



Professional Diploma in Fire Detection Alarm System

❖ What is Fire Detection Alarm System?

An automatic fire alarm system—typically made up of smoke detectors, heat detectors, manual Call Points, audible warning devices, and a fire alarm control with remote notification capability – can provide early warning of a developing fire., it will also info. to user that fire is going to happen in which zone

This Course is also give guideline and understanding of Fire Detection And Alarm Systems Standards under Bureau of Indian Standards (BIS), the National Standards Body of India is a statutory organization under the Bureau of Indian Standards Act, 1986. IS 15908: Selection, Installation and Maintenance of Control and Indicating Equipment's for Fire Detection and Alarm System--Code of Practice

Type of Course: - 100 % class Room Training.

Module 2 :- FIRE ALARM SYSTEM INSTALLATION & Maintenance TRAINING COURSES

[We 1 Month Theory & 1 Month Practical.]

Modern fire alarm systems require careful, validated installation and maintenance to ensure that false alarms are infrequent and that a real fire would be detected quickly without damage to property or loss of life. This course provides delegates with the knowledge and skills necessary to work on these systems competently. Candidates who attend this course may also like to attend

PARTICIPANTS

The course is designed for those who have an electrical background (for example maintenance electricians) or for those who have successfully completed course

COURSE PRESENTATION

The course is presented using 4 wire, 2 wire and analogue addressable fire alarm panels and associated components so that candidates 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 are used to ensure that the candidates are able to meet the objectives of the course. Comprehensive course notes are provided.

COURSE OBJECTIVES

On completion of the course, participants will be able to:

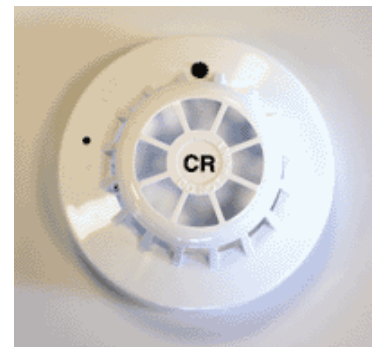
- Understand the way in which a large fire alarm system would be connected and zoned
- Specify the import of the British Standards and Regulations relating to fire alarm systems
- Identify the main connections, component parts and indications on typical fire panels
- Identify the required end of line (EOL) terminations and the cabling requirements for mains supplies and detectors etc
- Recognise the various types of detectors used in fire alarm systems
- Read and understand a typical schedule for a large fire alarm system
- Identify the dangers involved in incorrectly connecting detectors and Manual Call Points (MCPs)
- Connect a fire alarm panel (using EOLs) to a variety of detectors, sounders, MCPs etc

- Find faulty detectors, cabling, configuration errors, etc on a simulated system
- Test and inspect a fire alarm system using walk tests, making measurements, testing for functionality of detectors etc
- Complete the relevant certificates to validate a functional commercial system.

Successful completion of the course leads to the award of the Technical Training Solutions competence Certificated Technician of Fire Alarm System Installation.

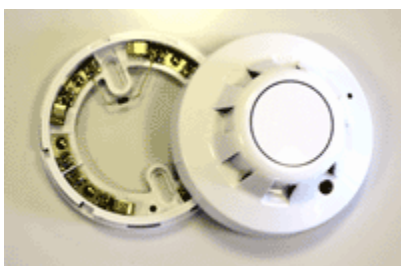
What do candidates on the Fire Alarm System Installation Training Courses actually do?

The Installation and Maintenance of fire alarm systems course begins by looking at the Legislation, British Standards and Codes of Practice applicable to Fire Alarm Systems. The various requirements are explained, in particular the requirements of BS 5839-1 and BS5839-6. Candidates then learn about the component parts of fire alarm systems, starting with the detectors used. (We employ a range of manufacturers' components on the course, so that the candidates can carefully consolidate their knowledge and experience of the range of devices that they might encounter when looking at real systems subsequent to the training. We source a lot of the equipment we use on the course from Standard vendors For example, the following are some of the many and various fire detectors that we use as demo pieces on the course:



Some of the detectors used as demonstration pieces for the candidates to look at on the fire alarm system installation training course

