



## MX 43

- Analog and digital controller
- 4 or 8 lines / 16 to 32 detectors max
- Highly versatile controller
- SIL 1 reliability



### Approvals



## 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.

Large graphic display

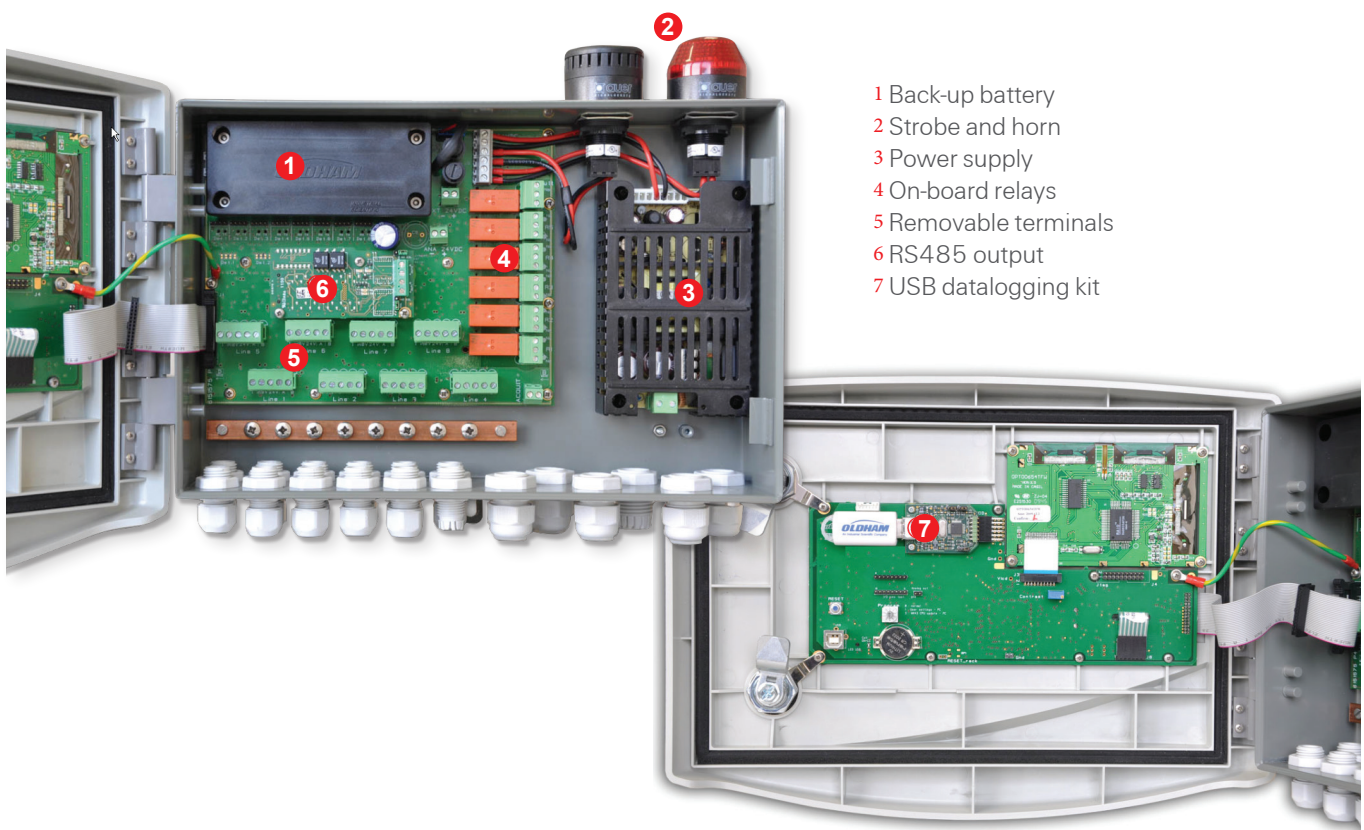
Smart keys make embedded menus simple to use



Front panel LEDs allow a quick and basic overview of the installation.

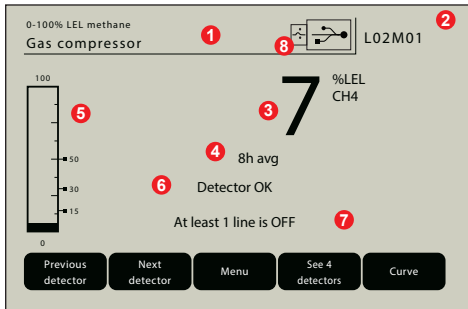
MX 43 manages both digital lines and analog channels, and covers all needs for a wide variety of applications.

