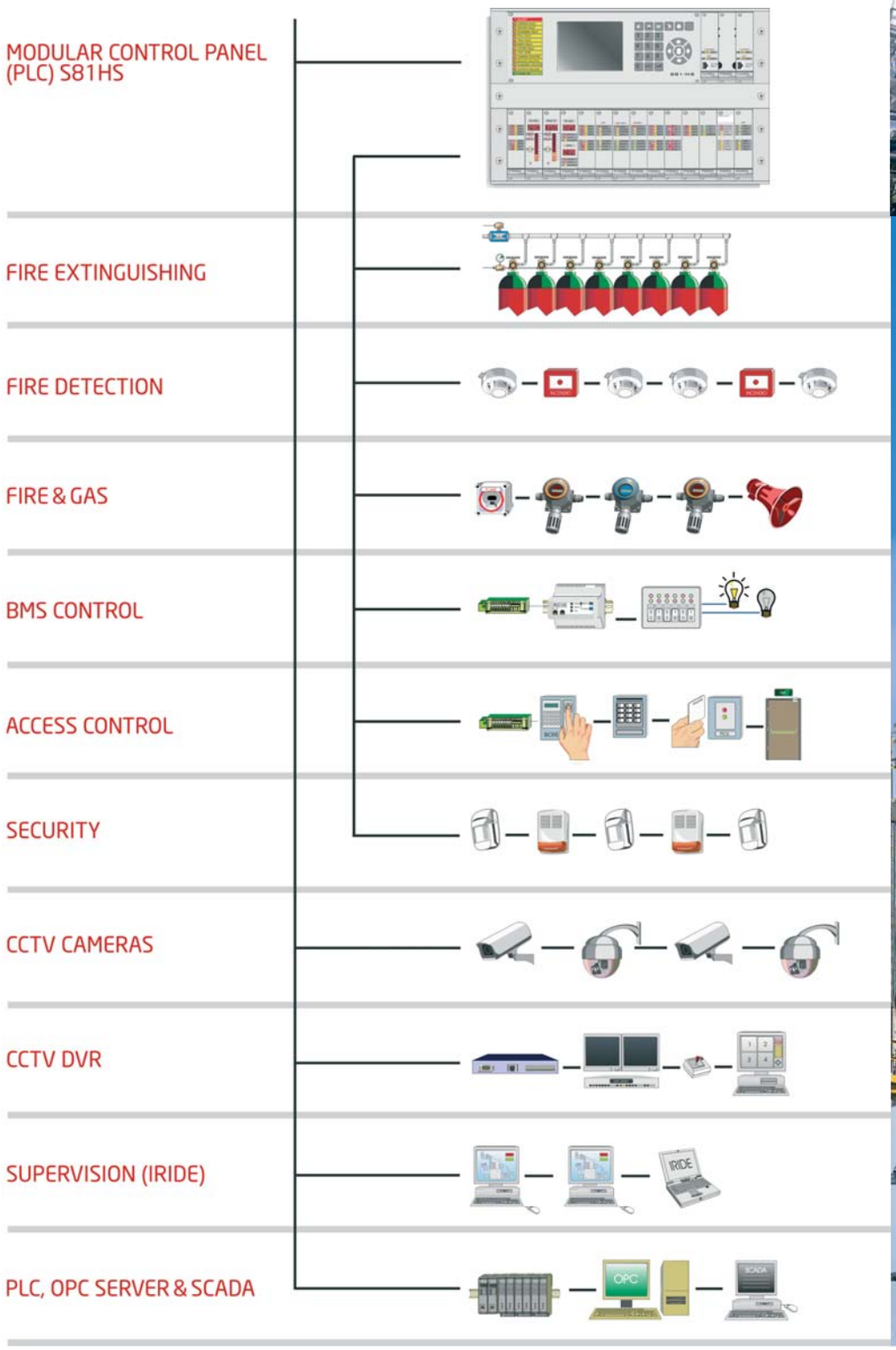


Typical applications

The panel S81-HS is used for:

