

# MINERVA® MX

## MX1000 / MX4000 / ZX1 / ZX4 MX Panel Range

### Features:

- Long term service and support
- Reliable, modular fire controllers
- LPCB, BV, UL, VdS approved controllers, network, detectors and ancillaries
- Expandable from one 1 zone controller to multiple 240 zone, 1000 point controllers
- Easy to use with flexible and powerful configuration functions

### MINERVA® MX Panel Range

MINERVA® MX is a comprehensive range of fire controllers designed and built to BSEN ISO9001/2 and EN54 for installation to BS5839 Pt. 1. An advanced proven microprocessor based system, MINERVA® MX provides conventional and digital addressable detection for new, refurbished and refitted detection systems.

A wide range of detectors and ancillaries makes MINERVA® MX suitable for applications from clean areas and offices to large industrial and hazardous areas.

### What should you expect of your fire detection system?

In broad terms: cost effective reliability and flexibility. In today's buildings, under today's conditions, you should also be looking for ease of operation, flexible programming, precise fire source pin-pointing and the kind of circuitry and sensitivity which ensures rapid activation in the event of a fire.

### MINERVA® MX meets all these expectations as a matter of course.

MINERVA® MX is a comprehensive range of fire controllers designed and built to BSEN ISO9001/2 by the UK's leading fire and security company. The 4 similar models are:- MX1000/MX4000/ZX1 & ZX4. The MX1000/MX4000 may be installed to BS5839 Part 1 and have been approved by LPCB and the ZX1/ZX4, have been approved by VdS.

An advanced proven micro-processor based system, MINERVA® MX provides conventional as well as digital addressable detection at the price of today's conventional systems.



The decision to sound the alarm is made at the controller allowing adjustments and compensations to be made for changes in environmental conditions. In short, maximum security whilst minimising the risk of false alarms.

Modular in design, MINERVA® MX provides economical fire detection for small buildings but is also flexible enough to implement the complex event procedures required in larger ones. Detectors are controlled in groups of up to 240 zones all software configurable, so avoiding the expensive need to hardwire each zone back to the control panel. Further savings are made possible by harnessing the power of the latest micro-processing technology to enable a single loop of two-core cabling to carry both detection and command signals.

Backwards compatibility is also achieved by using an ancillary module which allows existing fire systems to be updated and extended cost effectively, utilising existing wiring where possible and with minimal disruption. Other ancillary modules offer even greater system flexibility: short circuit sensing isolation ensures the MINERVA® MX continues in operation, even if a wiring fault occurs. Local sounder activation further reduces wiring costs and switch monitoring allows easy interface to a building's plant and control systems.

Further flexibility and installation savings can be made using the loop power MINERVA® MX options. Loop powered MINERVA® MX panels allow sounders to be powered from the same loop wires that carry communications and power to the detectors and other ancillaries.

## MINERVA® MX Key Functions

Thanks to powerful software each zone can be given a tailor-made response text message to help locate the source of a fire. Software configuration and reconfiguration can be carried out on site, with minimum disruption and the avoidance of system down time. Correct execution of the software is ensured by twin micro-processors that perform watchdog functions on each other.

MINERVA® MX sounders can be set for either continuous, pulse, or a combination of two tones via the system software. The pattern of signals is programmable, allowing phased, controlled evacuation of buildings.

To aid the rapid location of fire, remote repeater panels or geographical mimics can be connected to the controllers for greater monitoring convenience, as can visual display units.

For management information, a printer can also be connected to the MINERVA® MX providing a hard copy of events. MINERVA® MX has the capacity to store up to 1000 events in its memory.

A weekly test reminder facility can be built in, while a walk-test facility allows truly cost-effective systems checking by a single operative.



### MINERVA® MX1000 & MX4000

The MINERVA® MX panels are intelligent LPCB EN54 approved panels, which can be networked to provide up to 396 detection loops and installed to BS5839:Pt. 1.

