Bosch networked fire alarm systems:
safety and peace of mind in one

2016 | Bosch Security Systems

BOSCH
Invented for life

Comprehensive safety
with networked fire solutions

We care about your safety.
With this in mind, we have designed our products to let you and your customers rest assured that their lives will securely be protected and that emergency services will be able to react promptly.

Dear Reader,

Your daily task is to protect people and property against many different risks. At Bosch, we support you by designing and implementing innovative solutions. Our technical expertise enables us to understand your specific requirements and to discuss a range of potential alternatives before smoothly implementing your chosen system in accordance with all relevant regulations.

Our aim is to exceed your highest expectations. Our principle of delivering only the “highest quality” is based on the aspirations of our founder, Robert Bosch. He shaped this motto over 100 years ago and it continues to characterize all aspects of our daily work today. It applies to the development of new products just as much as it does to the planning and realization of your project. Our promise is to always achieve the best possible result for you.

We offer individual security and safety solutions you can rely on.

Uwe Ladwig
Vice President
Product Group Fire
Bosch Security Systems

Thomas Knauel
Director
Product Management Fire
Bosch Security Systems

Welcome to networked security solutions for fire alarm systems

Bosch Security Systems enjoys a worldwide reputation for quality, innovation, effectiveness and cost efficiency. We specialize in large and complex fire alarm systems for major projects, where our extensive experience makes us your ideal partner. You can rely on both the quality of our systems and our advice and guidance. Our experts will be pleased to work with you to design the most functional and effective fire security solution for your precise needs. This brochure provides you with an introduction to our business, products, systems and services. You will also find a number of case studies, showing the sorts of challenges we have helped our customers to meet in a variety of different sectors.

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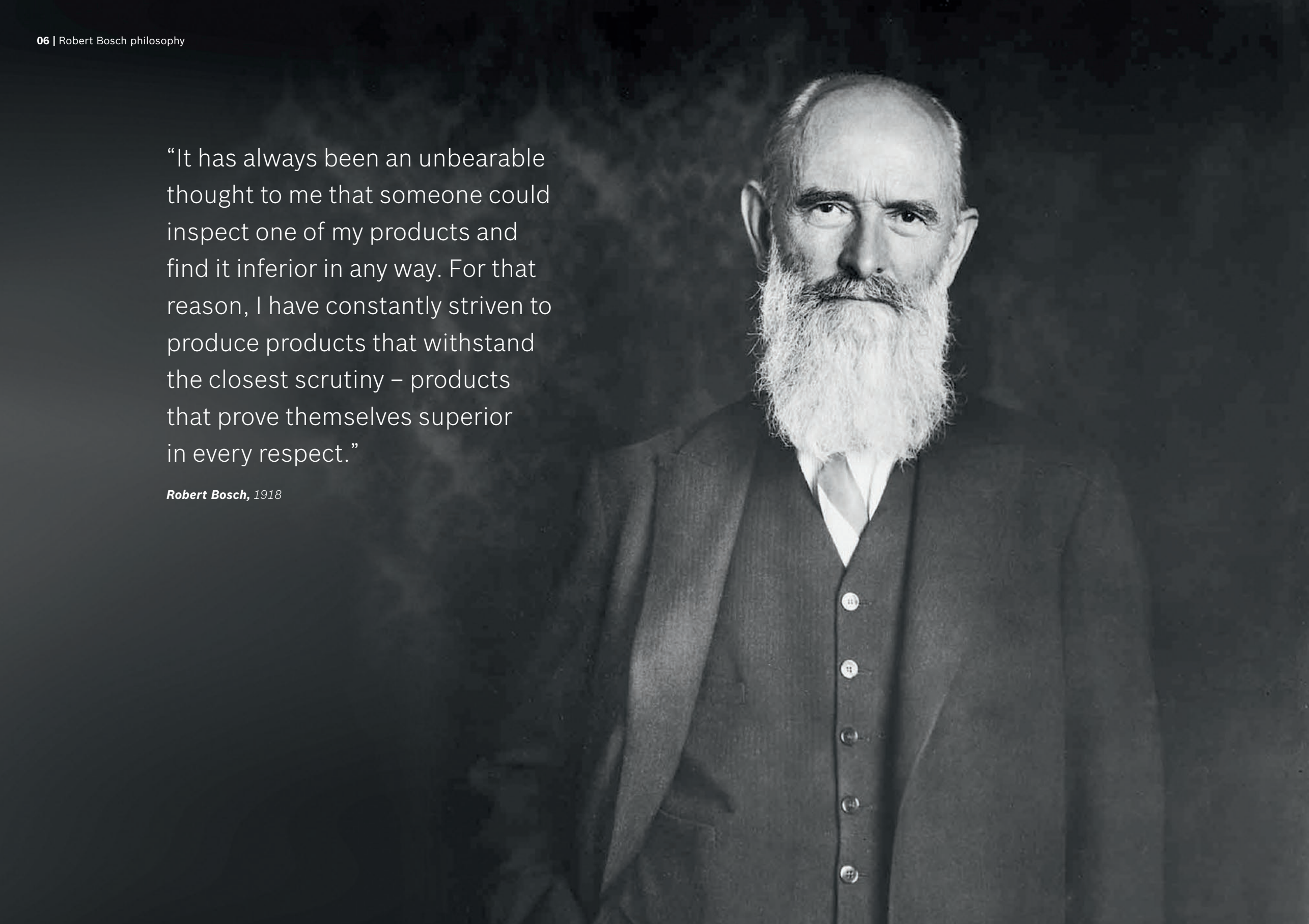
“It has always been an unbearable thought to me that someone could inspect one of my products and find it inferior in any way. For that reason, I have constantly striven to produce products that withstand the closest scrutiny – products that prove themselves superior in every respect.”

