



# Life & Safety

Magazine for fire protection, voice alarm and care communication

**Cover story**

A soft (R)evolution - the FlexES modular fire alarm system

**Projects**

Playing it safe - Fire protection in the Wuppertal Opera House

**Products**

MODULar multitalent - the new Electronic Module EM 340

# The future is flexible



## A new era of fire detection technology

The new FlexES fire detection system uniquely combines the advantages of an innovative system with high flexibility and optimized services. Today and tomorrow.

**ESSER**  
by Honeywell

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“Rampage” alarm (Page 14)

The EM 340 is a trend-setting electronic module which meets even the highest requirements, both optically and functionally.  
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**Abstract** The new fire alarm system FlexES is based on a trendsetting concept elaborated with a strong focus on customer benefits. What is needed: a flexible, expandable fire detection system with an integrated approach to modern building management systems, allowing intuitive operation and ensuring cost reduction and easy maintenance.

# A soft (R)evolution

A new era of fire detection technology has begun with the FlexES modular fire detection technology

Sometimes revolutionary ideas cause profound changes – especially if they are ahead of their time. Nevertheless, every idea is only as good as its implementation. With the FlexES modular fire detection system, ESSER has developed an innovative concept which places the customer's benefits in the foreground and revolutionizes the world of fire detection technology.

It was a long way from the idea to the start of production; the goals, however, were clearly defined right from the start. If a high-quality fire detection system is developed it should be convincing from both the technological point of view as well as from a customer's position. A flexible, expandable and economic fire protection concept should take the holistic approach to modern building management systems into account (including the integration of voice alarm systems for the self-rescue of people). Intuitive operation is vital as well.

## The requirements

Apart from technical innovation, a manufacturer stands out through improved service and a significantly increased benefit for the customer. One of the objectives is to harmonize the interests of installers, planners and operators without neglecting the necessary approval regulations. Meeting the architects' creative requirements in addition is quite a feat. Modern fire detection systems should offer the customer the very features he wants so that he need not pay for a large package of hardware and software he would only partially use. But cutting costs must not be at the expense of functionality. Maintenance forms the largest part of the total costs – considering the full life cycle of such a system - amounting to almost 50%. Consequently, this is where the largest saving potential for the operator lies. When using suitable software, costs as well as time spent can be significantly reduced.



## The requirements for fire detection systems are as diverse as the objects they protect

### **The modularity principle**

The basis of a high-end, modern fire detection system which lives up to all of these aspects is made of flexible, expandable control panels with connectable plug and play modules that can be quickly mounted, configured and substituted. In the case of a usage change or building extension the system can easily be adapted to the changed needs at any given time. The individual modules are automatically recognized by the control panel – thus, mounting errors during exchange or expansion are avoided. A robust housing also protects the individual modules from mechanical and electrostatic damage.

### **Just-in-time assembly**

Cascadable power supplies facilitate the necessary adaptation – depending on capacity - in the case of system expansion. Incremental costs in the scope of expansions required can thus be reduced. The service technician will also always have the necessary spare parts in his service vehicle since he can carry those few modules needed to provide the full scope of functionality. Finding out that the wrong component has been brought on site is now a matter of the past.

## Fire detection technology and voice alarms

The concept of long-term cost savings goes along with the manufacturer extending their portfolio with products for professional voice alarm systems (VA/PA). This is further intensified by the current regulations status, in particular by the new DIN VDE 0833-4. More clearly than before this standard focuses on coupling the voice alarm system and the fire detection system. This takes both building regulations as well as fire department-related requirements into consideration. The results are more security for the people, more planning security for the architects planners and installers of voice alarm systems. So, fire detection technology and evacuation will also merge in the future – a process in which complex voice alarm systems will gradually become a core element. When networked with the fire detection systems, they give direct instructions for correct behavior in the case of fire by playing pre-saved voice announcements and thus guaranteeing that the people are alerted in time so that the building can be evacuated quickly

and systematically. Here, the voice-supported alarm on the field bus is just as preferable as the ability to speak live over the field bus and a professional VA/PA system, if such is required under legal building regulations.

## Everything under one roof

Ultimately, a superordinate building management system (BMS) facilitates the central processing and recording of all events throughout different disciplines by providing one homogeneous user interface; it guarantees that all fault messages - for example in the case of a fire – are visualized via the computer. Especially the integration of fire detection technology and a BMS offers many synergy effects and represents a sophisticated solution for security-related objects.

