

LifeSafety

MAGAZINE

Information on life safety from the leader in fire detection

Fire- and Life-Safety System Design

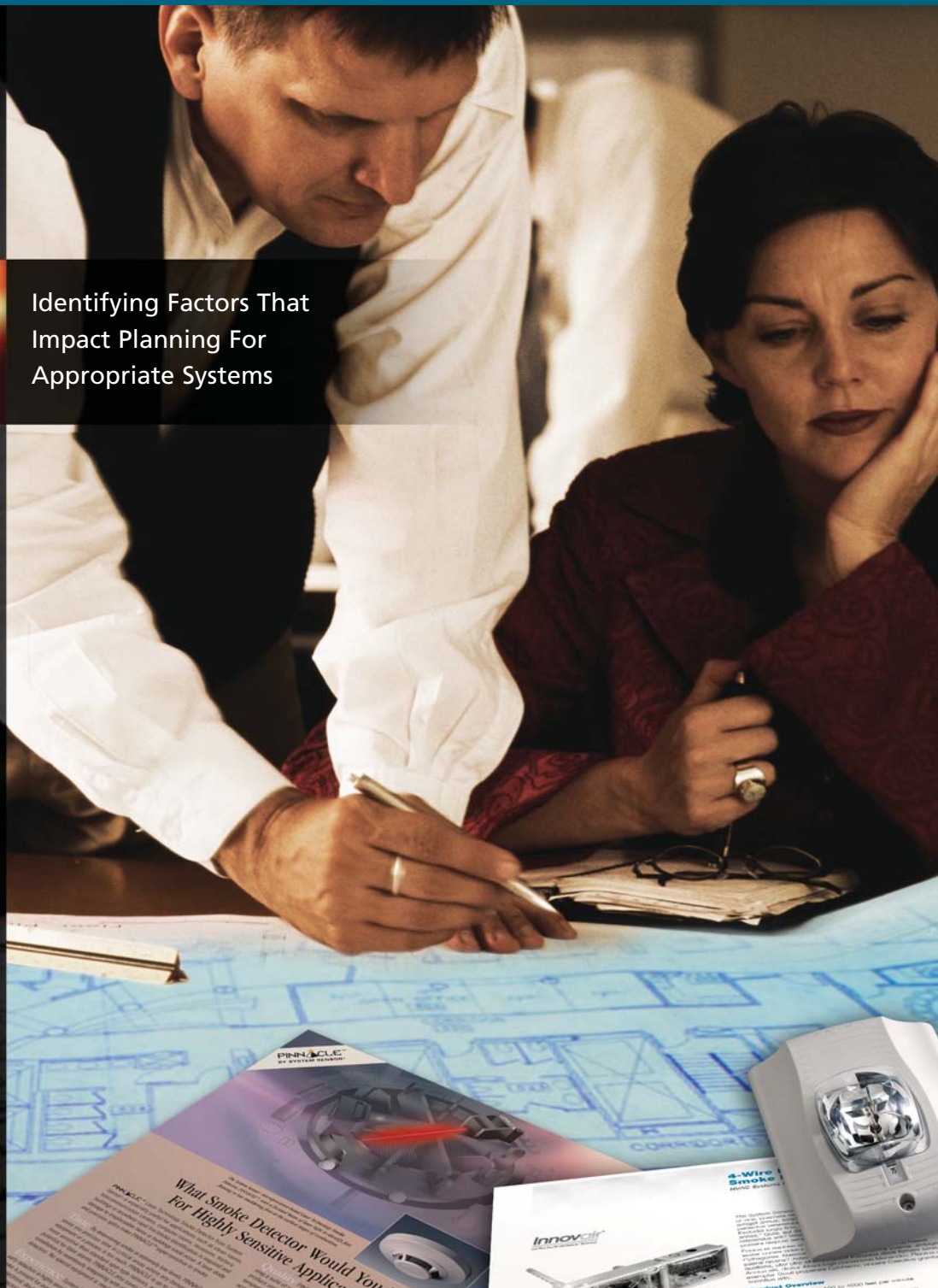


Identifying Factors That
Impact Planning For
Appropriate Systems

Inspection, Testing and Maintenance of Fire- and Life-Safety Systems

Bell Canada Relies on System Sensor's New Laser Duct Smoke Detectors

Ionization Smoke Detector Recycling





When it comes to Carbon Monoxide detection,

Failure is Not An Option.



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- **NFPA-required wiring supervision** will sense power outages and the trouble relay will signal the panel.
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Other CO detectors may be able to sense the presence of carbon monoxide. But only the CO1224 offers reliable CO detection *plus* the benefits of wiring supervision and a trouble relay.

Keep yourself and your customers safe and informed. Specify and install the CO1224 from System Sensor. Because when it comes to life safety, failure is not an option.



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Continuous Product Development

Whether you're installing a fire- and life-safety system to protect occupants of a school or nursing home, or to avoid business interruption, you need the right technology for the job.

