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Fire Detection Design, Installation, Testing & Fire Alarm Maintenance Training

Venue: Kenvision Techniks Workshops,

Nairobi, Kenya

Duration: 10 Days

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Synopsis

Why is electrical knowledge important in fire alarm installation?

It is very important to understand the association between fire alarm installation and electrical installation. In order to install and maintain a fire alarm system, a basic knowledge of electrics is a must.

Not all fire alarm systems demand a mains connection, there are smoke detectors which sometimes do not require a mains connection in domestic dwellings. It all depends on the grades of the system.

However, when a fire alarm system is connected to the mains, it should comply with the standards.

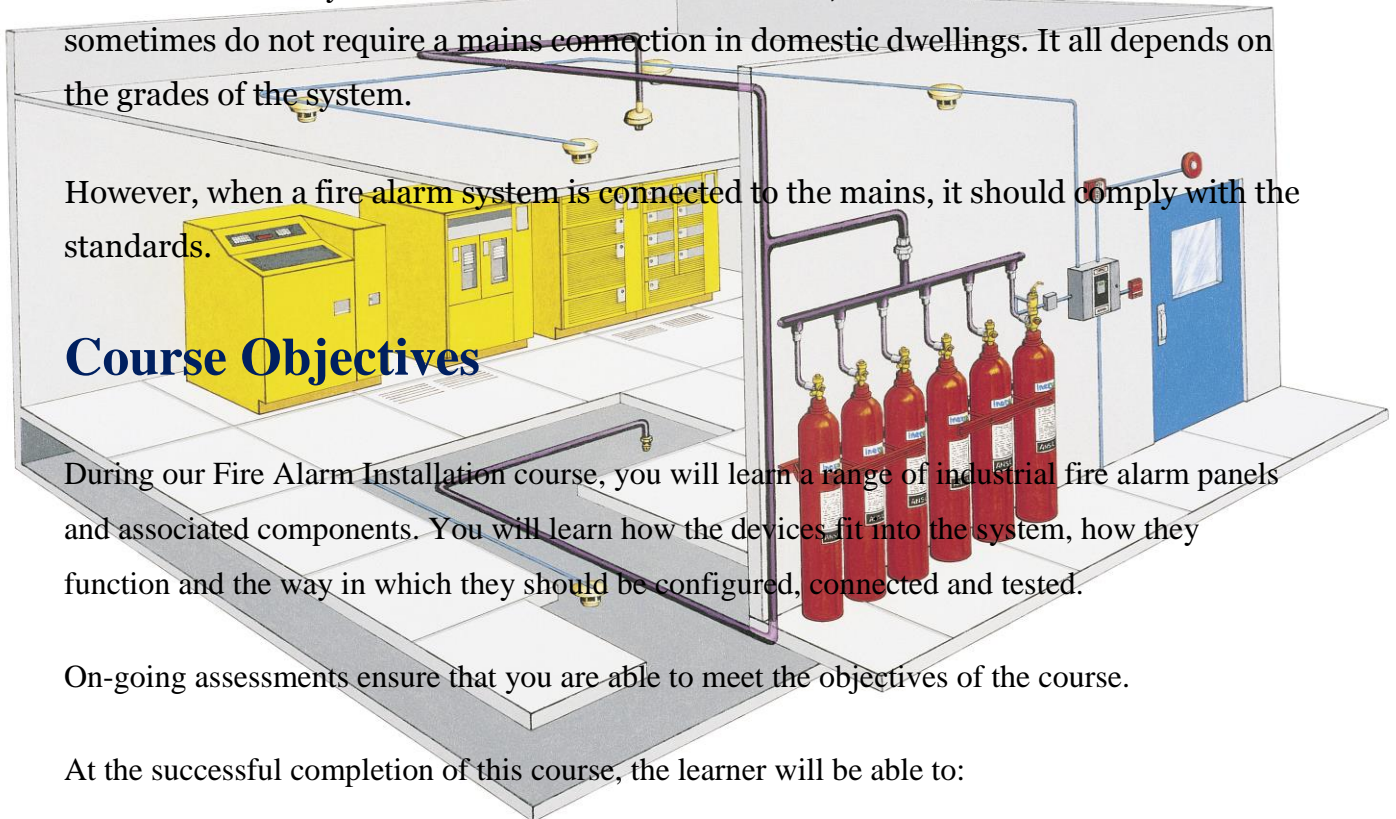
Course Objectives

