



.the
big picture

ZP3 Fire Detection Systems for large networks



GE imagination at work



Royal Farms
Saudi Arabia

8 control
panels, operating
22,000
sensing devices.



St.Regis Hotel
and Residence
Singapore

29 control
panels, operating
1,600
sensing devices.



Queens Medical Centre
England

84 control
panels, operating
35,000
sensing devices.



Ziton Fire Detection Networks

DETECTING FIRES IS EASY ENOUGH; DECIDING WHAT TO DO AFTER A FIRE HAS BEEN DISCOVERED TO PROTECT PEOPLE AND BUILDINGS, WITHOUT CAUSING ADDITIONAL DAMAGE OR UNNECESSARY DISRUPTION, IS MUCH HARDER. THAT'S WHERE WE CAN HELP.

All Ziton fire detection systems are designed to detect and locate fires and provide a controlled response. Whether you have one building or multiple sites spread throughout the country, we have the technology to put you in control.

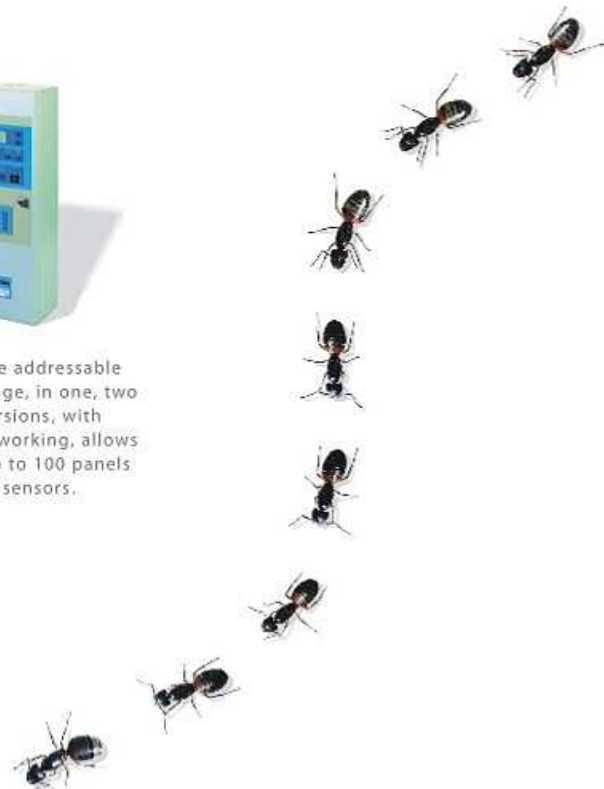
Our ZP3 system is our flagship product designed for installations from a single panel system up to networks of 100 panels, monitoring up to 50,000 sensors at multiple locations. It is packed with innovative features and practical benefits to make it reliable, effective and easy to use; while our Maestro system management programme puts total fire detection capability at your fingertips.

Features include:

- **Single-panel and Multi-panel systems**
For easy monitoring and simple installation.
- **Peer-to-peer networking**
Providing a display of the system from all panels.
- **Local Area Networks (LAN)**
For single-site installations.
- **Wide Area Networks (WAN)**
For multi-site installations.
- **Secure Network Loop Technology**
So that the system still performs perfectly even if a single fault develops.
- **Flexible topology**
So you can scale up the system as your site grows.



The ZP3 analogue addressable control panel range, in one, two and four loop versions, with peer-to-peer networking, allows for systems of up to 100 panels with over 50,000 sensors.



ZP3 Control Panel

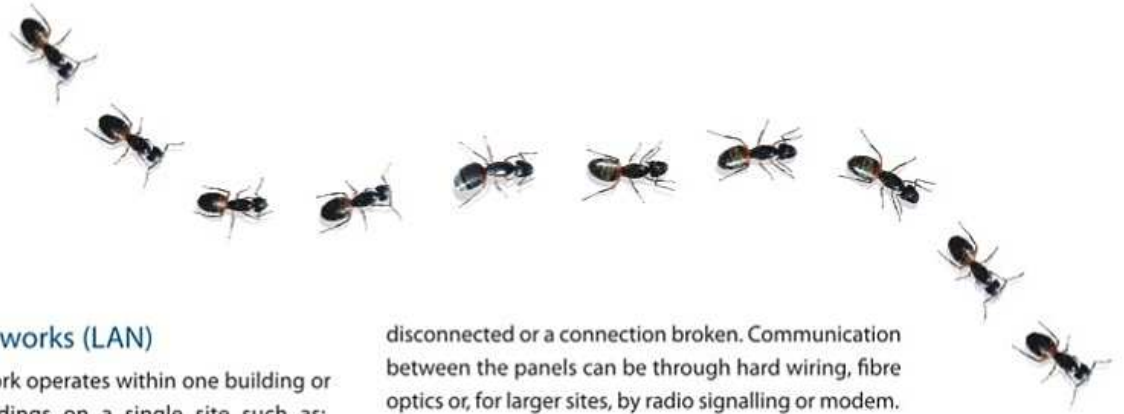
Building the system you need

THE ZP3 CONTROL PANEL IS THE BUILDING BLOCK THAT ENABLES US TO BUILD A FIRE DETECTION AND RESPONSE SYSTEM THAT MEETS YOUR NEEDS.



