



**Radio technology: flexible functionality**  
**IQ8Wireless – intelligent wireless fire protection**

# Starts where cables end: pioneering fire protection with IQ8Wi

Also in the field of fire protection, conventional cabling is being complemented more and more with radio technology. There are often structural reasons or aesthetic considerations for using fire detectors which function without cable connections, for example in heritage-protected buildings.

One decisive advantage of wireless systems over cable-bound systems is the possibility of mounting the wireless detectors and wireless alarms flexibly, within the scope of the currently valid guidelines, without having to connect any cables. The **IQ8Wireless** radio technology can also be conveniently used for the subsequent expansion of existing installations.

Museums



Industry



Monuments



Senior citizens' homes





**IQ8Wireless** enables the practical, cable-free connection of various **IQ8** devices like detectors, manual call points and alarm signaling units to one fire alarm system.

## **IQ8Wireless – intelligent and wireless safety**

**IQ8Wireless** enables the practical, cable-free connection of various **IQ8** devices like detectors, manual call points and alarm signaling units to one fire alarm system. Thus not only is it possible to realize complete fire alarm systems with wireless components, it is also possible to expand already existing systems both easily and inexpensively. Subsequent detector installation saves not only the cost of cabling, but also the time-consuming work associated with mounting and wiring.

Even under difficult environmental conditions, the **IQ8Wireless** fire alarm system offers the highest level of safety with the most flexibility possible. The detector most suitable for the corresponding usage area is simply placed on the wireless base and/or wireless interface. The location and the positioning of the wireless detector can be selected freely within the scope of current guidelines. Battery operating life of up to five years additionally ensures low maintenance costs.\*

\* For professional planning, designing, and programming of the **IQ8Wireless** components, a participation in the ESSER "Wireless Systems" training course is recommended.

# Always on the ball – flexible, reliable and cost-efficient

The **IQ8**Wireless components communicate with each other via a dual-band transfer mode. Here, the radio technology uses a frequency-hopping process, in order to guarantee the highest level of transmission security.

This way, radio channels are changed automatically when affected by interference sources. Should the frequency band be blocked, thus interfering with communication between the respective wireless components, this is immediately reported to and displayed on the fire alarm control panel. A secure and reliable radio link is thus guaranteed. The transfer range is up to 300 meters in open air.

The indoor range depends on the layout of the building as well as on predominating environmental conditions. In addition to being an excellent solution for the supervision of remote parts of the building or areas in which cabling is not possible for other reasons, this system offers the possibility of installing temporary supervision without excessive expenditure. In this way, for example, construction site areas or provisional storage depots can be equipped quickly and cost-efficiently with fire detection- and alarm technology through the use of wireless transponders in independent operation or through the use of the wireless gateways in existing analog loops.

## Products



### **IQ8**Wireless transponder

The wireless transponder serves as a connecting link and communication interface between wireless devices and the fire alarm control panel. Up to 32 wireless bases with automatic **IQ8**Quad fire detectors or ten **IQ8**Wireless MCPs can be assigned to one transponder. Stand-alone mode is also possible due to its separate power supply unit.



### **IQ8**Wireless gateway

The wireless gateway is particularly useful for the convenient and time-saving expansion of an existing fire alarm system. Up to ten wireless devices (**IQ8**Quad or manual fire alarms) can be operated on this system.

### **IQ8**Wireless base

The **IQ8**Quad series detector is placed into the wireless base. A replacement and/or battery change is quick and easy. The assignment to a wireless transponder or wireless gateway is carried out conveniently via the tools 8000 programming software.



