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Kentec CS10 Wireless Fire Detection And Alarm System

Kentec CS10 Wireless Fire Detection And Alarm System Instruction Manual

Contents

Kentec
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Kentec CS10 Wireless Fire Detection And Alarm System

Product Information

- **Specifications:**
  - **System Type:** Wireless Fire Detection & Alarm System
  - **Communication:** Radio-based communication systems
  - **Configuration:** Fully wireless or a combination of wired and wireless field devices
  - **Standards:** EN54-3, EN54-5, EN54-7, EN54-11, EN54-17, EN54-18, EN54-23, EN54-25, EN54-29, Radio Equipment Directive (RED), EN54-2, EN54-4, EN544, BS5839 part 1
  - **Manufacturer Qualification:** ISO 9001:2015 compliant

Product Usage Instructions

- **Installation**
  - Ensure accredited bodies approve all components as per the specified standards. Follow the manufacturer's guidelines for proper installation.
- **Configuration**
  - Set up the wireless fire alarm system with a compatible analogue addressable fire control panel. Ensure proper communication between the control panel and wireless fire alarm devices via radio signals.
- **Testing**
  - Conduct regular testing of the system to ensure all components are functioning correctly. Test the wireless communication between field devices and the control panel.
- **Maintenance**

- Schedule routine maintenance checks to keep the system in optimal condition. Follow the manufacturer's recommended maintenance procedures.

FAQs

- **Q: What are the qualifications required for the system equipment manufacturer?**
  - **A:** The manufacturer should regularly be involved in designing, manufacturing, and distributing products meeting ISO 9001:2015 requirements.
- **Q: What standards should the wireless fire detection system components adhere to?**
  - **A:** Components should be approved to standards such as EN54-3, EN54-5, EN54-7, EN54-11, EN54-17, EN54-18, EN54-23, EN54-25, and EN54-29, among others.

Scope

- To provide a fire detection and alarm system for the protection of life and property using radio-based communication systems and compatible Control and Indicating Equipment (CIE).
- The system may be of a fully wireless configuration or a combination of wired and wireless field devices.

Standards

The wireless fire detection system components should be approved by an accredited body to the following applicable product standards:

- **EN54-3** Fire detection and fire alarm systems. Fire Alarm devices. Sounders
- **EN54-5** Fire detection and fire alarm systems. Heat detectors. Point heat detectors
- **EN54-7** Fire detection and fire alarm systems. Smoke detectors. Point-type smoke detectors that operate using scattered light, transmitted light, or ionization
- **EN54-11** Fire detection and fire alarm systems. Manual Call Points
- **EN54-17** Fire detection and fire alarm systems. Short-circuit isolators
- **EN54-18** Fire detection and fire alarm systems. Input/Output devices
- **EN54-23** Fire detection and fire alarm systems – Fire alarm devices. Visual alarm devices
- **EN54-25** Fire detection and fire alarm systems. Components using radio links
- **EN54-29** Fire detection and fire alarm systems. Multi-sensor fire detectors. Point detectors using a combination of smoke and heat sensors

Wireless fire detection devices must also be approved under the Radio Equipment Directive (RED). Compatible control and indicating equipment used with the wireless fire detection devices must be approved by an accredited body to EN54-2 and EN54-4. Power supplies installed as part of the wireless fire detection system must also be approved to EN54-4. Design and installation of the system shall be by the requirements of local standards e.g., BS5839 part 1.

Qualification of Manufacturer
The manufacturer of the system equipment shall be regularly involved in the design, manufacture, and distribution of all products specified in this document. These processes shall be monitored under a quality assurance program that meets the current ISO 9001:2015 requirements.

Qualification of Fire Alarm Contractors

- The fire alarm contractor shall be responsible for the design, supply, 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.
- Wireless detection system design and installation should only be carried out by accredited fire alarm contractors – BAFE certificated or similar. System designers should be able to demonstrate previous experience in wireless fire detection system design and installation.
- Fire alarm contractors and their sub-contractors must be able to provide evidence of training provided by the product manufacturer covering specific product design requirements, configuration, and commissioning processes as well as radio surveying.
- It will be the responsibility of the fire alarm contractor to carry out a wireless survey.