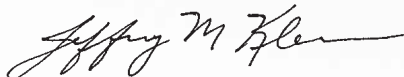
As you know, the basic smoke detector frequently used in commercial buildings is not always the answer to protect a warehouse or an exposed parking garage. There are other, more application-specific technologies that have been developed for those different environments.

System Sensor puts a strong emphasis on product development to ensure that we can provide the most appropriate — and most advanced — technologies for our customers and their fire protection needs. Standard fire detection and notification remain an important part of our product line-up. We have also branched into other related fire- and life-safety areas.

Newer technologies include our high-sensitivity smoke detectors, which we developed for highly sensitive environments that require very early warning (see “Bell Canada Relies on System Sensor’s New Laser Duct Smoke Detectors,” page 12).

Gas detection for protection against carbon monoxide is another area where System Sensor continues to conduct a great deal of research and product development. Our CO1224 carbon monoxide detector is an industry first — a detector specifically designed for system operation. This detector, along with our monitored smoke alarm detectors, is a logical extension to protecting people from danger. In each of these product areas, System Sensor knows it's not enough to just meet the letter of the law. System Sensor wants to bring customers the highest level of protection possible from different life- and property-threatening emergencies.

System Sensor will continue to develop other, more diverse technologies that can cover the full gamut of potential fire and smoke scenarios. We're committed to covering all the bases in detection and notification with the right technology for the job.



Jeff Klein
Commercial Business Line Leader

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LifeSafety

MAGAZINE

LifeSafety Magazine is provided as a courtesy to our colleagues in the fire- and life-safety community. While we make every attempt to ensure the accuracy of all information contained herein, product specifications and building codes are always subject to change. Under no circumstances should product or code information published in *LifeSafety Magazine* be considered a substitute for written instructions from the manufacturer or Authority Having Jurisdiction. Always follow proper installation and maintenance practices, including carefully reading and understanding manufacturers' instructions before attempting to install, operate or maintain any life-safety equipment.

Your thoughts and comments are welcome at info@systemsensor.com. For more information on System Sensor products, call 1-800-736-7672 or visit www.systemsensor.com.

Factors to Address in Fire- and Life-Safety Design

Robert E. Solomon, P.E., National Fire Protection Association, tells how identifying building use, occupancy and other factors impacts planning for an appropriate system.

A comprehensive fire- and life-safety design requires a cohesive blend of alarm/detection capabilities, an appropriate suppression system and a number of other building construction features that depend on occupancy, type of facility and use of space. An often overlooked component — planning — is integral to keeping occupants safe.

In buildings, like an apartment complex, the alarm and detection system is a critical component

disturbance or not be a desired option, suppression becomes the focus of the system.

“An automatic fire sprinkler system has the ability to control the situation, thereby limiting the effects of the fire, the generation of products of combustion, and in general, allowing additional time for occupants to move to a safe area,” said Solomon. “Of course, the presence of a well-thought-out means of egress, with adequate



SMOKE DETECTORS



CO DETECTORS



because occupants may be asleep. Alarm and detection features can provide functions such as early warning for occupants, fire-department notification and unlocking of doors. In large public venues, like a shopping mall or arena, the notification system may integrate a voice-communication function to give emergency instruction.

For healthcare occupancies, correctional facilities, high-rise buildings or other places where evacuation would cause considerable

exits, stairs and doors, is also crucially important.”

In general terms, the means of egress should also be thought of as a “system,” as well. The number, type and arrangement of the egress components are important factors to consider.

Some construction options may require the integration of firewalls, fire barrier walls and smoke compartments, as well as protection schemes for vertical openings between floors.

“There are even criteria for interior finish materials such as floor, wall and ceiling coverings,” explained Solomon. “Each of these building construction features can be specified to achieve the desired level of fire resistance, which is usually measured in hours for a firewall system, or for flame spread and smoke-developed characteristics for an interior wall finish. The level of fire-safety performance intended for the building is contingent upon the use of the occupancy.”

Space Use Affects Life-Safety Design

NFPA Codes, such as NFPA 101, Life Safety Code, and NFPA 5000, Building Construction and Safety Code, provide occupancy-specific requirements depending on the use of the building or of certain areas within the building. The codes look at overall characteristics of the occupants, which could affect the egress time from the building.

Most code provisions for business occupancy presume that the majority of occupants are familiar with the building and their environment, that occupants are awake and alert, and that they are largely capable of self-preservation through actions to evacuate from the area.

“In a healthcare occupancy, the code applies an approach that strives to minimize the need to relocate, and certainly to evacuate, the patients,” Solomon said. “In this case, the occupants — patients — are largely incapable of self-preservation, and a large reliance is placed

Hopefully the importance of the drills will carry over into the adult lives of the school-aged children,” he said.

Code provisions for hotels, dormitories and apartment buildings utilize additional fire alarm components — specifically smoke alarms and smoke detectors. In these environments, occupants may be sleeping. That increases the importance of early warning to a fire condition, afforded by automatic detection, especially during sleeping hours.