Robert Bosch, *1918*



Safety is a **question of trust**

Robert Bosch's founding values continue to run through the core of our company. Our constant commitment to quality and reliability has made Bosch a trusted partner in countless applications worldwide. This is especially true in the case of today's networked security systems, for which these values have never been more relevant.

Quality and innovation since 1886

In 1886, Robert Bosch founded the "Workshop for Precision Mechanics and Electrical Engineering" in Stuttgart, Germany. This marked the birth of Robert Bosch GmbH. From the very beginning, the Bosch brand built its reputation on innovative entrepreneurship, visionary ideas and a total dedication to quality – values that were lived by Robert Bosch and which continue to inspire all Bosch employees to this day. His legacy lives on.

Independent, responsible, trustworthy

Bosch Security Systems is an independent, non-listed company. The Robert Bosch Foundation holds approximately 92% of the shares of Robert Bosch GmbH. The foundation is financed through dividends and conducts charitable work in the fields of international relations, health, education, science and culture.

This special ownership structure gives Bosch Security Systems its financial strength and allows us to make decisions independent of stock market or shareholder pressures. At the same time, we take our social responsibility very seriously – for example, through the training of skilled professionals at our locations.

The Bosch culture of financial independence coupled with charitable work and social responsibility has created a special trust among our customers and partners. This commitment has remained unchanged since he first founded our company.

Continuous **support**

For any responsible company, nothing can be more important than the reliable protection of people and assets. As your trusted partner, our aim is to support you in all security issues with optimal solutions that have been custom-designed to meet your specific requirements.

Requirements of big systems

Big systems involve large networks that are often spread across wide areas. Typical applications include networking multiple tall buildings or entire campuses. Such systems often involve several business units or user groups and there is frequently the need to integrate third-party infrastructure systems.

