OLDHAM

GAS DETECTION CONTROL PANEL

MX43

- Analog and digital controller
- 4 or 8 lines /
  16 to 32 detectors max
- Highly versatile controller
- SIL1 reliability

HATECH
GASDETECTIETECHNIEK

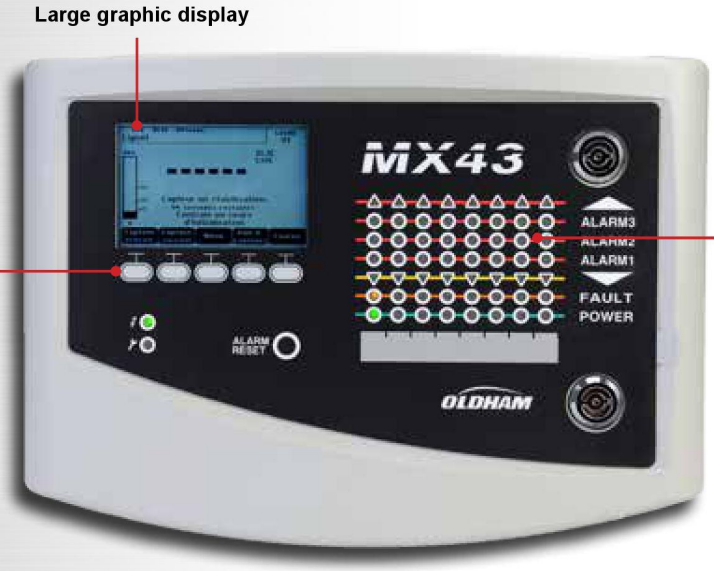
SAFETY DEVICES
SIL
INERIS
DISPOSITIFS DE SÉCURITÉ

Fixed Gas Detection Experts

MX 43

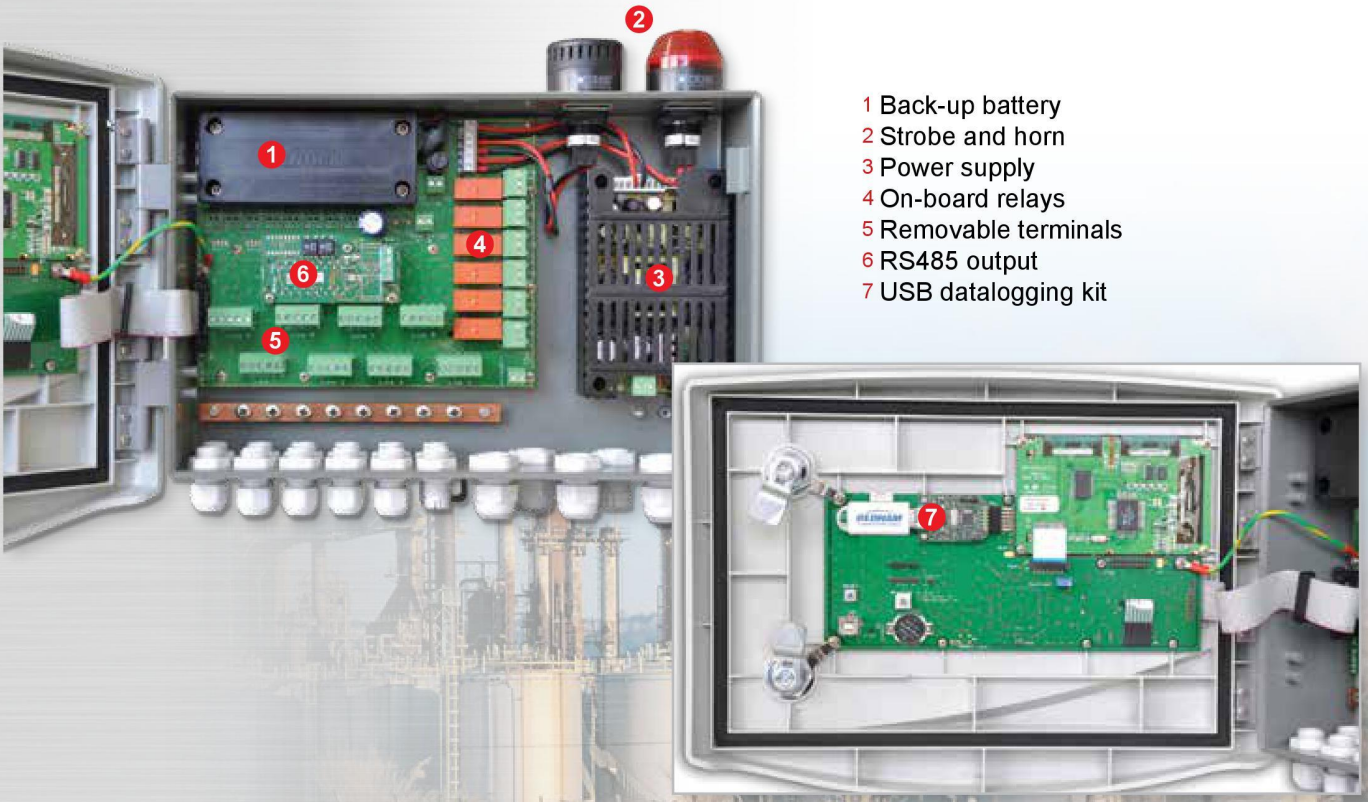
Controller presentation

The MX 43 is an analog and digital controller designed for the continuous measurement and control of the gases present in the atmosphere and for 4-20 mA or digital contact signal.



MX 43 manages both digital lines and analog channels, and covers all needs for a wide variety of applications.

The MX 43 digital technology allows up to 32 detectors to be distributed on 8 lines for increased cost savings.



1 Back-up battery
2 Strobe and horn
3 Power supply
4 On-board relays
5 Removable terminals