Each panel can control up to 508 devices such as smoke detectors, heat sensors, manual call points or sounders. Each device has a known location within the system for a fast, accurate response to any fire condition. Up to 100 panels can be linked together as a peer-to-peer network to create a unique system designed specifically for the location.

The system can be controlled directly from the panel or from a remote PC. Multiple panels can be linked to single or multiple PCs to provide central control and monitoring either locally or remotely. The system can be configured, to interact with a Building System, to react automatically in a fire condition – for example, to control air conditioning or ventilation equipment.



Local Area Networks (LAN)

A Local Area Network operates within one building or a number of buildings on a single site such as: factories, shopping centres, hospitals, airports and university campuses. The site may include multi-storey buildings or a number of smaller buildings spread over a large area. Each building or floor of a high-rise block can be controlled by its own ZP3 panel to meet the needs of that environment. Up to 100 panels can be linked over the whole site to create an integrated fire detection system.

The panels operate on a peer-to-peer network. This allows all panels to display the status of the whole system and to be used for programming. Each panel can also be programmed to receive, display and action all or selected events.

Network reliability is maintained by using a secure loop system to connect the panels together. This ensures that the system continues to operate normally even if a fault develops such as a wire being

disconnected or a connection broken. Communication between the panels can be through hard wiring, fibre optics or, for larger sites, by radio signalling or modem.

The whole network can be operated via a PC using our Ziton Maestro control system and graphic display.

Features include:

- Up to 100 panels each separately programmable and operating up to 508 devices.
- Operates on sites with multiple buildings or on floors of high rise buildings.
- Peer-to-peer configuration for easy programming.
- Secure connections for total reliability in the event of a break in the network, sub networks are formed automatically.
- Choice of connection system (hard wire, fibre optic, R/F or modem).
- Maestro PC control.

Wide Area Network (WAN)

A Wide Area Network is a number of LANs linked together to provide much wider coverage for large industrial or commercial sites, railway or underground transport systems, or any large national or international organisation that needs a central fire detection and control system. Each LAN can be configured and operated independently but be linked to form a single multi-site system.

Numerous local networks can be combined to form a WAN covering extensive geographical areas.

Each local section can be given the ability to control both its own location and the entire WAN. Alternatively the WAN can be controlled separately from a remote location with the LANs retaining local control only.

A WAN provides all the features and benefits of a LAN plus:

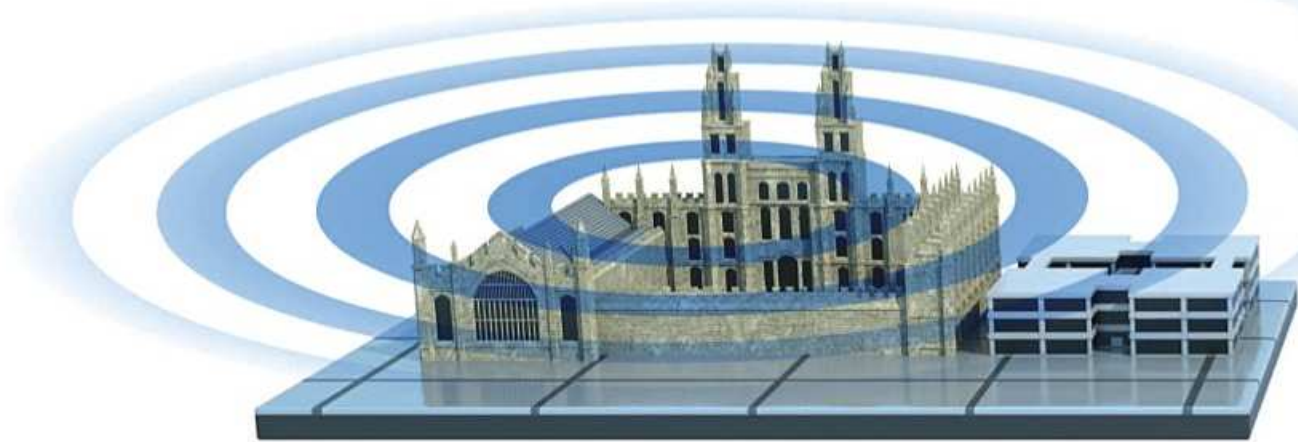
- The system can cover a number of locations provided that a communication infrastructure is available.
- It can be controlled locally or centrally.