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

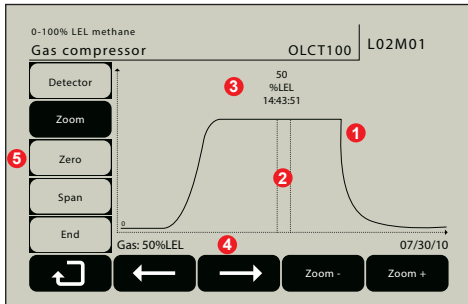
## Normal Mode



- 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

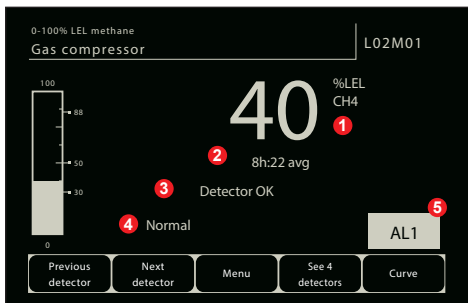
## Calibration Curve

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

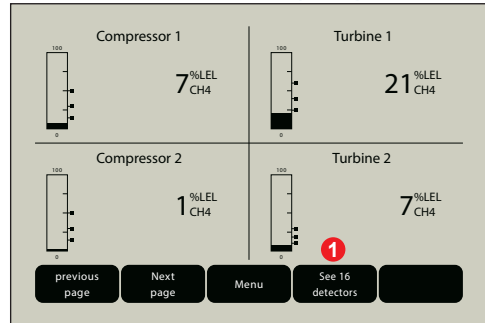
## Alarm mode



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

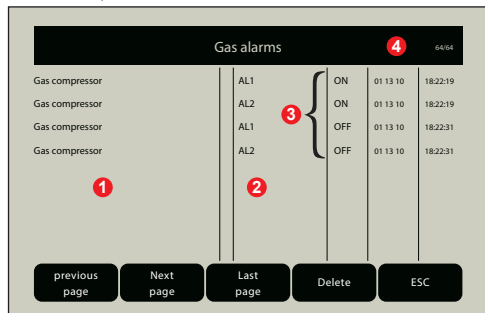
## In 4-channel display



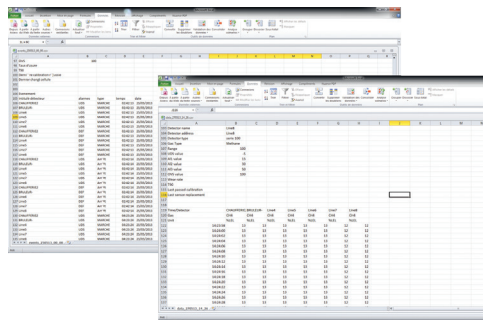
- 1 Up to 16 detectors can be displayed simultaneously

## Data-logging

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



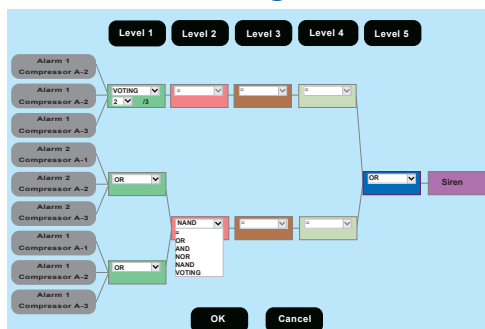
- 1 Detector tag
- 2 Event
- 3 Date and time of events appearance or clearance
- 4 Page number (up to 64 pages)



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



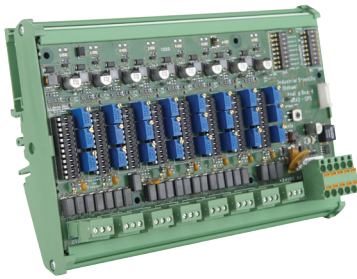
4 or 8-programmable-relay module can be located closer to the actuators for cost savings.

