



**Kieback&Peter**

**PREVENTIVE FIRE PROTECTION**

**IN BUILDING AUTOMATION**

**Integrated modular smoke extraction  
and fire damper control system**

# PROTECTION OF LIFE AND TANGIBLE ASSETS

**Welcome to the future of construction – smarter, safer, stronger. We've adapted our technology to meet the ever-expanding needs of investors, operators, and users. Our digital building automation with intelligently networked technical systems delivers advancements in cost, energy efficiency, comfort, and safety.**

These enhancements also extend to preventive fire protection – in hospitals as well as office, administrative, and commercial buildings. In the event of an emergency, the quality and reliability of our building systems protect life, property, and the building structure from harm. This in turn minimizes the liability risk for owners and operators.

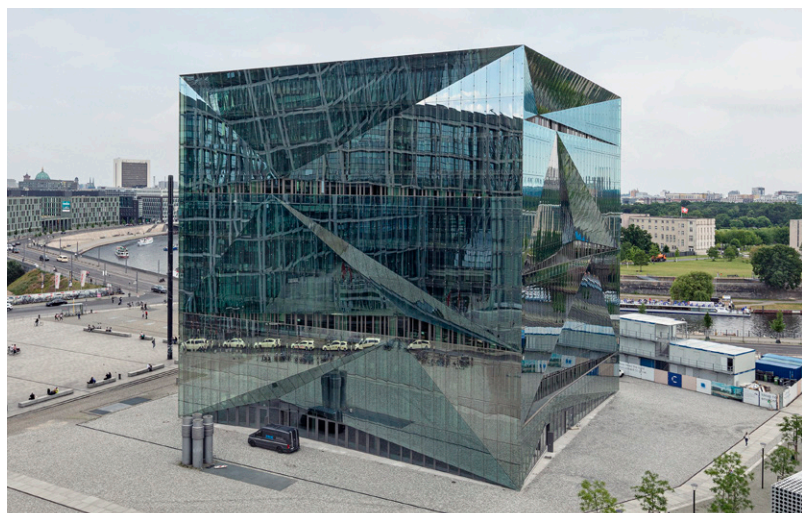
In the event of a fire, the risk of which can never be completely ruled out, toxic smoke represents the greatest danger to building users. It is therefore essential to keep escape and rescue routes clear of smoke. In modern real estate, ventilation and air conditioning are controlled by their respective systems connected to building automation systems. If the associated exhaust and supply air ducts pass through individual fire and smoke compartments, automated fire dampers and smoke dampers are required, integrated into a fire control system. These perform two crucial functions in the event of a fire:

- Ensure smoke-free escape routes and targeted smoke extraction from the building
- Enable safe evacuation and rapid extinguishing by the fire department



## Cube Berlin – Europe's most intelligent office building

This Smart Commercial Building is located in the heart of Berlin, featuring pioneering building technology from Kieback&Peter. The combination of digital building automation and artificial intelligence maximizes efficient management, offering the best possible user comfort and safety – even in the event of fire. 57x DDC4040e automation stations from Kieback&Peter seamlessly perform control and regulation tasks. In the event of a fire, they take control of the building's approximately 450 fire dampers for immediate fire suppression.





## INTELLIGENT SOLUTIONS FOR

# AUTOMATED FIRE PROTECTION SYSTEMS

From smart new construction to building modernization, every construction project requires tailored systems for automated smoke extraction and fire protection.

A critical building block for these systems comprises intelligent smoke extraction and fire damper controls from Kieback&Peter, which are integrated into the building automation system. Their modular design enables standard and directive-compliant solutions for all building sizes and systems. They provide optimal preventive fire protection and, in the event of a fire, remove smoke from the building as quickly as possible.

Integrates seamlessly with:

- Natural smoke extraction systems
- Mechanical smoke extraction systems
- Smoke protection pressure systems
- Underground car park ventilation/ smoke extraction systems
- Ventilation systems

# ADVANTAGES AT A GLANCE

**In the event of a fire, automated smoke extraction and fire dampers rapidly contain the fire and effectively dissipate smoke and heat.**

All hardware and software components comply with current standards and guidelines and ensure efficient fire protection. This paves the way for a smooth and successful inspection by the relevant building authorities. The system automatically performs checking, error analysis, and documentation of the damper functions. And all you need is an Internet browser for convenient system monitoring.