Fire Detection Systems

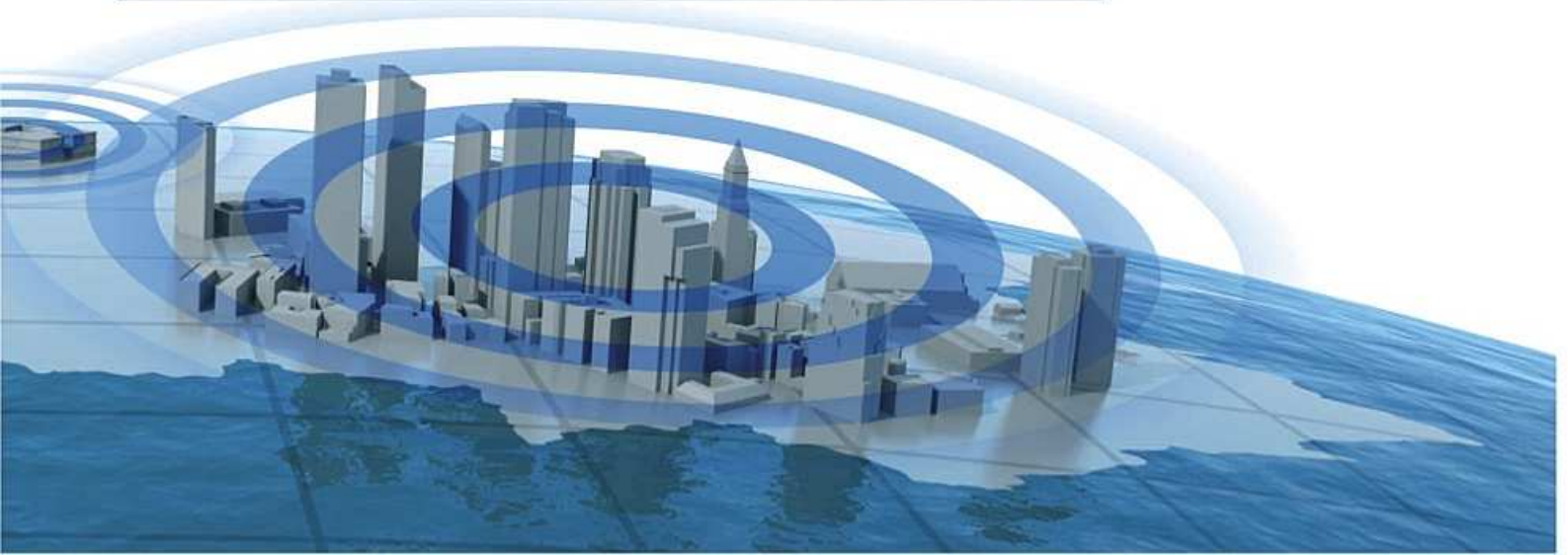
Large and Small

ZITON MULTI PANEL NETWORKS OPERATE WORLDWIDE, SUPPLIED AND ENGINEERED THROUGH 100 EXPERT PARTNER COMPANIES, SAVING LIVES AND PROTECTING PROPERTY TO THE SAME HIGH LEVEL REGARDLESS OF SYSTEM SIZE.





No matter what the size of the installation, this completely scalable system ensures the same protection levels and facilities whether it's a single high rise office block, a local network across a single site or widespread locations connected to form a complex net off re detection control.



Planning

Comprehensive tools to help you create the fire detection system you need.

Installation

Fast, cost-effective installation of the most appropriate system for your site.

Maintenance

Easy-to-use diagnostic software for simple analysis of network status.



Flexible Installation

OUR SYSTEMS ARE SIMPLE TO INSTALL AND HAVE BEEN DESIGNED WITH BUILT-IN SAFETY TO ENSURE TOTAL CAPABILITY EXACTLY WHEN YOU NEED IT MOST.

Networks

Networks of any size can be built in phases to provide protection during construction and as a site develops.

System Integration

While local panels, LANs and WANs can provide extensive input and output (I/O) controls, all our systems can be integrated with building management, security and access control systems to provide the appropriate response to any alarm. This might include closing down air conditioning plant, grounding lifts, pressurising stairwells, or triggering appropriate extinguishers, especially in vital areas such as computer control rooms, vaults, libraries, museums or galleries.

Secure Network Loop Technology

Secure Loop Technology gives the maximum system security even if the wiring becomes damaged. If there is a fault on the network, Network Loop Module cards within the system immediately identify where the fault lies and isolate it to keep as much of the network as possible intact and functioning properly. This means that even if the wiring is disconnected between two panels the network still operates at 100%.

