sygno-fi®

WIRELESS FIRE ALARM
CONSULTANT SPECIFICATION

eurotech®
fire systems limited

Contents

1   Scope of Work

To design, supply and install a Wireless Fire Alarm Detection and Alarm System in accordance with the details specified herein and in accordance with the supplied drawings.

2   Standards and Specifications

2.1   Manufacturer Requirements

The manufacturer of the system equipment shall be regularly monitored under a quality assurance programme that meets the current ISO 9001 requirements.

2.2   Fire Alarm Contractor Requirements

The fire alarm contractor shall be responsible for the design, installation, commissioning and maintenance of the wireless fire detection and alarm system. The use of subcontractors for any of these duties must be agreed at the time of submitting the proposal.

The fire alarm contractor shall be BAFE certified (or similar), alternatively a minimum of 5 years' experience in designing, installing, commissioning and the maintenance of a wireless fire detection and alarm systems is acceptable.

The fire alarm contractor shall have available a complete set of technical manuals for all the equipment installed. This must cover the technical specification, system design recommendations and guidelines for installation, commissioning, operating and maintaining the wireless equipment.

2.3   Product Requirements

The equipment proposed for the wireless fire detection and alarm system shall be approved by an accredited organisation to the following standards:

BS EN 54-2:1997+A1:2006 - Control and Indicating Equipment
BS EN 54-3:2001 - Fire alarm devices: sounders
BS EN 54-4:1998 - Power supply equipment
BS EN 54-5:2001 - Heat detectors: Point detectors
BS EN 54-7:2001 - Smoke detectors: point detectors using scattered light, transmitted light or ionization
BS EN 54-11:2001 - Manual call points
BS EN 54-17:2005 - Short-circuit isolators
BS EN 54-18:2005 - Input/output devices
BS EN 54-23:2010 - Fire alarm devices. Visual alarm devices
BS EN 54-25:2008 - Components using radio links

2.4   Systems Requirements

The fire detection and alarm system shall be designed, installed and maintained to the relevant British and European standards (typically BS5839-1) or relevant code of practice.

19/20 Stratfield Park, Elettra Avenue
Waterlooville, Hampshire, PO7 7XN
United Kingdom

www.eurotechfire.com

+44 (0) 203 141 0999
enquiry@eurotechfire.com

Technical: +44 (0) 203 141 0982
technical@eurotechfire.com

3 Specification for Wireless Fire Alarm System

3.1 General

The system shall have the capability to be used either as a standalone wireless solution or allow wired field devices to be combined on the same loop wiring as the wireless translator modules to form a seamless hybrid system. This will be controlled by an analogue addressable fire alarm control panel.

The wireless fire alarm system shall be analogue addressable, and devices are to be installed throughout the areas nominated as part of the system design. The system shall consist of analogue addressable fire detection, wireless smoke and heat detectors, manual call points, sounders and visual alarm devices which use an 868MHz frequency to communicate with the wireless infrastructure devices, through to the fire alarm control panel via the translator module.

The wireless translator shall sit on the loop and communicate with the wireless devices directly or using expanders connected to the translator to boost the signal or system capacity. The communications are interpreted by the fire alarm control panel and information is sent back to the devices via the translator module.

The site shall have a full radio survey ensuring the required signal headroom is adhered to as stated in EN54-25.

The fire alarm panel shall meet the requirements of the relevant EN and British standards including EN54-2 and EN54-4.

Each loop of the fire alarm control panel shall have the capacity to allow the installation of up to 240 devices.

The wireless elements of the system shall have the capacity to be programmed and commissioned on site or pre-programmed off site from drawings and/or survey results.

All wireless and wired analogue addressable devices shall be of the same visual appearance.

The analogue addressable fire control panel, utilising the Argus Vega protocol, will be sourced from the following approved manufacturers:

Eurotech Fire Systems Ltd - Toccare range
Advanced Electronics Ltd - MxPro 5 range & Go series
Haes Technologies Ltd - Esprit range

3.2 Wireless System Configuration

The translator module will be loop powered by the fire alarm control panel.

Each loop of the fire alarm control panel shall be capable of supporting multiple translators, not exceeding a maximum of 6 per loop.