Kieback&Peter provides the highest quality building solutions to guarantee safe planning and cost-effective commissioning with optimum functionality and reliability.



## **Easy integration into a building management system**

We use the international BACnet standard to facilitate effortless incorporation with your building management system.

In addition, any automation devices can be networked across trades. This makes it possible to implement a wide variety of concepts in the field of fire protection.



## **Flexibly expandable and scalable to any project size and function**

Modern, future-proof real estate is adaptable to changing building operation requirements within its life cycle. The fire control systems, including their components, must be similarly flexible. Kieback&Peter's modular control solution can be flexibly modified and expanded for varying applications. The scalable components also allow for optimal adaptation to any building size easily and economically.



## **Reduction of cabling effort and fire load**

Communication via ring bus system in connection with the building automation system minimizes the use of materials – particularly for costly copper lines, terminals, and distributors. This saves installation and maintenance costs, reduces the fire load by up to 50 percent, and optimizes the ecological impact by saving resources.



### Standard-compliant and certified

Enjoy safe planning and commissioning thanks to standard- and directive-compliant and certified system components in accordance with EN 1366-2 and EN 15650 and country-specific building regulations. The systems can be certified up to SIL3 and are approved by the German Technical Supervisory Association (TÜV) and state-certified experts.



### Safe and reliable over the entire life cycle

Guaranteed safety in emergencies: the redundant system design through fail-safe functionality ensures the system's functional integrity even in the event of a malfunction or failure of individual components.

In addition, powerful software tools accompany the maintenance process for functional and visual inspection of the fire protection control system. The test scenarios are fully automated and faults are detected and reported to the responsible personnel.

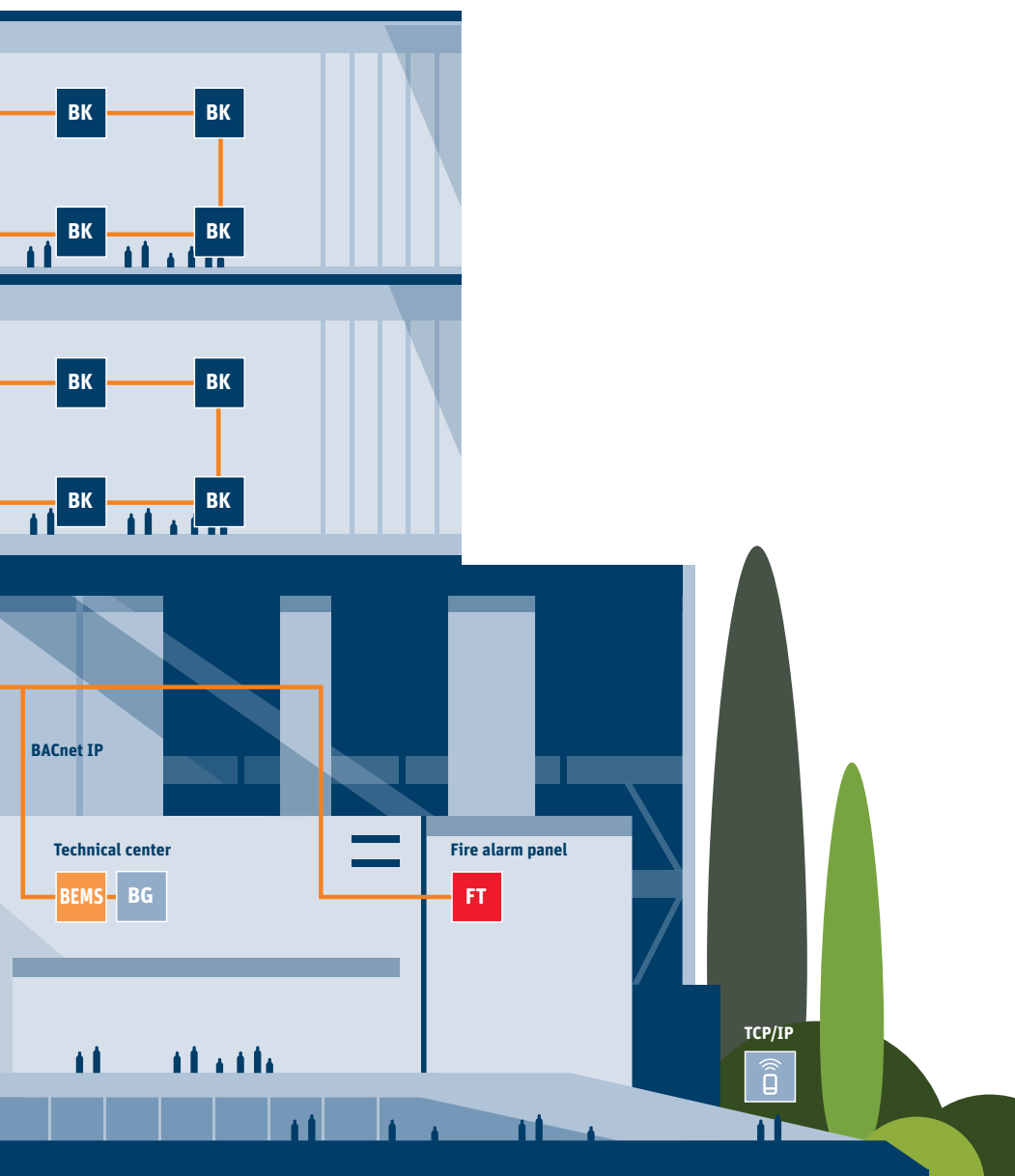
## Holistic support from the very beginning