Regardless of the type of facility, in some areas, the nature of the combustible materials present may warrant some added protection features, such as fire-rated walls and self-closing fire doors. Also, large conference rooms and cafeterias that hold more than 50 people will trigger the supplemental rules for assembly occupancies. In addition, interior finish regulations (wall, ceiling, floor) are somewhat more restrictive in egress corridors than in an individual work space or in rooms served by the corridor.

Change of Occupancy

When a building is going to be renovated for a completely different use, the new building owners will have to make provisions for the change of occupancy. “In general terms, if the change is going from a

lower hazard category to a higher hazard category, NFPA codes require the work and the newly classified building meet all of the requirements for a newly constructed building,” Solomon said.

“If the change is going from a higher hazard use to a lower hazard use, the code requires that the new use meet the minimum requirements for that newly classified use based on the requirements for existing occupancies, with one exception. The automatic sprinkler, detection, alarm and communication system requirements for new construction must be adhered to.”

Based on the requirements of *NFPA 101, 2006 edition*, the following brief example illustrates this approach.

- A building currently being operated as a residential occupancy — rental apartments — is to be sold.
- A prospective buyer wants to convert the building into a residential board and care facility classified as Assisted Living in some states.
- The NFPA Life Safety Code would classify the apartment building use as a lower hazard category. On a scale of 1 (highest hazard category) to 4 (lowest hazard category), the apartment use would rank as a 3.

(Continued on page 6)



AV DEVICES

VOICE MESSAGING

not only on construction, compartmentalization, fire alarm and sprinkler system features, but also on the hospital staff. For this case, assistance from others is absolutely critical to the protection of the patients who have no ability to self preserve.

“In educational facilities, a fairly broad mix of construction and building systems is utilized to protect the students. Evacuation drills are important to keep the students safe when at school.

Table 1, taken from Chapter 43 of the 2006 edition of NFPA 101, shows the hazard category classification.

Table 1 Hazard Categories and Classifications	
Hazard Category	Occupancy Classification
1 (highest hazard)	High hazard contents
2	Healthcare, detention and correctional, residential board and care
3	Assembly, educational, day care, ambulatory healthcare, residential, mercantile, business, industrial, storage
4 (lowest hazard)	Industrial and storage occupancies with low hazard contents

Factors to Address in Fire- and Life-Safety Design

(Continued from page 5)

- The NFPA Life Safety Code would classify the residential board and care use as a higher hazard category, a 2.
- The prospective building owner would be expected to completely upgrade the building to accommodate the residential board and care use to meet all of the requirements for new construction.

Carbon Monoxide Detection

Each year in the United States, thousands are killed or injured as a result of carbon monoxide (CO) poisoning. As with most hazards, public officials, as well as the public at large, prefer to be proactive with a system or feature that can help to prevent or minimize the impact of certain hazards. In most cases, an increasing trend in the numbers of CO poisoning cases, the death of local residents and similar events will trigger the call to action.

“In Massachusetts, the CO death of a young girl in 2005 prompted a statewide effort to establish legislation that became effective in 2006,” Solomon said.

Known in Massachusetts as Nicole’s Law, the legislation was implemented after a 7-year-old girl died in January 2005. Her Plymouth home was filled with deadly amounts of carbon monoxide when an outside dryer vent was blocked by snow. The law applies to residential occupancies, including single-family homes, which utilize fossil-burning heating sources such as oil, gas, coal or wood, or where similar heating sources are used in an attached garage. The language of the law also restricts a property from being sold or transferred without having a carbon monoxide detector or system in place.

About 100 people were the victims of unintentional CO poisoning in western Washington State in December 2006. Many



residents resorted to extended use of emergency generators in their homes and charcoal grills following widespread power outages after a severe storm. “It is these types of events that will normally result in state legislation to mandate the installation of certain devices and systems,” he said.

Detectors for CO have now been available for several years, and the technology has been refined. *NFPA 720, Standard for the Installation of Carbon Monoxide Warning Equipment in Dwelling Units*, is being updated to reflect best practice installation methods and equipment features. The UL product standard *ANSI/UL 2034, Standard for Single and Multiple Station Carbon Monoxide Alarms* has also been refined.

There are three main power sources for CO detectors. The first, battery-powered CO detectors, requires annual battery replacement. When the battery has reached its maximum lifespan, the detector will chirp at regular intervals to alert homeowners. Some homeowners, however, become annoyed by the chirping, and instead of replacing the battery, they remove it; therefore, battery-powered CO detectors require discipline (checking the battery) and maintenance (replacing the battery) by the homeowner. This is similar to

the upkeep for battery-powered smoke alarms.

The second, a 120-volt-powered detector, runs off the main power supply in the dwelling. Like battery-powered detectors, most of these detectors do not have monitoring capabilities. So, if your detectors lose power in a blackout, for example, you may not realize your detectors are not working unless the detector has a battery backup feature. Plus, a power outage is a crucial time to protect against CO because people tend to use more CO-generating appliances, such as space heaters and generators.