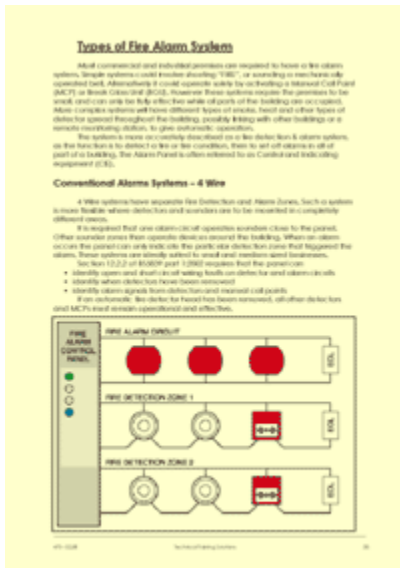
We then disassemble the commonly used component parts of fire alarm systems, looking carefully at the terminal identifications etc. We provide the candidates with a wide range of Manual Call Points, Detectors and Sounders as demonstration pieces.



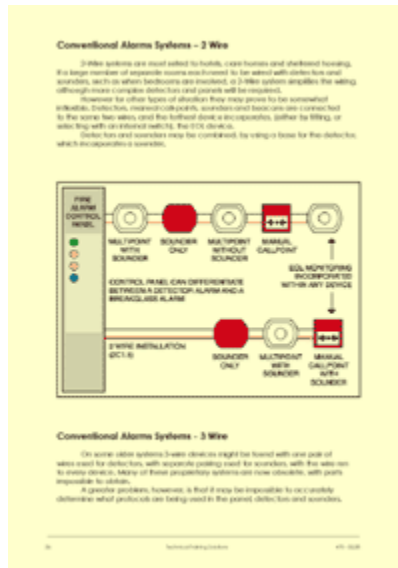


Some of the detector bases, Manual Call Points (MCPs) and sounders used as demonstration pieces for the candidates to look at on the fire alarm system training course

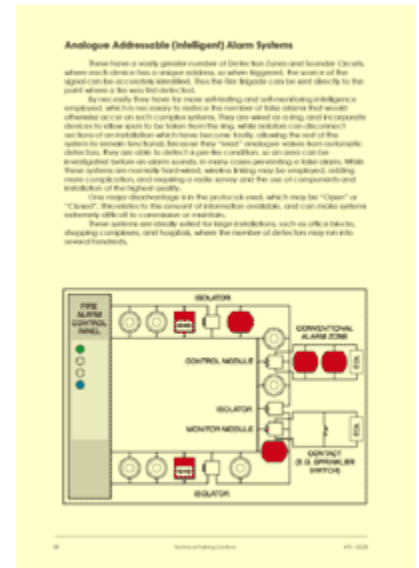
We then analyse the various types of fire alarm panels in common use, differentiating between conventional and addressable, 2-Wire and 4-Wire types. The following are pages taken from the course notes in this section of the course, dealing with 4-Wire Panels, 2-wire Panels and analogue addressable panels:



Page 35 of the course notes for the fire alarm system installation training course, describing the 4-Wire types of fire alarm panel

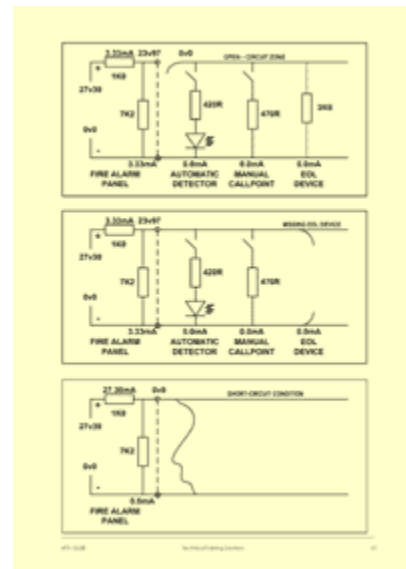
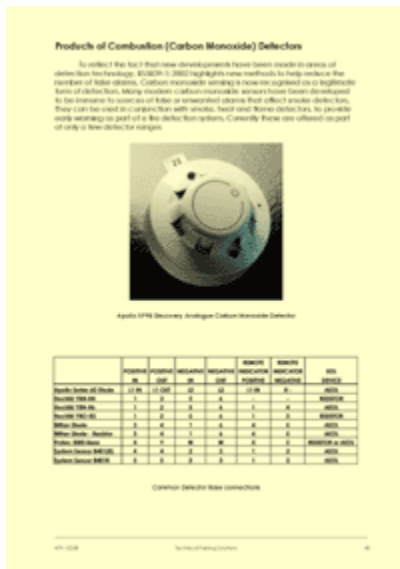


