

Fire Detection Systems

Automatic fire detection systems are used for the rapid discovery of fires, especially in areas where no people are present.

In series the systems warn people at risk and alert units of the fire fighting services.



Image: Robert Tober

By means of an interface, supplementary fire prevention installations can be controlled, eg

- Extinguisher systems
- Smoke and heat extractors
- Door closers for fire compartments
- Switching-off systems

The core of the fire alarm is the fire detection centre: where all the information from the automatic and manual fire detectors is evaluated. According to the programme chosen, instructions are sent to the optical/acoustic signaller and/or the fire service, or the permanently manned post.

Fire detection systems have their own emergency electrical supply which is activated immediately in a power failure.

Arten von Brandmeldern

Classification is as follows according to the type of fire that requires recognition:

- Smoke detectors
- Heat detectors
- Flame detectors

All of the secure area that is to be monitored by the fire detection system can be sub-divided into detection zones. The zones should enable rapid and clear investigation of the detection / fire site.

Detectors in ventilation systems, suspended ceilings, or cable ducts must be grouped together in one detection group.

Monitoring with automatic fire detectors must cover at least one complete fire compartment, or a separate fire resistant zone.

Permissible exceptions to monitoring areas are:

- Clinical areas where no inflammable materials are stored (cleaning agents, paper hand towels)
- Cable ducts and cable shafts that are not accessible and have a fire resistant seal
- Bunkers
- Outside loading ramps
- Areas with automatic extinguishing systems and alarms in a manned post
- Suspended ceilings which are no higher than 0.8 m and with a verifiable fire load of less than 25 MJ/m²