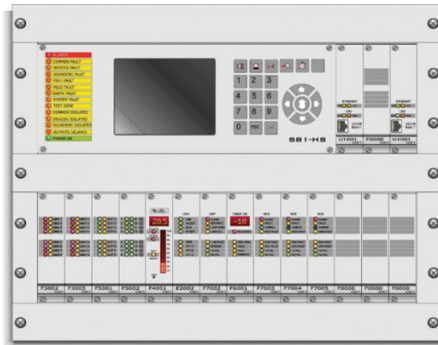# MultiSafe-MX

Gas and fire station

Description

The MultiSafe-MX system is intended for the protection of high hazard, high risk plant and facilities.

The MultiSafe-MX is certified, by European laboratories, to comply with the applicable regulations.

The panel is composed of dedicated cards, installed in 19" racks which have their own " intelligence", programmed for active/passive fire protection, gas detection, intruder alarm and logic functions.

Moreover, the MultiSafe-MX can interact with supervisory and SCADA systems via Ethernet, TCP/IP or Modbus.

Applications

• Fire and Gas detection and measurement systems.
• Automatic fire extinguishing control systems.
• Integrated systems, intruder/burglar alarm, CCTV and logic functions.
• Fire protection systems in accordance with the recommendations of NFPA 72.
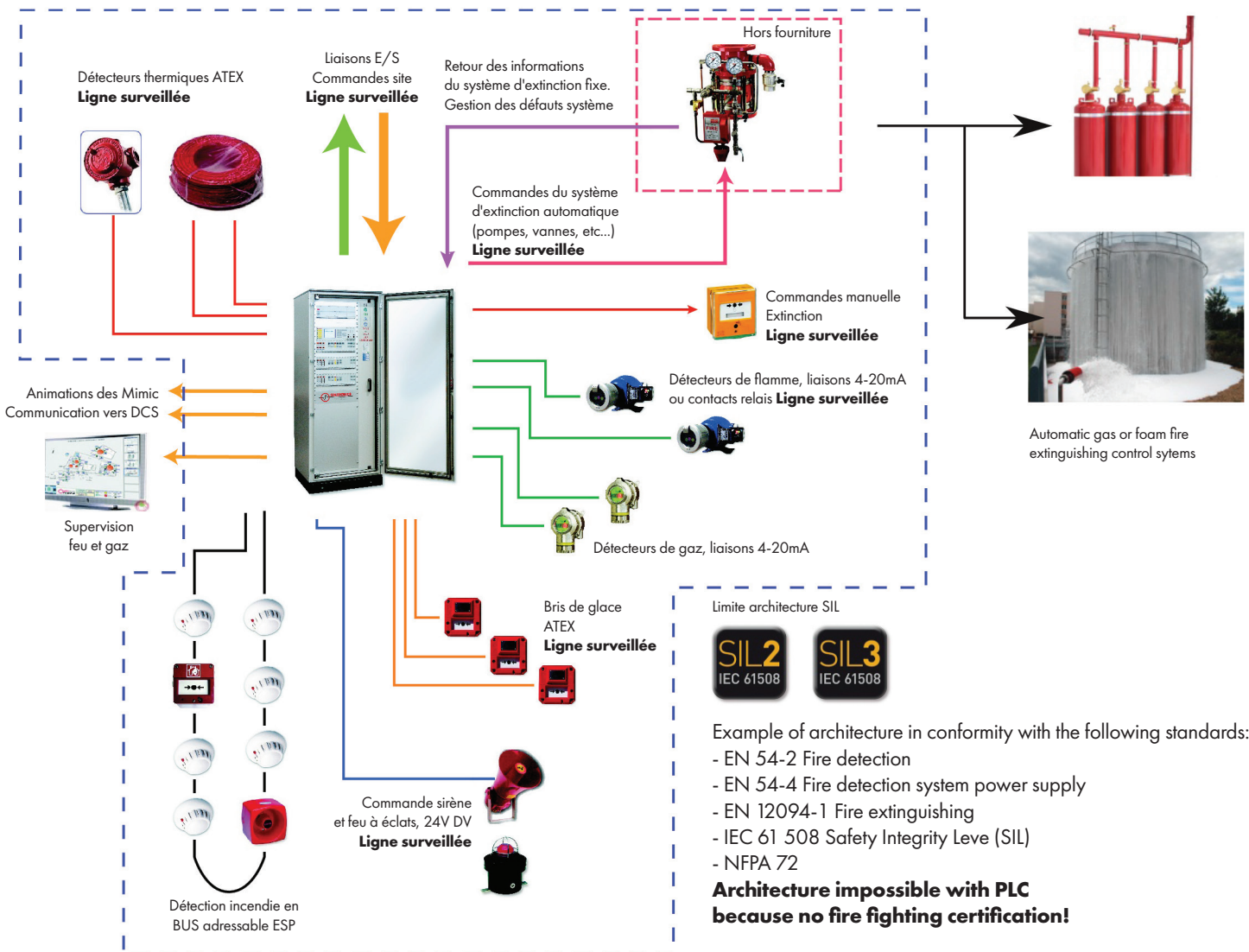
Features