## i Information

### Our plan for the future is called FlexES

Wherever proven technology reaches its limits, this modular fire detection system convinces with its continuous adaptation to new conditions and new dimensions of economic efficiency.

### Everything included

- Customized system configuration with flexible options for change and expansion
- Easy installation and fast start-up (automatic recognition of hardware modules)
- Optimized logistics/storage (small number of modules)
- Cost-effective maintenance
- Quick software activation for additional/expansion options
- Easy and short-term planning in the case of usage change
- Future-proof thanks to consecutive versions of the software platform
- Easy licensing of options
- Ergonomic control panel in night design





Within complex technical building networks data transfers to superordinate locations are often needed. A multi-protocol gateway can take over the conversion of manufacturer-specific data protocols into standard software protocols for communicating with the superordinate building management system and with devices from other manufacturers.

### **Night design**

The optimal organization of the so-called HMI (Human-Machine-Interface) is gaining more and more importance since aesthetic aspects play a gradually increasing role in addition to the ergonomic operation of fire detection systems. Modern HMIs work for example with a so-called night design: As long as no incident occurs, only the aesthetically high-quality surface is shown. Should an incident occur, only those keys

whose function is needed are illuminated. Large LCD displays are supplied – also available in color - allowing the depiction of graphics and building plans. Bilingual displays are also very helpful in this context due to the ever increasing level of internationality among the staff.

### **Outlook**

FlexES has proven to be a trend-setting system which is able to practically implement all of these requirements.

# Playing it safe

Wuppertal Opera House in gala form after reopening with ultra-modern fire protection



Bild: © Andreas Fischer Fotodesign



## **Abstract**

Rich in tradition, the Wuppertal Opera House recently underwent extensive renovation, including its fire detection technology. The new fire protection concept includes almost 1,000 IQ8Quad fire detectors, some with integrated acoustic alarm signaling devices for supporting a systematic evacuation. It perfectly matches the requirements of a modern venue: for example, the complex fire detection control matrix also controls parts of the building management services, and the noise level of the aspirating smoke detection system was reduced in the orchestra pit. The overall concept was realized by ESSER in perfect co-ordination with the German Niscayah Holding GmbH, inDIGO GmbH (engineering company from Dortmund), and IfBW GmbH.

This renowned opera house in the bergischen metropolis is well known for its artistic delights. One prominent figure contributing to this was the late choreographer Pina Bausch, who reached world fame with her dance theatre and received many awards for her work over the years. The building had to be closed at the end of 2003 in order to update its fire protection equipment and to have its entire electronics systems redone.

### **Slow but sure wins the race**

After extensive modernization, the long-awaited reopening of this prestigious Wuppertal treasure took place on the 18th of January, 2009. The days leading up to its solemn re-opening flew by and time was growing thin, providing quite an adrenaline rush for all those involved in the installation work. The final work was completed by working in both day and night shifts. The last dust cover caps were removed from the fire detectors on the day of the opening itself.

### **Fire protection draped in style**

Niscayah (a subcontractor of Ahrens) was the partner responsible for implementing the security concept of the Wuppertal Opera House. The Niscayah Holding GmbH, one of the leading manufacturer-independent enterprises on the international security market, installed highly modern ESSER brand fire detection technology in this prestigious object. These security experts also took over the initiation of external

services in cooperation with the Wuppertal fire department, the City of Wuppertal Facilities Management (GMW) and local building authorities as well as the TÜV Rheinland.

**The ultra-modern ESSER fire protection technology complies with the latest regulations and ensures the highest safety standards for visitors, actors and the building itself.**

### **Perfectly composed**

Almost 1,000 high-quality IQ8Quad fire detectors were installed, about 40 percent of those with integrated, acoustic alarm signaling devices for corresponding support in the event of an evacuation. 25 aspirating smoke detectors as well as 150 push-button detectors and approx. 30 air duct detectors complete these extensive protective measures. The peripheral elements were connected to 6 IQ8Control fire alarm control panels via 20 loops networked to each other. The master panel with the operating unit is located in a separate room.

## Coordinated orchestration

The complex control matrix for the fire detection system, initially programmed according to the present standards, controls among other things the ventilation and lighting systems, the smoke exhaust systems as well a freight elevator and an elevator for disabled persons. During the installation, the control matrix was modified several times to also consider the special requests of the stage company and resident fire department.

