MINERVA® Marine

MX / T2000 Panel Range

Features:

- Enhances fire detection and eliminates unwanted alarms using "fuzzy logic"
- Assists fire fighting and training by providing on-screen risk management information
- Helps fire crews by giving smoke density and temperature readings in the affected areas
- Simplifies maintainance by pin-pointing faults
- Enables remote fault finding to be carried out
- Flexible interfacing with graphic management systems

MINERVA® Marine Panel Range

MINERVA® MX is a comprehensive range of fire controllers designed and built to BSEN ISO9001/2 and EN54. 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 general cargo vessels to large passenger vessels and offshore installation.

What should you expect of your fire detection system?

In broad terms: cost effective reliability and flexibility. In today's vessels 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

MX/T2000 is a comprehensive range of fire controllers designed and built to BSEN ISO9001/2 by the world's leading fire and security company. The MX/T2000 has been approved by all the major marine authorities.

An advanced proven micro-processor based system MINERVA® MX provides conventional as well as 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 vessels 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 MX/T2000 continues in operation, even if a wiring fault occurs. Local sounder activation further reduces wiring costs and switch monitoring allows easy interface to a vessels machinery control system.

Further flexibility and installation savings can be made using the loop power MX/T2000 options. Loop powered MX/T2000 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.
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.

The displayed temperature and smoke density reading allows the operator to quickly visualise the situation and select the appropriate procedures to be implemented.

For management information, a printer can also be connected to the MX/T2000 providing a hard copy of events. MINERVA® MX has the capacity to store up to 1000 events in its memory. Finally a weekly test reminder facility can be built in, while a walk-test facility allows truly cost-effective systems checking by a single operative.

MX / T2000

The MX/T2000 panels are intelligent EN54 approved and marine approved sub-panels, which can be networked to provide up to 396 detection loops and installed to BS5839:Pt.1.

. The T2000 sub-panel supports up to four loops supporting up to 1000 addressable devices and can be expanded using additional loop sub-panels

The panel consists of a strong stainless 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 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

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 Manned/Unmanned switching. Two control keys and 2 indication LEDs are provided for vessel-specific functions.

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

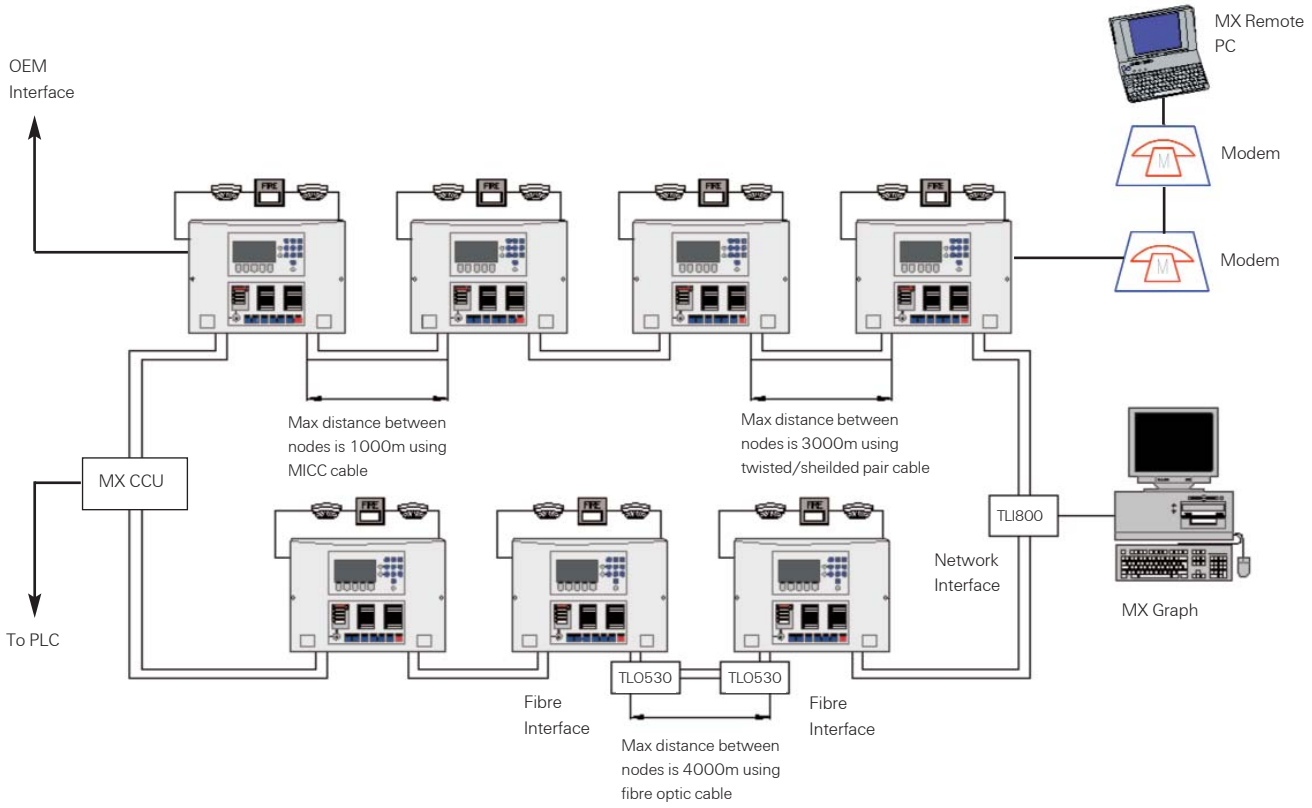
MINERVA® MX T2000 Repeaters

The MINERVA® MX full function repeater is an EN54 Marine approved repeater with optional addressable EN54:Pt.4 power supply. The repeater consists of a stainless 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 Manned/Unmanned switching. Two control keys and 2 indication LEDs are provided for vessel-specific functions.

Control keys and LEDs are labelled in English according to the default approved 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. 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.

Interfacing Options



Up to 99 MX/T2000 sub-panels can be linked together providing unrivalled design flexibility.

Interfacing to PLCs

An industrial standard protocol is available to allow the MX/T2000 to communicate with PLCs. This is especially useful in offshore type installations.

Remote Diagnostics

Reduces the cost of service and fault finding by using a trained engineer in an office to remotely identify faults and solutions via our unique MX Remote.

Graphical Management Systems

Provides intuitive user friendly graphics for easier incident management on large passenger vessels.

Peer-to-Peer Interface to 3rd Party Systems

Unique protocol to allow development of peer-to-peer interface.

Technical Specifications

Mechanical

Dimensions (WxHxD):	Controller 440 x 320 x 135mm
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:	IP42

Electrical

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

Input

T2000 Sub-Panel

No. of Loops:	4
Addresses per Loop:	250 Max

Output

T2000 Sub-Panel

Display:	240 Zone 16 x 40 Character
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
802SB	Loop Powered Sounder Base
5B	5″ Universal Base

Command Modules

SNM800	Sounder Module
RIM800	Relay Module
CIM800	Contact Monitor Module
SB520	Sounder Booster Module
TM520	Timer Module
DIM800	Conventional Detector Module
APM800	Power Supply Monitor Module
MIM800	Mini Input Module
CP820M	Indoor Callpoint
CP830M	Outdoor Callpoint

tyco / Safety Products

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

Technical Information Sheet PSF126UM Issue 1

www.tycosafetyproducts-europe.com

©Tyco Safety Products 2003