Wireless Fire Alarm System

Functional Description

- The wireless fire alarm system will consist of a compatible analogue addressable fire control panel that communicates with a range of wireless fire alarm devices via radio signals. The radio devices communicate to the fire alarm control panel via a wireless translator which allows the control panel to interpret information from field devices and send information to field devices.
- Wireless field devices must include but not be limited to:
- Wireless smoke, heat and multi-sensor devices provide the earliest possible detection of smoke or fire and transmit this information to the fire alarm control panel.
- Wireless manual call points provide manual activation of the fire alarm system on the discovery of a fire.
- Wireless notification devices i.e., sounders/beacons etc. provide notification to building occupants that the fire alarm has been activated and they should evacuate the building.
- Wireless input modules provide the ability to monitor other equipment or devices on the site that cannot directly communicate with the fire alarm control panel.
- Wireless output modules provide control of other equipment that cannot communicate with the fire alarm directly i.e., equipment shutdown, control of fire doors etc.
- The wireless fire alarm system will be able to provide a fully wireless solution or be interfaced to the detection loop alongside hard-wired field devices to provide a hybrid system.
- The wireless fire alarm system will also provide wireless expanders to boost radio signals throughout the system as required.
- Wireless fire alarm systems will use the designated licence-free 868MHz for their radio communication.
- The maximum power output of devices must not exceed 25mW.
- The wireless fire alarm system must provide self-healing mesh technology whereby field devices will be able to communicate with multiple wireless expanders and automatically be able to select the strongest available signal path to the wireless translator compensating for changes in the signal path due to signal blockage, expander failure etc.

Wireless System Configuration

- The wireless fire alarm system will have a main wireless translator module which will be hardwired to the detection loop of the manufacturer's recommended analogue addressable fire alarm panel.

- The compatible fire alarm control panel must be capable of supporting multiple Translator Modules (maximum 10) on a single detection loop.
- The wireless translator must provide bi-directional radio communication to the wireless field devices and must be able to support a minimum of 126 wireless devices.
- The wireless system must be capable of the following maximum communication ranges in clear air:
    - 2000m between the wireless translator and wireless expander modules
    - 1200m between expanders and wireless field devices
- Wireless devices must be logged on to the wireless translator allowing the translator to establish communications and control the communication of information between the wireless field devices and the fire alarm control panel.
- Wireless expanders must be provided as part of the product range to be able to boost radio signals across the site as required.
- Where wireless expanders are used these must be powered from a dedicated EN54-4 approved supply with battery back-up complying with the requirements of BS5839-1.
- The wireless fire alarm system must be capable of providing a self-healing mesh technology to maintain a consistent signal path between wireless field devices, wireless expanders, and the wireless translator. Field devices shall not be tied to a specific wireless expander but should use self-healing mesh technology to determine the strongest communication path to the wireless translator.
- The wireless fire alarm system must provide a minimum of 6 independent frequency sub-channels within the 868MHz frequency range. Each field device must be capable of automatically switching between these frequency channels to establish the best communication path.
- Each wireless detection system must have a unique site code preventing any interference with any other adjacent wireless detection systems.
- All field devices must provide automatic and independent amplitude control of the wireless signal to optimise performance.
- The addition or removal of wireless devices from the system must only be possible through the wireless translator module or associated configuration software, accessible through engineering passcodes.
- Configuration of the wireless system must be possible through the wireless translator or associated configuration software. Cause and effect programming of the wireless fire alarm system must only be possible through the compatible fire alarm control panel.
- All wireless devices must be powered by an internal power source consisting of easily replaceable batteries. The power source must provide the device with an operational life of up to ten years in normal conditions (EN54-25). Each power source must be monitored and capable of reporting its condition to the CIE. Power sources must provide notification of low battery voltages to the wireless translator and subsequently the fire alarm control panel. Wireless devices indicating a low battery voltage shall continue to function normally for a minimum of 30 days after the low battery warning is indicated allowing remedial action to be taken.
- All wireless devices must be powered by commercially available batteries, no special battery packs or non-standard cells shall be used.
- All wireless devices must have two independent battery supplies, a primary cell to power the device under normal conditions and a secondary cell to maintain the operation of the device should the primary cell fail. Notification must be provided as a fault event at the panel if either (or both) batteries are defective.
- In normal working conditions field device battery life should be as follows:
- **Detectors, Manual Call Points, and Input Modules:**
    - Primary Cell – 8-10 Years

- ○ Secondary Cell – 3 Months
- **Warning and Output Devices:**
  - ○ Primary Cell – 8-10 Years
  - ○ Secondary Cell – 3 Months
- All wireless detectors must contain a magnet test point, whereby when a magnet is held adjacent to this point the device will activate.