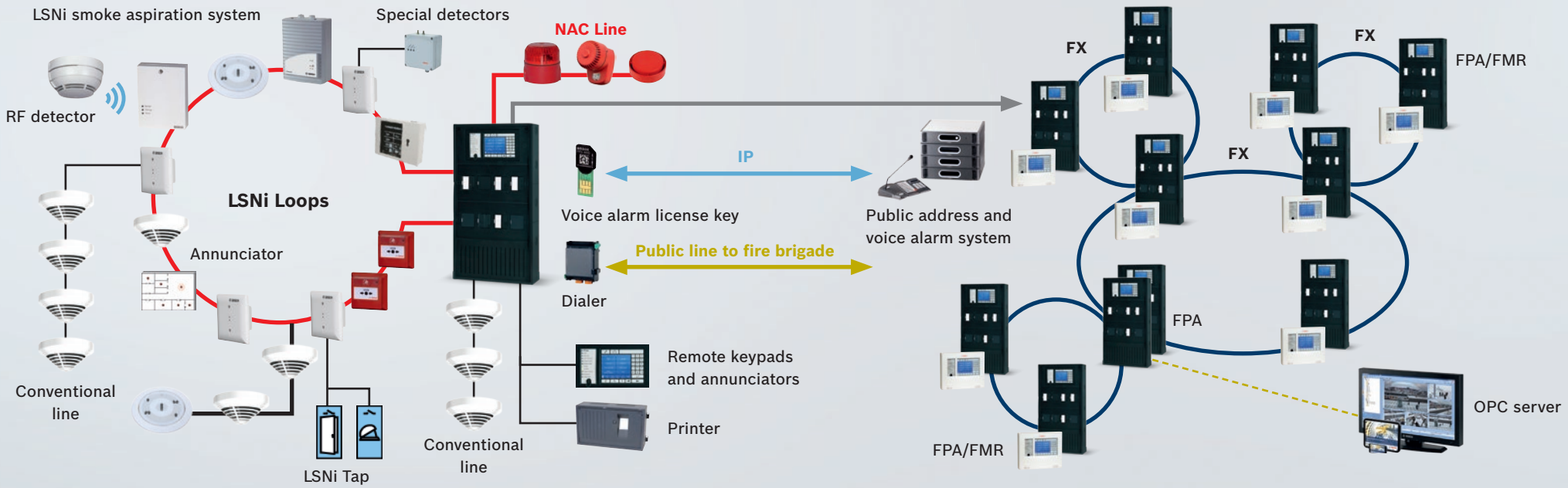
Besides the logistical challenges, big systems need to provide excellent quality with no false alarms. This calls for high-performance software as well as an extensive range of components to cover all possible technical requirements. Finally, the system needs to be supported by effective and efficient service to ensure 100% uptime.

Networking Bosch fire panels in various topologies and applications

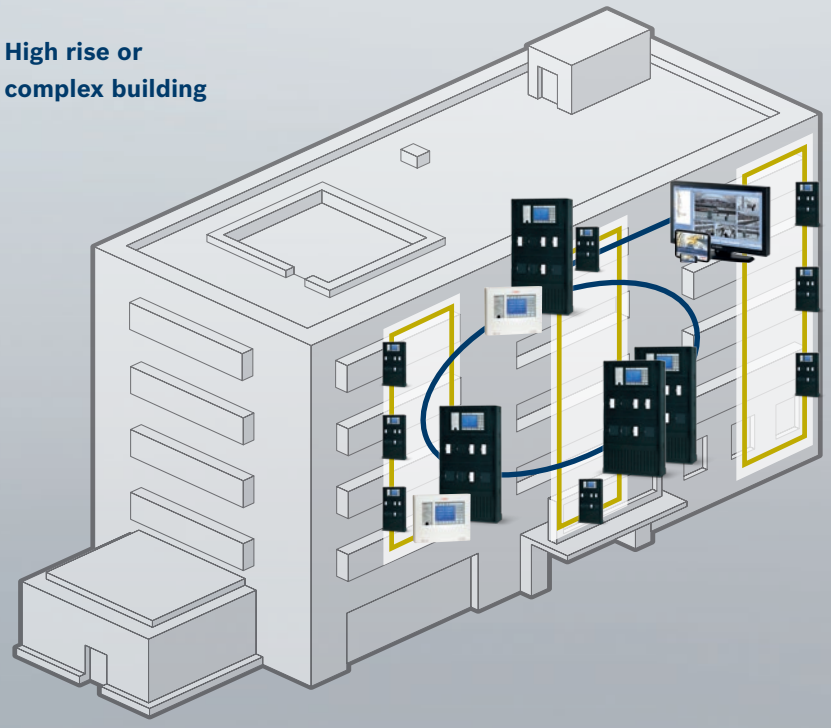
- Modular principle designed for expandability
- Maximum LSNi loop current of 1500mA
- Maximum loop length 3000m
- Can be connected to a sprinkler system
- High-level connection to Voice Evacuation
- Integration in business management system (e.g. Building Information System)
- Video surveillance
- Intrusion detection
- Access control

