MINERVA® MZX125

Digital Addressable Fire Detection System

Features:

- Long term service and support
- Supports 1 MXDigital loop with 125 addresses
- 2 KM loop length
- 16 way zonal LED display
- High level User Interface with "Front Panel Controls" to reduce lifetime cost of ownership
- Wide range of detectors including the 3otec triple sensing detection. Early detection without false alarms.
- Wide range of ancillaries including door control to BS7273 category A
- DDA compliance using the advanced 3000 series AV Base and loop powered sounder beacons.
- Approved to EN54 the system is designed to be installed to BS5839
- Expandable to 1 loop of 250 points when MXDesigner and MXConsys configuration tools are used

The Minerva® MZX125 is a highly featured digital addressable panel with a comprehensive but easy to operate user interface. The system provides a single loop of 125 addresses making it suitable for small to medium size premises.

The MXDigital protocol is robust enough to operate over most cable types making it an ideal choice for upgrades where existing cables can be reused to dramatically cut costs. The built in power supply will charge the internal batteries and support a full compliment of loop powered sounders and beacons in accordance with the requirements of BS5839. The Minerva® MZX125 is a fire detection controller at the heart of a comprehensive fire detection system that can be used to protect both life and property.

The MZX125 is configured for 125 addressable points when used with the MXConsys Express configuration tool. It can be expanded to a maximum of 250 points on a single loop by using MXDesigner in combination with the MXConsys configuration tool.

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Disability Discrimination Act

With Minerva® MZX125, compliance with the DDA is uncomplicated and does not require the use of special, high cost detection units. In place of the standard detector base, Minerva® MZX125 uses an AVbase that produces a high intensity beacon of light in addition to the audio signal. No additional wiring is required.

The full standard range of MX detectors can be used with the AVBase including 3*o*tec and flame detection. The result is DDA compliance with flexibility of design and lower lifetime cost. In situations where ceiling mounted beacons would be ineffective in complying with the DDA, wall mounted loop powered beacons and sounder beacons can be incorporated. To ensure that a DDA compliant system remains compliant, Minerva® MZX125 can monitor the operation of both sounders and beacons. RSM (Reflective Sounder Monitoring) will alert the user should an alarm fail to operate during the weekly test.

Customer Maintenance Features

MINERVA® MZX125 has been designed with the long term interest of the end user in mind. Standard user controls such as view statuses and isolate\ de-isolate are simple to use with easy to follow text menus. Customers can also use the comprehensive "Front Panel Updates" feature to carry out many functions for example, change zone and point text or even add and remove devices from the system. This powerful feature gives users the option to take full management control of the fire detection and alarm system.

New Standard for Door Control

Preventing the spread of smoke in the event of a fire is essential and the fire detection panel has to be relied upon to actuate door closure. BS7273 part 4: "Actuation of release mechanisms for doors", defines three category of door actuation. Minerva® MZX125 can perform to the highest category "A" making it suitable for the most stringent life risk applications.

3*o*Tec

There is an obligation to comply with legislation such as the Regulatory Reform (Fire Safety) Order or the Fire (Scotland) Bill to ensure the safety of occupants. Similarly the avoidance of disruptive false alarms from the fire detection system is paramount. 3*o*Tec is a triple sensing detector that uses advanced algorithms to intelligently analyse the level of smoke, heat and carbon monoxide. The result is, fires are detected much earlier and false alarms can be eliminated.

MZX16R Repeater

The Minerva® MZX16R is a fully functional repeater that has the full user functionality of the Minerva® MZX125 controller itself. Up to 7 fully functional repeaters can be driven from the 2 wire remote bus making installation of repeaters both simple and economical. Like the Minerva® MZX125 panel, the repeater is fully approved to EN54 and houses it's own mains driven power supply making it power independent of the main controller.

MXConsys Express Configuration Tool

Installation and commissioning has been greatly simplified through the use of a user friendly software configuration tool, MXConsys Express. This simple to use configuration tool allows the system to be easily customised within the scope of the prevailing standards EN54 and BS5839.

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Detectors

Minerva® MX Series 800 addressable fire detectors include optical, heat, flame and carbon monoxide detection technologies. They all feature a low profile design with 360 degree visible LED indication and interchangeable base. The choice of detector is determined by the risk and the need to avoid false alarms. The three multi sensors in the range will provide the best level of cover for the majority of applications whilst the heat and flame detectors would be used for more challenging or specialist areas.

801PC 3*o*Tec Triple Sensing Detector

A combined optical, heat and carbon monoxide fire detector with exceptional performance. 3*o*Tec offers early detection of a wide range of fire types from slow smouldering to flaming together with a high level of immunity from false alarms. Typical applications include sleeping accommodation, hotel bedrooms, halls of residence, senior homes.