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

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



ISO 9001:2008

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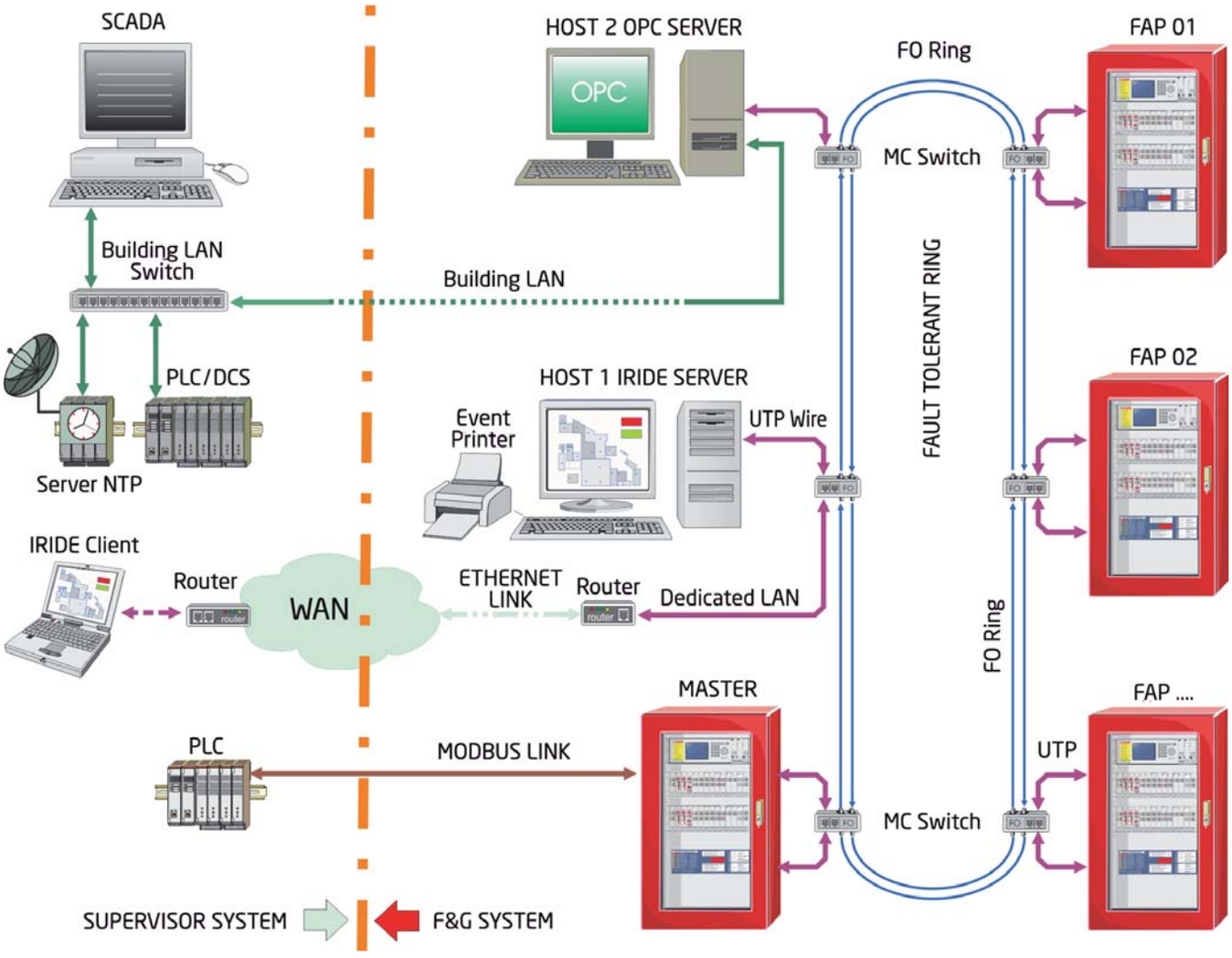
Communication systems

The panel S81-HS has been designed to communicate with other devices of the same type and with supervision systems and SCADA through standard or own protocols, such as Ethernet TCP/IP, Modbus and OPC Server.



Supervision Program

The panel S81-HS can be connected to a supervision program with graphic maps called IRIDE which, allows an easy management of the system from a remote position. The program IRIDE is installed on one or more PCs, which are connected to the panel via LAN network or serial cable.

S81HS

Brief description of S81-HS panel

Hot swap of cards, with consequent no need for panel shutoff

What is it?

The panel S81-HS is a programmable PLC suitable for safety and security installations with an high technological and economic content.

What is useful for?

With the S81-HS panel, fire & gas detection, intruder alarms and process control systems can be built in energy plants, in petrochemical industries, naval, military and public installations.

How is it composed?

Externally, the panel S81-HS is similar to a safety PLC; it is composed by electronic cards mechanically compatible, which are inserted in 19" racks.
The panel S81-HS can have from 1 to 10 racks, each rack has 13 card slots. Further to the versions customizable for clients, the UL version has a case with 6 racks, while for the European market, other 3 versions are available:

S81-HS/1R	Base Rack + 1 card rack, wall-mounting cabinet L=600 H=700 P=400 mm
S81-HS/2R	Base Rack + 2 card rack, wall-mounting cabinet L=600 H=1100 P=400 mm
S81-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 S81-HS panel has a dedicated rack for the operator's interface and it is constituted by a big alphanumeric display, by a keyboard and led indications to show the system status.
Each panel S81-HS has its own modular feeder and battery charger, which allows the panel to work even without an external power supply.