6 RS485 output
7 USB datalogging kit

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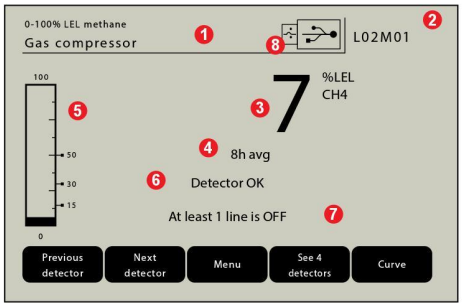
GRAPHIC DISPLAY

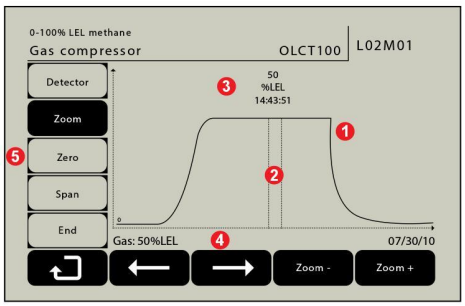
Normal Mode



1 Measurement range, gas and detector tag
2 Detector address
3 Current value with unit and detected gas
4 Averaged value on the last 8 hours
5 Bar graph with alarm thresholds
6 Detector status (OK, OFF, fault)
7 MX 43 status information
8 Records on progress

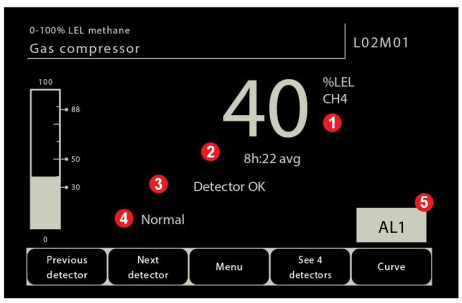
Calibration Curve

Simplified procedure that enables time savings (i.e. non-intrusive and one-man calibration).



1 Calibration curve
2 Cursors for span settings
3 Measured value
4 Calibration gas value
5 Detector selection, zeroing and spanning

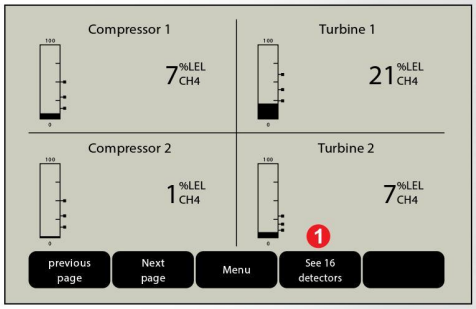
Alarm mode



Reverse video in alarm conditions for immediate identification of the concerned detector.