### 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



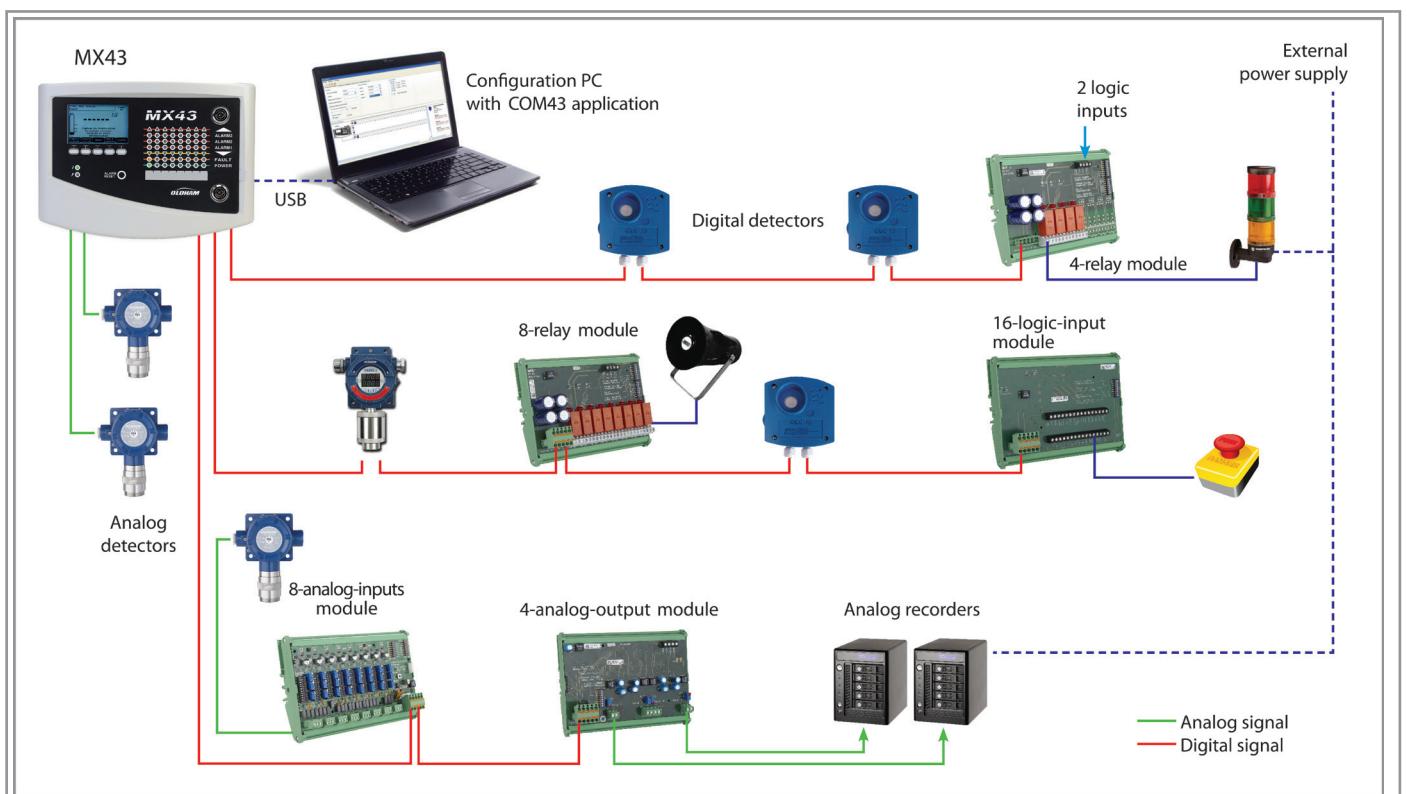
This module enables standard analog transmitters (gas or flame detectors for instance) to be connected on a digital line for cost savings.

