



Coffee Break Training - Fire Protection Series

Fire Alarms & Detection: Presignal and Positive Alarm Sequence Functions

No. FP-2012-19 May 8, 2012

Learning Objective: The student shall be able to explain the difference between presignal and positive alarm sequence functions of a fire alarm signaling system.

Fire detection and alarm systems often serve as the first line of awareness and warning of a fire inside a building. In many cases, as soon as a fire is detected, an alarm sounds alerting occupants to a threatening condition.

There may be times, however, when the code official agrees it is not warranted to have a general fire alarm sound throughout an entire building right away. In those circumstances National Fire Protection Association (NFPA) 72, *National Fire Alarm Code*[®], permits what is called a “presignal” feature.

In “presignal” systems, activation of the fire alarm system does not sound an alarm throughout the building immediately. There is either a built-in delay of at least 1 minute from system activation or the initial fire alarm signals sound only in department offices, control rooms, fire brigade stations, or other constantly attended central locations. Then, someone must intervene to sound a general fire alarm.

This integral delay gives someone on the premises time to investigate the source of the signal before sounding a general evacuation alarm. Because of the need for human intervention, presignal systems may be undesirable and, therefore, require the special approval of the code official. If a fire alarm system with a presignal feature is connected to a remote monitoring service, the initial operation of an alarm initiating device must be reported to the monitoring service.

Positive alarm sequence systems, on the other hand, are delayed alarms under specific controlled conditions that eventually default to a full general alarm. In a positive alarm sequence system, system activation must be acknowledged electronically by trained personnel at the control panel within 15 seconds of receiving the alarm or the alarm system automatically and immediately goes into general evacuation alarm.

If the system activation is acknowledged within the first 15 seconds, the system goes into a “hold” mode for 180 seconds while the trained personnel investigate the source of the alarm. If the system is not reset during this 180-second period or if another device detects fire conditions, all building alarm signals are sounded automatically and immediately.

For additional information, refer to NFPA 72, Chapter 23.



This combination horn strobe notification appliance is part of a fire alarm system that may employ a presignal feature.



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