

Automatic Fire – Smoke Alarm Systems

Effective fire protection

A properly designed Fire/Smoke Detection System is an important factor in the overall fire protection of any building. Whether the building is residential, business, industrial, or any other type of occupancy, an Automatic Fire/Smoke Alarm System can do a great deal to limit both life and property loss in the event of a fire. However, Automatic Fire “Extinguishing” Systems should be considered in addition to/or in place of, automatic fire alarm systems, when building operations contain large quantities of flammable liquids or high levels of combustible material.

Types of automatic alarm systems

Automatic Detection Systems may be installed in one of the following three methods:

1. Single station system
 - A self contained device which has the sensor, control equipment, and alarm sounding device in one unit. It may be operated from a power supply either in the unit (batteries), or from the electrical system at the point of installation. Single Station units are suitable for small hotels and mercantile occupancies.
2. Multi-station system
 - This system inter-connects two or more single station devices and is arranged to activate all audible alarms on the system.
3. System concept
 - This is a direct wired system which includes remote power supplies, detection devices, alarms and zone indicating panels. Alarms may be directly connected to a central station office or to the Fire Department. Systems of this type are installed in business offices, industrial buildings, educational and public assembly properties.

Fire/smoke alarm detectors

There are many different types of detectors available on the market today. All serve a purpose for specific needs. The most common and effective detectors are:

1. Ionization detectors
 - This is a fast reaction detector to incipient fires. The unit has a small amount of radioactive material which ionizes the air in a sensing chamber to activate the alarm. This device can detect a fire well in advance of active heat, smoke or flame.

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2. Photoelectric detectors

- This detector operates on the principle of an electric eye. As smoke from a fire obscures the light beam, changes occur in the conductivity and an alarm is transmitted.

3. Fixed temperature heat detectors

- Detectors of this type will initiate an alarm whenever the ambient temperature reaches a pre-determined level. Operating temperatures range from 135°F and up. They have been widely used and are inexpensive to install. However, they are also the slowest to respond to an incipient fire condition.

4. Flame detectors

- These units may be either ultra-violet or infrared. There must be a flame to activate the alarm. They will not respond to smoke or gas. These are special purpose detectors which are most commonly installed in vaults and enclosed areas.

Maintenance and Testing

The entire alarm system should be properly maintained and tested periodically. (Preferably every 30 days). This program should be supervised by a responsible and knowledgeable person.

Installation

State, city and/or local authorities have approval jurisdiction that may require a specifically designed system for your property. Local authorities should be contacted prior to the installation. A qualified contractor, familiar with Local code requirements, should be engaged to install an Automatic Fire Alarm System.

The loss prevention information and advice presented in this brochure are intended only to advise our insureds and their managers of a variety of methods and strategies based on generally accepted safe practices, for controlling potentially loss producing situations commonly occurring in business premises and/or operations. They are not intended to warrant that all potential hazards or conditions have been evaluated or can be controlled. They are not intended as an offer to write insurance coverage for such conditions or exposures, or to simply that Great American Insurance Company will write such coverage. The liability of Great American Insurance Company is limited to the specific terms, limits and conditions of the insurance policies issued.
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