The third, a 12/24-volt device, is the most reliable means of powering a CO detector. These system-connected (hard-wired) CO detectors can be wired to either a security or fire panel. This type of system offers monitoring by a central station to provide extra protection if the residence is empty, if the residents are sleeping, or if the residents are already suffering the effects of carbon monoxide poisoning. If a problem arises with the detector or if carbon monoxide concentrations hit dangerous levels, the owner will be notified by the detector and the control panel, as well as by the central station. If the owner is unreachable, the central station may send the proper authorities to investigate.

Although non-system-connected CO detectors provide a critical function, especially in single-family homes, the ability to connect CO-detection devices to a control panel allows a monitoring function and the ability to automatically summon help in an emergency situation.

Because you cannot see, smell or taste carbon monoxide, it is imperative that the detector remains operable at all times.

See NFPA’s Website for additional tips on preventing CO poisoning at www.nfpa.org/co. LS



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Inspection, Testing and Maintenance of Fire- and Life-Safety Systems

Scott Bailey is the senior vice president of Koorsen Fire & Security, an installation and service company that has been privately held since 1946. The company focuses on inspection, testing and maintenance of fire alarm, fire sprinkler, fire suppression, fire extinguishers, access control and video surveillance systems, as well as monitoring of residential and commercial facilities. The company recently developed a training center and provides training in the above-mentioned product categories.



Q. Would someone who has completed your training courses be qualified to inspect his own facility to determine if it satisfies NFPA requirements?

A. Yes. We cover the NFPA requirements and how they relate to real-life situations, and we discuss how to interpret or understand what the NFPA says.

Q. What is new and what has changed over the past 5, 10 and 20 years?

A. Going back a little bit further, I would say 30 years ago, sprinkler protection was installed primarily to protect the property with no expectations or thoughts about life safety. In the '80s with the adoption of ADA, the industry began to focus more on life safety in more applications. Ten years ago, sprinklers became important for protection of life and property. Smoke detection and fire alarms became more of a design criteria, specifically for evacuation.

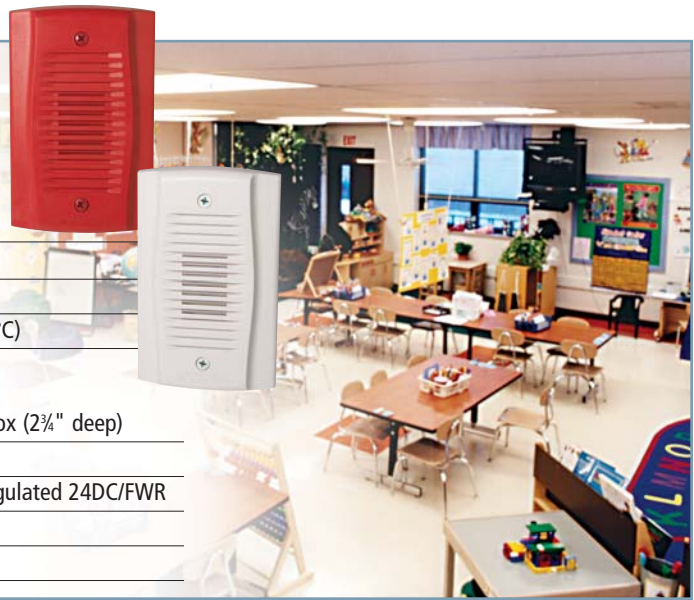
Within the past five years, I think most of the building standards have been written with the assumption that fire sprinklers are in place. With fire sprinklers, you reduce the requirements for wider corridors and the number and size of exits. A fully sprinkled building is much different than one that is not, which is good and bad alike, in my opinion.

SpectrAlert® Advance Mini-Horns

SpectrAlert® Advance series of Mini-Horns are designed to simplify installations to provide primary and secondary signaling for fire and security applications.

Mini-Horns

Dimensions:	4.6" L x 2.9" W x .45" D
Weight:	2.67 oz.
Operating Temperature Range:	32°F to 120°F (0°C to 49°C)
Mounting:	
Surface:	single-gang back box
Flush:	4" x 4" BBD deep back box (2¾" deep)
Input Terminals:	12 to 18 AWG
Nominal Voltage:	Regulated 12C/FWR or regulated 24DC/FWR
Operating Voltage:	8-33
Operating Voltage with MDL:	9-33



Q. Why is that?

A. Sprinklers do not give early warning of a fire. If the sprinkler system is in operation, it's typically too late to get people out of the building. A fire-alarm system is needed to work in tandem with a sprinkler system to give earlier notification. Then you will have quicker evacuation times to protect people, and you will have the sprinkler systems to protect the property. That seems to be the direction the industry is going and the way the standards are being written.

With the new NFPA Standard, 2007 edition, the direction has been modified again, but not many places have adopted it yet. The new standard is going in the direction of mass notification systems versus fire-alarm systems.

Mass notification is a voice system to announce that there is an emergency in the building. The system can override the fire-alarm system to give evacuation instructions. You also have the ability to hit a tornado button or hurricane button that would give a voice instruction. I think this trend has been driven by the military because it had adopted and started moving in that direction on bases.

