

Use Specific

by Dean K. Wilson, P.E.

We recently purchased a large quantity of components that we were told could be used for either fire alarm systems or burglary alarm systems. The first time we tried to use these components for a commercial fire alarm system, the local fire marshal told us we were violating the *National Fire Alarm Code*. He told us the components did not bear a listing mark indicating they could be used as part of a fire alarm system. He would not permit us to use these components in the fire alarm system we were installing. Now I know that most fire marshals and other Authorities Having Jurisdiction always look for the UL or FM mark on a product. But how important is it for fire alarm system components to have such a mark?

One of the most fundamental concepts in every fire alarm code or standard developed in the United States, stretching from the late 1800's to the present, rests in the expectation that the baseline safety, quality, usefulness, and operability of fire alarm system components will have a third-party assurance. Over the years, the highly skilled people at Underwriters Laboratories Inc. and FM Approvals have dedicated themselves to performing detailed investigations, analysis, and testing to confirm that fire alarm system components will remain safe, maintain a baseline level of quality, offer a minimum acceptable level of usefulness, and operate as the manufacturer intends.

NFPA 72-2002, *National Fire Alarm Code*, carries on a long tradition of requiring components to bear a listing mark of an organization acceptable to the Authority Having

Jurisdiction. For virtually every AHJ, the list of acceptable organizations has only two entries: UL and FM.

Section 4.3.1 of NFPA 72-2002 states: “Equipment constructed and installed in conformity with this Code shall be listed for the purpose for which it is used. Fire alarm components shall be installed in accordance with the manufacturers’ installation instructions.” In Chapter 3 the *Code* defines the term “listed” as “Equipment, materials, or services included in a list published by an organization that is acceptable to the authority having jurisdiction and concerned with evaluation of products or services, that maintains periodic inspection of production of listed equipment or materials or periodic evaluation of services, and whose listing states that either the equipment, material, or service meets appropriate designated standards or has been tested and found suitable for a specified purpose.”

The emphasis in both the requirement and the supporting definition remains clear: the component must bear a listing mark that indicates a “use specific” listing. This prevents anyone from using a component in a fire alarm system that has not received such a listing.

Probably the most common violation occurs when a well-meaning contractor installs a piece of equipment listed for use in a burglary protection system, or other type of electronic communications system, that has not received a listing for fire alarm use. The equipment may work properly and even show evidence that it has inherent quality. But, without the rigorous investigation and testing process to assure the component will perform properly as a fire alarm system component, its use has the potential for compromising the quality of the installation.

Some critics of this long-standing requirement try to denigrate it by suggesting that when an AHJ applies it broadly, it would prevent the use of electrical connectors unless they had received listing for fire alarm use. This attempt to make the requirement seem ludicrous falls flat when one

realizes that NFPA 72-2002 requires any installer to perform the electrical installation of a fire alarm system in accordance with the requirements of NFPA 70, *National Electrical Code*. The *NEC* requirements would apply to electrical connectors. And, the connectors must bear a listing mark indicating they have passed the investigation and testing for use as electrical connectors.

Every successful safety system, including fire alarm systems, must have a suitable means to assure the baseline level of quality. The *National Fire Alarm Code* provides such a means when it requires components to bear a listing mark that indicates those components have passed the very specific and rigorous investigation and testing of UL or FM, as suitable for a specific fire alarm system use. This “use specific” listing forms a very, very important building block in the overall management of the quality of an installed fire alarm system.

How important is this listing mark? It is of paramount importance. Unless a component bears the appropriate listing mark for fire alarm use, don’t even think about using it as part of a fire alarm system installation.

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