Hardwiring

Many customers prefer the security and confidence that hard wiring can offer. We use soft-skin fire retardant cables when appropriate and MICC (Mineral Insulated) where virtually indestructible, fire-survival cables are needed for critical installations.

Fibre Optics

All our systems can be installed using fibre optic connections rather than standard copper cables. They reduce the effects of electrical noise, perform well over distance and can provide total isolation between system media in industrial environments.

Radio Frequency Connection

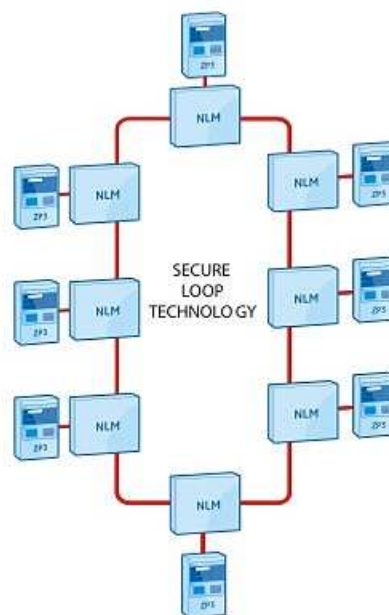
Hardwiring large sites can be expensive and impractical. For these installations we recommend networking via Radio (RF) link. RF technology offers the opportunity to connect multi-location sites quickly and inexpensively without hardwiring and to upgrade installations as necessary.

Multi-medium communications

A variety of communication equipment can be used to ensure system integrity: modem connection for transmission and receipt of system data over long distances, repeater units to boost signals where appropriate, and isolators to provide protection for less robust parts of the network.

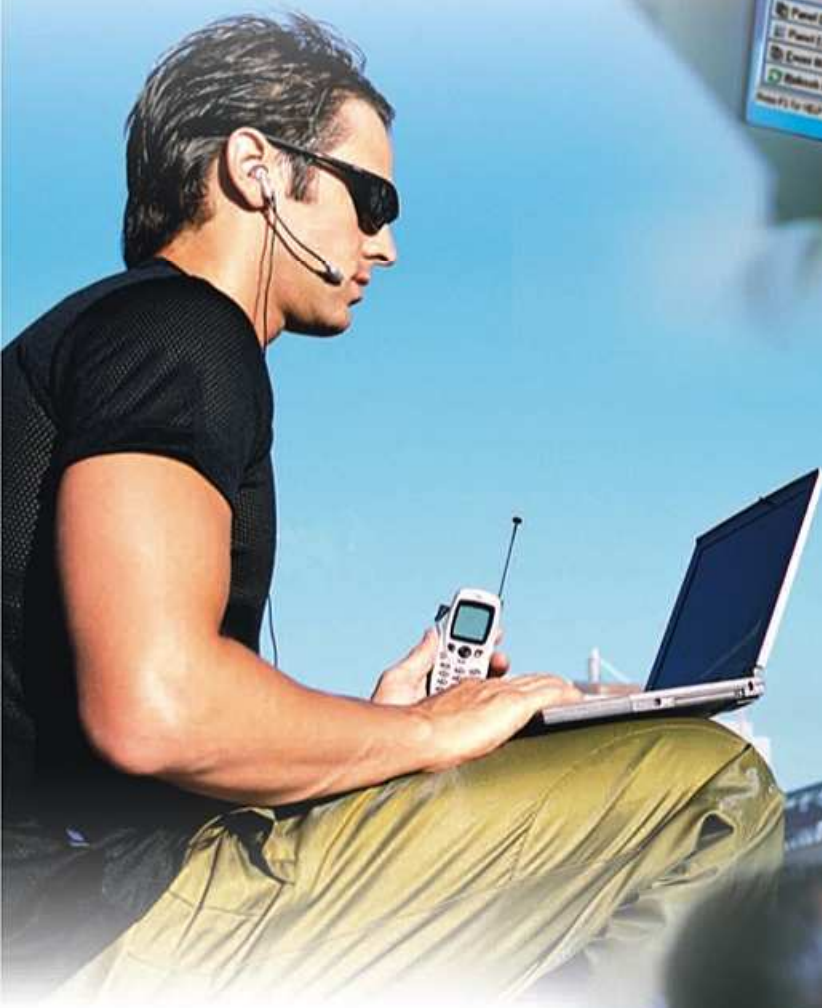
Safety Standards

All our systems are designed and installed to meet international fire safety standards for example the European Standard EN54 for equipment manufacture and most local system design codes such as BS5839 Part 1 in the UK.



Maestro

Central control of your entire alarm system.



Remote Diagnostic

Off-site monitoring for efficient maintenance programmes.



Planner

The ability to configure a system precisely to meet your needs.