System Components

Wireless Translator Module

- The system shall utilise one or more loop-powered translator modules to integrate the wireless and wired elements of the fire alarm system.
- Each translator module must be capable of communicating with a maximum of 126 field devices.
- Each translator module should be capable of supporting a maximum of 126 expander modules.
- Translator modules will be loop-powered devices and will not require a dedicated power supply unit.
- The translator module must only be used with the manufacturer's recommended fire alarm control panel and the control panel will fully monitor the status of the translator module and associated wireless devices in compliance with the relevant standards.
- Translator modules should be configurable without the need for special tools or software, and access to configuration settings should be controlled by password/passcodes.
- Translator modules must be provided with licence-free software to support configuration and diagnostics.
- The translator must provide the facility for connection of a PC/laptop for configuration, diagnostics, and information downloads.
- Translator modules must provide the ability to secure the enclosure lid to restrict easy access to internal circuitry by employing additional screw fixings.
- Translator modules must be capable of indicating radio signal strengths.
- Translator modules shall have the ability to be configured as a loop-powered Expander Module for boosting signal strengths and providing a self-healing mesh system.
- The translator module shall include a wireless transceiver using a licence-free 868MHz frequency.
- **Wireless translator modules must be tested and approved by an accredited body to the following standards:**
  - ○ EN54-17
  - ○ EN54-18
  - ○ EN54-25
  - ○ Radio Equipment Directive (RED)

Wireless Expander Module

- The system shall have the facility to use one or more expander modules to boost the signal strength and coverage of the associated translator module where required.
- Expander modules must be capable of communicating using a self-healing mesh configuration maintaining a consistent signal path back to the translator module.
- Each expander module must be capable of communicating with a minimum of 125 wireless field devices.

- Expander modules will require their own dedicated EN54-4 approved power supply and backup battery supply in compliance with BS5839 part 1. Expander modules shall work on a supply voltage between 10-27V DC.
- Expander modules must be able to provide increased ingress protection (IP) where required this may be by use of an additional housing.
- Expander modules must provide the ability to secure the enclosure lid to restrict easy access to internal circuitry using additional screw fixings.
- **Wireless expander modules must be tested and approved by an accredited body to the following standards:**
    - EN54-17
    - EN54-18
    - EN54-25
    - Radio Equipment Directive (RED)

Wireless Optical Smoke Detector

- The wireless optical smoke detector shall be low profile in appearance with a two-part construction:
    - Smoke chamber, wireless transceiver, and batteries
    - Mounting base
- Wireless optical smoke detectors must be fitted with a double dust trap to protect from airborne contamination.
- Wireless optical smoke detectors must provide the following features to aid false alarm reduction:
    - Dust compensation algorithm
    - Automatic drift compensation
    - Alarm threshold sensitivity adjustment
- Wireless detectors must be able to function as part of a self-healing mesh system automatically switching between expanders to maintain the strongest radio communication path.
- Wireless detectors must have a manufacturer's recommended battery life of 8-10 years.
- Wireless detectors shall provide the facility to test the activation of detectors by use of a magnet.
- Integral tamper switches must be provided on wireless detectors which provide a fault notification to the wireless translator when a detector has been removed from its mounting base.
- Visual indication of the detector status must be provided using a bi-colour LED indicator.
- Wireless detectors must contain two commercially available cell batteries. Battery status will be monitored by the wireless translator.
- Wireless detectors must provide the facility to secure them to the detector base using a grub screw.
- Wireless optical smoke detectors must have a minimum ingress protection of IP43.
- Wireless optical smoke detectors must be tested and approved by an accredited body to the following standards:
    - EN54-7
    - EN54-25
    - Radio Equipment Directive (RED)

Wireless Optical Smoke Detector and Sounder
The wireless optical smoke detector and sounder shall be low profile in appearance with a two-part construction:

- Smoke chamber, sounder element, wireless transceiver, and batteries

- Mounting base

Wireless smoke detectors must be fitted with a double dust trap to protect from airborne contamination.

- Wireless smoke detectors must provide the following features to aid false alarm reduction:
    - Dust compensation algorithm
    - Automatic drift compensation
    - Alarm threshold sensitivity adjustment

Wireless detectors must be able to function as part of a self-healing mesh system automatically switching between expanders to maintain the strongest radio communication path.

