

POSITION PAPER
on
RESIDENTIAL SMOKE DETECTORS
By
OHIO FIRE OFFICIALS
ASSOCIATION

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FINAL

(Unanimously voted on by the membership March 25, 2010)

The Ohio Fire Officials Association (OFOA) is a Fire Prevention group which was formed to organize the major fire prevention organizations throughout the state, so that fire prevention related matters such as code changes, fire safety issues, and other related topics could be uniformly supported and disseminated with a cohesive voice.

Membership represents over 500 fire departments throughout the state and has experienced continued growth since its inception. Participating support is recognized by the State Fire Marshal's Office and the Ohio Fire Chief's Association.

Education, Enforcement, and Engineering are the premise for all fire prevention activities. The Ohio Fire Officials Association purpose is to be effective in the execution of any changes necessary to protect the public throughout a statewide network of fire officials.

The Ohio Fire Officials Association recognizes the need for establishing a critical position on the use of residential smoke detectors. Within the last few years, manufacturers of smoke detectors have improved technology to a level where the residential homeowner is now in a better position of being protected than in previous years.

Upon researching articles Published by National Institute of Standards and Testing (NIST), the International Association of Fire Chief's, The National Fire Protection Association (NFPA), and the University of Texas A&M, The Ohio Fire Officials are establishing a position to support the installation of residential smoke detectors utilizing photoelectric technology as the primary choice in association with ionization technology.

Residential fires account for the majority of all fire fatalities, and that fires occurring in the residential setting can either be smoldering or flaming type fires. It is the position of OFOA that all homes be protected with a minimum of both technologies with additional emphasis of specific technology placement in areas subject to false alarms.

Since false alarms of smoke detectors can result in the removal of batteries, which in turn render the detector inoperative, it is our position that specific technology placement be considered in certain areas of the home. The documentation clearly supports the replacement of ionization detectors with photoelectric detectors in areas commonly exposed to false alarms.

The current standards indicate smoke detector placement on every floor level and in every bedroom of residential occupancies. In areas where detectors are close to the kitchen and or bathrooms, it is OFOA's position that photoelectric detectors be used specifically. The intent is to reduce false alarms commonly associated with cooking and steam from showers and baths, which are causes for ionization detectors to alarm. This in turn will reduce the likelihood of battery removal and improve overall detector performance.

The remaining portions of the home should be protected at minimum by detectors utilizing both photoelectric and ionization technologies. This is best accomplished by utilizing combination detectors. Since the type of fire cannot be predicted, utilizing both technologies within a single detector provides for maximum protection of the occupants.

The Ohio Fire Officials Association recognizes that not all residents can meet the requirements as described above, however it should be emphasized that detector technology, and placement, have a significant impact on occupant survivability.

It is imperative the above recommendations be followed in their entirety. At the very least, when a choice must be made, photoelectric detectors should be chosen over ionization. The determination being, that photoelectric are less susceptible to false alarms in the areas previously stated, and thus reducing the potential for battery removal and the detector being inoperable.

The Ohio Fire Officials Association further supports detectors that have restricted or limited battery access. This is to prevent the removal of batteries, which could be used for other purposes. Along the same line, Lithium batteries have shown a long operation time (of up to ten years), and are encouraged to be the battery of choice for residential detectors. Any detector utilizing a proprietary battery with a ten-year life span, is further encouraged since the removal of the battery is all but eliminated.

Smoke detectors are typically listed for a 10-year life span and at the end of that life span, the occupant should be informed to replace them. Given the ten-year battery technology and the ten-year life span of the detector, There is a reasonable platform to encourage regular replacement of detectors and batteries.

In summary, the Ohio Fire Officials Association issues this position statement paper in order to make clear the specific type of detectors and their locations needed in the residential setting, and to provide maximum protection with limited false alarms and deactivations. It is also our position that detectors have a limited life span and replacement at the end of that life span is essential for proper life safety protection.

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