



Ionization Smoke Detector: Remove, Recycle, Replace.

In their time, ionization smoke detectors provided optimal detection with the best available technology. As technology progressed, photoelectric and multi-criteria detectors have evolved to provide comparable or better performance while delivering superior false alarm immunity. Due to their radioactive content, ionization detectors have also become more costly to manufacture and recycle. **System Sensor has therefore decided to discontinue the manufacture of ionization smoke detectors as of July 1, 2015.**

If you are not sure what type of detectors to use in place of your ionization smoke detectors, we would be happy to help. System Sensor offers a variety of smoke detectors to suit nearly any application. If you would like additional guidance, you can contact our technical service group at (800) 736-7672. For more information on how to recycle your used ionization detectors, please see our technical bulletin at go.systemsensor.com/IONdetectors.



Original ION Detector
Pre - 1993



ION Detector
1993-2002



Current ION Detector
2002 - Today

Make the switch to environmentally friendly detectors

Standard Smoke Detection

As the predecessor to photoelectric detectors, ionization detectors were often used in common applications such as offices, retail spaces, and apartments. Although ionization detectors were great at detecting fires in these applications, they are also prone to common nuisance sources such as light cooking and fine dust.

Flaming Fire Detection

Ionization smoke detectors are often used in applications where there is a high potential for flaming fires. These types of fires typically produce smaller smoke particulate in lower concentrations than other types of fires.

Cross Zoning

For years, ionization smoke detectors have been used in cross-zoning applications to confirm a fire event before releasing a suppression agent. These applications typically call for two different detection technologies (usually photoelectric and ionization) in each of the two zones.

Clean Room/Mission Critical

Ionization detectors used to be the technology of choice for clean environments where early detection of incipient fires is important. Ionization detectors can detect small smoke particulate in fairly low concentrations.

Recommended Replacement: Acclimate Multi-Criteria detectors or Photoelectric detectors

The Acclimate Multi-Criteria detector is well suited for applications where general smoke detection and improved immunity to false alarms are desired. These detectors "learn" their environment and adjust their sensitivity to help prevent false alarms. With both smoke and heat sensors, the Acclimate is designed to respond more quickly to fires that create a heat rise. They are also UL listed as both a smoke and heat detector.

Today's photoelectric smoke detectors have advanced algorithms and enhanced optics that provide superior smoke detection with fewer nuisance alarms.

Recommended Replacement: Advanced Multi-Criteria detectors or FAAST aspirating smoke detectors

Although Advanced Multi-Criteria detectors are primarily known for ability to reduce false alarms, they can also be programmed to respond very quickly to flaming fires. These detectors utilize an infrared sensor to detect flame signatures as well as heat sensors to force a faster response when a temperature increase is detected.

FAAST Aspirating smoke detectors utilize dual vision sensing technology to detect trace amounts of smoke particulate while reducing false alarms. These detectors have advanced features to help you tailor your response such as multiple pre-alarm levels and the ability to send email notifications.

Recommended Replacement: FAAST aspirating smoke detectors or Photoelectric/Multi-Criteria Detectors

FAAST aspirating detectors are being used in place of traditional cross zoning because of their ability to control response based on multiple pre-alarm levels. Their broad sensitivity range combined with their ability to ignore common nuisance sources make these detectors ideal in suppression release applications.

Multi-Criteria detectors significantly reduce false alarms, possibly eliminating the need for cross-zoning altogether. When cross-zoning is still required, photoelectric detectors can be used on their own or in combination with multi-criteria detectors. Contact our technical service group for more information.

Recommended Replacement: Laser-based high-sensitivity spot detectors or FAAST aspirating smoke detectors

Laser-based high-sensitivity spot detectors are the most responsive spot detectors on the market today. These detectors can detect smoke concentrations down to 0.02%/foot and exceed the strict NFPA76 criteria for very early warning smoke detection. A typical ionization detector is only capable of detecting concentrations down to 0.5%/foot. Laser-based detectors are also able to better distinguish between smoke and non-smoke particulate, improving their ability to prevent nuisance alarms.

FAAST aspirating smoke detectors are ideal for clean room and mission critical environments. They can detect ultra-low concentrations of smoke down to 0.0046%/foot and are also NFPA76 compliant for very early warning applications. The FAAST detector's nuisance rejection capability combined with up to six-pre-alarm levels make these detectors ideal for applications where uptime is critical.



Acclimate™
Multi-Criteria
Detectors



Advanced
Multi-Criteria
Detectors



FAAST
Aspirating Smoke
Detectors



Laser-based
High-sensitivity
Detectors



Technical Field Bulletin

Issued: 9/03 Revised: 1/13

To: All users of System Sensor ionization-type smoke detectors
From: Systems Application Engineers
Subject: Ionization Smoke Detector Recycling

Effective 1 October 2003, System Sensor reserves the right to impose a fee for the return and recycling of each ionization-type smoke detector or multi-sensor distributed under Nuclear Regulatory Commission (NRC) License 12-15023-02E.

PRODUCTS

The affected System Sensor Series are:

- 100 Series
- 200 Series
- 400 Series
- 500 Series
- 800 Series

EXEMPT STATUS

Purchasers and secondary distributors of these ionization smoke detectors are exempt from any regulatory requirements, including disposal of the smoke detector. Under NRC regulations, a purchaser or secondary distributor in the United States can dispose of ionization detectors in a manner consistent with the disposal of any non-hazardous household refuse.

RECYCLING FEE

As the manufacturer of ionization smoke detectors, System Sensor is subject to regulations regarding disposal. Therefore, any ionization smoke detector returned to System Sensor is subject to a recycling fee. Effective January 2013, the recycling fee is \$5.00 US for each smoke detector. This amount covers System Sensor's internal handling cost to recycle the sealed source.

Disposal of any returned detectors will only take place on a pre-paid basis. In the event detectors are returned without appropriate payment, detectors will be returned to sender freight-collect. In addition, prior to sending the detectors back, please contact System Sensor Customer Service at 800-736-7672 to request a Return Authorization (RA) #.

The recycling fee will not be applied to ionization smoke detectors returned under warranty or withdrawn from service at the direction of System Sensor.

NON-UNITED STATES APPLICATIONS

A similar exemption exists in most other countries. System Sensor will continue to verify this avenue on a case-by-case basis.

In the event of a return, contact your respective System Sensor representative for appropriate direction regarding the return.

PACKAGING

In the event of an ionization smoke detector return to System Sensor, each detector must be enclosed in a sealed plastic bag. Enclose the sealed bags containing ionization smoke detectors in a new and sturdy corrugated overpack with shock absorbing material to fill any empty space. Each package must not exceed 45 lbs. (20.4 kg). Shipments to or within the US are subject to DOT regulations. After following these instructions the shipper must place a copy of this sheet inside each package prior to sealing it to certify that:

**THIS PACKAGE CONFORMS TO THE CONDITIONS AND LIMITATIONS
SPECIFIED IN 49 CFR 173.424 FOR RADIOACTIVE MATERIAL,
EXCEPTED PACKAGE-ARTICLES, UN2911.**

If there are any questions or concerns, please contact the System Sensor Customer Service Department at 800-736-7672.

Disclaimer: These packaging requirements are believed to meet the applicable ground and air transport regulations. To verify the current version of this bulletin, contact System Sensor Customer Service or check on-line at www.systemsensor.com/html/technicalbulletins.html.