- The sounder element of these detectors shall provide an audible warning signal with a minimum of four selectable tones:
    - Single Continuous tone
    - Single intermittent tone – 1 sec on/1 sec off
    - Single intermittent tone – 2 secs on/2 secs off
    - Two-tone – 1 sec on/1 sec off
- The sounder element of these detectors should provide two software configurable sound levels of 84 or 96dB (A) @ 1 metre.
- Wireless detectors shall provide the facility to test the activation of detectors by use of a magnet.
- Wireless detectors must have a manufacturer's recommended battery life of 8-10 years (subject to sounder use during regular testing).
- Integral tamper switches must be provided on wireless detectors which provide a fault notification to the wireless translator when a detector has been removed from its mounting base.
- Visual indication of the detector status must be provided using a bi-colour LED indicator.
- Wireless detectors must contain two commercially available cell batteries. Battery status will be monitored by the wireless translator.
- Wireless detectors must provide the facility to secure them to the detector base using a grub screw.
- Wireless optical smoke detectors must have a minimum ingress protection of IP43.
- Wireless optical smoke detectors and sounders must be tested and approved by an accredited body to the following standards:
    - EN54-3
    - EN54-7
    - EN54-25
    - Radio Equipment Directive (RED)

Wireless Optical Smoke Detector with Voice Alarm and VAD

- The wireless optical smoke detector with voice alarm and VAD (Visual Alarm Device) shall be low profile in appearance with a two-part construction:
- Smoke chamber, voice element, VAD element, wireless transceiver, and batteries
- Mounting base
- Wireless smoke detectors must be fitted with a double dust trap to protect from airborne contamination.

- Wireless smoke detectors must provide the following features to aid false alarm reduction:
  - Dust compensation algorithm
  - Automatic drift compensation
  - Alarm threshold sensitivity adjustment
- Wireless detectors must be able to function as part of a self-healing mesh system automatically switching between expanders to maintain the strongest radio communication path.
- The voice alarm element of these detectors shall be capable of providing a clear voice message notifying of an alarm state. The device should be capable of storing up to 3 voice messages with the ability to install customised voice messages by a qualified engineer.
- The voice alarm element of these detectors should provide sound levels up to 91dB (A) @ 1 metre.
- The voice alarm and VAD element of this device should be configurable to provide, through the use of a Doppler effect, white noise sound path and progressive propagation light path guidance to an exit route within the area.
- Wireless detectors shall provide the facility to test the activation of detectors by use of a magnet.
- Wireless detectors must have a manufacturer's recommended battery life of 8-10 years (subject to sounder use during regular testing).
- Integral tamper switches must be provided on wireless detectors which provide a fault notification to the wireless translator when a detector has been removed from its mounting base.
- Visual indication of the detector status must be provided using a bi-colour LED indicator.
- Wireless detectors must contain two commercially available cell batteries. Battery status will be monitored by the wireless translator.
- Wireless detectors must provide the facility to secure them to the detector base using a grub screw.
- Wireless optical smoke detectors must have a minimum ingress protection of IP43.
- Wireless optical smoke detectors with voice and VAD functionality must be tested and approved by an accredited body to the following standards:
  - EN54-3
  - EN54-7
  - EN54-23
  - EN54-25
  - Radio Equipment Directive (RED)

Wireless Heat Detector

- The wireless heat detector shall be low profile in appearance with a two-part construction:
  - Thermal sensor, wireless transceiver, and batteries
  - Mounting base
- Wireless heat detectors shall monitor the temperature of the surrounding environment using an internal algorithm to provide both fixed temperature (56oC) and rate of rise (8oC per min) alarm thresholds.
- Wireless detectors must be able to function as part of a self-healing mesh system automatically switching between expanders to maintain the strongest radio communication path.
- Wireless detectors shall provide the facility to test the activation of detectors by use of a magnet.
- Wireless detectors must have a manufacturer's recommended battery life of 8-10 years.
- Integral tamper switches must be provided on wireless detectors which provide a fault notification to the wireless translator when a detector has been removed from its mounting base.