Networking

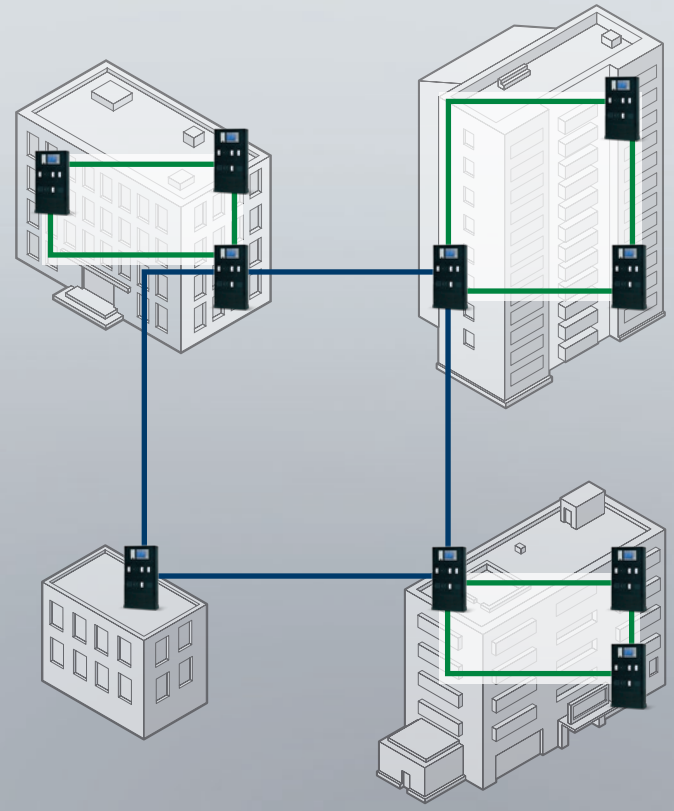
- Panel networking via CAN and/or Ethernet
- Reliable functionality is ensured even in error occurrences
- Different loops give the system flexibility and adaptability
- Connection to various building management systems (e.g. Bosch BIS and third party) and panel controller integration is possible
- Well-regulated administration is facilitated by Ethernet and set-up zones
- No additional interface module required
- Integrated IP technique in panel processor unit



High rise or complex building



Extensive campus – very large network spanning large distances, for example university campus



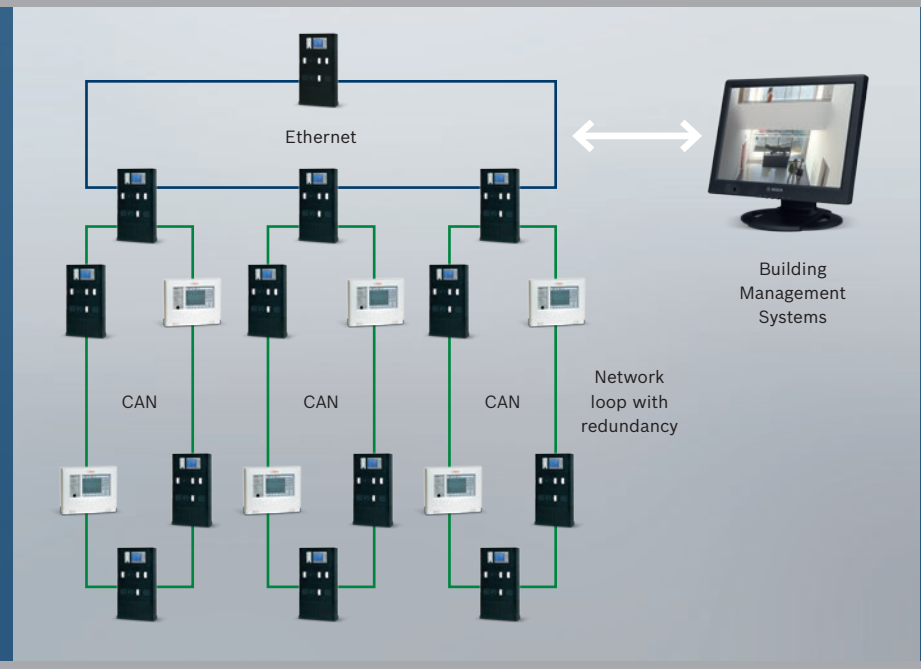
IP **networking**

Given today's increasing demand for extensive networking, system security and reliability are of vital importance. This is especially true when it comes to reconfiguring or expanding your network. Our scalable and easily integrated solutions are ideally suited to meet the demands of secure and versatile modern networked systems.

For maximum reliability, Bosch systems support fully redundant networking via an IP and/or CAN connection between the panels. This ensures that the system continues to function even in the unlikely event of an error. In addition, our systems conform to all relevant international standards and guidelines.