Operation and Configuration

TO BE EFFECTIVE, SYSTEMS NEED TO BE SIMPLE TO SET UP AND TO OPERATE. OUR SYSTEMS ARE DESIGNED TO DO ALL THE HARD WORK SO THAT YOU DON'T HAVE TO.

Planner

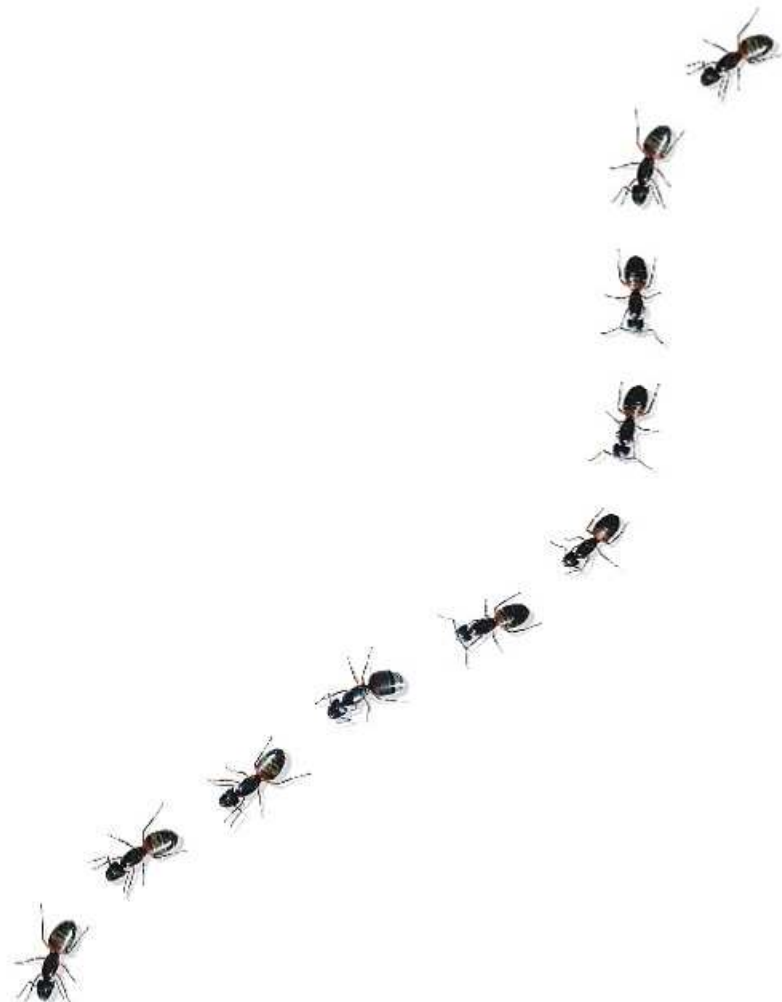
'Planner for Windows' is a sophisticated software package specifically designed to provide a comprehensive, simple-to-use, off-line configuration of even the largest ZP3 systems. The programme allows you to develop systems taking into account complex cause and effect scenarios to ensure an appropriate response to any alarm.

Remote Diagnosis

The remote diagnosis programme allows information from ZP3 control panels to be assessed from a remote PC location. This allows the system to be reconfigured offsite including the downloading of software. An ongoing events schedule can be viewed allowing pre site visit maintenance planning to be developed.

Maestro

Maestro is an alarm management programme operated from a PC on site or located remotely. It allows you to view alarm conditions throughout the system shown graphically on the computer screen and respond appropriately.



Building the system you need

ZP3 TAKES ANALOGUE ADDRESSABLE FIRE DETECTION INTO NEW DIMENSIONS. BASED ON ADVANCED TECHNOLOGY, STATE OF THE ART SENSING TECHNIQUES AND SPECIALLY DESIGNED SOFTWARE THAT FEATURES BUILT IN RELIABILITY AND COMPLETE PEACE OF MIND.

Advanced panel design, combined with high sensitivity smoke and fire sensing, enables ZP3 not only to identify and disregard conditions, which would result in false or unwanted alarms - but to recognise real fires sooner – limiting inconvenience and reducing downtime to a minimum.

Scaleable in every aspect, the ZP3 system offers tailor made engineered solutions for all applications, from single panel systems to large multi panel networks. Modular design backed by powerful software enables ZP3 systems to be configured exactly to the needs of any commercial or industrial site.

Control panels are available in 1, 2, and 4 loop sizes, accommodating up to 508 sensing addresses. For larger systems, panels can be networked together to form installations capable of controlling over 50,000 devices from 100 control panels.

Up to 127 line devices (sensors, callpoints, sounders or interface units) can be connected to each of the control panel loops. All loop devices incorporate switch settings enabling them to be assigned a unique address, the location of which is pinpointed and polled by the panel every two seconds. Variations in the sensors environment caused by increases of temperature or products of combustion, are reported to the panel, where they are processed and compared to known fire data, prior to any alarm output being activated.