Q. How much influence does the military have to bring about that code change?

A. The NFPA has carried forward the military's emphasis of mass notification to the private

sector in the new NFPA 72, which was originally written to define a fire alarm system. Moving forward, when the new mass notification systems standard is adopted by a state or governmental agency, a resultant requirement in the private sector may be created, as compared to a standard fire alarm system. What that means is that the industry is going to rely more heavily on speaker systems and voice evacuation systems.

Q. What effect will this have on a fire- and life-safety system?

A. I think future fire-alarm systems will require many more devices to achieve good voice clarity. The main issue with voice instruction is clarity and volume because you do not get the same decibel levels as you do from a horn or siren or any variation thereof. To get good clarity and to get good audible levels, you need to space the speakers closer together. Once you've done that, you have good clarity, but you still don't have the same volume levels as you do with other audible devices.

Now, that's not to say that I'm against voice evacuation systems — not at all. The reality is — and this is documented by studies — people respond better to voice evacuation systems. When people are told what to do during an emergency, they tend to follow the instructions. If it's a voice evacuation system, people believe the threat is real.

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Q&A: ASK THE EXPERT

Inspection, Testing and Maintenance

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Q. Do you think UL 864 opened up more possibilities for building owners in terms of adding to their current fire alarm systems?

A. I don't think the UL or ANSI standards drive much in the field. Let's face it. Design of fire alarm systems is driven primarily by enforcement of the local code. Generally speaking, a new fire alarm system is going to be coming from an engineer with a set of drawings, plans and specifications.

Retrofit projects generally use an engineer. Our goal is to bring the property up to a reasonable standard by upgrading the system to the necessary levels. Once again, this is code and authority driven. Some authorities having jurisdiction interpret the standard to mean that if you make any modifications whatsoever to the current system, you have to bring it up to the current standards. Other authorities interpret it as anything you add to the system must meet the current standard. Others just say anything is better than nothing. It's all over the board, really.

Q. Do you recommend going to the Authorities Having Jurisdiction (AHJ) first to find out their point of view?

A. Absolutely. As a matter of fact, we typically try to talk to the AHJ up front. After we do some preliminary design, we'll have them review the plans and then move forward with final drawings and the project.

Q. What other challenges do retrofit projects present?

A. If I were talking to a business owner, I would suggest that he demand a product that is distributed by multiple vendors. If he chooses a proprietary product, he will have fewer places to get service for that product.

One of the challenges that we face on a regular basis is trying to assist a potential customer who is unhappy with his current provider. However, we are unable to help because of proprietary software or the inability to get the product because of the limited sales organization that represents the

product. A building owner should make sure that he has at least a couple of vendor choices locally, so that if he becomes unhappy or dissatisfied with his current vendor, he will have another option.

Q. How does the fire- and life-safety industry contribute to the green design movement?

A. It's not specifically related to green design, but I will tell you that the number of notification appliances with low current draw on a circuit influences cost. Mass notification and voice evacuation systems are possibly impacted the most because of the need for amplification. Amplifiers are probably the most expensive piece of the puzzle. With a lower current draw, the number of notification appliances on a single loop can be increased. Anything having a lower current draw is advantageous.

Q. What should a building operator know about the importance of a life-safety system?

A. One of the reasons I think I have been successful in training is because I am so passionate about life safety. One of the things that I think the industry needs to get across to building owners is that they need to be more focused and concerned about life safety.

Most building owners are looking at fire alarms as a code driven requirement, not from a life-safety perspective for their personnel, and they need to change that concept. That's not about sales for this company or anything thereabouts. It's about things that I run into on a regular basis, like, "Do I have to do this?" How valuable are your employees, or associates, or the people that work for you? How much are their lives worth?

I don't think the industry has done a good job of communicating that to the marketplace. This isn't about somebody standing over you saying, "You have to do this." It's more about protecting your people and your property. 15

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Single-ended, reflector design eases installation with only one side to wire

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Integral Sensitivity Test Filter

Protect open areas with single-ended, reflected-type beam smoke detectors. Where other methods of smoke detection are difficult to install and maintain, these detectors:

Protect up to 328 feet of building space where spot detectors are not suitable and where temperature ranges greatly fluctuate.

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Can be equipped with an integral sensitivity test filter that allows the user to quickly and easily meet the annual maintenance and test requirements of NFPA 72®.

