

# Fire and gas hazards

16 channels controller

**MX 52**

■ ■ ■ SIL 2 approved  
according to EN 6511

■ ■ ■ From 2 to 16 channels

■ ■ ■ 1 fault and 3 alarm indications  
per channel

■ ■ ■ 19" 3U cardframe



ATEX



**INDUSTRIAL  
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Global fire and gas detection solutions



Example of application in industrial circle

## MX 52 control unit

MX 52 controller accepts inputs from flammable (4-20 mA transmitter or catalytic bridge types) and toxic gas detectors. The MX 52 modular design allows you to build your own gas detection system to meet your requirements.

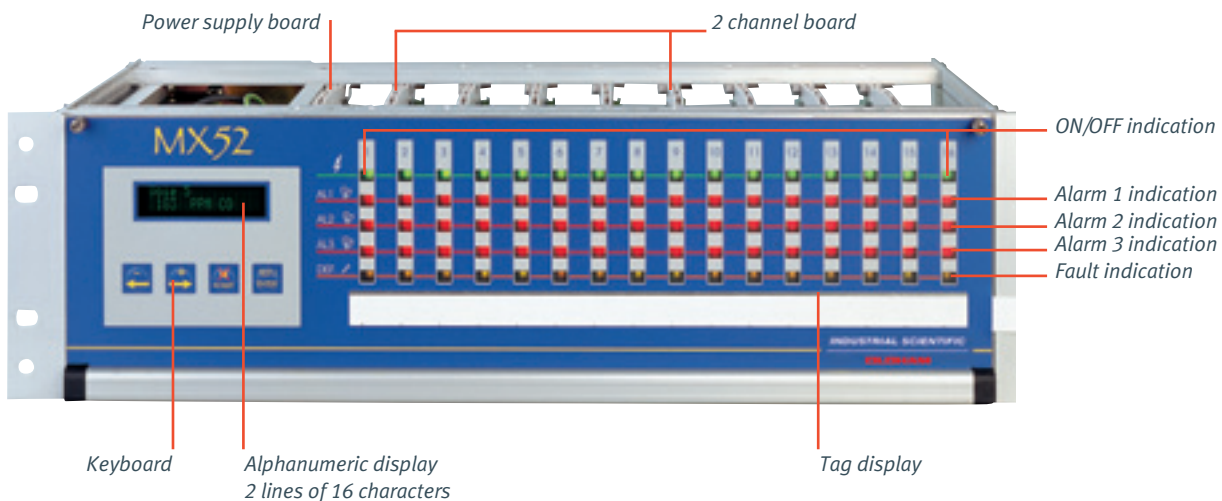
## A control unit that fulfills your needs

The innovative features of the MX52 are integrated in a 3U 19" frame rack for use in various applications. The MX 52 can be programmed thanks to the keyboard or with a laptop.

### Detection display and alarms

Each of the 16 channels performs as follow:

- continuous monitoring
- scrolling display of the monitored gas, nature, content and unit (ppm, LEL or %)
- alarms are triggered if content exceeds preset thresholds
- relays activated to enable external warning devices (valves, audible/visual alarms...)
- general fault alarms.



# Performance, reliability, safety

## Performance

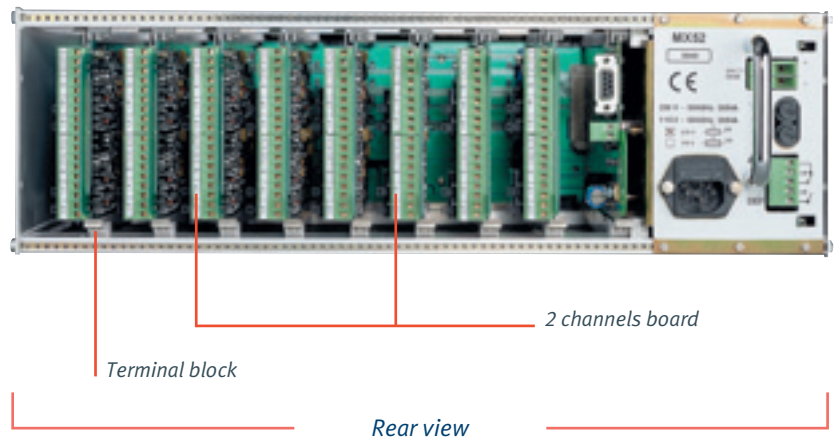
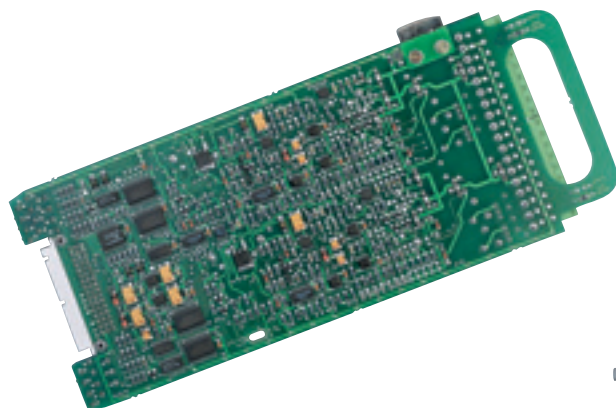
- The main frame is a 19" rack frame 3U high with up to 16 channels (8 cards - 2 channels each)
- Easy wiring
- Easy programming
- Fault and gas alarms monitored by a built in micro-controller
- 8 cards with 2 independent channels each
- Fixed or scrolling fluorescent display with 2 lines, 16 characters
- 3 gas alarm thresholds individually adjustable
- Instantaneous alarms 1 and 2
- Alarm 3 on delay or average
- General fault alarm
- Local TEST push button
- Fail safe relay operation
- Maintenance mode indicated by LED
- 5 LED indicators per channel
- Local or remote alarm acknowledgement
- 4-20 mA input enables the connection of any analog transmitters (flame, temperature, air velocity, pressure...)
- Common digital output (RS485 MODBUS protocol) and 4-20 mA output per channel