- Visual indication of the detector status must be provided employing a bi-colour LED indicator.
- Wireless detectors must contain two commercially available cell batteries. Battery status will be monitored by the wireless translator.
- Wireless detectors must provide the facility to secure them to the detector base employing a grub screw.
- Wireless heat detectors must have a minimum ingress protection of IP43.
- Wireless heat detectors must be tested and approved by an accredited body to the following standards:
    - EN54-5
    - EN54-25
    - Radio Equipment Directive (RED)

Wireless Heat Detector and Sounder

- The wireless heat detector with sounder shall be low profile in appearance with a two-part construction:
    - Thermal sensor, Sounder element, wireless transceiver, and batteries
    - Mounting base
- Wireless detectors must be able to function as part of a self-healing mesh system automatically switching between expanders to maintain the strongest radio communication path.
- The heat detector element of this detector shall monitor the temperature of the surrounding environment using an internal algorithm to provide both fixed temperature (56oC) and rate of rise (8oC per min) alarm thresholds.
- The sounder element of this detector shall provide an audible warning signal with a minimum of four selectable tones:
    - Single Continuous tone
    - Single intermittent tone – 1 sec on/1 sec off
    - Single intermittent tone – 2 secs on/2 secs off
    - Two-tone – 1 sec on/1 sec off
- The sounder element of this detector shall provide two software configurable sound levels of 84 or 96dB (A) @ 1 metre.
- Wireless detectors shall provide the facility to test the activation of detectors by use of a magnet.
- Wireless detectors must have a manufacturer's recommended battery life of 8-10 years (subject to sounder use during regular testing).
- Integral tamper switches must be provided on wireless detectors which provide a fault notification to the wireless translator when a detector has been removed from its mounting base.
- Visual indication of the detector status must be provided using a bi-colour LED indicator.
- Wireless detectors must contain two commercially available cell batteries. Battery status will be monitored by the wireless translator.
- Wireless detectors must provide the facility to secure them to the detector base employing a grub screw.
- Wireless optical heat detectors with sounders must have a minimum ingress protection of IP43.
- Wireless optical heat detectors with sounders must be tested and approved by an accredited body to the following standards:
    - EN54-3
    - EN54-5
    - EN54-25
    - Radio Equipment Directive (RED)

Wireless Multi-Sensor Detector

The wireless multi-sensor detector shall be low profile in appearance with a two-part construction:

- Smoke chamber, thermal sensor, wireless transceiver, and batteries
- Mounting base
- Wireless multi-sensor detectors will be capable of detecting the presence of smoke or heat within the same device.
- Wireless multi-sensor detectors must be fitted with a double dust trap to protect from airborne contamination.
- The smoke detector element of this detector must provide the following features to aid false alarm reduction:
    - Dust compensation algorithm
    - Automatic drift compensation
    - Alarm threshold sensitivity adjustment
- The heat detector element of this detector shall monitor the temperature of the surrounding environment using an internal algorithm to provide both fixed temperature (56oC) and rate of rise (8oC per min) alarm thresholds.
- The wireless multi-sensor detector shall be capable of operating in any one of three modes:
    - Smoke only
    - Heat only
    - Smoke + Heat
- Wireless detectors must be able to function as part of a self-healing mesh system automatically switching between expanders to maintain the strongest radio communication path.
- Wireless detectors shall provide the facility to test the activation of detectors by use of a magnet.
- Wireless detectors must have a manufacturer's recommended battery life of 8-10 years.
- Integral tamper switches must be provided on wireless detectors which provide a fault notification to the wireless translator when a detector has been removed from its mounting base.
- Visual indication of the detector status must be provided using a bi-colour LED indicator.
- Wireless detectors must contain two commercially available cell batteries. Battery status will be monitored by the wireless translator.
- Wireless detectors must provide the facility to secure them to the detector base using a grub screw.
- Wireless multi-sensor detectors must have a minimum ingress protection of IP43.
- Wireless multi-sensor detectors must be tested and approved by an accredited body to the following standards:
    - EN54-5
    - EN54-7
    - EN54-25
    - EN54-29
    - Radio Equipment Directive (RED)

Wireless Manual Call Point

- The MCP shall be of two-part construction:
    - Industry recognised fascia, radio transceivers and batteries.
    - Surface Mount Backbox
- Wireless manual call points shall be of the resettable type using a pushbutton behind a clear plastic fascia.
- Wireless manual call points must provide a clear visual indication that they have been activated with a special

tool required to reset them.