Backed by our wealth of experience as a leading provider in building automation, we offer comprehensive support every step of the way — from planning and execution in compliance with standards and directives to smooth operation and value-preserving services over the entire life cycle.

# THE MODULAR CONTROL CONCEPT FOR SMOKE EXTRACTION AND FIRE PROTECTION

Kieback&Peter's modular solution for smoke extraction and fire damper control can be individually adapted and expanded to any building size and use case. It consists of interconnected components including control units, communication interfaces, and input and output modules. Communication can take place via both the bus systems in the line topology and the innovative ring bus systems specially developed for safety-relevant tasks. Both system designs ensure secure data transmission and efficient networking of all equipment required for preventive fire protection. The components are networked in a safety ring bus for maximum reliability and functional integrity in the event of a fire. The control units can be designed redundantly.





**SG**

**Control units**

Controls and monitors the smoke and fire dampers, fans, heat extractors, and garage doors.

**BK**

**Smoke extraction and fire damper modules**

Monitors and controls the fire damper actuators through the concentrated input and output of binary signals.

**KI**

**Communication interface**

For galvanic isolation of the safety ring bus from the network and other components outside the ring bus.

**FT**

**Fire indicator panel**

Displays the status of the ventilation systems in the floor plan for fire department operation in the event of a fire.

**FB**

**Fieldbus modules**

For the concentrated input and output of binary signals to monitor and control the fire damper actuators.

**DDC**

**Automation station**

Controls and monitors the smoke and fire dampers, fans, heat extractors, and garage doors.

**BG**

**Operating devices**

For operating the control units and automation system.

**BEMS**

**Building and energy management system**

Guarantees safe and efficient building operation.

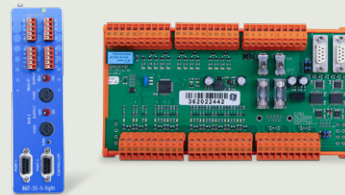
# SYSTEM-TESTED COMPONENTS

## SCALABLE FOR BUILDINGS OF ALL TYPES



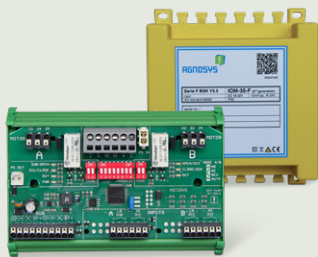
### Control units

Easily control and monitor smoke and fire dampers, fans, heat extractors, and garage doors, including logging system status. The control units communicate with each other, the automation station, and the input and output modules at the field level via Ethernet or safety ring bus. They connect to the building management system via BACnet/IP (open standard). Up to 256 ventilation systems with 4,000 fire dampers can be intelligently monitored and controlled.