- The MX1000 supports one MX DIGITAL detection loop with up to 250 addressable devices.
- The MX4000 supports two MX DIGITAL detection loops and can be expanded to four loops supporting up to 1000 addressable devices.

The panel has a strong cast aluminium front door, which incorporates a modular user interface that fully complies with EN54:pt.2. The user interface incorporates the ODM800 operator display module with a 16 x 40-character backlit LCD display, simple alphanumeric keypad and 5 softkeys.

The OCM800 operator control module provides all mandatory operator control keys and LED functions including Day/Night switching. Two control keys and 2 indication LEDs are provided for site-specific functions.

Control keys and LEDs are labelled in English according to the default LPCB functionality. The slide in decals can be reversed and alternative text added.



Both panels consist of a strong steel enclosure incorporating a removable chassis plate. The chassis plate holds:

- PSB800 5A 24Vd.c. battery backed power supply and loop booster to EN54:pt.4
- FIM800 field interface PCB incorporating one or two MX DIGITAL loops
- CPU800 32 bit processor and memory card
- Optional network card, additional loop card (s) and remote diagnostic modem
- Optional IOB800 input/output expansion card mounted on the PSB800



### MINERVA® MX Repeaters

The MINERVA® MX full function repeater is an EN54 LPCB approved repeater with optional addressable EN54:Pt.4 power supply. The repeater consists of a steel backbox and cast aluminium front door which incorporates the ODM800 operator display module with a 16 x 40-character backlit LCD display, simple alphanumeric keypad and 5 softkeys. The OCM800 operator control module provides all mandatory operator control keys and LED functions including Day/Night switching. Two control keys and 2 indication LEDs are provided for site-specific functions.

The MINERVA® MX repeater with Power Supply is connected to the Panel via the remote bus (RS485, 1200 m distance). A maximum of 7 repeaters (including one MX REMOTE repeater) can be linked to each MINERVA® MX panel and can provide full repeater functions for all panels on the system.

The operator control module (OCM800) can support up to 80 inputs and outputs in the form of LED annunciators, IOB800 input/output modules, XIOM universal I/O modules or the XIOM 800 LED mimic module.

Control keys and LEDs are labelled in English according to the default LPCB functionality. The slide in decals can be reversed and alternative text added.

The back box has a removable chassis plate with the PSM800 power supply, APM800 addressable PSU monitor module and space for 2 x 7 Ah batteries to provide 72 h backup.





## ZETTLER Expert 1000 & 4000

The ZETTLER EXPERT panels are intelligent LPCB & VdS certified EN54 panels, which can be networked to provide up to 256 detection loops.

- The ZX1 supports one Tyco MX DIGITAL detection loop with up to 250 addressable devices or 128 for VdS certified installations.
- The ZX4 supports two Tyco MX DIGITAL detection loops and can be expanded to four loops supporting up to 1000 addressable devices or 512 devices for VdS certified installations.

The user interface incorporates the ODM800 operator display module with a 16 x 40-character backlit LCD display, simple alphanumeric keypad, 5 softkeys and a fast access key. The OCM800 operator control module provides all mandatory operator control keys and LED functions including Day/Night switching. Four control keys and 4 indication LEDs are provided for site-specific functions.

Control keys and LEDs are labelled in German according to the default VdS functionality. The slide in decals can be reversed and alternative text added.

The batteries and any additional zone LED's or operator controls are mounted in a separate housing which can be mounted below the main panel or behind the panel. This expansion battery box is supplied with the panel as a deep box to take 38Ah batteries. The chassis plate in the battery box also has space for up to 2 x IOB800 input/output expansion modules (maximum 24 I/O) or a TUD800 German Fire Brigade transmission unit.

The battery box can have one or two 40 way zone indicators (ANN840) mounted in the front door.

