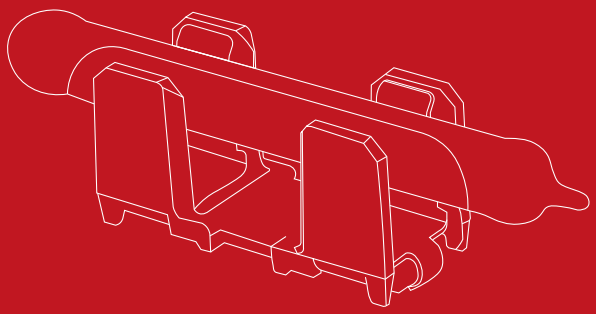
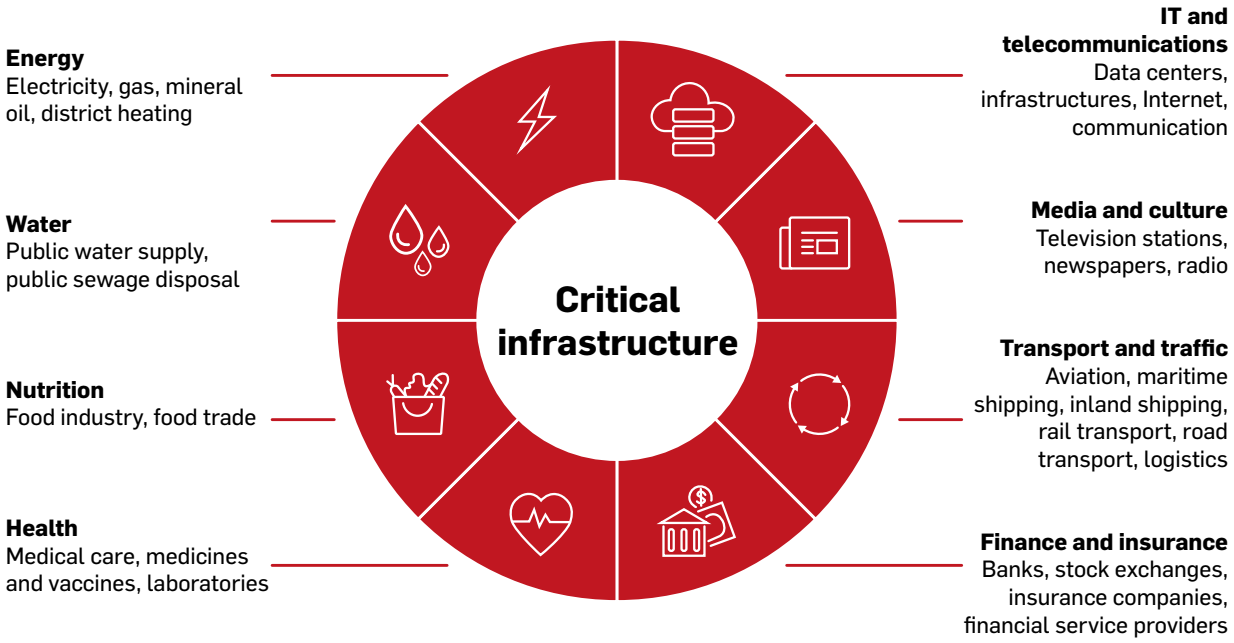
FIRE PROTECTION IN CRITICAL INFRASTRUCTURE

WHITEPAPER



INITIAL SITUATION

The modern world is characterized by growing complexity and diverse challenges. The protection of critical infrastructures - KRITIS for short - is therefore a top priority. Fire protection plays a central role in security measures for KRITIS in order to ensure resilience and business continuity.