801PH High Performance Optical Detector

A combined photo-optical and heat detector that is ideal for the protection of escape routes and circulation areas. The sensitivity of the optical chamber is enhanced when heat is sensed resulting in reliable high performance detection. The 801PH will simultaneously operate as an EN54 A1R rated heat detector and high performance optical smoke detector. Typical applications include escape routes, corridors, circulation areas, offices.

801CH Carbon Monoxide Detector

Ideal for detecting very slow smouldering fires, typically from discarded cigarettes. The 801CH can be used in dusty areas where optical smoke detectors could not be used and when the level of risk makes it inappropriate to rely on heat detectors alone. Typical applications include workshops, storage areas, textile industry.

801H Heat Detector

The 801H heat detector can be used where environmental conditions preclude the use of smoke detectors. EN54-5 approved settings are available for use in normal ambient and high ambient temperature environments. Typical applications include kitchens, car parking garages.

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801F Point Flame Detector

The 801F solar blind flame detector provides a fast response to flame and can reliably detect a 0.1m^2 fire at a distance of 20m. Use to protect non-hazardous areas containing materials that are highly flammable. Typical applications include generator rooms, boiler rooms.

Detector Bases and base accessories

5B Detector Base

The 5B 5" detector base is the standard base for use with Minerva® MX point detectors. It carries a built in locking pin and is electronics free permitting cable testing for trouble free installation.

5BI Isolator Base

The 5BI 5" detector base provides short circuit protection for use with Minerva® MX point detectors. An amber LED indicates isolator operated.

801RIL Remote Indicator

The 801RIL is a remote LED indicator for use when the detector is out of sight or in a room that is likely to be locked. Fits a standard one gang backbox.

CW-5B Protective Cage

CW-5B is a robust steel protective cage for MX detectors using the standard 5" base or Isolator base. Ideal for schools and sport halls or whenever detectors need protection. Strong coated steel construction with 4 point fitting.

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DHM5B Deckhead

DHM5B Deckhead mount provides IP55 protection where the detectors are mounted in humid and environmentally challenging situations. The DHM5B deckhead mount provides a sealed waterproof mounting which protects the base electrical connections.

Callpoints

There are two addressable callpoints available for use with the Minerva® MZX125 system. The CP820 Indoor callpoint and the CP830 IP67 rated outdoor callpoint. The indoor unit can be surface or flush mounted and both incorporate a test key facility, integral LED indication and can be fitted with a hinged cover to prevent accidental operation

Ancillary Modules

MX Addressable modules are housed in a M520 cover housing that fits a standard double gang electrical box and has an LED indication and programming socket. There are five addressable input \ output modules specifically for use with the Minerva® MZX125.

RIM800 Relay Interface Module provides one set of change over contacts rated at 24Vdc. The device can be easily programmed to operate for a number of functions including interfacing and plant control. An additional module the HVR800 is a self powered high voltage relay which allows 240V loads of up to 10A to be driven directly via the addressable loop.

CIM800 Contact Input Monitor will monitor volt free contacts whilst providing open and short circuit monitoring of the interconnections. Used to interface alarm and fault inputs from a variety of equipment with optional delay for sprinkler alarm inputs.

TSM800 Door Control Module is a dedicated fire protection interface module that can control door actuation in accordance with BS7273 for category A and has built in line isolation.

LIM800 Line Isolator Module provides short circuit protection to the addressable loop to meet the requirements of BS5839.

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Sounders and Beacons

Minerva® MZX125 supports fully loop powered sounders and beacons that are driven directly from the detection loop, minimising cabling and installation costs. MXConsys Express will automatically configure any mix of sounders, up to the maximum permitted, with tone compatibility in accordance with BS5839.

802SB Sounder Base provides a convenient package for providing sound in smaller spaces with a 90dB output. Any of the MX detectors or the SAB801 sounder beacon can be fitted.

SAB801 Addressable Beacon is a high efficiency low powered beacon that fits on either a standard detector base or the 802SB sounder base. It can be ceiling mounted or wall mounted to give optimum performance.

AVBase Advanced 3000 series AV Base is an addressable detector base available as an independently controlled sounder and beacon combination (LPAV3000) or a sounder only device (LPSB3000). Both have built in line isolators and feature RSM, Reflective Sound Monitoring. The sounder is tone compatible with the other sounders in the Minerva® MX range and the high efficiency LED beacon gives 360° coverage.

LPSY Loop Powered Symphoni Sounders and Sounder Beacon are indoor (available in red and white housings) and outdoor units (red I.P.65), all with built in line isolation and featuring Reflective Sound Monitoring (RSM). The range employs a transducer to actively monitor the units sound output during the weekly sounder test. The Minerva® MZX controller will report any sounder not sounding when commanded. Similarly the units fitted with addressable beacons are monitored to ensure correct operation of the beacon. Integral line isolators reduce the need for separate line isolation devices saving installation time and wiring costs. 16 Tones are available from the sounder which include tones compatible with the 802SB sounder base and AVBase.