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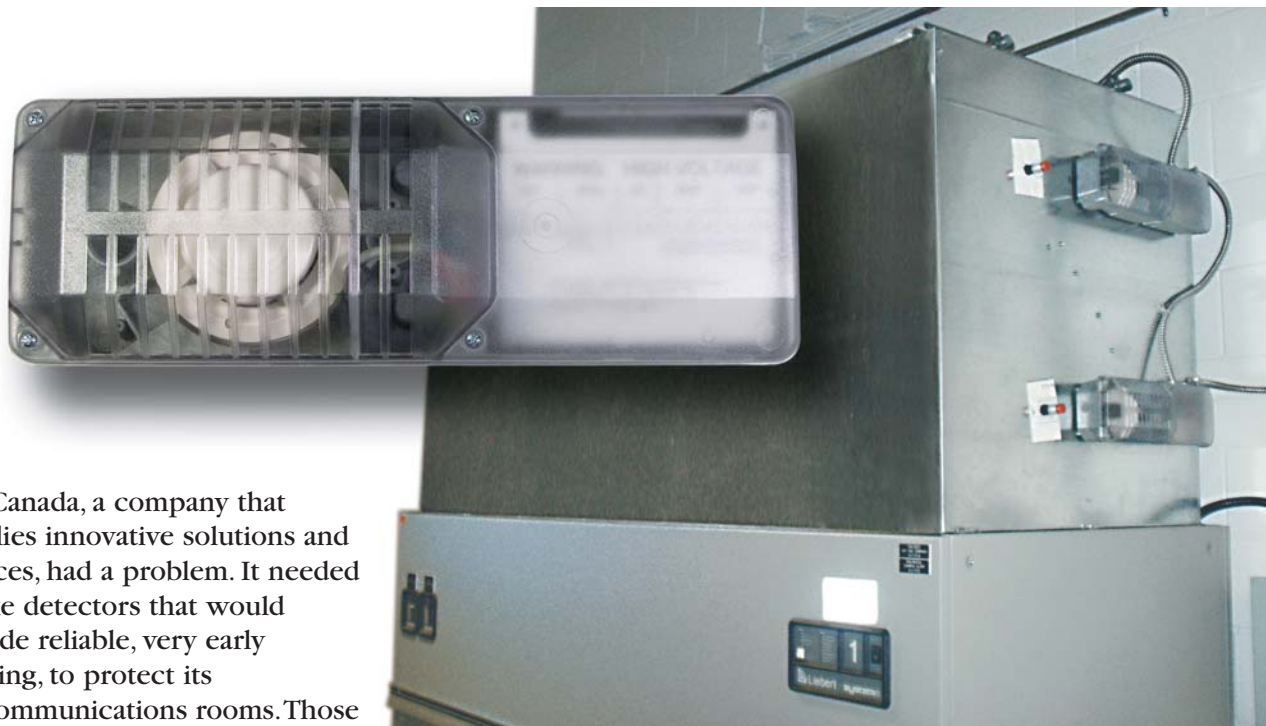


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Bell Canada Relies on System Sensor's New Laser Duct Smoke Detectors

Canada's Largest Telecom Chooses Laser Duct Smoke Detectors for Very Early Warning Capabilities



Bell Canada, a company that supplies innovative solutions and services, had a problem. It needed smoke detectors that would provide reliable, very early warning, to protect its telecommunications rooms. Those high-asset areas with high air flow are very sensitive. Even small traces of smoke could cause significant damage and disruptions of operations.

Bell Canada turned to System Sensor, which had the product to do the job: its new laser-based model 7251 DH intelligent air duct smoke detector, the company's latest addition to its high-sensitivity detection line-up. The product combines System Sensor's high-sensitivity laser sensor with its industry-leading duct smoke detection capability.

The detector not only provides very early warning, it screens out false alarms with a set of sophisticated logic algorithms. It was created to work in such

Intelligent air duct smoke detectors mounted on the computer room air-conditioning unit reduces aisle widths from 30" to less than 24".

areas as telecommunications rooms and computer server rooms, which have high air flow and several air changes per hour.

These types of environments are different than a static air environment where fire generates smoke that rises to the ceiling in a concentrated form. In a telecommunication center, the high air flow causes air mixing and smoke dilution. That makes detection by any means other than high-sensitivity detection slow and less responsive.

NFPA 76, Standard for the Fire Protection of Telecommunication Facilities, requires very early

warning fire detection in order to detect small incipient stage malfunctions that could lead to fire conditions. A manual response in this early stage normally terminates the malfunction.

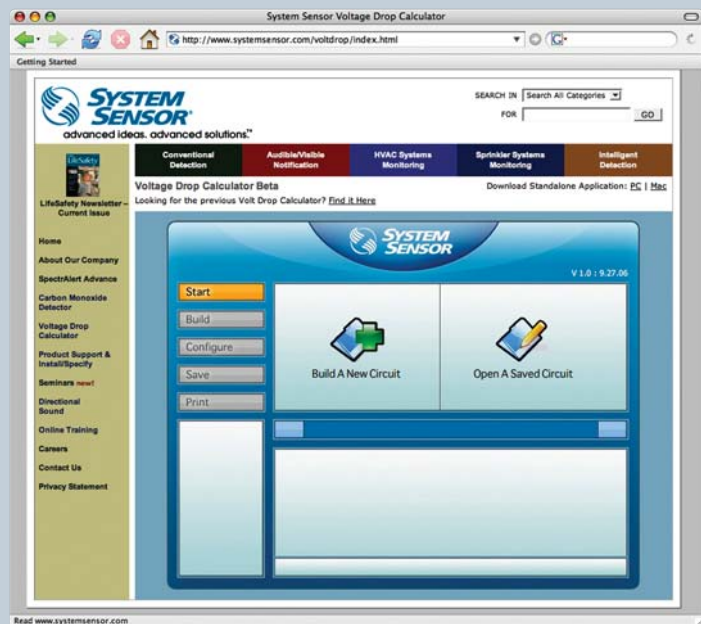
At elevated air flows and in some other locations the smoke does not have an opportunity to rise to ceiling-based detection, making the detection of the air flow at return grilles a very important part of the smoke-detection system. Very early warning detection requirements for return air require an air aspiration port or spot detector