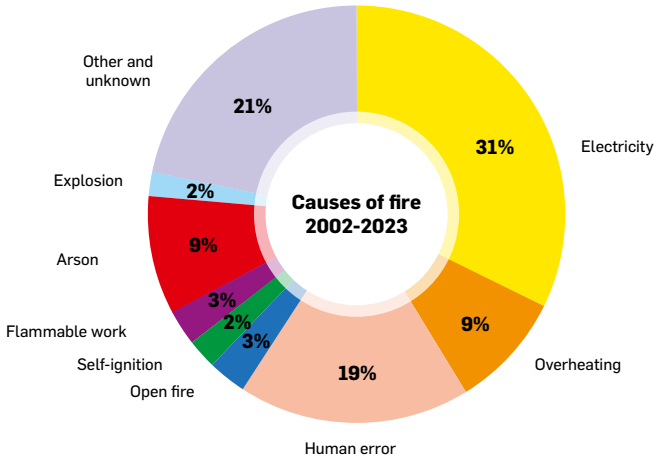


Preventive fire protection minimizes the risk of fires and reduces the impact on operations, human life and material assets in the event of an emergency. As part of the 14th Allianz Risk Barometer, more than 3,000 people from 106 different countries were asked about the ten biggest global corporate risks.

Allianz **2.**

"In second place on the risk list is the risk of business interruptions caused by downtime, due to fires for example."

1st place: Cyber attacks, which often lead to business interruptions.



Source: Institute for Loss Prevention and Loss Research of the public insurers (IFS)

THE STATISTICS

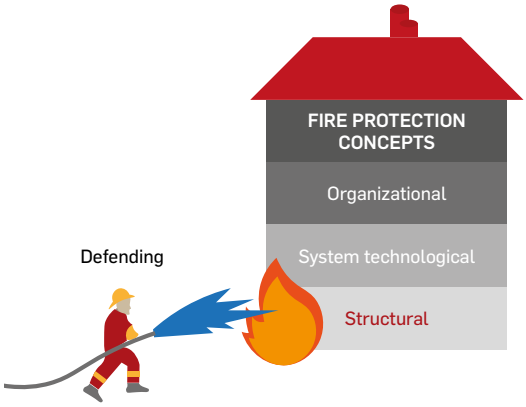
The Institute for Loss Prevention and Loss Research of the public insurers (IFS) has been publishing fire cause statistics for years. Every third fire is caused by electricity and many fires occur within electrical appliances and systems. Business continuity is often at risk. There is a fire in Germany every 2 minutes. Every 6 minutes due to electricity.

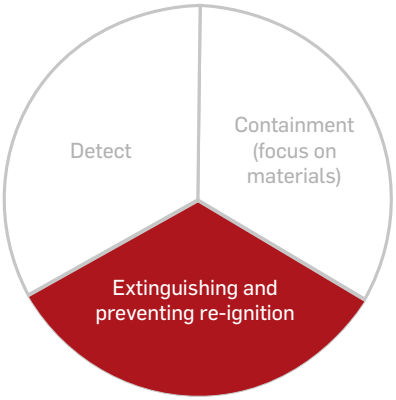
Consequences for businesses after major fire incidents:

- 1/3 goes bankrupt immediately after the fire
- 1/3 goes bankrupt within 2-3 years after the fire
- 1/3 remains bankrupt in the long term after a fire

In the best-case scenario, an insurance company will pay out the sum insured in the event of damage. However, the damage cannot usually be compensated in monetary terms. This is why there are statistically so many insolvencies after a fire. Preventive fire protection makes sense to protect the business.

FIRE PROTECTION CONCEPTS





- Many fires start **inside** electrical appliances
- Existing fire protection concepts are good!
- However, fires are usually only extinguished once they have escaped from the housing.

New: Device-integrated fire protection can **support** and **complete** the holistic fire protection concept by fighting the fire directly at its source.

DEVICE-INTEGRATED FIRE PROTECTION

Device-integrated fire protection is an important solution component. Device-integrated systems, which are integrated directly into control cabinets, systems and machines, for example, enable an immediate response to fire incidents - even before they can spread further. Early detection, localization and extinguishing of fires directly at their point of origin can protect critical systems, minimize down-times and ensure the safety of personnel and systems. Device-integrated fire protection is therefore tanta-mount to a paradigm shift. By integrating fire protec-tion technologies directly into critical components and machines, this solution enables fires to be detected and extinguished immediately.