## Extensive security ensemble

Just how comprehensive the organizational processes are, even only those concerning fire protection, is reflected by the number of enterprises involved. The inDIGO GmbH engineering company from Dortmund had been entrusted with the overall planning of electronics and telecommunication for the project and acted decisively as the interface between planning and project management, even concerning the TÜV approval and the linking to the Wuppertal fire department. The elaboration of the fire protection concept and the supervision

of fire protection regulation fulfillment was carried out by the Ingenieurbüro für Brandschutz Wuppertal (IfBWGmbH), contracted by the GMW. In order to achieve optimal levels of security, all parties involved had to show extensive specialized knowledge and great commitment.

## Successful dress rehearsal

The final inspection and approval of the fire detection system was carried out by TÜV Rheinland one week before the re-opening. Two days later the installation was then linked to the fire department. An initial evacuation drill was one component of the building approval procedure. This test had to be successful to facilitate the opening on the 18th of January. An unannounced test alarm was carried out during a special event with invited guests. After 20 seconds the first visitor was already at the door, four minutes later the building was completely emptied. Siegfried Brütsch, Head of the Wuppertal Fire Department, was very satisfied with the result. The opera house had passed its final test.

## No background noise in orchestra pit

Conductors and orchestra members are known for finely-tuned hearing. During soft passages of classical pieces, noises of the aspirating smoke detectors used to cumulate in the orchestra pit (barely noticeable to others) irritating the conductor and his musicians. A solution was badly needed. By utilizing an acoustic insulation solution, a reduction of approx. 18 decibels was achieved and the distracting noise was minimized.

After the renovation – which totaled 23 million euros – the opera house now radiates the charm of the fifties again, while being equipped with the latest technology. The renovation was made possible by some investing from the city of Wuppertal, supported amongst others by a donation from the Jackstädt Foundation and the commitment of the Wuppertal citizens who raised almost 600,000 euros through the “adopt-a-seat” program which paid for all the new seats. It was thus no surprise that all seats were filled for the performance of Mozart’s “Magic Flute” on February 7th.





Energy-efficient architecture: The juwi company headquarters built with a woodframe construction cover an area of 8,500 m<sup>2</sup>. The company uses an innovative concept which limits the amount of energy used for electricity, heating and air conditioning to approx. 200,000 kWh per year.



# Sustainably secure

**ESSER fire detection technology protects the top-performing energy-efficient office and administration building in the world**

With an annual turnover of more than 400 million euros the juwi Group, which was founded in Rhineland-Palatinate in 1996, has now become one of the leading enterprises in the area of renewable energies. With a total of approx. 550 employees, juwi covers the complete value creation chain, including the planning, installation, financing and management of regenerative energy plants.

## **Structurally and technically in unison**

Technical fire control monitoring of this new company headquarters in Wörrstadt has been trusted to ESSER products: 210 IQ8Quad O<sup>2</sup>T detectors as well as 34 call points provide early warning for fires; additional O<sup>2</sup>T detectors with integrated alarm support evacuation measures which may become

necessary in an emergency. The core of the system are two IQ8Control M fire alarm control panels built in fire protection housing with a coldsmoke-proof ventilation system and a smoke detector controlled, electromagnetic shutter release. As a type-tested “fire protection distribution board” this complete construction meets all requirements: from the proven functional integrity over a time span of 30 minutes to the proven fire load insulation of circuit systems in evacuation routes – as well as all insurance conditions. Dornhöfer GmbH, a specialist installation company located in Mainz was awarded the order with their customized offer and convincing performance during installation and start-up.

„juwi wants to contribute to generating energy in many regions solely from renewable sources as quickly as possible – such sources as modern wind turbines and photovoltaic systems, sustainable bio-energy projects and new technologies.”

Ralf Ratanski, Head of the Implementation Department, juwi AG



Manual call point activates "rampage" alarm

# Rampage alarm

## Wireless detectors support safety in public buildings

Ever since the killing sprees in Winnenden and in Ansbach (Germany), school and public safety has become a dominant topic everywhere in the media. Suggestions made in round-table discussions range from further tightening of the firearms law to arms controls and police forces at school entrances. The Bundestag is debating whether to extend emergency alarm plans in schools. It cannot and will not be possible to provide complete protection. Violence prevention should therefore become the general rule. It is a fact, however, that there is potential for improvement and that precautions will have to be taken in order to be able to initiate corresponding measures in an emergency. Initial efforts are already under way.