The translator shall be capable of communicating with 128 devices in total.

Each translator shall be capable of supporting up to 15 expanders.

Each expander shall be capable of accepting 32 devices in total.

Additional expanders required for boosting wireless signals and coverage of the translator modules where required will require a power supply meeting the requirements of EN54 part 4.

The system shall incorporate a total of 60 communication channels across the infrastructure and field devices.

The infrastructure and field devices shall operate on separate channels to allow for maximum channel separation and therefore performance across the systems lifetime. The infrastructure devices shall operate across 8 pairs of channels and field devices shall operate across 22 pairs of channels.

The system shall utilise the licence free 868MHz range.

The devices shall incorporate QR codes to uniquely identify and program them to the infrastructure devices.

The system shall incorporate redundant channel technology between all field devices, translators, and expanders.

The system shall incorporate fully synchronised outputs.

The system shall incorporate a discovery mode which will wake up preinstalled devices.

All infrastructure and field devices shall utilise automatic and independent amplitude control and will optimise its wireless output to fit the device location and site conditions.

Each translator shall have a unique site code preventing any interference with other systems on the site or nearby.

All wireless field devices shall be powered by an internal power source consisting of easily replaceable lithium batteries of standard manufacture. Each power source shall be monitored and capable of reporting is condition to the fire alarm control panel. When the battery capacity is low, a low battery condition shall be indicated at the CIE allowing 30 days of normal use for the batteries to be replaced.

4   System Infrastructure Devices
4.1   Translator Module Specification
General
The system shall utilise translator modules to integrate the wired and wireless elements of the fire alarm system. The translator module shall translate all the analogue and digital messages from radio devices into protocol messages to be handled via the fire alarm control panel.

The translator module shall be powered by the loop and not require a dedicated power supply.

Translator modules shall include loop isolation in each unit. An EN54-4 PSU may be used in parallel to support the translator radio functions in the event of a loop failure.

The translator module shall only be used with the manufacturers recommended fire alarm control panels and the control panel will fully monitor the status of the translator module and associated wireless devices.

The translator module shall be wall mounted and include an anti-tamper switch which is monitored by the fire alarm control panel.

The translator module shall provide a method of connection to a PC configuration tool.

Functionality
Each translator shall be capable of communicating with 128 field devices.

It shall be possible to connect to a maximum of 15 expander modules.

Each translator module shall be capable of switching to a secondary redundant channel.

The communication channels in which the translator operates shall be independent of those which the field devices operate on for enhanced wireless signal separation.

It shall be possible to view the background noise via the onboard translator screen.

Translator modules shall be fully monitored by the fire alarm control equipment.

Translators shall be provided with licence free PC software for support programming.

Translator modules shall be rated to at least IP65.

The translator module shall indicate power, fault and alarm events via three independent LEDs on the front of the module.

It shall be possible to add/remove/replace devices to the systems configuration using a unique ID in the form of a QR code, through the dedicated PC based software tool.

Compliance
Translator modules shall be approved by an independent accredited approval body to EN54-17, -18, -25 and the Radio Equipment Directive (RED).

A comprehensive report of the whole system built on each translator shall be available for download containing network topology, link quality status, wireless channels occupied, device description, radio address, loop address, analogue values, configured options, wireless packet test results and event logs.

19/20 Stratfield Park, Elettra Avenue
Waterlooville, Hampshire, PO7 7XN
United Kingdom

www.eurotechfire.com

+44 (0) 203 141 0999
enquiry@eurotechfire.com

Technical: +44 (0) 203 141 0982
technical@eurotechfire.com

4.2 Expander Module Specification

General

The system shall utilise expander modules to boost signal strength and add additional capacity for devices to the translator module.

The expander module shall be powered by a dedicated EN54-4 approved power supply unit and back up battery in compliance with BSS839-1.

The expander module shall be wall mounted and include an anti-tamper switch which is monitored by the fire alarm control panel.

The expander module shall provide a method of connection to a PC configuration tool.

Functionality

Each expander shall be capable of communicating with 32 field devices.

It shall be possible for multiple expander modules to create a pre-configured robust mesh communication network at the point of commissioning with redundant paths back to the translator established.