During our Fire Alarm Installation course, you will learn a range of industrial fire alarm panels and associated components. You will learn how the devices fit into the system, how they function and the way in which they should be configured, connected and tested.

On-going assessments ensure that you are able to meet the objectives of the course.

At the successful completion of this course, the learner will be able to:

- Demonstrate the basic key concepts and all the components used in fire alarm systems.
- Install, test and maintain conventional and addressable fire alarm systems.
- Recognize the role of fire alarm outputs, automatic and manual fire detectors.
- Describe the differences between fire alarm categories and grades.
- Explain the role of a fire alarm installer.
- Effectively work with other stakeholders in fire alarm installation.



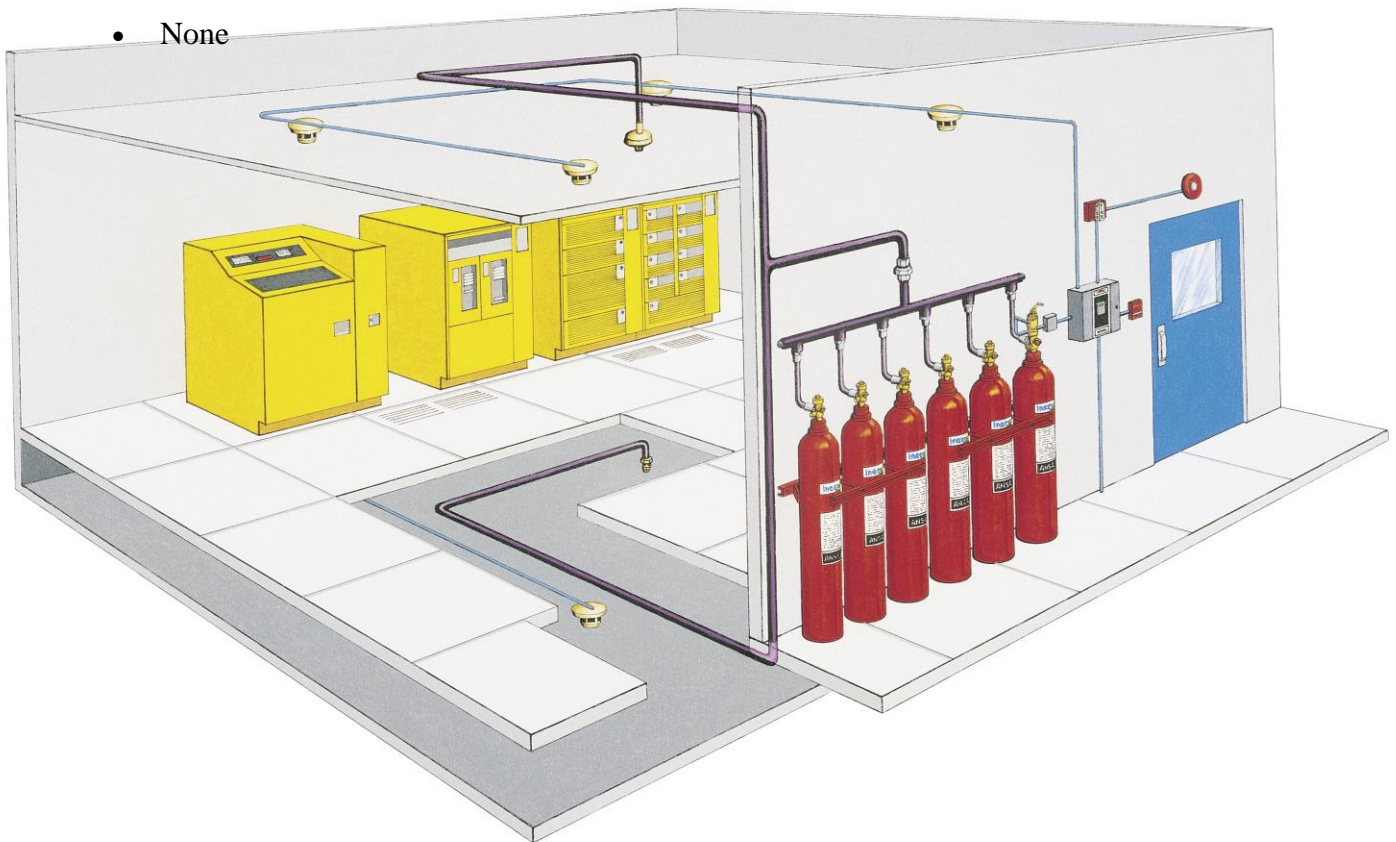
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Who's it for?