Both panels consist of a strong deep steel enclosure incorporating a removable chassis plate. The chassis plate holds:

- PSB800 5A 24V DC battery backed power supply and loop booster to EN54:pt.4
- FIM800 field interface PCB incorporating one or two MX DIGITAL loops
- CPU800 32 bit processor and memory card
- Optional network card, additional loop card (s) and remote diagnostic modem

The panel has a strong cast aluminium front door, which incorporates a modular user interface that fully complies with EN54:pt.2.



## ZETTLER Expert Repeaters

The ZETTLER EXPERT full function repeater is an EN54 LPCB & VdS certified repeater with optional addressable EN54:Pt.4 power supply. The repeater consists of a steel backbox and cast aluminium front door which incorporates the ODM800 operator display module with a 16 x 40-character backlit LCD display, simple alphanumeric keypad, 5 softkeys and a fast access key. The OCM800 operator control module provides all mandatory operator control keys and LED functions including Day/Night switching. Four control keys and 4 indication LEDs are provided for site-specific functions.

Control keys and LEDs are labelled in German according to the default VdS functionality. The slide in decals can be reversed and alternative text added.

The back box has a removable chassis plate with the PSM800 power supply, APM800 addressable PSU monitor and space for 2 x 7 Ah batteries to provide 72 h backup. The ZETTLER EXPERT Repeater with Power Supply is connected to the Panel via the remote bus (RS485, 1200 m distance). A maximum of 7 repeaters (including one MX REMOTE repeater) can be linked to each ZETTLER EXPERT panel and can provide full repeater functions for all panels on the system.

The operator control module (OCM800) can support up to 80 inputs and outputs in the form of LED annunciators and IOB800 in/output modules



## Mechanical

Dimensions (WxHxD): Controller 440 x 320 x 120mm (MX)  
440 x 640 x 245mm (ZX)  
Colour: Dawn Grey (Housing) Pantone - 431C  
(Modules)  
Installation: Surface or Semi-flush Mounted

## Environmental

Operating Temp. Range: -8°C to +55°C  
Storage Temp. Range: -20°C to +70°C  
Humidity: Up to 95% RH (Non-condensing)  
Housing Protection To: IP30

## Electrical

Mains Supply: 120V-240Vac + 10% / -15% at  
50/60Hz  
Secondary Supply: 24V d.c. Nominal

## Input

No. of Loops: 1 (MINERVA® MX 1000)  
4 (MINERVA® MX 4000)  
1 (MINERVA® ZX1)  
4 (MINERVA® ZX4)  
Addresses per Loop: 250 Max (all panels above)

## Output

Display: 240 Zone (all panels above)  
16 x 40 Character (all panels above)  
Sounder: There are two separate monitored  
sounder outputs each rated at 2A.  
Alarm: Fire – Relay output rated at 30V d.c.  
at 1.0A volt free c/o.  
Fault – Relay output rated at 30V d.c.  
at 1.0A volt free c/o.

## Detector Base Command Modules

801IB	Isolator Base
801RB	Relay Base
601SB	Conventional Sounder Base
601SBD	Conventional Diode Sounder Base
802SB	Loop Powered Sounder Base
901SB	Universal Sounder Base

## Command Modules

SNM800	Sounder Module
LI800	Line Isolator Module
RIM800	Relay Module
CIM800	Contact Monitor Module
SB520	Sounder Booster Module
LPS800	Loop Powered Sounder Module
TM520	Timer Module
DIM800	Conventional Detector Module
APM800	Power Supply Monitor Module
MIM800	Mini Input Module
LAV800	Extinguishing Interface Module
SIO800	Single Input/Output Module
SAB800	Sounder Addressable Beacon
SAM800	Sounder Addressable Module
BDM800	Beam Detector Module



**The right is reserved to modify or withdraw any product  
or service without notice**

**Technical Information Sheet PSF126U Issue 2**

[www.tycosafetyproducts-europe.com](http://www.tycosafetyproducts-europe.com)

©Tyco Safety Products 2003

