



The benefits of installing MZX Technology into a School

// Overview:

The Requirements for installing a suitable fire detection and alarm system within a School will vary dependent upon the type and size. Small schools may only require a manual system, whereas a larger school will benefit from having automatic fire detection installed. Arson in schools may be a problem requiring detectors in critical and high value areas. In schools where evening classes are held and therefore only partially occupied additional detection may be required. Schools are also quite diverse in their occupancy and therefore the fire detector should suit the environment, a normal classroom being quite different to a physics laboratory or a craft workshop. During unoccupied periods a different set of rules may apply when the detection system may need to be at its most sensitive. Disruption to the school day as a result of unwanted alarms can be critical, especially during examinations and so the reliability factor is extremely important when selecting a suitable system.

The **MZX** fire detection and alarm system is a complete system from a single manufacturer designed to provide optimum performance at all times. Some of the systems key features are highlighted below.

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// **Risk:** Schools often rotate classrooms with a former craft workshop becoming a library. As the risk changes so should the fire detector although all too often this fact will be ignored and so the system remains as it was, increasing the risk of unwanted alarms. High levels of unwanted alarms are disruptive to the school's curriculum and may even affect a person's response which could easily lead to a fatality.

// **Solution:**

By installing **850PC multisensors** this problem is overcome. The multisensor has six detection modes, and employs three detection channels, heat, smoke and combustion gas (carbon monoxide). These channels are combined in software to provide optimum detection based on the occupancy and risk. If either or both of these change the detection mode can be changed to suit. Changing Modes can be as simple as pressing a button on the panel, or if permanent change is required, it's a simple reconfiguration in software. Simple and inexpensive compared to other solutions. The 850PC can be configured as a High performance Optical Detector, Compensated Carbon Monoxide Sensor (Fire), Carbon Monoxide Sensor (Toxic Gas), a Heat Sensor or as a Resilient or Universal (High sensitivity) optical detector. The 850 series of sensors are available in 10 standard colours, to match most decors, are available with and without an integral short circuit isolator and use sophisticated digital signalling to ensure reliable communications with the MZX control panel.

MZX technology continues to offer reliability and value throughout its lifetime.

// **Risk:** Class change systems are employed in schools to indicate the end of a lesson and the need to go to another class.

These systems can be comprehensive standalone systems integrated with the school clocks providing synchronisation throughout the school or campus. Alternatively where the requirements are simpler, specifiers may want to save cost and integrate the class change within the fire alarm, using common sounders. In this situation it is the responsibility of the

designer to ensure that this is done ensuring that the fire alarm system is in no way compromised by the other system.

// **Solution:**

By specifying and installing an **MZX** system, a **Class Change input** can be programmed to allow a switched input to activate all sounders for a short period of time after which they will automatically turn off. If a more complex system is required where sounders need to be configured with a completely different tone (sound), and be switched on and off automatically at different times of the school day, then a programme can be quickly and easily configured by creating a **USER DEFINED GROUP** within the Configuration software. Timers exist within the system software providing a programme of days/weekdays, months and on times. **With this combination it is possible to target the class change several times a day, excluding weekends and holiday periods.**

// **Risk:** What happens if by accident the system is activated. This is still referred to as an unwanted alarm, which could be caused by accidentally operating a manual call point, or some unusual occurrence close to a sensor.

Sometimes it is not unknown in schools for students to activate call points maliciously. It is possible to protect against accidental operation by fitting an additional cover, (Stopper) over the device, but malicious operation cannot be totally ruled out. The incident, whilst not really being a malfunction, still causes the same amount of disruption as that of a genuine alarm. To avoid unnecessary disruption to students and staff, incidents will often be investigated before evacuation takes place. When taking this course of action speed is of the essence as delays will undoubtedly increase the risk to all occupants.

// **Solution:**

Any investigation needs to be carried out quickly and under strict controls ensuring that time limits are in place and if exceeded, the system will automatically sound a full evacuation alarm. Every MZX control panel

has an **investigate delay programme** ensuring that a procedure is followed within those time constraints.

// **Risk:** Schools have to keep pace with demand and any population increase within the area might require additional resource within the School.

This often means what starts out as a single building grows campus style to several buildings. Investment is usually structured over long periods and it would be wasteful if systems had to be replaced or major upgrades carried out.

// **Solution:**

MZX technology offers a range of controllers from the compact MZX250 single loop, through the modular MZX2 panel which extends up to 8 loops. Controllers can be easily networked by adding the **TLI800EN network** card in up to 99 panels (99000 addresses), with panels interacting with each other where required. The network is true peer to peer and remains unaffected by a single node failure. Furthermore failure of any panel's main processor will not inhibit transmission of any fire alarm or fault signal from that panel across the network to a designated panel's zonal display. **The network is LPCB, EN54-2 and EN54-13 approved.** Additionally a windows based **graphics system** can be installed providing a layout of the buildings, with additional text, emergency file data, instructions to staff and other useful functions, ideal for the larger sites.

ZETTLER, is a leading brand of fire detection, security, and care communications products in the European market. The ZETTLER fire detection product line includes a wide range MZX TECHNOLOGY EN54 CPD approved fire detection products carrying approvals and cross-listings, including VdS and NF, for all European countries. The ZETTLER care communications product line is a technology leader providing the latest IP based Nursecall, Emergency Call, Communication and Management solutions for care homes, hospitals, prisons, and related markets. The ZETTLER product lines are available through ZETTLER dealers as well as many ADT and Tyco offices around the world. For more information, visit www.tycoemea.com.