Constant communication between control panel and sensor, enables ZP3 to provide a wide range of user facilities including pre alarm, constant sensitivity adjustment and service and near service listings for all sensor types.

Software flexibility enables facilities such as alarm organisation, evacuation procedures and complex cause and effect requirements to be easily programmed into any system.

All customer and site data is held in non volatile flash memory, ensuring both ease of initial system data input and subsequent on site amendments and modifications should they occur.

The ZP3 panel can control fire and non fire functions, loop powered sounders, remote control and remote display panels, with up to 128 zones with 768 programmable inputs and outputs per panel, all covered by comprehensive programming facilities.

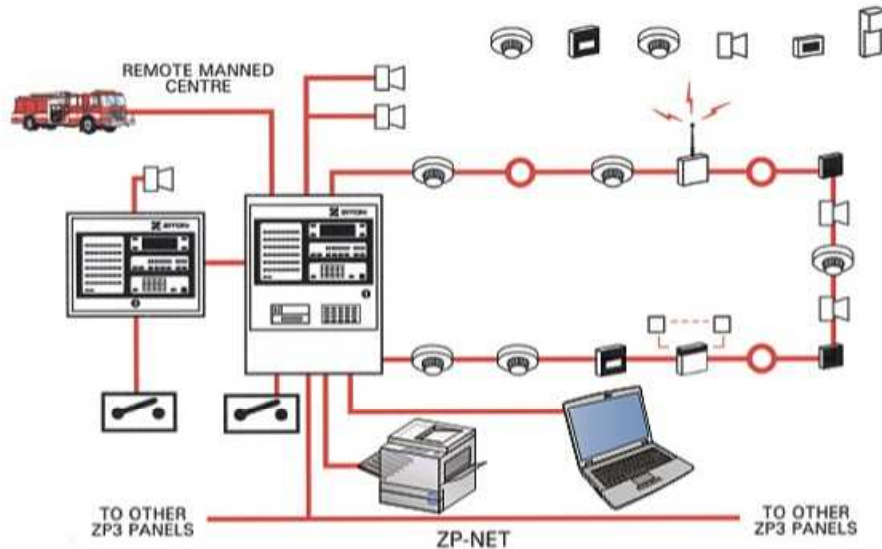
Ideal for systems of all sizes the ZP3 is designed with true scalability – it's operation, facilities and levels of protection are the same from single panel, to large multi site network – meaning that you can start small and add phases as the system and site develop, saving large initial capital outlays for hardware not required until later stages of development.



Active protocol means complete reliability at all times. Systems feature continuous monitoring of wiring and sensors, corrupt data detection and disconnection of faulty or impaired loop sections.

Sensors, sounders and interface equipment can be installed on a single pair of wires, greatly reducing installation costs.

All system components meet full the stringent requirements of European Standards and are continually tested by international testing laboratories (for example the Loss Prevention Certification Board LPCB). ZP3 also meets the recommendations of most local design and installation codes.



- Smoke Sensors
- Thermal Sensors
- Combination Sensors
- High Sensitivity Aspiration Sensors
- Beam Sensors
- Loop Sensors

- Loop Relays
- Loop Interface Units
- Loop Isolators
- Manual Call Points
- Remote Display Units
- Colour Graphic Computer and Printer

Other features include –

Ease of operation – large 160 character LCD display and traditional LED indicators providing clear, easy to understand information.

Automatic contamination adjustment – maintains constant, individual sensor sensitivity by compensating for sensitivity drifting over time period.

Service and near service – lists sensors that are due for cleaning and others that may be approaching the service condition.

Sophisticated alarm verification – offers two time integration levels for each separate address.

Advanced loop isolation – maintains system integrity against partial or full short circuit faults.

Automatic Self Test – all sensors are functionally tested every 24 hours.

Day/night control – different system operation, automatically switched at any time during a 24 hour period.

Sounder Self Test – loop wired sounder range features built in microphone circuit to automatically test sounder output.

Radio loop interface – full analogue system facilities via wireless interface enables equipment to be sited where access is restricted or wiring impossible.

Password protection – provides multilevel access to system controls and can be configured to match operator responsibilities.

Event log – Up to 1000 alarms, faults and disablements can be displayed or printed in chronological order.

Simple design, set up and operation have proved to be the success of the ZP3 on a worldwide basis all made even easier with various user software packages.

Planner for Windows enables system designers to fully configure ZP3 systems – either directly into the panel via a PC – or off site for subsequent download at the commissioning stage.

Loop load calculator – checks that equipment assigned to any loop is within allowable parameters – then calculates power supply requirements.

Graphically presenting alarms and events, **Maestro** provides system control, colour graphics and event logging.