This approach offers numerous advantages:

Maintaining operational continuity

Minimization of damage

Improved response time

THE “BUILT-IN FIRE DEPARTMENT”

Innovative and proven solutions for effective, device-integrated fire protection include the AMFE automatic miniature fire extinguishing unit and the E-Bulb, pro-bably the smallest fire extinguisher in the world. They are integrated directly into electrical components such as switch cabinets, control panels, control systems or machines and act as a miniature fire department. Ideally, a fire remains confined to the affected com-ponent.

Good to know: The technology is recognized by the Association of Property Insurers (VdS Schaden-verhütung GmbH) and TÜV Nord.

TÜV NORD Zertifizierung

VdS

AMFE

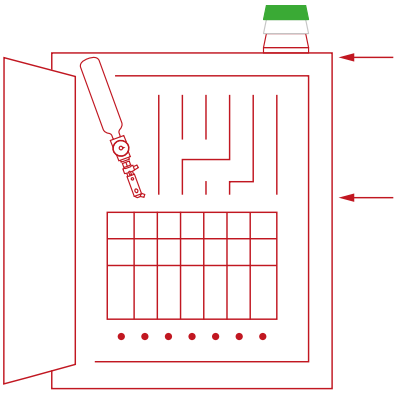
Automatic miniature fire extinguishing unit

Effective fire protection for retrofitting

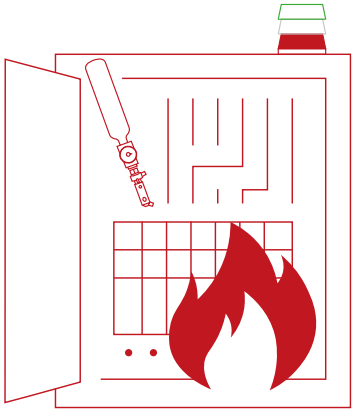
Our AMFE system is able to identify smouldering fires at an early stage. At the same time, it is so small that it can be retrofitted directly into electrical switch cabinets, operating devices or technology boxes. The way it works is as simple as it is reliable: At the appropriate, pre-defined trigger temperature, the glass ampoule bursts automatically and releases the extinguishing agent it contains independently of the current. As it escapes, the extinguishing agent vaporizes immediately and can be distributed highly effectively in gaseous form throughout the entire extinguishing area.

Another advantage:
Unlike aerosol extinguishers, foam or water-based extinguishing systems, there is no consequential extinguishing damage as the extinguishing agent is non-corrosive, non-conductive and residue-free.

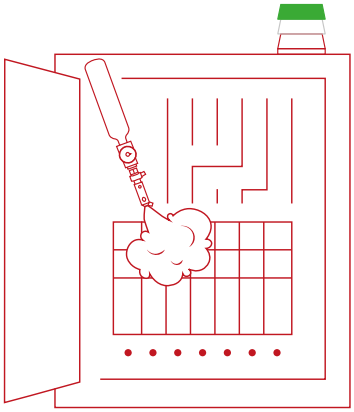
APPLICATION IN THE SWITCH CABINET



The AMFE is installed as high up in the control cabinet as possible.



A fire breaks out



The AMFE extinguishes automatically, quickly and residue-free

AREAS OF APPLICATION

- Switch cabinets
- Machines
- Vending machines
- Media technology
- E-Mobility Charging stations
- Museums/ Collections
- Wind power
- Airports

AMMORTISATION

- Reduce the risk of business interruption
- Device-integrated fire protection as a competitive advantage
- Strengthening resilience. Improve insurability
- Easier achievement of fire protection specifications, requirements and approvals

TIP: TALK TO YOUR INSURANCE COMPANY

The integrated protection of electrical appliances through integrated fire protection makes sense and can have a positive effect on the insurance premium.

Dietmar Linde (Management Board, Hübener Versicherungs AG)

REFERENCES

You can find a detailed description of the projects on our Homepage.

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