Each expander module shall be capable of switching to a secondary redundant channel.

The communication channels in which the expander operates shall be independent of those which the field devices operate on for enhanced wireless signal separation.

Expander modules shall be fully monitored by the fire alarm control equipment.

Expander modules shall be rated to at least IP65.

The expander module shall indicate power, fault and alarm events via three independent LEDs on the front of the module.

It shall be possible to add/remove/replace the device to the systems configuration using a unique ID in the form of a QR code, through the dedicated PC based software tool.

Compliance

Expander modules shall be approved by an independent accredited approval body to EN54-17, -18, -25 and the Radio Equipment Directive (RED).

5 System Field Devices

5.1 Wireless Dual Optical Smoke Detector Specification

General

The wireless dual optical smoke detector shall be low profile in appearance and shall use the light scattering principle to measure smoke density. The detector will send digital communication

through the system to the fire alarm control panel, via the translator module.

The wireless dual optical smoke detector shall be powered by two commercially available CR123A 3v lithium batteries in the detector head.

The wireless dual optical smoke detector shall be ceiling mounted and include an anti tamper switch which is monitored by the fire alarm control panel.

Functionality
Wireless dual optical smoke detectors shall provide the following features: dual channel optics, automatic drift compensation and adjustable sensitivity settings.

It shall be possible to activate remote detector functions from the PC configuration software.

Each wireless dual optical smoke detector shall be capable of switching to a secondary redundant channel.

The communication channels in which the wireless dual optical smoke detector operates shall be independent of those which the infrastructure devices operate on for enhanced wireless signal separation.

The wireless dual optical smoke detectors can operate across 22 pairs of field channels.

Wireless dual optical smoke detectors shall be fully monitored by the fire alarm control equipment.

The wireless dual optical smoke detector shall include bi-coloured LEDs for visual status indication.

The wireless dual optical smoke detectors shall have a manufacturer's recommended battery life of up to 10 years.

The wireless dual optical smoke detectors shall have a facility to lock the detector to the base via means of a grub screw.

Wireless dual optical smoke detectors shall be rated to at least IP40.

It shall be possible to view the location on a visual map/drawing, address on the loop, links between devices and all device information which can be produced and printed for use in an O&M manual.

It shall be possible to add/remove/replace the device to the systems configuration using a unique ID in the form of a QR code, through the dedicated PC based software tool.

Compliance
Wireless dual optical smoke detectors shall be approved by an independent accredited approval

19/20 Stratfield Park, Elettra Avenue
Waterlooville, Hampshire, PO7 7XN
United Kingdom

www.eurotechfire.com

+44 (0) 203 141 0999
enquiry@eurotechfire.com

Technical: +44 (0) 203 141 0982
technical@eurotechfire.com

body to EN54-7, -25 and the Radio Equipment Directive (RED).

The detector shall operate on the 868MHz frequency band.

5.2 Wireless Heat Detector Specification

General

The wireless heat detector shall be low profile in appearance and shall use a thermistor to measure the thermal conditions caused by fire. The detector will send digital communication through the system to the fire alarm control panel, via the translator module.

The wireless heat detector shall be powered by two commercially available CR123A 3v lithium batteries in the detector head.

The wireless heat detector shall be ceiling mounted and include an anti-tamper switch which is monitored by the fire alarm control panel.

Functionality

Wireless heat detectors shall have two modes of operation, either BS static profile or A1R rate of rise profile.

It shall be possible to activate remote detector functions from the PC configuration software.

Each wireless heat detector shall be capable of switching to a secondary redundant channel.

The communication channels in which the wireless heat detector operates shall be independent of those which the infrastructure devices operate on for enhanced wireless signal separation.

The wireless heat detectors can operate across 22 pairs of field channels.

Wireless heat detectors shall be fully monitored by the fire alarm control equipment.

The wireless heat detector shall include bi-coloured LEDs for visual status indication.

The wireless heat detectors shall have a manufacturer's recommended battery life of up to 10 years.

The wireless heat detectors shall have a facility to lock the detector to the base via means of a grub screw.

Wireless heat detectors shall be rated to at least IP40.