Remote diagnosis allows fault diagnosis and information access from remote location via a modem link.



ZP

Analogue Fire and Smoke Sensors



GE imagination at work

Knowing what to expect....

ZP SENSORS SEND INFORMATION TO THE CONTROL PANEL EVERY 2 SECONDS – ALGORITHMS IN THE SYSTEM PROCESSING SOFTWARE COMPARE THE INCOMING ZP SENSOR SIGNALS AGAINST PROFILES – ENABLING SENSORS TO DISCRIMINATE AGAINST FALSE OR UNWANTED ALARMS WHILST DETECTING REAL FIRES SOONER.

Elegant styling, designed to be unobtrusive, fits perfectly into modern building interiors concealing powerful state of the art electronics. Each sensor type is designed specifically to provide expert detection of temperature rise, products of combustion, smoke or combinations of all three.

Based upon tried and tested software and communications and used in thousands of installations throughout the world, the ZP range incorporates the latest components and manufacturing technology.

Easily addressed by switch settings, located on the sensor base plate - the unique identification code establishes the device within the system. Up to 127 series ZP sensors can be connected to each loop.

All sensors are automatically self tested once every 24 hours and are compensated for calibration changes caused by dirt, temperature, humidity, voltage fluctuations and long term contamination. This maintains every sensor at a constant sensitivity level, allowing even faster fire detection without false alarms. Sensors automatically advise when near maintenance levels have been reached or maintenance is required.

Sensitivity can be varied through preset levels, either manually or automatically on a timed basis – allowing for example lower sensitivity whilst buildings are occupied during the day, then automatically increased when the premises becomes empty at night time.

An important feature, selectable on all smoke sensors, is Alarm Verification enabling the control panel to re-examine incoming fire data prior to making the final alarm decision – reducing even further the likelihood of unwanted alarms.

Easy to install, all units simply plug into a base with a built in, automatic locking facility. Devices can only be removed by use of a special tool.



The ZP sensors

ZP710 Ionisation smoke sensor >

The ZP710 ionisation sensor measures the density of smoke particles in the 0.01 to 10 micron range and provides an active output proportional to the amount of smoke present in the sensing chamber. It is responsive to both visible and invisible products of combustion with very early response to fires in the incipient stage. Dual chamber design provides maximum stability and the device is ideal in risk areas where small particle smoke may be expected for example locations where oil, spirits, wood or paper may be stored. The sensor is fully approved by international certification boards to EN54 Part 7.



< ZP720 Thermal sensor

The ZP720 thermal sensor provides an active output proportional to the ambient temperature. This output value is transmitted to the control panel every two seconds. It is especially useful in areas where environmental conditions may preclude the use of smoke detection.

Sensitivity and configuration on an individual sensor basis are set in the control panel and can be adjusted between four levels from 58 °C to 75°C and includes rate of rise algorithms.

The sensor is fully approved by international certification boards to EN54 Part 5.

ZP730 Optical smoke sensor >

The ZP730 optical smoke sensor measures the density of smoke particles in the 0.5 to 10 micron range and provides an active output proportional to the amount of smoke present in the sensing chamber. It is responsive to visible smoke with early responses to smouldering fires.

The photo electric principles of operation make it particularly useful where ionisation could prove too sensitive. The sensor's proven stability in air movement, associated with air conditioning systems has made it a popular selection in modern building interiors.

The sensor is fully approved by international certification boards to EN54 Part 7.



< ZP732 Combination smoke and thermal sensor

The ZP732 combines optical smoke sensing and thermal monitoring to provide an accurate warning of fire. Individual software control of each element measures actual levels, as well as temperature rate of rise.

The sensor is fully approved by international certification boards to both EN54 Part 5 (Class A1 and A2) for thermal performance and EN54 Part 7 for smoke sensitivity.

ZX832 Multisensing fire detector >

Representing the next generation of sensing technology, the ZX832 gives an earlier warning of fire or smoke, with the ability to discriminate against false or unwanted alarms. Software using multi-criteria sensing forms the basis of this advanced device.

The detector consists of integrated high sensitivity smoke and thermal sensors. The system combines the dynamic results of rates of change patterns and absolute levels of smoke and heat, to identify real fire criteria. Selectable software algorithms allow the response to be matched to each particular hazard.

The sensor is fully approved by international certification boards to both EN54 Part 5 (class A1 and A2) for thermal performance and EN54 Part 7 for smoke sensitivity. The device is also approved within CEA4021 test procedures for multisensor detectors.



Ziton



ZP755

Addressable Alarms



GE imagination at work

Alarms for every occasion....

DEVELOPED THROUGH WORLDWIDE, ON-SITE EXPERIENCE – THE ZP755 ADDRESSABLE ALARM RANGE ENABLES SYSTEM DESIGNERS AND INSTALLERS TO ACHIEVE EXACT ALARM MANAGEMENT AND EVACUATION PROCEDURES IN ANY TYPE OF BUILDING.

