

B1 Online

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Integrated safety

Fire detection, alarming, evacuation, and extinguishing have to interact smoothly to achieve efficient fire safety while minimizing downtimes. Siemens developed an integrated and comprehensive fire safety and security solution for the new data center at Internet PoP Hannover GmbH, assuring optimal and sustainable protection of their business processes.



The data center servers require the highest level of security.

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Internet PoP Hannover GmbH is one of Germany's leading Internet providers. Internet datacenter and hosting services are the key aspects of the company's business. Due to the successful growth of the last years it was essential for the company Internet PoP to establish a new data center. They provide a data center with 750 m² and around 2.000.000 watt for up to 5.000 servers without interruption. "It is important to our customers that their data as well as their servers are available at all times," says Managing Director Peter Sager. "Trust and reliability are therefore important factors for us in fire safety."

Internet PoP thus was looking for a partner who would care about their specific needs and offer a reliable, integrated fire safety and security concept that would provide optimal and sustainable protection to the highly sensitive server rooms. Siemens is this partner. "We and our customers now can be sure that in case of a fire, vital data is ideally protected and business processes are secured," says Peter Sager.

Covering the entire building life cycle

From risk assessment to maintenance – the Internet provider chose a solution for the entire building life cycle. In total, the combination of the earliest possible fire detection, alarming, evacuation, and automated extinguishing, the integration of

Solution overview

- Fire control panel with neural fire detectors
- Extinguishing control unit
- GMA-Manager user interface (touchscreen)
- Sinorix argon extinguishing system with 5 flooding zones supplied by 36 extinguishing agent cylinders (300 bar precharge pressure)
- Selector valve station
- Piping network with nozzles
- Personal safety device (pneumatic time delay device)
- Manual releases
- Manual call points
- Alarm sounder beacons
- Pneumatic horns (Martin) and alarm sounder
- Warning displays
- Overpressure flaps
- Intrusion detection and access control
- Service agreement

security systems such as intrusion detection and access control as well as a comprehensive service package all resulted in the desired integrated safety concept. The benefits that customers highly value include a seamless concept covering all safety and security systems with a common design and operating philosophy, as well as the holistic and competent sales support, starting with the initial contact through project rollout and beyond.

The fire safety solution complies with applicable national and international standards and guidelines. In addition, only products that comply with industry standards, regulations, and certification requirements are used. Thanks to the comprehensive service performance, smooth operations can be ensured at all times. Siemens is tasked with ongoing maintenance in order to maximize availability of the installed systems and thereby ensure business continuity.

Complete solutions for a safe data center from a single partner

As the heart of a corporation's information infrastructure, data centers are crucial for data availability and thus a vital factor in ensuring business continuity. That is why the highest level of fire safety has to be implemented at data centers.

Analyses have demonstrated that the interfaces between fire detection, alarming, control, and extinguishing are the most frequent points where errors occur in a fire safety system. For this reason, Siemens offers integrated fire safety and security solutions for data centers tailored to precisely match customer requirements. The fire safety solution include a comprehensive range of features, from fire detection and alarming all the way to extinguishing, with Siemens providing regular service throughout the system's life cycle. This begins with risk assessment, project management, and selection of the appropriate system, and extends to system design, installation and comprehensive services such as alarm management, system maintenance, and modernization.

For comprehensive data center security and ideal building automation performance, the one-stop-shop solutions from Siemens also include video surveillance, intrusion detection, access control, building automation and control systems, and management stations that integrate all of these functions. The comprehensive solutions for data center ensure optimal security for employees as well as protection of sensitive data and business continuity.

An integrated solution for optimal protection

A fire in a data center usually starts slowly, after a long period of overheating and smoldering. Smoke must be detected at the earliest possible moment to be able to detect overheating and prevent the onset of flames. Siemens fire safety solutions are based on extremely early and reliable fire detection. Even in the most difficult conditions, the detectors are capable of distinguishing between genuine danger and deceptive phenomena and set off an alarm if an imminent danger is present. The fire protection system combines the most demanding



Sinorix extinguishing solutions with natural agents can be customized to optimally meet data center requirements.

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safety standards with the most up-to-date technology. Whether small and compact or modular and customizable, the fire control panel processes all messages generated by the system, and trigger alarm signals and complex control processes. The extremely simple user interface with user prompting allows the system status to be checked quickly.

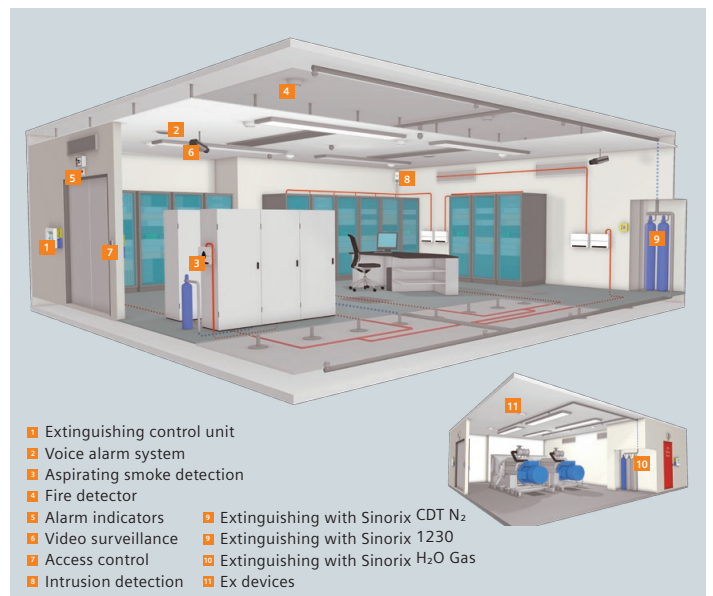
Only after a preset evacuation time has elapsed, the extinguishing process is activated by the fire detection and extinguishing control panel. Also, system signals of the extinguishing system are processed, and sent to the fire detection system.

To optimally provide safety for Internet PoP GmbH, a Sinorix extinguishing system was selected and installed featuring reliable and fast extinguishing, including 36 extinguishing agent cylinders for five flooding zones. At the customer's request, the natural agent argon was chosen. Natural agents that include not only argon but also nitrogen (a commonly used agent for data centers) reduce the oxygen in the air. This extinguishes fires effectively and prevents reignition. Argon or nitrogen is thus an optimal choice for fire protection in enclosed spaces. Because no reaction products result when the extinguishing agent comes into contact with the fire, damage to equipment and servers is avoided. In addition, because they occur naturally in the atmosphere, these inert gases are very environmentally friendly, and refilling of cylinders is inexpensive.

In addition to the fire safety solution, Siemens also integrated modules for comprehensive security. Thanks to integrated access control, escape routes can be monitored and doors rapidly opened or closed. By deploying an integrated intrusion detection system, sensitive data and electronics are protected not only against fire but also against theft.

Long-term investment security

"With its complex, innovative fire safety solution, Siemens is making a valuable contribution to protecting sensitive data and business processes at Internet PoP Hannover GmbH," emphasizes Peter Sager. And after implementation, the customer can also rely on the comprehensive maintenance and support services provided by Siemens. In addition, the solution provides long-term investment security to the Internet provider. Future expansion of the data center poses no difficulties because of the high degree of flexibility inherent in the scalable fire safety solution and installed security system.



Integrated data center fire safety solution.

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Contact: b1.i-bt@siemens.com