It shall be possible to view the location on a visual map/drawing, address on the loop, links between devices and all device information which can be produced and printed for use in an O&M manual.

It shall be possible to add/remove/replace the device to the systems configuration using a unique ID in the form of a QR code, through the dedicated PC based software tool.

Compliance

Wireless heat detectors shall be approved by an independent accredited approval body to EN54-5, -25 and the Radio Equipment Directive (RED).

The detector shall operate on the 868MHz frequency band.

5.3 Wireless Multi-Sensor Detector Specification

General

The wireless multi-sensor detector shall be low profile in appearance and shall use the light scattering principle to measure smoke density and a thermistor to measure the thermal conditions caused by fire. The detector will send digital communication through the system to the fire alarm control panel, via the translator module.

The wireless multi-sensor detector shall be powered by two commercially available CR123A 3v lithium batteries in the detector head.

The wireless multi-sensor detector shall be ceiling mounted and include an anti-tamper switch which is monitored by the fire alarm control panel.

Functionality

Wireless multi-sensor detectors shall combine both dual optical smoke and heat detection technologies for improved performance.

It shall be possible to activate remote detector functions from the PC configuration software.

Each wireless multi-sensor detector shall be capable of switching to a secondary redundant channel.

The communication channels in which the wireless multi-sensor detector operates shall be independent of those which the infrastructure devices operate on for enhanced wireless signal separation.

The wireless multi-sensor detectors can operate across 22 pairs of field channels.

Wireless multi-sensor detectors shall be fully monitored by the fire alarm control equipment.

The wireless multi-sensor detector shall include bi-coloured LEDs for visual status indication.

The wireless multi-sensor detectors shall have a manufacturer's recommended battery life of up to 10 years.

The wireless multi-sensor detectors shall have a facility to lock the detector to the base via means of a grub screw.

Wireless multi-sensor detectors shall be rated to at least IP40.

It shall be possible to view the location on a visual map/drawing, address on the loop, links between devices and all device information which can be produced and printed for use in an O&M

manual.

It shall be possible to add/remove/replace the device to the systems configuration through the use of a unique ID in the form of a QR code, using the dedicated PC based software tool.

Compliance
Wireless multi-sensor detectors shall be approved by an independent accredited approval body to EN54-5, -7, -25 and the Radio Equipment Directive (RED).

The detector shall operate on the 868MHz frequency band.

5.4 Wireless Manual Call Point Specification

General
The wireless manual call point shall be of a resettable type using a pushbutton with an optional transparent hinged cover to protect the device from accidental activation.

The wireless manual call point shall be powered by two commercially available CR123A 3v lithium batteries.

The wireless manual call point shall be wall mounted and include an anti-tamper switch which is monitored by the fire alarm control panel.

Functionality
Wireless manual call points shall have a clear visual indication that they have been activated with a special tool required to reset them.

It shall be possible to activate remote functions from the PC configuration software.

Each wireless manual call point shall be capable of switching to a secondary redundant channel.

The communication channels in which the wireless manual call point operates shall be independent of those which the infrastructure devices operate on for enhanced wireless signal separation.

The wireless manual call point can operate across 22 pairs of field channels.

Wireless manual call point shall be fully monitored by the fire alarm control equipment.

The wireless manual call point shall include bi-coloured LEDs for visual status indication.

The wireless manual call point shall have a manufacturer's recommended battery life of up to 10 years.

The wireless manual call points shall be secured to their mounting box with a special tool required to remove the front cover.

Wireless manual call points shall be rated to at least IP42.

It shall be possible to view the location on a visual map/drawing, address on the loop, links between devices and all device information which can be produced and printed for use in an O&M manual.

It shall be possible to add/remove/replace the device to the systems configuration through the use of a unique ID in the form of a QR code, using the dedicated PC based software tool.

Compliance

Wireless manual call points shall be approved by an independent accredited approval body to EN54-11, -25 and the Radio Equipment Directive (RED).

The call point shall operate on the 868MHz frequency band.

5.5 Wireless Output Module Specification

General

The wireless output module shall provide the facility to control third party equipment by interfacing and using wireless communication back to the infrastructure devices and fire alarm control panel.