Because no two applications have the same requirements, flexibility is a major feature of networked Bosch fire alarms. For example, the use of multiple loops allows the system to be adapted to any specific need. Our systems are also designed to integrate into a variety of building management systems, whether Bosch BIS or a third-party solution.

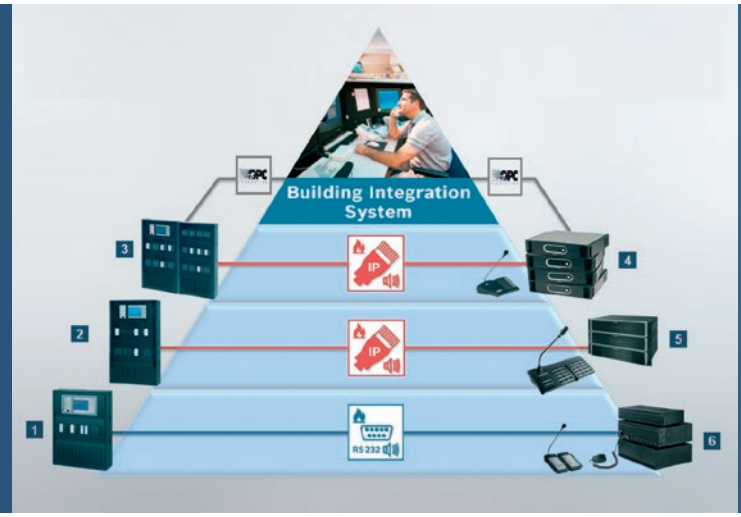
System administration is facilitated via Ethernet and set-up zones, and the central panel controller features integrated IP technology in the Panel Controller unit. With a maximum distance of 40 km between panels, it is even possible to network very large areas.



Fire Alarm
Voice Alarm

Safety **goes IP**

Internet protocol has proved itself an ideal solution for coping with the demands of the latest networked security systems. IP provides complete flexibility coupled with fail-safe reliability.



Interfaced fire detection and voice alarm
Having the right building protection system in place gives everyone peace of mind – from property owners and security personnel to employees and visitors. When safety is at stake, the system needs to respond immediately, accurately and reliably, with clear messages that keep everybody calm. Bosch systems meet all these requirements and add their own unique benefits.

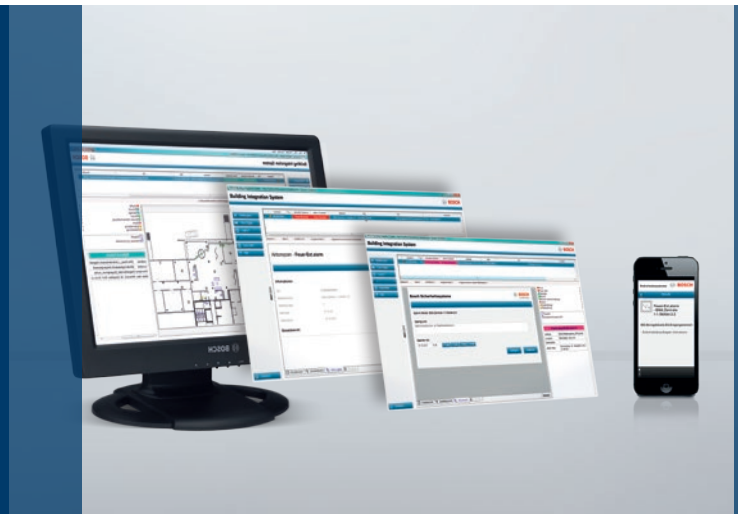
The Bosch system is designed for expandability and all devices and peripherals work seamlessly together. In mid- to largesized applications, an intelligent IP interface connects our fire panel series with the Praesideo public address and emergency sound system. Both systems can also be connected to a building management system via OPC by using a software development kit (SDK).