The ZP755 series is a comprehensive range of advanced addressable sounders, designed for use in ZP3 analogue fire detection and alarm systems. Installed directly onto the ZP loop wiring, ZP755 sounders, in conjunction with the range of Ziton sensors, provide a true two wire system – offering full analogue addressable features on a single pair of wires. Installation costs are greatly reduced, whilst system integrity, sounder selection and alarm organisation are significantly increased.

Acoustically highly efficient - up to 100 sounders together with 100 sensors can be installed and powered directly on a one kilometre loop - subject of course to wiring specifications. In systems where loop lengths or current requirements are excessive the units can be powered directly from an external power source via dedicated wiring.

Installation is simple as all sounders twist and lock into surface base plates – eliminating the need for any internal sensor/sounder connections.

The range incorporates a number of advanced and unique features –

Advanced addressing each sounder can operate as a separate device, or in a zone or group, or be linked to a sensor or callpoint – enabling individual rooms to be evacuated prior to sounding a general alarm

A self test, sound level facility is incorporated into every sounder, monitoring operation by a built in



microphone circuit – checking for sound output and automatically signaling to the control panel should sound level fall below minimum requirements.

Selectable sound outputs, continuous, intermittent and dual tone enable alert and evacuate signals to be provided on a zone, group or individual sounder basis. All three sound types comply with the European standard EN54 Part 3 and the recommendations of most international codes. Tones are synchronized to ensure frequencies are not cancelled out.

Horn models feature both wide and narrow angle sound paths – providing a full sound dispersion pattern with an evenly balanced output throughout the protected area.



ZP755B-2 Sensor base/sounder

Combining sensor base and sounder in a single unit. Low current – high power acoustic design provides an elegant solution where separate sensor and sounder would prove expensive. The ZP755B is intended for installations involving high numbers of alarm sounders, for example hotel bedrooms or compartmented risk areas.

Sensor and alarm elements can be addressed independently and sound levels comply with the requirements of EN54 Part 3. Sound output 90dBA (at 1m), Maximum per 1km loop – 60*, Colour – white

ZP755BV-3 Sensor base/sounder/beacon

A sister product to the ZP755B-2 but offering an additional visual output. Complying with most local disability legislation, the unit is also perfectly suited to any location involving high levels of background noise Sound output 90dBA (at 1m), Light source Red LED array, Maximum per 1km loop – 40* Colour – white moulding red light flash

ZP755R-2 Room sounder >

Compact for areas where the sensor/sounder combination proves impractical – for example where fewer or more sounders than sensors are necessary. Applications include – lobbies, sleeping accommodation and small rooms and compartments.

Sound output 90dBA (at 1m), Maximum per 1km loop – 60*,
Colour – white or red moulding



< ZP755HA -2 Horn sounder

Designed with dual front and rear sound paths, providing an 'all around' sound output - ideal for open area coverage. Continuous, intermittent and two-tone outputs can be selected to provide alert and evacuate two stage alarms. All sound types comply with most international codes – for example BS5839 Part1 recommended frequencies.

Sound output 102dBA (at 1m), Maximum per 1km loop – 40*,
Colour – white or red moulding.

< ZP755HAV-2 Horn sounder/beacon

Presenting an identical profile to the ZP755HA, the ZP755HAV includes an additional, high intensity beacon.

Disability legislation increasingly requires visual alarm signals to ensure equal response from people with hearing impairment - the unit is perfectly suited for this application. The alarm has also proved popular in risk areas involving high levels of background noise. Especially where operators are provided with ear protection.

Sound output 102dBA (at 1m), Maximum per 1km loop – 25*,
Colour – white moulding/clear lens or red moulding/red lens



ZP755V Addressable beacon >

Developed to compliment audible alarms, the beacon provides high intensity, visual signals for applications where alarm sounders alone would prove to be ineffective. The unit is designed to meet the requirements of most local disability legislation.

Maximum per 1km loop – 60*,
Colour –white moulding/clear lens



< ZP755W Addressable weatherproof sounder/beacon

Ideal for outdoor applications, or for use in areas where the ingress of water can be expected, for example where hygiene requirements demand regular washing or hosing down of equipment within the protected area.

Sound output 102dBA (at 1m), Maximum per 1km loop – 40*,
Colour – red moulding.

ZP755 WV-2R Addressable weatherproof sounder/beacon

A matching unit to the ZP755W but including an additional high intensity beacon.

Sound output 102dBA (at 1m). Maximum per loop - 25*.
Colour - red moulding/red lens.



* Maximum loop populations stated are based on a 1 Km loop of 1.5mm² soft skin cable, with a distance of 50m to the first device

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