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Technical Specifications

Minerva MZX125 Control Panel & Repeater

Mechanical

Dimensions (mm): H W D

Panel/Repeater	370 x 325 x 126mm
Approx Weight:	
Panel	7kg
Repeater	6.6Kg

Colour

Housings:	Dawn Grey (BS 4800 10A – 03)
Control Facia:	Pantone Grey 431C

Environmental

Operating Temperature: -8°C to +55°C
Storage Temperature: -20°C to +70°C
Relative Humidity: 90% RH continuous (non-condensing)

EMC/RFI:
EN50130-4, EN50081-1

Electrical

Supply Voltage:	110 - 240 Vrms
Input Current:	0.8 – 1.6 Amp
Max Charge Current :	3.8A (dependant on standby current)

Device	Type	Typical maximum
802SB	Sounder Base	60
LPSB3000	Sounder base with isolater	90
LPAV3000	Sounder/beacon base with isolator	35
SAB801	Beacon with 5" base	120 or 40 with 802SB
	Beacon with 802SB sounder base	
LPSY800R	Indoor sounder red	Combined maximum 55
LPSY800W	Indoor sounder white	
LPSY865	Outdoor sounder red	
LPAV800R	Indoor sounder beacon red	
LPAV800W	Indoor sounder beacon white	
LPAV865	Outdoor sounder beacon red	

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Detectors	801PC 3otec Triple Sensing Detector	801PH High Performance Optical Detector	801CH Carbon Monoxide Detector	801H Heat Detector	801F Point Flame Detector
Dimensions Diameter x Height mm	109 x 43				109 x 21.2
Operating Temperature Range Deg. C	-10 to +55	-20 to +70	0 to + 55	-25 to +70 (-40 to + 90 short periods)	-20 to +70
Storage Temperature Range Deg. C	-20 to +55	-40 to +80	- 20 to +55	-40 to + 80	-40 to +80
Relative Humidity (non condensing)	90%	95%	95%	95%	90%
Standards	EN54-7 & EN54-5	EN54-7 & EN54-5	EN54-7 & EN54-5	EN54-5	EN54-10

Ancillary Modules	CP820 Indoor Callpoint	CP830 Outdoor Callpoint	RIM800 Relay Interface Module	CIM800 Contact Input Monitor	TSM800 Door Control Module	LIM800 Line Isolator Module
Dimensions Height Width x Depth mm	93 x 89x 59.5 with surface back box	93 x 97.5 x 73	Uses M520 ancillary cover to fit standard double gang box 87 x 148 x 23.5			
Operating Temperature Range Deg. C	-10 to +55	-25 to +70	-25 to +70	-25 to +70	-25 to +70	-25 to +70
Storage Temperature Range Deg. C	-30 to +70	-30 to +70	-40 to +80	-40 to +80	-40 to +80	-40 to +80
Relative Humidity (non condensing)	95%	95%	95%	95%	95%	95%
Electrical Characteristics	Quiescent 0.46mA Alarm 4.5mA	Quiescent 0.46mA Alarm 4.5mA	Relay Contact: 2A @ 24V dc Standby: 0.46mA max Alarm: 4.5mA max	Standby: 0.505mA max Alarm: 4.5mA max Maximum Wiring Resistance Monitored Circuit: 10 Ohms	Relay Contact: 2A @ 24V Quiescent 0.425mA Alarm 3.0mA	Input Current: 80µA max (normal) 3.5mA max (tripped)

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	Indoor use						Outdoor use	
Sounders & Beacons	802SB Sounder Base	SAB801 Addressable Beacon	LPSY800-R Sounder Red	LPSY800-W Sounder White	LPAV800-R Sounder Beacon Red	LPAV800-W Sounder-Beacon White	LPSY865 Sounder IP65 Red	LPAV265 Sounder-Beacon IP65 Red
Dimensions Height x Width x Depth mm	110 mm Dia x 37.5	108 mm Dia x 32	104 x 104 x 91				108 x 108 x 100	
Operating Temperature Range Deg. C	-25°C to +70°C	-10°C to +55°C	-10°C to +55°C				-20°C to +70°C	
Storage Temperature Range Deg. C	-40°C to +80°C	-25°C to +70°C	-25°C to +70°C				-25°C to +70°C	
Relative Humidity (non condensing)	95%	95%	95%				95%	
Electrical	1.2mA to 6.8mA	3.25mA	3.4mA to 8.1 mA	3.4mA to 8.1 mA	6.5mA to 13mA	6.5mA to 13m A	3.4mA to 8.1mA	6.5mA to 13mA
Sound output dBA @ 1m	90dB ± 3dB	-	103dB ± 3dB				103dB ± 3dB	

AVBase	LPSB3000 Addressable Sounder Base	SAB801 Addressable Sounder Beacon
Dimensions Height Diameter x Height mm	110 x 37	
Operating Temperature Range Deg. C	-10 to + 55	
Storage Temperature Range Deg. C	-25 to + 70	
Relative Humidity (non condensing)	0.95	
Output dBA @ 1m	90	

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