The wireless output module shall be powered by two commercially available CR123A 3v lithium batteries.

The wireless output module shall include an anti-tamper switch which is monitored by the fire alarm control panel.

It shall be possible to add/remove/replace the device to the systems configuration through the use of a unique ID in the form of a QR code, using the dedicated PC based software tool.

Functionality

Wireless output modules shall provide a 24V DC switched output with the 24V DC being supplied by an external EN54-4 approved PSU.

The relay internal to the output module will be rated at 30V DC with a max switch rating of 2 Amp.

The relay internal to the output module shall have options for a normally open and normally closed volt free contacts which will switch when activated.

Cause and effect to control the activation of the output will be configurable within the wireless system manufacturer's recommended fire alarm control panel.

The wireless output module must also be capable of providing a fault monitored output.

It shall be possible to activate remote functions from the PC configuration software.

Each wireless output module shall be capable of switching to a secondary redundant channel.

The communication channels in which the wireless output module operates shall be independent of those which the infrastructure devices operate on for enhanced wireless signal separation.

The wireless output module can operate across 22 pairs of field channels.

Wireless output module shall be fully monitored by the fire alarm control equipment.

The wireless output module shall have a manufacturer's recommended battery life of up to 5 years.

Wireless output module shall be rated to at least IP65.

It shall be possible to view the location on a visual map/drawing, address on the loop, links between devices and all device information which can be produced and printed for use in an O&M manual.

It shall be possible to add/remove/replace the device to the systems configuration using a unique ID in the form of a QR code, through the dedicated PC based software tool.

Compliance
Wireless output modules shall be approved by an independent accredited approval body to EN54-18, -25 and the Radio Equipment Directive (RED).

The module shall operate on the 868MHz frequency band.

5.6 Wireless Input Module Specification

General
The wireless input module shall provide the facility to monitor and interface with third party equipment by interfacing via wireless with the fire alarm control panel.

The wireless input module shall be powered by two commercially available CR123A 3v lithium batteries.

The wireless input module shall include an anti-tamper switch which is monitored by the fire alarm control panel.

Functionality
Wireless input modules shall provide a single monitored input for the monitoring of third-party equipment.

Cause and effect to control the activation of the input will be configured within the wireless system manufacturer's recommended fire alarm control panel.

The wireless input module must also be capable of providing a fault monitored fire active input.

Each wireless input module shall be capable of switching to a secondary redundant channel.

The communication channels in which the wireless input module operates shall be independent of those which the infrastructure devices operate on for enhanced wireless signal separation.

The wireless input module can operate across 22 pairs of field channels.

Wireless input module shall be fully monitored by the fire alarm control equipment.

The wireless input module shall have a manufacturer's recommended battery life of up to 10 years.

Wireless input module shall be rated to at least IP65.

It shall be possible to view the location on a visual map/drawing, address on the loop, links between devices and all device information which can be produced and printed for use in an O&M manual.

Compliance
Wireless input modules shall be approved by an independent accredited approval body to EN54-18, -25 and the Radio Equipment Directive (RED).

The module shall operate on the 868MHz frequency band.

5.7 Wireless Base Sounder Specification

General
The wireless base sounder shall be capable of being used alongside a wireless detector or standalone with a cap, providing audible warning of fire events.

The wireless base sounder shall be powered by two commercially available CR123A 3v lithium batteries.

The wireless base sounder shall include an anti-tamper switch which is monitored by the fire alarm control panel.

It shall be possible to add/remove/replace the device to the systems configuration through the use of a unique ID in the form of a QR code, using the dedicated PC based software tool.

Functionality
Wireless base sounder shall provide a choice of 32 tones within the device.

Wireless base sounders shall have a typical sound output of 88 to 91dB(A).

The wireless base sounders shall have 4 volume levels as standard.

The wireless base sounder shall have a primary and secondary accessible tone option which can be controlled via the fire alarm system dependent on the evacuation or alert message which requires to be communicated.

Each wireless base sounder shall be capable of switching to a secondary redundant channel.