1 Current value with unit and detected gas
2 Averaged value on the last 8 hours
3 Detector status (OK, OFF, fault)
4 MX 43 status information
5 Detector in alarm

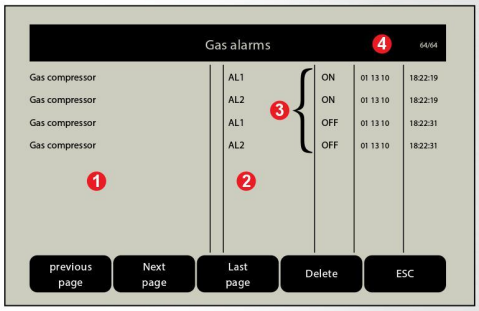
In 4-channel display



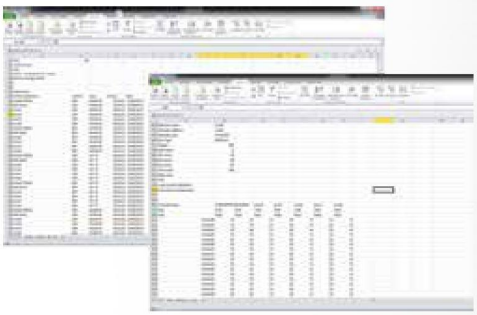
1 Up to 16 detectors can be displayed simultaneously

Data-logging

By default, the MX 43 can store up to 512 alarm events, 512 fault events and 512 system events.



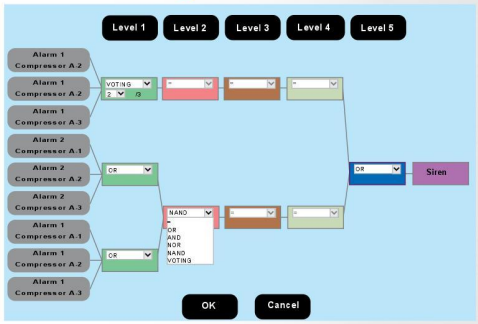
1 Detector tag
2 Event
3 Date and time of events appearance or clearance
4 Page number (up to 64 pages)



The USB option enables gas measurements to be saved at a sampling rate of 2 seconds to 15 minutes while events are saved when they happen.

The 4 Gb USB drive provides more than 2 years of storage in most of configurations. The USB option also delivers the ability to save and restore configuration and firmware files.

COM 43 configuration software



1 Simple relay programming
2 Up to 5 embedded functions: OR, AND, NOR, NAND, VOTING
3 Several timers available
4 Advanced management of audible alarms (acknowledgment, reactivation, evacuation)

Modules

Different modules can be connected to the controller:

4 or 8-relay module

4 or 8-programmable-relay module can be located closer to the actuators for cost savings.

16-logic-input module

Addressable module of 16 logic input for recovery of digital information such as fire or intrusion alarms, emergency stop, limit switch activation, etc.