### **IQ8**Wireless universal interface

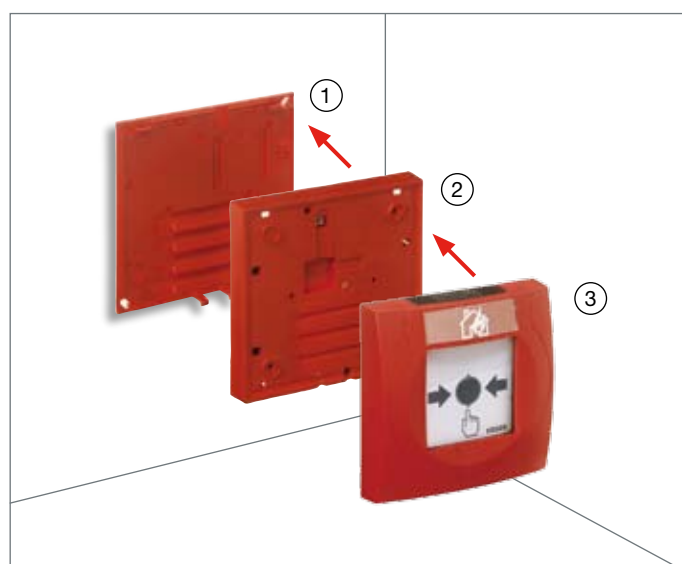
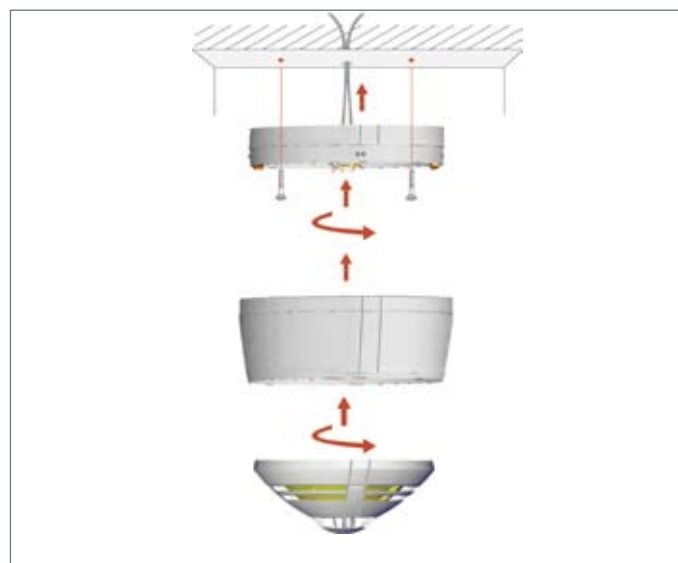
Connecting an **IQ8**MCP (small or large design) to a wireless transponder or wireless gateway is carried out by means of a universal wireless interface.

The universal wireless interface also facilitates the connection of **IQ8** components with alarm signaling devices. This is valid for all **IQ8**Alarm signaling devices and the **IQ8**Quad detectors with speech, sound and flash. The wireless controlling of the alarm signaling device is carried out without synchronism.

## IQ8Wireless: systematic flexibility

### IQ8Wireless base with fire detector

The radio technology is inside of the IQ8Wireless base, onto which the respective fire detector is fitted. Possible detectors range from the optical mono-criterion detector up to the false alarm-proof multisensor detector. The wireless base enables the connection of the TM, TD, O, O<sup>2</sup>T and OTG IQ8Quad detectors via a radio link to the esserbus/esserbus-PLus and integrates them via wireless transponder or gateway into the fire alarm system.



### IQ8Wireless universal interface for MCP

The universal wireless interface for manual alarms as an interface to the bus system enables the cable-free operation of the IQ8MCP on the esserbus or esserbus-PLus. This option is available for both the larger model and the smaller model of the MCP. The detector housing is available in various colors. The mounting frames and the interface are optionally available in white or red. The modular principle enables individual assemblies and thus the discreet integration into almost any type of environment.