### Calm during emergency

Taking these sad and inexplicable actions into consideration, many cities have already developed emergency plans which they have then distributed to the relevant facilities. These plans are already being displayed in many classrooms. They indicate the appropriate behavior in an emergency. An example of one tactic is never to trigger the fire alarm, which would in turn cause pupils to run outside. Pupils and teachers should instead barricade themselves into the classrooms and remain calm.

### Alarm alternatives

It is impossible to state that scenarios such as those in the German cities Erfurt or Winnenden could not occur at other schools. Of course there are often alarm plans for cases of emergency and it may be that the teaching staff has been trained on how to behave in the case of such a tragic event; yet a certain degree of danger is always present. Some facilities have prepared themselves for this and have created the possibility of triggering an alarm via manual call points placed in strategic locations. Such installations are of special interest now since many schools are currently upgrading to optimized fire protection. It would be quite easy to consider the possibility of also installing a device for triggering a possible "rampage alarm" during this upgrading procedure.



### **Wireless multitalent**

Products best suited for this are those equipped with a corresponding alarm in addition to their normal operation of detecting fires. With the innovative ESSER IQ8Quad fire detector, an optical flashing light, an acoustic alarm as well as a voice alarm could be additionally integrated into one housing no larger than a normal detector. The supplementary option of wireless operation significantly simplifies the subsequent integration into already existing installations. In the same way, wireless manual call points or IQ8Alarm alarm signaling devices can be easily incorporated into the existing installation. Thus one can easily activate an “alarm” via a call point in the form of a coded voice message, for example, and warn all persons present and involved of the threatening situation – so that they can take appropriate actions. Such voice messages can be predetermined by the operator and even combined in different languages (e.g. German, French, Spanish, English and Italian). Various special tones can also be programmed.

**Coded voice messages warn against threatening situations and support targeted evacuation.**

Scientific studies show that people rarely react to abstract alarm sounds or to purely optical signals in emergencies; they do, however, act quickly and correctly if they get clear voice instructions. The IQ8Quad thus enables a systematic evacuation – simultaneous with the alarm. By having one detector successively issue the messages in different languages, it is also possible to reliably alert international visitors in the building and lead them out of the dangerous area.

### **Responsibility begins at the planning stage**

To increase the security level at schools and in public buildings, forethought by those responsible (concerning special building directives and school construction guidelines) is necessary: professional measures for optimal fire protection, voice alarm, evacuation and rampage alarm should be taken into consideration as early as in the planning phase.



## **i** Information

In the scope of maintenance work, technicians formerly often used to carry with them several separate testing devices to subject the different detectors to the required functional tests. Now, smoke, heat and CO test resources are produced at the Testifire in a single test device.

# Passed the test

In light of Testifire's great success, the detector tester's portfolio has now been complemented with an additional model for functional testing of smoke and heat detectors

Since its introduction at Security 2008, the Testifire 2001 has already demonstrated its practical advantages in many ways. It simplifies the detector testing, reduces the time required for it and thus facilitates fast and effective functional testing of single criterion detectors and multi-sensor detectors.

### **Smoke-free zone**

The integrated cleaning mode for quick desmoking also prevents false alarms which can arise from left-over smoke in the detector chamber. The

great success of this product has led to broadening the series with a smaller version: the Testifire 1001. The larger model is ideal for both optical smoke detectors and for ionization smoke detectors, heat detectors (rate-of-rise and fixed heat detectors), CO detectors and multiple-criteria detectors, whereas the 1001 model was designed for the testing of smoke and/or heat detectors.

### **Calculable advantages**

Savings potential in purchasing a Testifire testing device can be easily estimated by using the online 'Payback Calculator'.

### **Links**

[www.testifire.com](http://www.testifire.com)

# Extended functionality

In addition to a fire alarm, the IQ8Quad OTG (optical, heat, and gas sensor) can now also sound a technical alarm (TAL), if a set CO concentration has been exceeded. This alarm is independent of any alarm during a fire. This function is configurable via the tools 8000 programming software. The desired carbon monoxide concentration, automatic and/or manual resetting as well as the behavior of the relay contact in the detector base can all be programmed in this TAL function.