## Reliability

- Protection against RF and electromagnetic interferences prevents from false alarms (CE marked)

## Safety

- The MX 52 controller is approved as a SIL 2 Safety Instrumented System according to EN 61511
- Compliant with European standards EN 50054, 50081 and 50082



# Technical characteristics

Manufacturer:	• OLDHAM SA
Type:	• MX 52
Function:	• Controller Safety Instrumented System
Capacity:	• 8 cards, 2 independent channels each (max 16 channels)
Display:	• Fluorescent 2 lines 16 fixed or scrolling characters

## Alarms

Fault alarms:	<ul style="list-style-type: none"> <li>• Specific channel identification with yellow LED</li> <li>• Common fault relay</li> </ul>
Gas alarms:	<ul style="list-style-type: none"> <li>• 3 independent thresholds per channel</li> <li>• Third threshold on delay or average</li> <li>• Automatic or manual reset</li> <li>• Programmable increasing or decreasing alarm</li> <li>• Visual red LED</li> </ul>
Audible alarm:	• Follows the fault sequence and panel acknowledgement gas alarm
Outputs:	<ul style="list-style-type: none"> <li>• 2 independent gas alarm relays per channel (2 A - 250 VAC Rating for resistive load)</li> <li>• 1 common alarm 3 relay</li> <li>• 1 common fault relay</li> <li>• Energized or de-energized alarm relays</li> <li>• Energized fault relay</li> <li>• Programmable NC or NO on alarm 1, alarm 2 and fault alarm, SPDT on alarm 3</li> </ul>

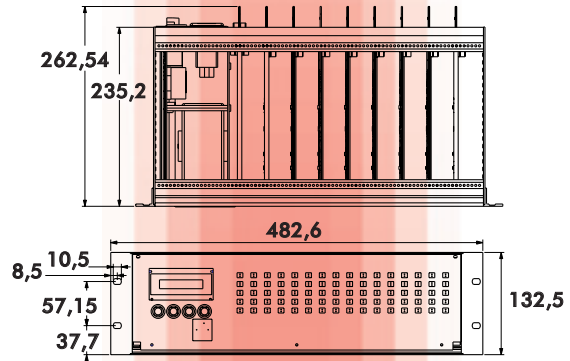
## Inputs

Type of detectors:	<ul style="list-style-type: none"> <li>• Flammable catalytic bridge type - 3 wires</li> <li>• Oxygen, toxic or flammable analog transmitters, 2 or 3 wires</li> <li>• Other 4-20 mA analog output transmitters</li> </ul>
wiring:	• 2 or 3 wires shielded cable
Loop impedance:	<ul style="list-style-type: none"> <li>• Flammable 3 wires: 32 Ω</li> <li>• 4-20 mA; 2 or 3 wires: 56 Ω</li> <li>• Average line length (in meters at 20°C, core size 1,5 mm<sup>2</sup>): Flammable: Bridge type - 1000 m 4-20 mA - 2000 m</li> </ul>
Signal output:	<ul style="list-style-type: none"> <li>• 4-20 mA per channel</li> <li>• Serial RS 485 or 232 MODBUS protocol</li> </ul>

Power supply:	<ul style="list-style-type: none"> <li>• 103 to 122 V AC or 207 to 244 VA</li> <li>• 21 to 31 V DC</li> <li>• Power consumption: 300 VA or 240 W</li> </ul>
Miscellaneous:	<ul style="list-style-type: none"> <li>• Local or remote acknowledgement</li> <li>• Operating temperature: -10 +45°C</li> <li>• Relative humidity: 5 to 95 % non condensed</li> </ul>
Dimensions:	<ul style="list-style-type: none"> <li>• Rack 3U, 19" frame</li> <li>• Dimensions: 482 w x 132 h x 266 d in mm</li> </ul>
Weight:	• 15 Kgs

## Approvals

- Compliant with European standards EN 50054, EN 50057, EN 50104 and EN 50271 (harmonized standards 61779-1: 2000 and 61779-4: 2000)
- SIL 2 capability according to EN 61511 (INERIS n° 68210-2005)
- Ex II (2) G
- EEC Directive EN 50081-1-2 and EN 50082-1-2
- Low voltage directive EN 61010-1



**MX 52**



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