



## The Benefits of Installing ZETTLER Technology into a Data Centre

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// A suitable fire detection and alarm system for a data centre usually requires a very comprehensive range of measures. It starts with a risk assessment covering the physical aspects of the centre, together with the electrical and mechanical systems and the fire detection and suppression systems. The risk assessment should provide formal recommendations for the types of fire detectors suitable for use in the various areas of the data centre. The degree of protection may be dependent upon the risk in each area and can be defined as low, medium, high or critical. Fire systems are usually integrated with the main building management system, where the data centre is part of a larger building complex. The risk assessment should also include the requirements of any fixed fire suppression systems. The ZETTLER PROFILE solution can meet all of these requirements. Some of the systems key features are highlighted below.

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// **Risk:** Fire doors or shutters that are controlled by an electromagnetic release mechanism should be released on alarm. To ensure the doors and shutters are capable of closing all parts of the necessary linkage from detector to release device need to be connected, powered and free from fault. The simplest way of providing this link between detector, trigger device, and the door is via a relay. The relay is a simple device, however, it needs an instruction before it can operate. How sure can you be that it will work when called upon to do so?

## // **Solution:**

By specifying and installing a ZETTLER PROFILE system, fire doors and shutters can be connected to a TSM800 door control module. The TSM800 is designed especially for fire doors and shutters and has a self-monitoring system that checks communication with the control panel and detects the presence of the line voltage. It also monitors the essential secondary supply that feeds the magnetic holding device. The system will detect isolations and faults ensuring that nothing is isolated without being detected by the panel. If a fault or isolation is detected the module will release the door to its closed position, ensuring that if a fire were to break out the door is already closed and exit routes are free from smoke.

// **Risk:** In the event of an alarm the detection system needs to interact with other systems, such as power to electronic equipment, air conditioning systems and to initiate the release of any fire suppression systems installed. Interfacing with other systems could involve switching extra low voltage control circuits, power circuits or mains voltage. With the choice of ancillary modules available with MZX Technology, standard devices will accomplish all of this.

## // **Solution:**

MZX Technology provides dual output paths allowing the connection and control of ancillary modules. The Remote Bus provides for 15 remotely addressed devices of up to 80 I/O each. The function of the I/O is defined by a multipurpose module, MPM800, as an input, output, printer or repeater panel. Modules include the IOB800, 8 digital inputs and 8 relay outputs or the XIOM which

provides 16 programmable inputs/outputs, will drive LED's, relays and has the ability to monitor extra low voltages. Ancillary modules can also be connected to all loops and be single, dual or multi I/O. The RIM800 single output relay module and the QMO850 quad relay module both have the ability to drive the HVR800 high voltage relay module, which is capable of switching 240v.ac up to 10 amps. A range of housings are also available, including DIN rail mounts. I/O modules can be programmed for various contact configurations and can operate as a result of a single action, dual (coincidence) action, be instant or delayed.

// **Risk:** Control of the fixed fire suppression system should be in accordance with EN12094, EN54-2 &4. Often a buildings fire detection and alarm system is separate to the data centre system but the two systems still need to communicate.

## // **Solution:**

ZETTLER PROFILE is a powerful fire detection and alarm system that uses MZX technology. The system is highly resilient to external factors such as electrical noise or sources of false alarm. The touchscreen Guided User Interface (GUI) has context sensitive help which has been ergonomically engineered so that every operation is made easy, even for non-fire experts. Touch sensitive LED's provide detailed status information and an integral help file ensures a fast response to all incoming events. The system combines ease of use with high performance. On screen site floor plans display devices in alarm or fault. These are site configurable so will always be up-to-date. ZETTLER PROFILE control panels are available as single, 2-4 or 2-8 loop capacity. There is also a range of fully functional repeater panels offering a number of options including a compact DC repeater, an 80 zone AC version or 40 and 80 way zonal displays. Controllers can be networked together easily, up to 99 panels can be networked together (each with a minimum of 1000 addresses), interacting where required. The 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. The MZX E extinguishing panel is approved to EN12094-1:2003, EN54-2 and 4. This comprehensive panel can interface with the data centre fire detection panel and can provide all the necessary control functions required of a suppression panel. These include, control inputs for auto/manual, monitored inputs, such as gas discharged, timers, monitored actuator/solenoid release (metron or solenoid) and extensive disablement options. The panel has extensive configuration options yet is simple to install, programme and commission.

// **Risk:** The choice of fire detector can be selected from a range of smoke, heat, combustion gas or multi-sensor detectors. Also suitable in certain applications are optical beam detectors, aspirating type smoke detectors and line-type heat detectors.

## // **Solution:**

By specifying and installing an MZX Technology system we offer reliability in all of our components. The ZETTLER 850 series of addressable detectors have added protection applied to printed circuits and vital components, enabling them to survive in difficult environments. Threshold compensation overcomes the effects of dirt and dust and prolongs the life of the detector. The Open area Smoke Imaging Detector (OSID) and Universal Fire and Gas Detection Module (DDM800) combine to allow a direct connection to the addressable loop. The OSID is immune to many sources of false alarm and has a range of imagers available for wide, medium and narrow angle coverage, similarly to that of a CCTV camera. The imager sees the transmitted beam from up to 7 emitters as an array of pixels, which also gives the detector immunity from building movement. The ICAM AS 460 and 461 single or dual air sampling system combines the best of the 850PC multi-sensor detector with proven air sampling techniques. The VESDA Laser Compact, Laser Plus and scanner units connect directly to the loop or via the VIO800 MZX VESDA Interface. With MZX Technology integration of these systems is well thought out, engineered, tested and fully supported. It is certified to EN54-13 compatibility of components and systems, as certified by VdS.

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 CPR 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 Tyco offices around the world. For more information, visit [www.tycoemea.com](http://www.tycoemea.com)