System Sensor OnLine

for every four square feet of return grille area. This often results in an overabundance of detection technology in vulnerable placement areas.

Telecommunication equipment spaces are frequently tight. Placing spot detection or air-aspiration tubing in front of air-handling equipment to monitor the air flow often creates issues with potential injury and/or equipment damage. It can also create interference with HVAC equipment maintenance if the narrow aisles become partially obstructed.

System Sensor responded to Bell Canada's request for very early warning fire detection performance with the conventional duct detection configuration. Once the new duct detection technology was listed by Underwriters' Laboratories of Canada, Bell Canada installed the duct-detection system in one of the facilities that had recently been upgraded to laser spot detection. The ceiling-mounted detectors were installed to comply with NFPA 76 prescriptive requirements. The return air early detection system design was based on NFPA 76 performance-based requirements. In order to determine how well the new system worked, Bell Canada conducted the performance-based testing requirements outlined in NFPA 76 Annex B. LS



Visit www.systemsensor.com to learn more about System Sensor products and review previous issues of *LifeSafety* magazine. Complete information on the following website features can be viewed by simply clicking the icons in the left-hand column of System Sensor's home page.

- System Sensor's revamped web-based **Voltage Drop Calculator** helps architects and engineers design audible/visible notification device circuits using data provided by the user to perform the calculations. This valuable, easy-to-use design tool can be quickly downloaded from a MAC or PC.
- **Fire Protection Technology & Design Seminars** for CEU credits are available from System Sensor throughout the United States every year. These seminars focus on fire alarm systems, HVAC/sprinkler systems, code review, detection technologies and A/V design and placement, as well as technologies that can be incorporated in fire protection. Visit www.systemsensor.com for specific dates and locations, or to register for an upcoming seminar.
- Previous issues of *LifeSafety* magazine are now available online. Articles cover a variety of fire- and life-safety topics, including: managing life safety for the U.S.'s largest school district, laser smoke detection for mission-critical facilities, rapid build-up and design flexibility for retail life-safety systems, and fire-protection codes, training and equipment for healthcare facilities. Website visitors may search by topic or review any archived issue of *LifeSafety*.
- **Online Training** is offered as part of System Sensor's Learning Program. Access training modules for System Sensor's beam and heat detectors, fire sprinkler monitoring products and other detection and notification systems.

Ionization Smoke Detector Recycling

System Sensor's 100, 200, 400, 500 and 800 Series ionization detectors are subject to a disposal fee, according to the Nuclear Regulatory Commission, to meet the company's radioactive material license conditions.

As the manufacturer, System Sensor complies with those regulations regarding the proper disposal of ionization smoke detectors. For each detector returned to the company for disposal, System Sensor charges \$3 per smoke detector to cover internal handling costs and to recycle the sealed source.

System Sensor only disposes of these detectors on a pre-paid basis. If detectors are returned without appropriate payment, the detectors will be returned to the sender with freight-collect terms. *Note: The recycling fee does not apply to ionization smoke detectors returned under warranty or withdrawn from service at the direction of System Sensor.*

Exempt Status

Purchasers and secondary distributors of ionization smoke detectors are exempt from regulations pertaining to the disposal of smoke detectors. According to Nuclear Regulatory Commission 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.

Applications Outside of the U.S.

A similar exemption may exist in other countries. System Sensor will continue to verify exemptions on a case-by-case

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

Packaging

Each ionization smoke detector returned to System Sensor must be enclosed in a sealed plastic bag. The sealed bags must be placed in new and sturdy corrugated overpack with shock-absorbing material to fill the empty spaces. Any single mailed package may not exceed 45 pounds (20.4 kilograms). Shipments to or within the United States are subject to Department of Transportation regulations.