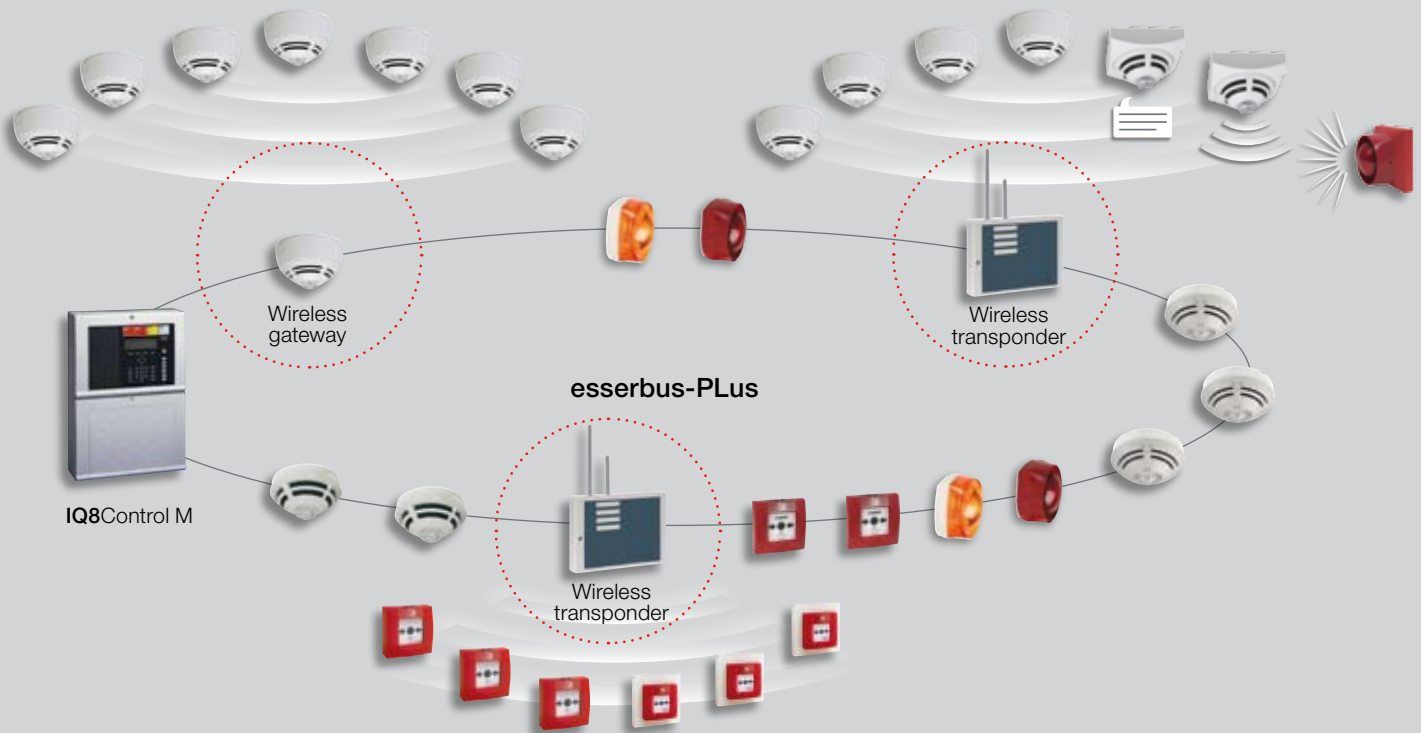
### IQ8Wireless universal interface with alarm signaling devices

The wireless interface shows its universal utilisability through the option of also wirelessly connecting IQ8Alarm and IQ8Quad detectors with integrated alarm signaling devices (speech, sound and flash) to the esserbus.

In order to achieve this, the corresponding mounting frame is applied in addition to the detector/alarm signaling device and wireless interface. The integration into the esserbus is then carried out via the IQ8Wireless transponder or the IQ8Wireless gateway. Up to ten alarm signaling devices – with speech, sound or flash – can be operated per wireless transponder and/or wireless gateway as fully addressable bus devices.



# Cable-free convenience: the system connection



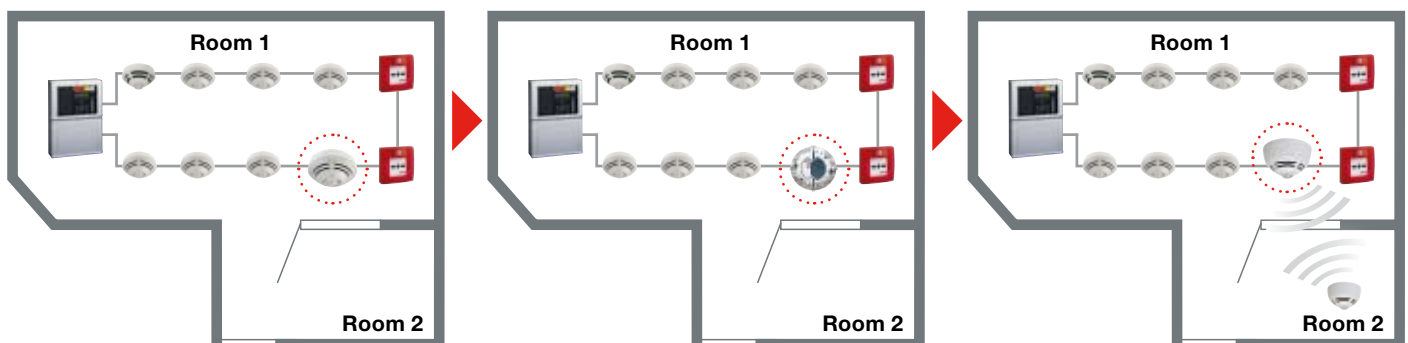
## Wireless gateway

The wireless gateway functions as a transponder element between the installed base and detector, and is particularly suitable for the convenient, tool-free expansion of an existing fire alarm system. For this purpose, the existing detector is simply removed from the base and replaced by the wireless gateway. The commissioning of the wireless gateway is conveniently carried out together with the remaining wireless devices via the tools 8000 software.