### 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



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 mm <sup>2</sup> (8 to 11 AWG) outer diameter cable 6 M20 cable glands, 6 to 12 mm <sup>2</sup> (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 for detector status 1 common LED for Fault condition 1 common LED for Power indicator
Buttons	5 smart keys 1 audible alarm accept/reset button
<b>Operating use</b>	
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)
<b>Measurement lines</b>	
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)
<b>Alarms</b>	
Per channel	5 alarm levels (A1, A2, A3, Overscale, Underscale) + Fault Non-ambiguity reading option for combustible gases monitoring
Programmable thresholds	On instantaneous 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
<b>Approvals</b>	
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 $\lambda_{du}=2,29 \cdot 10^{-6}$ , $PFD_{avg}=1,03 \cdot 10^{-2}$ , $T_i=1$ year, MTBF=20 years, SFF 60% (data for 4 channel version, 24 Vdc powered)
MED	According to Marine Equipment 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



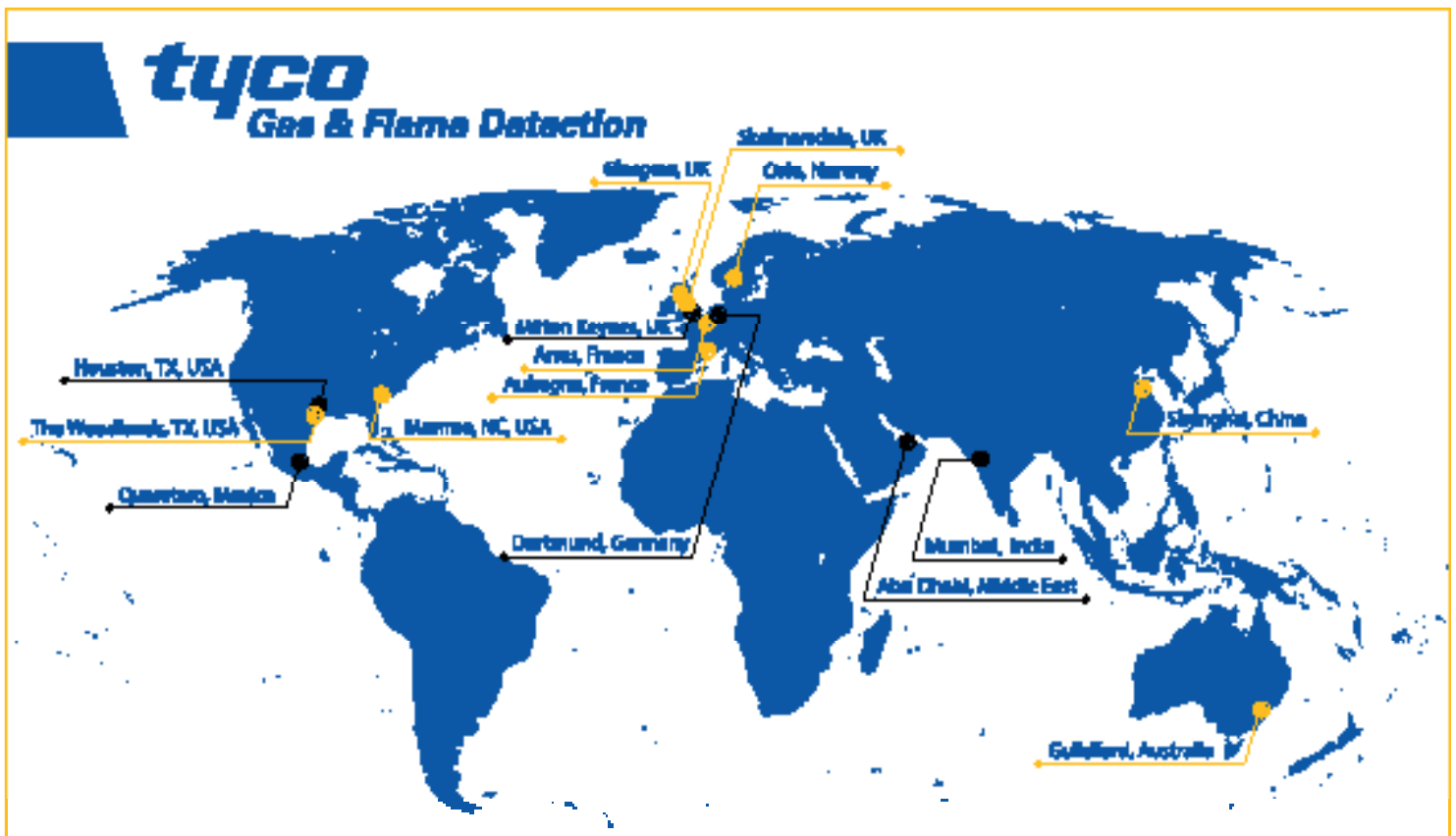
Meridian



Spyglass



Flamevision



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