- Wireless manual call points must be able to function as part of a self-healing mesh system automatically switching between expanders to maintain the strongest radio communication path.
- Wireless manual call points must have a manufacturer's recommended battery life of 8-10 years.
- Integral tamper switches must be provided on wireless manual call points which provide a fault notification to the wireless translator when a manual call point has been removed from its mounting backbox.
- Wireless manual call points must be provided with an option of a protective cover to reduce the possibility of false activation.
- Visual indication of the manual call point status must be provided using a bi-colour LED indicator.
- Wireless manual call points must contain two commercially available cell batteries. Battery status will be monitored by the wireless translator.
- Wireless manual call points must be secured to their mounting box with a special tool required to remove them.
- Wireless manual call points must have a minimum ingress protection of IP41.
- Wireless manual call points must be tested and approved by an accredited body to the following standards:
    - EN54-11
    - EN54-25
    - Radio Equipment Directive (RED)

Wireless Output Module

- A wireless output module shall provide the facility to control third-party equipment via the wireless fire alarm system.
- The wireless relay output will 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 8 Amp.
- The relay internal to the output module will be normally open and will close when activated.
- Cause and effect to control the activation of the output will be configured within the wireless system manufacturer's recommended fire alarm control panel.
- The wireless output module must also be capable of providing a fully monitored fault input.
- Wireless output modules must be able to function as part of a self-healing mesh system automatically switching between expanders to maintain the strongest radio communication path.
- Wireless output modules must have a manufacturer's recommended battery life of 8-10 years.
- Integral tamper switches must be provided on wireless output modules which provide a fault notification to the wireless translator when an output module has been removed from its mounting backbox.
- Wireless output modules must contain two commercially available cell batteries. Battery status will be monitored by the wireless translator.
- Wireless output modules must have the facility to secure the unit's cover by use of additional screw fixings.
- Wireless output modules must have a minimum ingress protection of IP20.
- Wireless output modules must be tested and approved by an accredited body to the following standards:
    - EN54-18
    - EN54-25
    - Radio Equipment Directive (RED)

Wireless Input Module

- A wireless input module shall provide the facility to monitor and interface other third-party equipment with the wireless fire alarm system.
- The wireless input module will provide a single monitored input for monitoring of third-party equipment.
- Cause and effect to control the activation of the input module 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.
- Wireless input modules must be able to function as part of a self-healing mesh system automatically switching between expanders to maintain the strongest radio communication path.
- Wireless input modules must have a manufacturer's recommended battery life of 8-10 years.
- Integral tamper switches must be provided on wireless input modules which provide a fault notification to the wireless translator when an input module has been removed from its mounting backbox.
- Visual indication of the wireless input module status must be provided using a bi-colour LED indicator.
- Wireless input modules must contain two commercially available cell batteries. Battery status will be monitored by the wireless translator.
- Wireless input modules must have the facility to secure the module's cover by use of additional screw fixings.
- Wireless input modules must have a minimum ingress protection of IP21.
- Wireless input modules must be tested and approved by an accredited body to the following standards:
    - EN54-18
    - EN54-25
    - Radio Equipment Directive (RED)

Wireless Electronic Sounder

- The sounder shall be designed for use as part of a fire detection and alarm system and of two-part construction:
    - Sounder, wireless transceiver and batteries
    - Wall mounting back box
- Wireless sounders shall be provided in red and constructed from ABS plastic.
- Wireless sounders should be capable of providing a minimum of 4 independent tones selectable within the sounder unit:
    - Pulsed tone 0.5 sec on/0.5 sec off
    - Dual tone
    - Continuous tone
    - Pulsed tone (Synchronised) 1 sec on/1 sec off
- Wireless sounders shall be capable of providing a sound output of 93dB (A) for all tones.
- Wireless devices must have a manufacturer's recommended battery life of 8-10 years (subject to sounder use during regular testing).
- Integral tamper switches must be provided on wireless sounders which provide a fault notification to the wireless translator when a sounder has been removed from its mounting base.
- Wireless sounders must contain two commercially available cell batteries. Battery status will be monitored by the wireless translator.
- Wireless sounders must be secured to their mounting box with a special tool required to remove them.
- Wireless sounders must have a minimum ingress protection of IP21.
- Wireless sounders must be tested and approved by an accredited body to the following standards:
    - EN54-3

- EN54-25
- Radio Equipment Directive (RED)

Wireless Survey Kit

- The wireless manufacturer shall provide a survey kit enabling fire alarm contractors to check signal strengths around the intended site in line with the system design.
- The survey kit should be provided in a configuration that enables a site survey to be carried out by a single trained person.

Software Tools

- The wireless system must be provided with PC-based software to aid with configuration, diagnostics, and commissioning.
- The software should as a minimum provide the following functionality:
  - Configuration of field device settings
  - Interrogation of field device data i.e., signal strength, battery voltage, analogue values etc.
  - Scanning of RF signals to identify and resolve any weaknesses
  - Signal strength and quality testing
  - Dynamic communication path routing
  - System status
  - Event log retrieval

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Documents / Resources

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References

- **User Manual**