## Wireless transponder

The wireless transponder can be used as a bus device as well as in stand-alone operation designed with local alarm and status indicator. Up to 32 wireless devices can be assigned to it. Connection to intruder alarm control panels and building management systems is also possible with the wireless transponder.

## Simply exemplary: the wireless expansion of a fire alarm system



In our example, there is already a fire alarm system with several IQ8Quad detectors installed in room 1.

Now room 2 has to be monitored in case of fire for a certain period of time. An IQ8Quad detector is simply unscrewed from the existing system and a wireless gateway is inserted into the now empty standard base.

One or more IQ8Wireless detectors are then installed in room 2 and are operated as bus devices via the wireless gateway.

# Secure, application-friendly, and quick commissioning with tools 8000

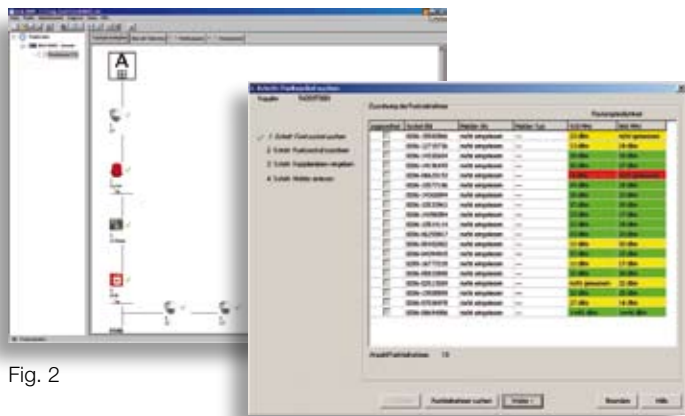


Fig. 2

Fig. 1

## With tools 8000, everything is possible: from field strength measurement to the commissioning of the IQ8Wireless components

The three traffic-light colors (Fig. 1) represent the intensity of the predominant on-site field strength. A green signal indicates movement within the recommended bandwidth. Yellow indicates a recommendation to change the position of

the wireless components in the building. Red means that the wireless components are not receiving any signal or not enough of one and must have their positions changed in order to guarantee proper operation. In addition to the traffic-light colors, the absolute values are given in dB per meter.

During commissioning (Fig. 2), the wireless components are read-in once and assigned to the wireless transponder/wireless gateway. Components already assigned can no longer be recognized by other wireless transponders/wireless gateways located in the building. Thus potential conflicts in communication can be reliably avoided. Finally, the information on the type of wireless components (whether e.g. O<sup>2</sup>T or OTG detector) is collected from the wireless transponders/gateways and sequentially represented in the topology of the tools 8000. After the usual group assignment in tools 8000, the IQ8Wireless component is addressable and is available to the IQ8Control fire alarm control panel as a genuine bus variant.

## References



Neersen Castle, Willich, Germany



objectflor Art und Design Belag GmbH, Cologne, Germany



Frankfurt exhibition center, Frankfurt am Main, Germany

### Innovative fire protection in baroque-style buildings

Neersen Castle, one of the most beautiful city halls in Germany, accommodates the administrative and cultural center of the city of Willich. As visible cabling for fire protection would not have complied with heritage protection requirements, Neersen decided to use IQ8Wireless. Sixty wireless detectors were subsequently integrated into the previously installed ESSER fire alarm system.

### Wireless, safe storage

The objectflor Art und Design Belag in Cologne belongs to the leading European providers of elastic flooring. The company's high-rise warehouse is protected by ESSER wireless

detectors. The eight-meter-high mobile shelves are made of aluminum and are constantly in motion. The use of 84 IQ8Wireless detectors here made it possible to do without conventional cabling and thus made it simpler to comply with technical fire protection requirements.

### Flexible protection for versatile exhibition concepts

The IQ8Wireless System provides reliable fire protection at the Frankfurt exhibition center during the constant changing of the booths, where it was first used successfully during the IAA 2005. The fact that all types of fire detectors can be used specifically via radio communication played a decisive role in the awarding of the contract.

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