• SIL2 / SIL 3 certifed
• Front plug-in/out cards
• Automatic monitoring of card and CPU fault
• Two CPU's, in hot back-up to one other
• Device calibration data and event logging
• Hot swap of cards and CPU's
• Addressable fire detection
• Easy PC-configuration

Applications

• Can replace a safety PLC system
• System flexibility
• Operational safety
• Automatic software configuration
• Tracks maintenance and incidents
• Easy and rapid maintenance
• Reduced cabling
• User friendly interface

MultiSafe-MX

Gas and fire station

Applications

Hors fourniture

Détecteurs thermiques ATEX
Ligne surveillée

Liaisons E/S
Commandes site
Ligne surveillée

Retour des informations
du système d'extinction fixe.
Gestion des défauts système

Commandes du système
d'extinction automatique
(pompes, vannes, etc...)
Ligne surveillée

Commandes manuelle
Extinction
Ligne surveillée

Animations des Mimic
Communication vers DCS

Détecteurs de flamme, liaisons 4-20mA
ou contacts relais **Ligne surveillée**

Supervision
feu et gaz

Détecteurs de gaz, liaisons 4-20mA

Automatic gas or foam fire
extinguishing control sytems

Bris de glace
ATEX
Ligne surveillée

Limite architecture SIL

SIL2 IEC 61508   SIL3 IEC 61508

Example of architecture in conformity with the following standards:
- EN 54-2 Fire detection
- EN 54-4 Fire detection system power supply
- EN 12094-1 Fire extinguishing
- IEC 61 508 Safety Integrity Leve (SIL)
- NFPA 72

**Architecture impossible with PLC
because no fire fighting certification!**

Commande sirène
et feu à éclats, 24V DV
Ligne surveillée

Détection incendie en
BUS adressable ESP

System capacity

Maximum number of racks per panel	10
Maximum number of cards per rack	13
Maximum number of configurable zones (*1)	300 + 300
Maximum number of devices per zone (*2)	99 + 99 + 99
Maximum number of devices per panel (*3)	1651 0
Maximum number of panels connectable to each other	64

(*1) = 300 safety zones and 300 security zones
(*2) = 99 inputs, 99 outputs, 99 logic relations
(*3) = based on all racks containing 13 addressable cards each

Environmental

Temperatures
Storage	-40°C to +85°C
Operational	5°C to +50°C
Humidity	5% to 95% RH (non-condensing)

Approvals

IMQ-certified to EN 54-2 and EN 54-4 (fire detection)
IMQ-certified to CEI 79-2 (intruder alarm)
CPD-certified to EN 12094-1 (fire extinguishing)
TUV-certified to IEC61 508 (functional safety) – SIL 2 & 3

Supervision PC Vue

We can provide one or more PC with SCADA software
to view, on site-wide interface, state and location of the
detectors.
Totally customizable configuration.

PC Vue

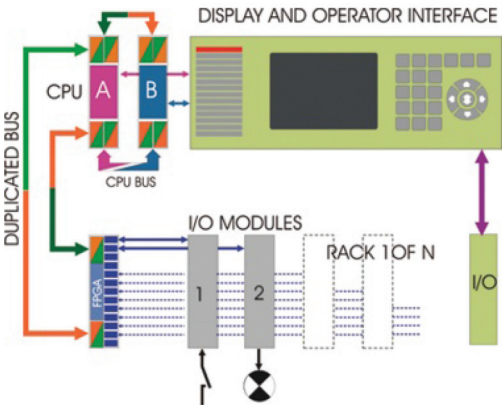Supervision software enables site
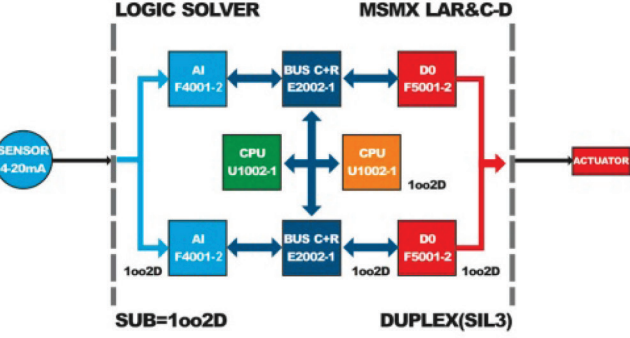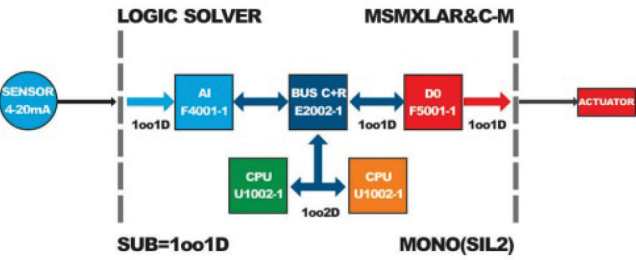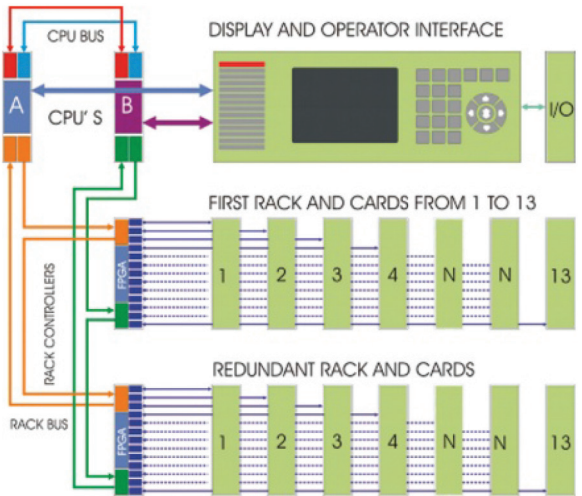specific software