The new parameterization of the OTG detectors with value limitation facilitates the usage in especially difficult environments (for example fog in theaters/operas/discos or security fog protection, which is created for example in the case of robberies in jewelry stores or treasuries) without any disconnection of the sensors and/or without any sensitivity reduction of the sensors.

### The prerequisites:

- OTG detector serial number from 149100200000 (no downward compatibility)
- tools 8000 version from V1.14.0 (with automatic recognition of OTG detector new function)
- IQ8Control firmware from V3.07

## Information

Parameterization is also applicable during wireless operation; however, in this case technical alarm is not.



### Security, productivity and comfort with Clino System 99

Clinics and hospitals can only meet the challenges of the future through process optimization and expansion of services. Clino System 99 is a modular, scalable communication solution which provides a flexible system basis that realizes sustainable concepts for more security, productivity and comfort. Find out more about Clino System 99 at [www.ackermann-clino.com](http://www.ackermann-clino.com)

 **ACKERMANN**  
by Honeywell



# MODULAR

The EM 340 is a trend-setting electronic module, which is not only functional. As a system component for the room, it offers advantages in terms of installation and usage, flexibility, economy and

## Many installation advantages

The advantages are already apparent as soon as the installer begins: Preassembled clamps and thus the possibility of a "frontal" configuration make his job that much easier. Colored voltage clamps and clear lettering on the connection board prevent assembly mistakes which formerly resulted in frequent defects with the printed circuit boards.

## Easy start-up

During start-up, the bed addressing had always been especially time-consuming. With the EM 340 it can now be initialized from the control panel and then be carried out locally in the individual rooms. This speeds up the process and saves unnecessary ways.

## Low-maintenance technology

Maintenance is especially user-friendly: The voltage of all installed modules can be polled via the system panel. So the onsite measurement of every single device is no longer necessary, but the individual functional check is nevertheless possible at any time. This function can also be quite timesaving during annual inspections.

Integrated voltage measurement additionally guarantees the operator optimal risk management. The voltage is continuously checked via the system control panel and an automatic report is created should it fall below a set value. The line test function offers additional convenience during maintenance: Every key's functionality can be checked in the test mode without triggering an alarm.

## Versatility

The new electronic module can be used for various tasks and has inputs/outputs for the connection with pull cords, bedside call units, presence push-buttons, display modules and all other components in the room. Thanks to the free allocation mode, inputs can also be assigned to other functions.

## Individual bed identification

Whether with or without display in the patient's room, a cost-effective two bed solution with individual bed identification is no problem with the EM 340. If a call is activated, one can recognize which bed deposited the call in the system control panel display. With the system Clino Opt 99 this was only possible with active call units via the bed databus.

## ☰ Abstract

The new EM 340 electronics module is characterized not only by innovative design and power-saving, low-maintenance LED technology, but also by easy installation and a variety of possible applications.

# multitalent

module which meets even the highest requirements, both optically and  
Clino System 99 it is setting completely new standards with regard to ease  
omic efficiency and design.

### Process support

Process advantages in the daily routine of care provision arise through the integration of new functions: In connection with an RFID module the EM 340 can even be used as a door opener, RFID reader and card manager.

### Sustainable and economical

The EM 340 is available with or without active modules or bed databus and is compatible with all previous and new Ackermann systems. It is also sustainable over the long-term: All necessary changes to future regulations can be activated via a software update. The module's life-cycle costs have been clearly reduced by using power-saving LED technology and at the same time its life cycle increased from 2,000 to 50,000 hours.

### Uniform design concept

In addition to its functionality, the EM 340's design is also impressive in conjunction with the CL 340 corridor lamp. Available in white or silver (optionally also in other colors), it sets creative accents to its surroundings – it enables a uniform design concept in connection with the other system components.

## Information

### The new system platform:

As a system generation with new functions, the Clino System 99 sets itself apart with its maximum of flexibility and scalability. Through its modular system design, both existing and new installations can be adapted to individual user demands at any time. Whether your facility has only 20 beds or more than 1,000, the Clino System 99 can handle all sizes of projects. Depending on your needs, it facilitates the full bandwidth of modern care communication, from pure optical/acoustic signaling to communication solutions with discrete speech at the patient's bedside. Special care was given to guaranteeing high investment protection through downward compatibility as well as always guaranteeing an optimal cost-benefit ratio. Numerous interfaces facilitate the integration of almost all relevant safety and communication systems in the area of care. Clino System 99 represents a consistent, differential and secure working platform for care.