### Communication interface

The communication interface is used for galvanic isolation (i.e., decoupling the safety ring bus from the network and other components outside the ring bus) between the safety ring bus and the control unit. The device is also used for analysis and switching off the safety ring bus, e.g., during commissioning. It has 17 binary inputs and 12 binary outputs for operating technology.



### Smoke extraction and fire damper modules

The modules perform the concentrated input and output of binary signals (data points) for monitoring and controlling the smoke extraction and fire damper actuators and for feedback signals of the end positions. The information is transmitted via the safety ring bus and they are tested to 10,200 complete switching cycles.



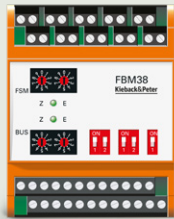
### Fire indicator panel

All system switching operations can be called up locally by the fire department through the fire indicator panel, featuring display and operating functions. In the event of a fire, the devices are used by the fire department to externally override the smoke extraction and fire damper system. The standardized modules can be individually adapted and expanded to any building environment.

- Remote mounting via Ethernet on the fire control panel or fire alarm panel in the distribution board
- Information transmission via input and output modules or communication interfaces of the safety ring bus



**Optimized safety for every building type: Kieback&Peter's smoke extraction and fire damper control system components comply with all current German and European fire protection standards and guidelines. Their scalability enables optimal adaptation to properties of all types and sizes – including retrofitting existing buildings.**



### Fieldbus modules

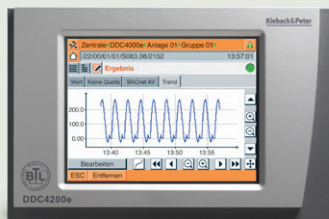
The modules perform the concentrated input and output of binary signals (data points) for monitoring and controlling the fire damper actuators and for feedback signals of the end positions. The information is transmitted via CAN bus.

- Networking of up to 63 modules for 252 fire damper actuators
- 10 binary inputs, 4 potential changeover contacts/outputs

### Operating devices

Local access to the smoke extraction/fire damper system or the building and energy management system is provided via the control panels with visualized status display. The following modalities are available for performing the required and recurring inspection of smoke extraction and fire dampers:

- Panel PC in control cabinet
- Smartphone
- Tablet



### DDC automation station

The control and monitoring of the fire dampers, fans, heat extractors, and garage doors, including logging of the system status, is handled by DDC automation stations. Communication is facilitated via Ethernet, and connection to the building management system via BACnet/IP (open standard).

- Connection of up to 99 automation stations via Ethernet
- Parameterizable objects for a wide range of control tasks
- BTL-certified BACnet Building Controller (B-BC)
- 32 individually switchable binary inputs and outputs (BE/BA)
- TFT touch screen

### Building and Energy Management System (BEMS)

If the building is already operated via a BEMS, it can also be used to monitor the smoke extraction and fire dampers. The system also signals the status of all fire and smoke dampers and enables regular automated checks of the fire protection system.



## **KIEBACK&PETER – A STRONG PARTNER AT YOUR SIDE**

**As a strong partner, we ensure your project success with expert knowledge and a holistic customer and service orientation. We support commercial and public buildings over the entire life cycle – on-site, via remote access, and through central service facilities with around 50 branches all over the world.**

**Our experienced engineers, technicians, and consultants work with passion and care to customize solutions for every phase of your building life cycle – from planning and implementation to smooth operation and system maintenance.**



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## 1. Planning and development

Gain valuable support and advice from our service team at any time – whether planning a new building automation system or migrating existing systems for future-proofing. We show you how to make your buildings more comfortable with intelligent automation solutions and how to meet the highest energy and safety standards. If needed, we can also support you in the use of subsidies.

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## 2. Construction, installation, and commissioning

Performance you can depend on from day one. Our experienced project managers coordinate the trades required for your Kieback&Peter solution directly at your site. Experienced service technicians then take over the installation and commissioning of hardware and software – including an on-site system briefing.