19/20 Stratfield Park, Elettra Avenue
Waterlooville, Hampshire, PO7 7XN
United Kingdom

www.eurotechfire.com

+44 (0) 203 141 0999
enquiry@eurotechfire.com

Technical: +44 (0) 203 141 0982
technical@eurotechfire.com

The communication channels in which the wireless base sounder operates shall be independent of those which the infrastructure devices operate on for enhanced wireless signal separation.

The wireless base sounder can operate across 22 pairs of field channels.

Wireless base sounders shall be fully monitored by the fire alarm control equipment.

The wireless base sounder shall have a manufacturer's recommended battery life of up to 5 years.

Wireless base sounders shall be rated to at least IP21C.

The wireless base sounder shall be synchronised with all other output on the wireless system.

It shall be possible to view the location on a visual map/drawing, address on the loop, links between devices and all device information which can be produced and printed for use in an O&M manual.

It shall be possible to add/remove/replace the device to the systems configuration through the use of a unique ID in the form of a QR code, using the dedicated PC based software tool.

Compliance
Wireless base sounders shall be approved by an independent accredited approval body to EN54-3, -25 and the Radio Equipment Directive (RED).

The base shall operate on the 868MHz frequency band.

5.8 Wireless Base Sounder VAD Specification
General
The wireless base sounder VAD shall be capable of being used alongside a wireless detector or standalone with a cap, providing visual and audible warning of fire events.

The wireless base sounder VAD shall be powered by two commercially available CR123A 3v lithium batteries.

The wireless base sounder VAD shall include an anti-tamper switch which is monitored by the fire alarm control panel.

Functionality
Wireless base sounder VAD shall provide a choice of 32 tones within the device.

Wireless base sounders VAD shall have a typical sound output of 88 to 91dB(A).

The wireless base sounder VADs shall have 4 volume levels as standard.

The wireless base sounder VAD shall be available with a red or white flash.

The wireless base sounder VAD shall have two visual alarm settings which are high or low.

The wireless base sounder VAD shall have a C-3-15 setting in high power mode.

The wireless base sounder VAD shall have a C-3-10 setting in low power mode.

Each wireless base sounder VADs shall be capable of switching to a secondary redundant channel.

The communication channels in which the wireless base sounder VAD operates shall be independent of those which the infrastructure devices operate on for enhanced wireless signal separation.

The wireless base sounder VAD can operate across 22 pairs of field channels.

Wireless base sounder VADs shall be fully monitored by the fire alarm control equipment.

The wireless base sounder VAD shall have a manufacturer's recommended battery life of up to 5 years.

Wireless base sounder VADs shall be rated to at least IP21C.

The wireless base sounder VADs shall be synchronised with all other output on the wireless system.

It shall be possible to view the location on a visual map/drawing, address on the loop, links between devices and all device information which can be produced and printed for use in an O&M manual.

It shall be possible to add/remove/replace the device to the systems configuration through the use of a unique ID in the form of a QR code, using the dedicated PC based software tool.

Compliance
Wireless base sounder VADs shall be approved by an independent accredited approval body to EN54-3, -23, -25 and the Radio Equipment Directive (RED).

The base shall operate on the 868MHz frequency band.

5.9 Wireless Wall Sounder Specification
General
The wireless wall sounder shall provide audible warning of fire events.

The wireless wall sounder shall be powered by two commercially available CR123A 3v lithium batteries.

The wireless wall sounder shall include an anti-tamper switch which is monitored by the fire alarm control panel.

Functionality
Wireless wall sounders shall provide a choice of 32 tones within the device.

19/20 Stratfield Park, Elettra Avenue
Waterlooville, Hampshire, PO7 7XN
United Kingdom

www.eurotechfire.com

+44 (0) 203 141 0999
enquiry@eurotechfire.com

Technical: +44 (0) 203 141 0982
technical@eurotechfire.com

Wireless wall sounders shall have a typical sound output of 88 to 91dB(A).

The wireless wall sounders shall have 3 volume levels as standard.

The wireless wall sounders shall be in red or white plastic.

Each wireless wall sounder shall be capable of switching to a secondary redundant channel.

The communication channels in which the wireless wall sounder operates shall be independent of those which the infrastructure devices operate on for enhanced wireless signal separation.