Page 36 of the course notes for the fire alarm system installation training course, describing the 2-Wire types of fire alarm panel



Page 38 of the course notes for the fire alarm system installation training course, describing the analogue addressable types of fire alarm panel

We then look at how the various components used in fire alarm systems achieve automatic detection, how to connect them to the panel and the typical arrangements of the electronic components used in the sensing wires. The following are pages taken from the course notes in this section of the course, dealing with CO detectors and the electronics found on the signal wiring:



Page 45 of the course notes for the fire alarm system installation training course, describing the various components used in fire alarm systems

Page 61 of the course notes for the fire alarm system installation training course, describing the typical arrangements of the electronic components used in the sensing wires

Whilst the course needs to cover the important requirements of the Standards and ensure that the candidates acquire the necessary knowledge on the subject, it is very important that the candidates are taught in an interesting and engaging way and for this reason we employ lots of practical exercises throughout the course.

The main focus of the course is on the following set of practical exercises, which requires them to apply the knowledge gained in the earlier part of the course to a series of proper skills-based practical exercises, allowing them to demonstrate that they have achieved the required understanding of fire alarm systems.

Candidates on the fire alarm system installation training course then work through a series of practical exercises on our custom built boards.

These exercises provide valuable experience and our instructors help the candidates where necessary.

In each of the practical exercises that follow, the candidates complete the relevant certificates as recommended by BS5839 as they go along.

The panel shown here is Practical Exercise No 1 on the fire alarm system installation training course. The candidates wire up a complete 4 wire system, using enhanced fire retardant cable.



Candidates are given access to a range of spare parts while working through the practical exercises:



The practical exercises include installation, inspection, measurement, fault-finding, maintenance and certification exercises. The candidates work with a maximum of 2 people per board, so that everyone gains sufficient exposure to the exercises.



Practical Exercise No 2 on the fire alarm system installation training course, where candidates commission and practice fault-finding on a 2 wire system



Practical Exercise No 3 on the fire alarm system installation training course, on which a walk test is completed for a 4 wire system



Practical Exercise No 4 on the fire alarm system installation training course, where adding detectors to a zone using zone isolation on a conventional 4 wire system is practiced



Practical Exercise No 5 on the fire alarm system installation training course, where the candidates practice addressing, zoning and programming an analogue addressable system



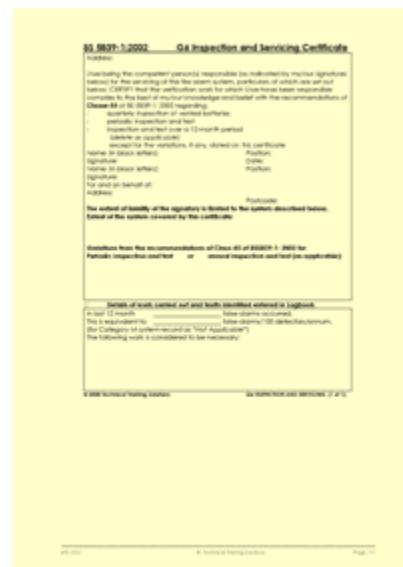
Practical Exercise No 6 on the fire alarm system installation training course, on which candidates commission and practice fault-finding on a conventional 4 wire system

We also identify the maintenance requirements of fire alarm systems, as well as the use of modern multi-technology detectors. We then look at the certification requirements and practice completing the required paperwork, taken from appropriate parts of IS Standard. In the practical exercises shown above the candidates complete the relevant certificates as they go along.