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## 3. Operation, maintenance, and optimization

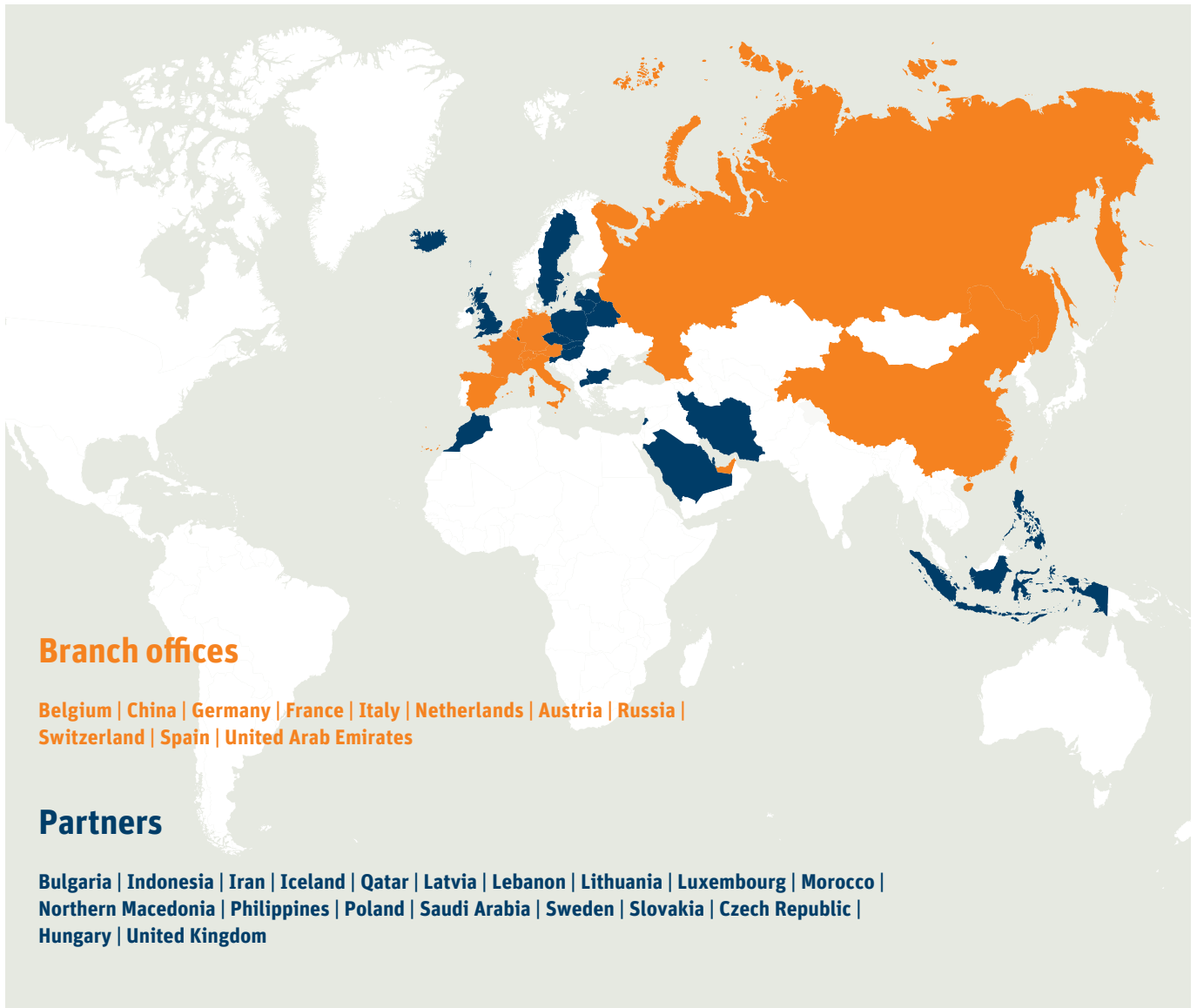
Our service staff are also passionate about existing plants, managing maintenance and repairs and providing valuable advice on operation and optimization options. Detailed information on functions and handling can be provided by our personnel upon request.

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## 4. Training

Do you want to better understand the complexity of building automation systems and optimize the use of equipment?

Reach out to your Kieback&Peter contact person to learn more about the workshops we offer in your region.



## Branch offices

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