The wireless wall sounder can operate across 22 pairs of field channels.

Wireless wall sounder shall be fully monitored by the fire alarm control equipment.

The wireless wall sounder shall have a manufacturer's recommended battery life of up to 5 years.

Wireless wall sounders shall be IP rated to IP65.

The wireless wall sounder shall be synchronised with all other output on the wireless system.

It shall be possible to view the location on a visual map/drawing, address on the loop, links between devices and all device information which can be produced and printed for use in an O&M manual.

It shall be possible to add/remove/replace the device to the systems configuration through the use of a unique ID in the form of a QR code, using the dedicated PC based software tool.

Compliance
Wireless wall sounders shall be approved by an independent accredited approval body to EN54-3, -25 and the Radio Equipment Directive (RED).

The sounder shall operate on the 868MHz frequency band.

5.10 Wireless Wall Sounder VAD Specification

General
The wireless wall sounder VADs shall provide visual and audible warning of fire events.

The wireless wall sounder VAD shall be powered by two commercially available CR123A 3v lithium batteries.

The wireless wall sounder VAD shall include an anti-tamper switch which is monitored by the fire alarm control panel.

Functionality
Wireless wall sounder VADs shall provide a choice of 32 tones within the device.

Wireless wall sounder VADs shall have a typical sound output of 88 to 91dB(A).

The wireless wall sounder VADs shall have 3 volume levels as standard.

The wireless wall sounder VADs shall be red or white in body colour.

The wireless wall sounder VAD shall have a W-2.5-7 rating.

Each wireless wall sounder VAD shall be capable of switching to a secondary redundant channel.

The communication channels in which the wireless wall sounder VAD operates shall be independent of those which the infrastructure devices operate on for enhanced wireless signal separation.

The wireless wall sounder VAD can operate across 22 pairs of field channels.

Wireless wall sounder VAD shall be fully monitored by the fire alarm control equipment.

The wireless wall sounder VAD shall have a manufacturer's recommended battery life of up to 5 years.

Wireless wall sounder VADs shall be IP rated to IP65.

The wireless wall sounder VAD shall be synchronised with all other output on the wireless system.

It shall be possible to view the location on a visual map/drawing, address on the loop, links between devices and all device information which can be produced and printed for use in an O&M manual.

It shall be possible to add/remove/replace the device to the systems configuration through the use of a unique ID in the form of a QR code, using the dedicated PC based software tool.

Compliance
Wireless wall sounder VADs shall be approved by an independent accredited approval body to EN54-3, -25 and the Radio Equipment Directive (RED).

The sounder shall operate on the 868MHz frequency band.

6 Software and Diagnostic Tools

6.1 Wireless Survey Kit Specification

General
The wireless survey kit shall enable signal strength to be tested between infrastructure devices and field devices to provide the fire alarm contractor with a report on how the system shall be configured.

Functionality
The wireless survey kit shall connect to a mobile/tablet opp to allow for an enriched survey report to be carried out.

The wireless survey kit shall provide information on signal strength, background noise, ideal channel for installation and packet loss %.

Per device, the wireless survey kit shall provide a good, marginal, or bad signal strength value.

The wireless survey kit opp shall allow photos and location text to be added to each point surveyed.

The wireless survey kit opp shall provide a PDF report following the completion of a survey.

6.2 Software Tools Specification

General

The wireless system shall be provided with PC based software to aid installation, commissioning, and maintenance.

Functionality

The PC based software shall visualise the location on a map/drawing of the device which is scanned into the software using a unique QR code.

The PC based software shall also present the loop address, radio address and individual device information.

The PC based software shall present live data to see the real time signal strength between devices, indicated by colours whether they are very good/good/marginal/bad.

The PC based software shall present an event log of the translator the PC is connected to.

It shall be possible to print a PDF report from the PC based software for use in an O&M manual.

19/20 Stratfield Park, Elettra Avenue
Waterlooville, Hampshire, PO7 7XN
United Kingdom

www.eurotechfire.com

+44 (0) 203 141 0999
enquiry@eurotechfire.com

Technical: +44 (0) 203 141 0982
technical@eurotechfire.com