The following are pages taken from the course notes in this section of the course, dealing with measurement of sounder levels and the BS5839 Certificates:



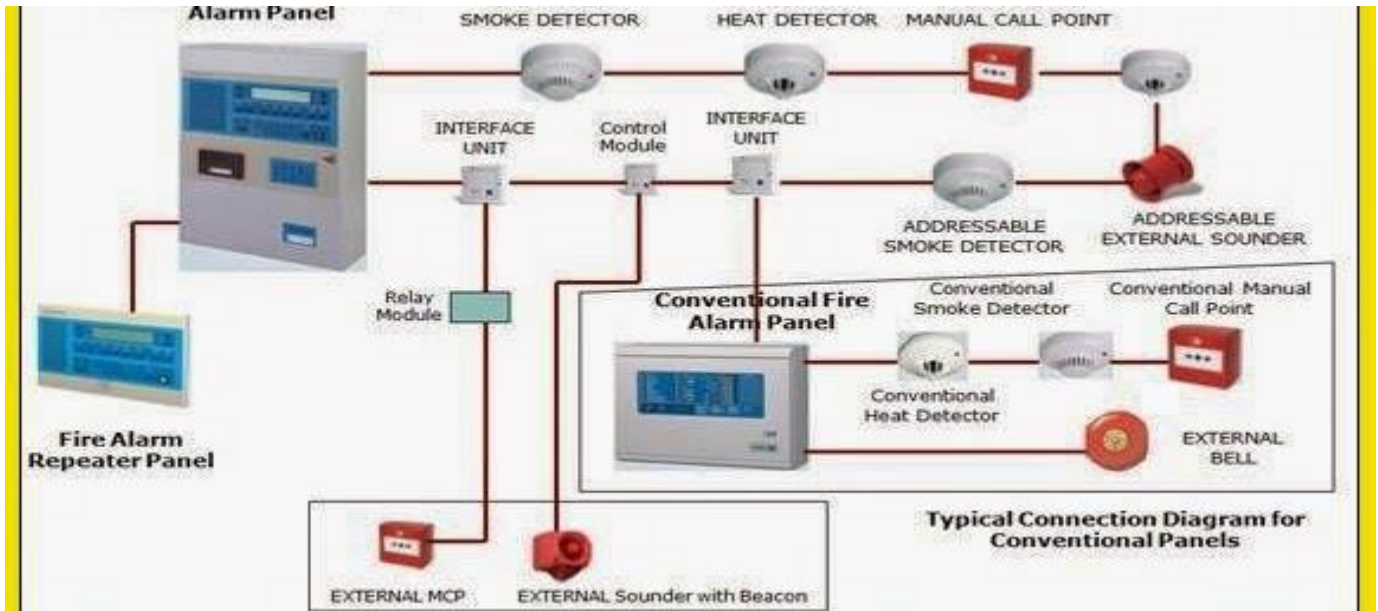
Page 77 of the course notes for the fire alarm system installation training course, describing how sound intensities vary within a room and beyond a door etc



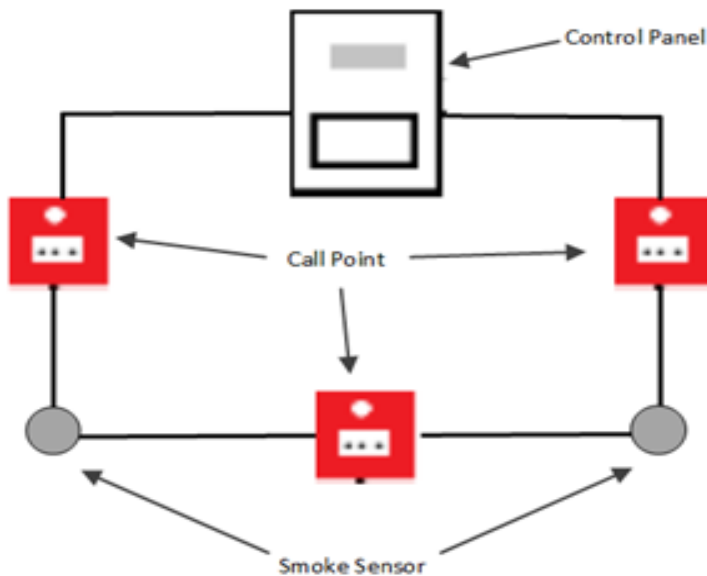
Page 111 of the course notes for the fire alarm system installation training course, presenting an example of one of the certificates. On the course the candidates look at all the certificates that may be required.



If you would like to see some of the equipment used on the fire alarm system installation training course for yourself, then please call us to arrange a visit to our offices in Kent. Alternatively, we can visit you anywhere in the British Isles.



Addressable Alarm System



Conventional Alarm System