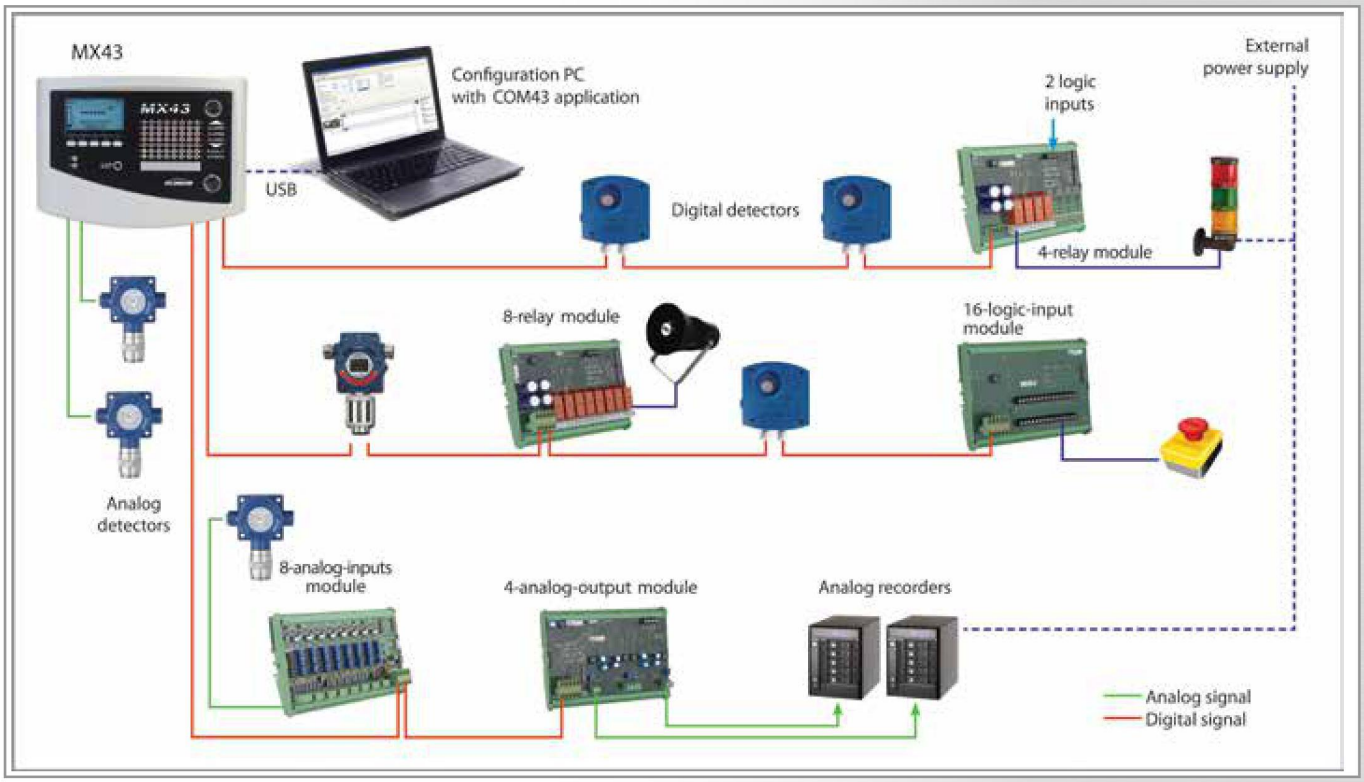
8-analog-input module

This module enables standard analog transmitters (gas or flame detectors for instance) to be connected on a digital line for cost savings.

4-analog-output module

Addressable 4- analog-output module which delivers 4 analog 4-20mA signal outputs (detector output copy, min, max, average of a group of detectors) for connection to a datalogger, a PLC, a Building Management System (BMS), etc.

Configuration example



SPECIFICATIONS

Model	MX 43 gas detection control panel
Dimensions (wall-mounted version)	370 x 299 x 109 mm (14.6 x 11.8 x 4.3 inches)
Dimensions (rack)	19", 4U ; 482.8 x 177 x 192.5 mm (19.1 x 7 x 7.6 inches)
Ingress protection	IP55 (wall-mounted), IP31 (rack)
Cable entries (wall-mounted version)	12 M16 cable glands, 4 to 8 mm² (8 to 11 AWG) outer diameter cable 6 M20 cable glands, 6 to 12 mm² (7 to 9 AWG) outer diameter cable
Display	LCD back-lit display + smart keys Display in video inverse in case of fault Customizable by user (display 1 to 16 channels simultaneously, fixed or scrolling, on events...) Bar graph with alarm threshold
Visual indicators	7 LEDs per line 1 LED fault indicator 1 LED fault indicator
Buttons	5 smart keys 1 audible alarm accept/reset button
Operating use	
Operating temperature	-20°C to +50°C
Storage temperature	-20°C to +50°C
Humidity	5 to 95% RH
Power	100-240 Vac 50-60 Hz or 21-28 Vdc, 112 W max
Battery	Embedded back up power supply in option (0.6 Ah)
Consumption	500 mA min (without module)
Measurement lines	
Digital lines	8 maximum RS-485 communication, proprietary protocol, 9600 Baud 2 twisted shielded-pair cable
Analog channels	8 maximum 0-23 mA analog signal input (4 to 20 mA reserved for measurement) 120 Ohm load resistance 2 or 3-core shielded cable
Voltage (typical)	21 to 28Vdc
Maximum current output per line	1.2 A (1.5 A intermittently)
Maximum current output in total	2.4 A permanent (3.2 A intermittently)
Alarms	
Per channel	5 alarm levels (A1, A2, A3, Overscale, Underscale) + Fault Non-ambiguity reading option for combustible gases monitoring
Programmable thresholds	On instantenous or averaged values, rising or falling alarms, manual or automatic acknowledgement
On-board relays	5 fully programmable alarm relays 1 fault relay (non-configurable) Dry contact relay DPCO relays with contact rating of 250 Vca 2 A (inductive)
Digital outputs	RS-485 Modbus RTU serial link
Approvals	
EMC	According to EN50270
ATEX	EN50271 and metrological performances according to EN60079-29-1
Low Voltage Directive	According to EN61010
CSA	Pending
Functional safety (Reliability data)	SIL1 capability according to EN50271:2010
	λdu =2,29.10-6, PFDavg=1,03.10-2, Ti=1 year, MTBF=20 years, SFF 60% (data for 4 channel version, 24 Vdc powered)
MED	According to Marine Equiment Directive 96/98/EC. Fulfills the EMC requirements for installation in General Power Distribution Zone and/or Deck Zone.

Our fixed detector range

OLCT 10

OLCT 10N

CTX 300

OLCT 100

iTrans 2

OLCT 80

OLCT 60

OLCT 60 / OLCT IR

OLCT IR

Spyglass

Flamevision

OLDHAM

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