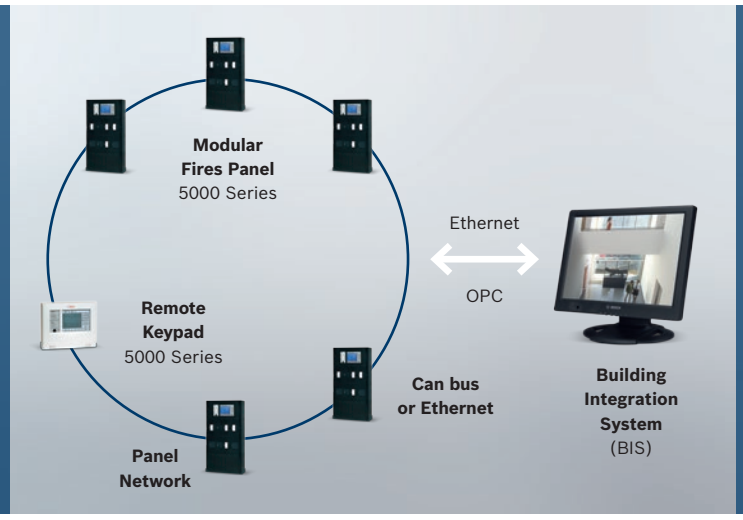
From reliable fire detection to advanced voice evacuation, Bosch systems are a safe, future-proof investment for every type of building.

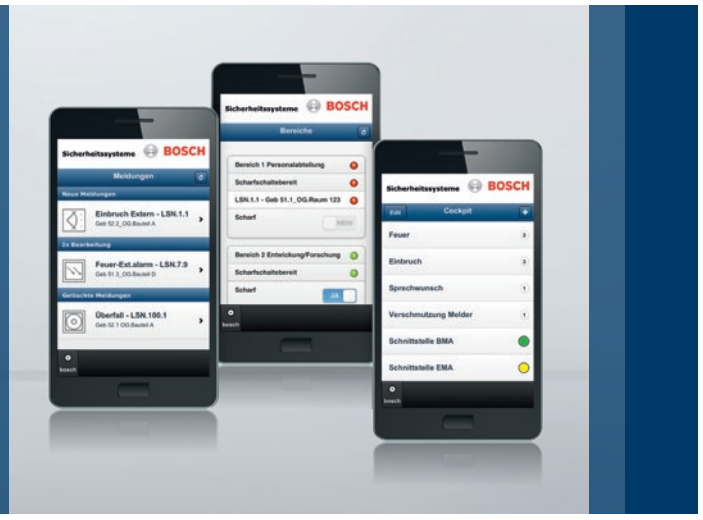
1 FPA 1200
2 FPA 5000
3 FPA 5000
4 Praesideo
5 PAVIRO
6 Plena VA

Building Integration System (BIS)

Rapid and reliable system integration is vital in ensuring that all your people and assets have the same advanced level of fire security protection.







Fire System Interface
The Fire System Interface (FSI) is a software development kit (SDK) that has been designed to help you produce state-of-the-art customized software applications. This tool lets you easily integrate the addressable fire panel series into different building management systems (BMS).

Integration enables message and command transfer between panel network and BMS. Based on predesigned modules and methods, the SDK provides a quick start for your applications and reduces overall development time. If you connect your BMS over the Bosch OPC server, the FSI is already implemented.

Registering as a partner gives you online access to our FSI manual. This includes detailed installation and programming information, as well as a technical description of the Bosch OPC server. You will also find information about how to integrate your Bosch system into a third-party management system.

Everything you need in a single system
Because every organization has unique building management requirements, the Building Integration System (BIS) is modular and combines different building management functions on a single platform. This gives you the flexibility to easily add or remove single elements or create new combinations.

The BIS works exclusively with proven open global IT standards such as OPC, SML, HTML and Windows. This simplifies integration into third-party security and building management systems, as necessary.

When every second counts
The Modular Fire Panel 5000 Series

In any business-critical application, time is a key factor. All our system components have been designed for maximum reliability and integration flexibility. This minimizes the risk of unplanned downtime and ensures the rapid and secure implementation of any system changes.

The Modular Fire Panel 5000 Series is an example of the exceptional performance of our fire alarm systems, which conform to all current guidelines and regulations. Its modular design ensures that the Modular Fire Panel 5000 Series can easily adapt to every need, from small shops to large hotels. As your needs grow, the system can be cost-effectively extended via the CAN or Ethernet infrastructure. The same principle supports secure subsystem integration with Praesideo voice alarm and other higher-level alarm systems.

Our comprehensive product range ensures complete system reliability. For example, our detectors use the latest technologies to rapidly and accurately detect risks. Our services include EN 54-certified, uninterruptible infrastructure systems and even provide fire alerts in the event that supply lines have been destroyed. Bosch systems are especially suitable for ensuring reliable fire safety warnings in large areas with several buildings or in tall buildings with multiple display devices, keypads and control panels on each floor.