After following these packaging instructions, the shipper must visit

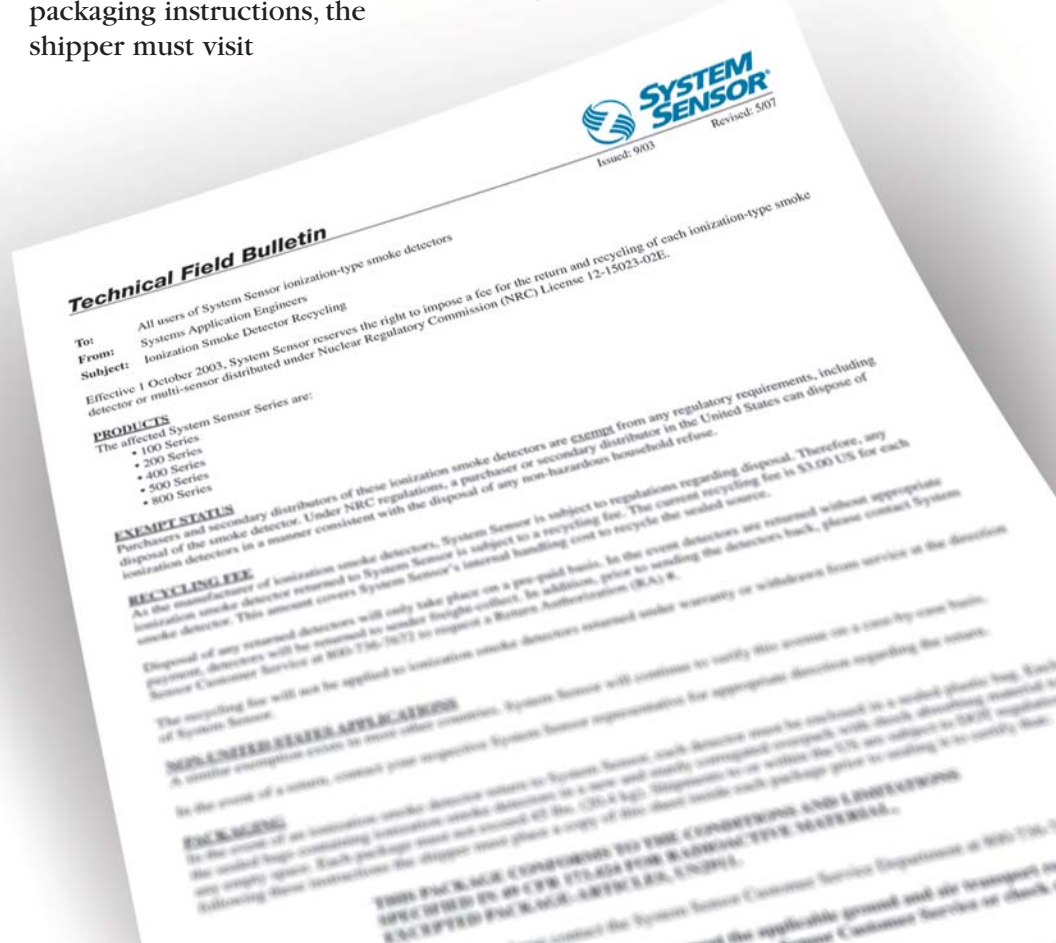
http://www.systemsensor.com/pdf/bulletins/ion_recycling.pdf.

Then print the file and place it inside the package before 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 or 630-377-5680.

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



Where's the Fire?



There isn't one. It's a false alarm that just cost your retail operation thousands of dollars in lost productivity and sales. The reason? Faulty detection.

But, you can keep your operation humming with System Sensor products that are designed to minimize false alarms.

System Sensor has a solution for all your retail needs within our complete fire- and life-safety lines:

- Conventional and intelligent smoke detection
- Directional sound egress technology
- Audible/visible notification
- HVAC system monitoring
- Sprinkler system monitoring

For more information on System Sensor's product lines, call 800-SENSOR2 or visit www.systemsensor.com/retail. You'll receive an E•DOCS CD ROM, a comprehensive resource for technical information, and a FREE subscription to *LifeSafety*, System Sensor's quarterly magazine on the industry's most innovative technology and with expert views on building safety.



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$$\left[\cos(3\sqrt{3t} + 1\sin) \right] 3 \approx \frac{1}{2} m_0 c = \frac{1}{2c^2} -$$

ExitPoint
= 75%
Faster Exit

Don't Worry, We Already Did the Math

Improved ExitPoint™ with Voice Messaging is the latest advanced idea from System Sensor and a quantum leap in egress technology. It is technology that can reduce evacuation times up to 75%. Traditional notification appliances alert building occupants to an emergency — an essential function — but they don't tell people how to get out. ExitPoint with Voice Messaging does.



ExitPoint receives top grades as an audible exit sign:

- A+ Uses broadband sound, allowing occupants to pinpoint the closest exit
- A+ Provides verbal instructions on what action to take as occupants approach an ExitPoint device. Includes "stairs up," "stairs down," "area of refuge," and "exit here," essentially eliminating the need for training
- A+ Offers 15 field selectable single and combination language choices
- A+ Provides ideal solution for new or retrofit fire alarm systems
- A+ Listed to UL 464, FM, MEA and CSFM, and the technology of exit marking audible notification appliances is referenced in NFPA 72, National Fire Alarm Code, 2007 Edition.



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For a complete ExitPoint Specifier's Kit, call 800-736-7672 or visit systemsensor.com/exitpoint.

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