Operational safety

The MultiSafe-MX F&G system can be used to produce SIL2 and SIL3 compliant systems.
- Redundant CPU's
- Two CPU's, in hot back-up to one other
- Independent display
- Two rack control bus
- Rack controller independently connected to two buses
- Independent serial communication for each card

SIL2 CONFIGURATION

SIL3 CONFIGURATION

Custom integration

The Simtronics MultiSafe-MX F&G system can be integrated in stand alone or wall mounted cabinet.
- Fixed or rotating frame
- Integration of fire suppression manual alarms
- Safety battery back up
- Size fitted to your constraints

Hot swap cards

All components of the MultiSafe-MX system can be hot swapped:
- CPU's
- Control rack (screen + keyboard)
- I /O cards (BUS)
- Power supply modules
- Battery charger

MultiSafe-MX

Gas and fire station

Cards for expansion rack

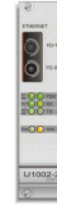### MSMX-U1006-1 - OPERATOR INTERFACE CARD

Interface between the panel and the operator (IHM). Large back lit screen 1 9 LED (fault, alarms)
Control keys.
Integral buzzer

MSMX-U1002-1 - CPU CARD

This card is the system central unit and contains the micro-controller
This version includes an RJ 45 Ethernet output connector

MSMX-U1002-2 - CPU CARD

As a U1 002-1 CPU but includes an ST Ethernet output
Connector for fibre optic

Cards for expansion rack

MSMX-E2002-1 - RACK CONTROL CARD

Rack controller

MSMX-F4001 - ONE ANALOGUE INPUT CARD

4-21 mA single channel analogue input card
Two alarm levels

MSMX-F4002 - TWO ANALOGUE INPUT CARD

4-21 mA dual channel analogue input card
Two alarm levels

MSMX-F4003 - EIGHT ANALOGUE INPUT CARD

4-21 mA eight channel analogue input card
Two alarm levels

MSMX-F3002 - 8-INPUT CARD FOR CONVENTIONAL DETECTION

8 inputs for conventional (nonaddressable) detection and flame detection

MSMX-F5001 - 8-MONITORED LINE CONTROL CARD

8 x 500 mA outputs
Mainly used to control solenoids
For extinguishing agent release and directional valves, or to activate visualaudible alarm devices.

MSMX-F5002-1 - 16-CONTROL CHANNEL CARD WITH OPEN COLLECTOR OUTPUTS

16 x non-monitored 250-mA outputs
Widely used for controls and direct hardwiring, or in conjunction with a 16-relay card (T8007)

MSMX-F5003 - ALARM CONTROL CARD WITH 8 OUTPUT LINES MONITORED THROUGH POLARITY REVERSAL

8 x 250mA outputs lines
Use in systems conforming to NFPA standards (activation of the alarm sounders)

MSMX-F5004 - 4-MONITORED LINE CONTROL CARD

4 x 2A outputs lines of the card
Mainly used to drive solenoids and heavy loads

MSMX-F6001-1 - CONTROL CARD FOR FIRE EXTINGUISHING SYSTEMS

Logic voting funtion for fire extinguishing control
Enables system compliance with N 1 2094-1

MSMX-F6002-1 - SPECIAL LOGIC CONTROL CARD

Produces and manages functional logic functions through flip/flop, toggle and timeouts devices
timeouts can be configured to operate in A and B modes

MSMX-F7002-1 - ADDRESSABLE DEVICE CONTROL CARD

Control card for devices addressable through ESP protocol (Hochiki's ESP protocol)
Manages up to 127 three-channel devices

MSMX-F7006-1 - MODBUS PROTOCOL SERIAL COMMUNICATION CARD

ModBus RTU Master/Slave protocol communication card
Two serial ports: RS485 (Half Duplex) and RS232

MSMX-F7007-1 - ANALOGUE ADDRESSABLE DEVICE CONTROL CARD - SSP PROTOCOL

Manage up to 127 analogue/digital input addressable modules and control modules for SSP protocol addressable devices.

Cards for power supply rack

PU-A0008 - 20A AC/DC CONVERTER - DRAWER TYPE

Universal switching feeder
Supplies a maximum 20A current at 25Vdc
1 9" rack mount used with PU-A009-1 battery charger
Connects up to four feeders in parallel
Hot swappable

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