Modular Fire Alarm Panel 5000 Series – complete flexibility

IP networking

Remote keypad FMR-5000

CO

Intelligent detection
for superior protection

“A wide range of fire detectors to suit your specific needs.”

Precision for every environment
Different substances burn differently and no two fires are exactly alike. For example, smoldering paper in a wastebasket generates smoke but very little heat, while an industrial fire involving ethanol gives off no smoke yet has a strong heat flow.

AVENAR detector 4000 takes all these possibilities into account. It meets EN54-7 and offers options that cover all fire criteria, from material type and heat flow to airstream, smoke emission and aerosol characteristics. The new eSMOG feature provides constant monitoring of environmental electromagnetic conditions. This combines unsurpassed reliability with outstanding detection performance.

In high-humidity areas like kitchens and bathrooms, AVENAR detector 4000 can be used to detect the difference between steam and smoke. In public spaces, office buildings, hotels, airports, etc, AVENAR detector 4000 can be used to detect invisible carbon monoxide particles to identify the very early stages of a smoldering fire.

With their high-precision Dual Ray Technology, the latest dual-optical models provide added reliability and early detection in even the most challenging environments, including nightclubs, garages and computer rooms.

Discreet, stylish and clean
The 500 series is ultra-slim and lies flush with the ceiling so that it does not detract from the appearance of attractive rooms. Colored rings can be mounted in the detector perfectly blending in with the color of the surrounding ceiling.

The smooth surface resists the build-up of visible dirt and dust. Build-up is automatically monitored and a signal indicates when a unit needs to be cleaned, maintaining a smart look.

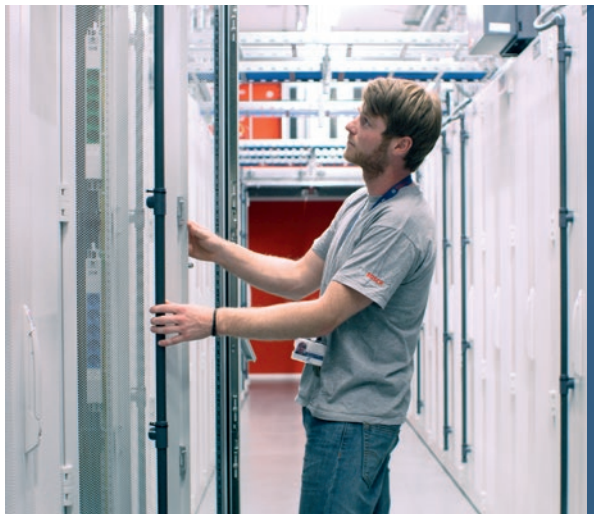
Service with a single goal: **complete safety**

Even the best systems require routine maintenance, upgrades, testing and technical support from time to time. As a global company, we can provide expert technical support, R&D, training and testing at a local level - no matter where your sites are located. This ensures rapid response, minimizes cost and eliminates the risk of unplanned downtime.

Everything we do is designed to maximize your safety. All our products are engineered and developed for optimum performance and are EN54 certified. In addition, our in-house R&D department provides regular revisions and software updates to ensure that your system remains at the cutting-edge of technology.

We also provide extensive on-site and remote training support in the use and maintenance of our systems in every country where they are used. Bosch offers specialist training for system integrators as well as multiple training courses for users and support staff.

Our test laboratories ensure that your system will perform as needed and we provide planning tools to help throughout the installation and commissioning process.



"Whatever your needs, we can design the ideal solution for your specific requirements. We also support you with expert advice before, during and after the installation process."

Remote Services

Best-in-class remote services with fast and trouble-free installation

Many routine service, maintenance and support issues can be effectively handled without the need for a site visit. Bosch Remote Services ensure constant system efficiency while reducing servicing costs.

Customer benefits

- Out of the box solution (< 30 min installation/configuration)
- High data security (no hacking risk)
- Connectivity from any internet access point
- Sites can be accessed independent of their IT infrastructure

Bosch Remote Services is an IP-based solution for remote diagnostics and maintenance. It allows system integrators to remotely monitor facilities around the clock and detect problems early, ensuring rapid response and reduced downtime.

Remote Services is based on Remote Connect, a secure internet connection between the system integrator and the client via Bosch Security servers. It can be quickly and easily installed, without specialist IT expertise, and is configured remotely.