- Anyone who needs knowledge of fire detection and alarm systems
- Who installs and tests hard wired systems
- Who services/maintains fire alarm systems

Other experience/training needed to take the course

- None



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Course content

Introduction to Fire Alarm Installation

- History of fire alarm installation
- The importance of fire alarm systems
- The different stakeholders in a fire alarm installation
- Role and responsibilities of a fire alarm installer

Basic components of a fire alarm system

- Detectors
- Automatic detectors
- Manual detectors
- Control panel
- Addressable and conventional
- Outputs
- Basic outputs

Electrical and fire alarm installation principles

- Ohm's law
- Voltage drop calculation
- Backup battery calculation
- Electrical health and safety
- Cable segregation EN 50174-2:2000

Fire Detection Design

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- The legislation categories of systems for a building
- Detector types and choices
- Manual call point zones
- Detector and alarm zone sizes and constraints
- Technology and system components
- Detector coverage, taking into account obstructions
- Sounder requirements
- False alarm management and good maintenance
- New cable requirements
- Design certificate

Testing and certification

- Testing a fire alarm system
- Role and responsibilities of a fire alarm installer
- Fire alarm certifications

Fire Alarm Maintenance- Practical

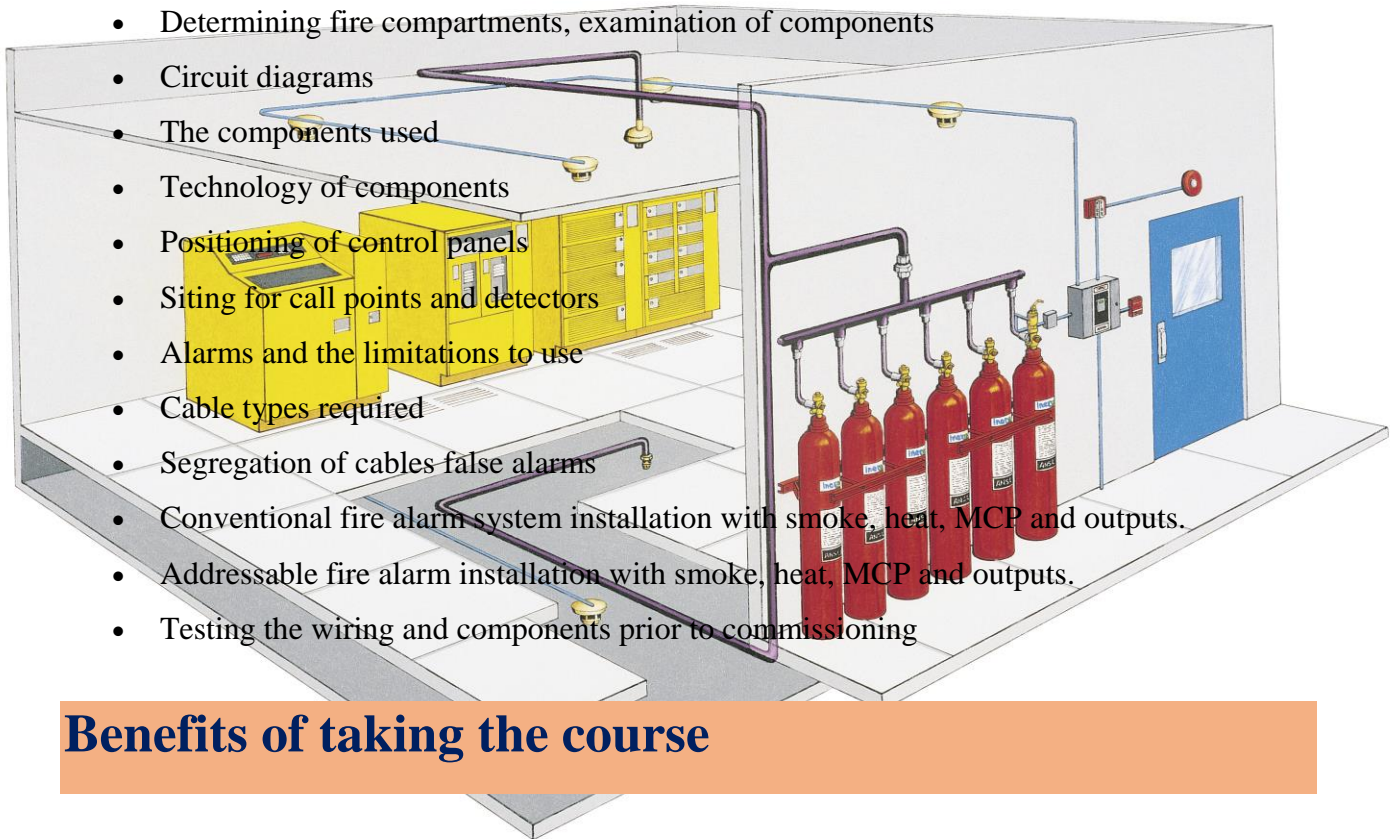
- The importance of fire protection systems components used
- A section on false alarms and how to assist the user in avoiding them
- The responsibilities and competence of the maintenance engineer
- Liaison with the user
- Investigating false alarms
- Routine procedures for testing
- Testing detectors and field devices
- Testing circuits
- Testing systems Sound level testing
