

SUBJECT: Electronic Monitoring for Portable Fire Extinguishers

CHANGE TYPE: Addition

906.2 General Requirements. Portable fire extinguishers shall be selected, installed and maintained in accordance with this section and NFPA 10.

Exceptions:

1. The travel distance to reach an extinguisher shall not apply to the spectator seating portions of Group A-5 occupancies.

2. Thirty-day inspections shall not be required and maintenance shall be allowed to be once every three years for dry-chemical or halogenated agent portable fire extinguishers that are supervised by a listed and approved electronic monitoring device, provided that all of the following conditions are met:

2.1. Electronic monitoring shall confirm that extinguishers are properly positioned, properly charged and unobstructed.

2.2. Loss of power or circuit continuity to the electronic monitoring device shall initiate a trouble signal.

2.3. The extinguishers shall be installed inside of a building or cabinet in a non-corrosive environment.

2.4. Electronic monitoring devices and supervisory circuits shall be tested every three years when extinguisher maintenance is performed.

2.5. A written log of required hydrostatic test dates for extinguishers shall be maintained by the owner to ensure that hydrostatic tests are conducted at the frequency required by NFPA 10.

CHANGE SIGNIFICANCE: Because the concept of using electronic monitoring devices to verify fire extinguisher readiness is relatively new (Underwriters Laboratories only recently began listing devices for this purpose), NFPA 10 has not yet fully acknowledged the value of electronic monitoring technology. In contrast, the ICC membership has overwhelmingly embraced electronic monitoring, as demonstrated by nearly unanimous votes in support of the technology at the final hearings where it was considered.

The new Exception 2 to Section 906.2 serves to amend NFPA 10, which is otherwise referenced as the basis for regulating portable fire extinguishers in the IFC. The purpose of the exception is to permit the use of electronic fire extinguisher monitoring systems in lieu of thirty-day inspections and annual maintenance, otherwise required by NFPA 10, for a period of up to three years for many fire extinguisher installations.

The traditional approach of NFPA 10 to inspection and maintenance of fire extinguishers allows significant intervals between times when extinguishers are checked. In contrast, electronic monitoring continuously ensures that extinguishers are properly mounted at required locations, are properly charged, and that there are no obstructions that would inhibit ready access by users. Any significant movement, tampering or obstruction of an extinguisher; loss of pressure in the extinguisher; or loss of power in the monitoring equipment will generate a trouble signal on the supervisory alarm system, signaling the need for a physical inspection. Fire extinguisher monitoring systems are also capable of maintaining an electronic log of extinguisher readiness and impairment history, which is useful to both owners and fire inspectors.

When this code change was discussed, a few code officials initially expressed concern that, without annual maintenance, agents in dry-chemical extinguishers might pack to the point that they would not discharge properly. However, testimony presented at the code hearing responded to that concern by indicating that lubricants added to modern dry-powder agents ensure proper discharge even when an extinguisher has remained in the same position for many years.

Listed and approved electronic monitoring equipment increases the reliability of portable fire extinguishers (photo courtesy of Mija Corporation).