The system's Remote Programming Software (RPS) enables Remote Connect to carry out programming and updates of the fire alarm panel independently of the location. Remote Connect also enables 24-hour remote surveillance for quicker and more specific reactions in the event of a malfunction.

Remote Connect for EN54-certified fire panels is compatible with all Bosch systems.

Hilton
Hilton Bursa

Hilton Bursa Hotel
Bursa, Turkey

Bosch Security Systems installed a networked security solution for one of Turkey‘s major hotel developments, the new Hilton complex in Bursa, which combines the 5-star Hilton Bursa Convention Center & Spa with the 3-star Hampton by Hilton Bursa.

The two hotels are located next to each other but are operated as two separate entities. However, the management required an integrated security system covering both hotels. Bosch partner Ateksis designed an integrated security solution with fire detection systems, access control, video surveillance and voice evacuation.

Ateksis implemented the Modular Fire Panel 5000 Series in both hotels, which can be operated independently but managed as a single integrated solution. In public areas such as lobbies, meeting rooms and ballrooms, Bosch "invisible" (flush-mount) 500 series fire detectors were used to minimize the impact on the stylish architecture.

Franz-Josef-Strauß Airport
Munich, Germany

The airport's owners have consistently relied on Bosch Security Systems as a dependable and experienced partner with a strong commitment to quality.

The Terminal 2 luggage sorting hall and parking facility were equipped with a fire system and a door security system with escape route control. The fire system includes 10 fire panels, 18,000 fire detectors throughout the terminal and luggage sorting hall, sprinklers, smoke removal systems and audible and visual alarms, connected by 360 km of cabling.

New Union Square
Warsaw, Poland

Completed in May 2014, the New Union Square features a 23-story tower with two 7-story bars in a triangular alignment and contains a shopping center, offices and a large garage.

The fire alarm system has a modular architecture with eight networked Modular Fire Panels 5000 Series, which support more than 14,000 fire detectors, controls and external devices. In the event of an alarm, evacuation instructions can be distributed to different zones and to any of the system's 3,200 loudspeakers via Bosch’s Praesideo digital public address and voice evacuation system. This system is also used to broadcast music and advertisements in the shopping center during business hours. Completely based on Bosch technology, the local partner installed fire detection, access control, video surveillance and voice evacuation systems, all networked and integrated through the IP protocol and the Bosch Building Integration System (BIS).

Wastewater Treatment Plant
Zagreb, Croatia

This project is the first wastewater treatment plant of its kind in Croatia. It enables the city of Zagreb to adopt and comply with the European Union’s environmental standards in the field of environmental protection and biological water purification.

The key objectives were employee safety and the safety of the entire plant. The Bosch solution consists of five fire alarm systems connected via fiber optics in a network. Integration of all Bosch systems into an existing monitoring system increases safety to a higher level. All alarm events are monitored in the 24-hour control room within the plant (fire, battery faults, main power fault for each fire control panel, etc).

Synergy Health
Ede, The Netherlands

Synergy Health is a global company specializing in the sterilization of medical equipment and the supply of linen, particularly for the healthcare sector. The company offers a comprehensive range of services across the Netherlands, including the rental and washing of bed linen, professional clothing and linen for operating rooms.

During a complete replacement of its fire protection systems, Synergy Health installed Bosch fire panels and detectors in eight subsidiaries. In Synergy Health’s laundries, high fire risk meets very demanding environmental conditions due to humidity, steam and dust. The company found that the modular architecture of the Modular Fire Panel 5000 Series from Bosch was best able to adapt to the different requirements of the individual laundries, which differ in size and production processes. Around 700 Automatic 420 Series fire detectors with Dual Ray Technology were also installed on the sites. This technology uses different wavelengths to better distinguish smoke particles from other particles such as dust, water vapor or cigarette smoke, thus greatly reducing false alarm rates.

A tradition of quality and innovation

The Bosch name has stood for quality and reliability for over 125 years. Bosch is the global supplier of choice for innovative technology, backed by the highest standards of service and support.

Bosch Security Systems proudly offers a wide range of security, safety, communications and sound solutions that are relied upon every day in applications around the world, from government facilities and public venues to businesses, schools and homes.

Bosch Security Systems
To learn more about our products and services, visit www.boschsecurity.com or email emea.securitysystems@bosch.com

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