- Battery capacity calculation
- Fault-finding
- Testing power supplies, measuring current loadings

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- Calculating battery capacity, testing batteries
- Documenting the results on service report forms and log books
- Servicing certificate and recommended action

Installation and Testing- Practical

- Risk assessment for installing and maintaining systems
- Standards and regulations
- Determining fire compartments, examination of components
- Circuit diagrams
- The components used
- Technology of components
- Positioning of control panels
- Siting for call points and detectors
- Alarms and the limitations to use
- Cable types required
- Segregation of cables false alarms
- Conventional fire alarm system installation with smoke, heat, MCP and outputs.
- Addressable fire alarm installation with smoke, heat, MCP and outputs.
- Testing the wiring and components prior to commissioning



Benefits of taking the course

- A qualified and certified engineer who can handle all aspects of fire alarm enquiries, installation, servicing and maintenance
- Staff that understand your business and the equipment you use
- A thorough knowledge of fire detection and alarm systems
- A successful delegate will be able to carry out complete installation and testing prior to commissioning, as well as servicing and maintenance in accordance with international standards
- An understanding of faults leading to false alarms and how to identify and rectify them

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- Course manuals to take away for reference
- The chance to complete the three most popular and relevant FD&A courses in intensive training period
- Guides and Codes of Practice relevant to fire detection and alarms
- The understanding the risks of neglecting maintenance
- Revision on the cable volt drop
- Installer's responsibilities
- Possible causes of fault finding

