



The benefits of installing **MZX Technology into a Hospital**

// **Overview:**

The Requirements for installing a suitable fire detection and alarm system within a Hospital will possibly come under the control of the local health board or their fire advisers.

The reliability of the system is paramount as its primary function is to protect life. Unlike most building whose occupants are of sound mind and body, this is not the case in hospitals and this should be taken into account when designing the system. Disruption can be stressful to patients and staff alike and it is therefore vital that the chosen system provides effective cover, performs reliably, and gives the maximum possible warning in the event of fire, given the additional difficulties and disruption in moving patients to safety.

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:** Are standard optical smoke detectors sensitive enough to fires in this type of premise where in some cases the residents are sick and sometimes frail to start with. Often and long before the smoke the first effect of fire is toxic gas.

Most of the furnishings in a hospital ward will contain carbon. When these materials are involved in a slow smouldering fire Carbon Monoxide is released. The combustion gas is highly toxic, odourless and colourless and poses a major threat to a person sleeping. Long before there are any visible signs, toxic gas levels can reach dangerously high levels. In older and frailer people the threat to life is exacerbated.

// **Solution:**

By installing the **850PC mutisensor** in patient areas, protection is afforded to the highest level from the emissions from a fire of Heat, Smoke and Carbon Monoxide. These three detection elements combine to provide a highly sensitive detector which increases its sensitivity in a fire where there is a presence of Carbon Monoxide. This enables the detector to operate in most cases much faster than a standard optical smoke detector enabling the occupant to be rescued earlier and suffering less from the effects of smoke/toxic gas inhalation.

// **Risk:** Hospital systems can be some of the largest in existence with numerous buildings on a campus style layout.

Detection is installed generally throughout the building(s) making the overall size of the system extremely large, cable runs extensive and the transmission of data around the site a challenge. Response to an incident needs to be fast; therefore information needs to be distributed around all control panels allowing the responder to visit the nearest panel. Integrity is key as hospitals cannot be evacuated in the normal way and without creating additional stress to patients who may already be vulnerable.

// **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 MZX network is a true peer to peer network which 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.

// **Risk:** What happens if the system is activated accidentally. This is still referred to as an unwanted alarm.

The incident, whilst not really being a malfunction, still causes the same amount of disruption.

// **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. MZX provides essential components to ensure a quick and accurate investigation of an alarm from a detector. Every MZX control panel has an **investigate delay programme** ensuring that a procedure is followed within those time constraints.

Any search needs to be on the basis of a single device, there is no time to search an area the size of a zone. All MZX systems can incorporate the **MZX Pager Interface** which delivers serial data to any number of receivers which can be carried by key personnel. The pager will display the alarm or fault status of every device, displaying the type of event, device type and its location. MZX technology also provides for both **Fully Functional** and the more **compact LCD repeater panels** for installation in key areas such as nurses' stations.

MZX technology will ensure that in the unlikely event of unwanted alarms, disruption is minimised by ensuring swift and accurate response.

// **Risk:** In any kind of sleeping risk awaking a sleeping person is always going to be a challenge. In a hospital where evacuation involves the added complication of moving patients, beds and medical equipment to a safe area within the hospital, providing an early warning of fire is essential to life safety.

That's why sounder testing is a vital part of the on-going procedure to ensure a fully operational system. The added complication in a hospital is when and how to do it with the minimum of disruption and inconvenience to staff and patients, and given the often high number of sounders to test, this is never going to be an easy task.

// **Solution:**

Every MZX control panel programme has the ability for sounder tests to be set up and run from the panel. **Reflective Sound Monitoring** enables all sounders to be tested at high volume simply by initiating a test for approximately 15 seconds, after which any sounder not operating will be reported back to the control panel. Sounders can be tested in groups, floor by floor, zone by zone, depending on how the test is set up. An essential operation that could take two or more persons a full day can now be completed single handed in a matter of minutes.

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.