## **i** Information

The name ATEX stands for the French abbreviation for “ATmosphères EXplosibles” and is used as a synonym for the two European Community directives regarding explosion protection: the ATEX equipment directive 94/9/EC and the ATEX workplace directive 1999/92/EC.

# Explosion protection

## ATEX approval for IQ8Quad Detector

The proven IQ8Quad detector series has now been certified for usage in potentially explosive areas as well. The automatic fire detectors from the IQ8Quad Ex (i) series meet the European ATEX directives and can be used in zone 1 areas including explosion group IIC T4, equal to device category 2G.

The following IQ8Quad-detectors **without management isolators** are available for usage in potentially explosive areas:

803271.EX	Rate-of-rise heat	<b>IQ8Quad Ex (i)</b>
803371.EX	Optical	<b>IQ8Quad Ex (i)</b>
803374.EX	O <sup>2</sup> T multi-sensor	<b>IQ8Quad Ex (i)</b>

In connection with the IQ8Quad standard detector these fire detectors, including the ex safety barrier (part no. 764744) can be connected to control panels of the fire detection system 800x/ IQ8Control via the standard detector zones of the esserbus transponder (part no. 808613.20).

The safety barrier separates intrinsically safe and not intrinsically safe circuits from the potentially explosive area to be monitored (explosion zone).

In this application it is also possible to replace groups with explosion-proof fire detectors from the 9100 Ex (i) series, already discontinued as of 31st December 2008, with the new detectors IQ8Quad Ex (i).

# Supporting environmental protection

## ESSER hosted by the World Wind Energy Association

In the Security edition of the ESSER company magazine, we presented an article on the technical fire protection monitoring of one of the tallest wind energy installations in the world (in Laasow, Germany), entitled "Safety rising high" (Sicherheit im Aufwind). Considerable interest was evoked by this report on the FL2500 (from the multi-megawatt class by Fuhrländer, Germany), which is equipped with ESSER fire detection technology.

After the publication in the journal "GIT Sicherheit + Management" the contribution also aroused the interest

of the World Wind Energy Association (WWEA), who have their head office in Bonn, Germany.

Accepting an invitation by the secretary-general Stefan Gsänger, Manuel Pelazas (International Sales Support) presented ESSER fire detection technology. He referred to the company's technological leadership and explained important aspects regarding the new guidelines for fire protection in wind energy plants.



## Information

The WWEA is an international non-profit-organization which comprehensively deals with all aspects of wind energy. With some 400 members, the WWEA represents 90 countries worldwide and is strongly interested in providing a lobby for and driving forward the development of wind energy. The organization offers a worldwide communication platform for all activities in this sector, advises governments and organizations in all questions of wind energy and ensures a target-oriented transfer.



## Discontinued

ESSER took the 9200 series technical alarm modules out of the production program as of August 1st 2009. This concerns the following modules:

- TAL with isolator (part no. 804863)
  - TAL with relay (part no. 804864)
  - TAL with isolator, IP 54 (part no. 805863) and
  - TAL with relay, IP 54 (part no. 805864).
- These are replaced by the new esserbus IQ8TAL transponder (part no. 804868).

The following aspirating smoke detectors were also discontinued:

- ARS70-1 (part no. 761345) and
  - ARS70-2 (part no. 761346) as well as
- the optical smoke detector for ARS70 (part no. 801372).

Alternatively, the Titanus EB and Vesda systems are now available. The external 12V and 24V power supply units with the part numbers 765653 and 765655 are no longer part of the ESSER product portfolio since August 2009.

# Reforestation in the jungle of standards



## Substantial changes in the Construction Products Directive [CPD]

On August 1st 2009 the Construction Products Directive [CPD] also came into effect for fire alarm control panels and power supplies in the European Union. Thus, the core of every fire detection system is also covered separately from automatic detectors, manual call points and acoustic alarm signaling devices as well as many special detectors. Just as is the case with other product groups, the manufacturers of such devices must already have become active and updated their portfolio, so that fire alarm control panels meet the requirements of the updated European standards EN 54-2 and EN 54-4 (for integrated power supply equipment) and are certified accordingly. The changes are to some extent quite serious.

### Extended, specified, updated

The European EN 54-2 standard defines requirements, test methods and service features for fire alarm control panels used in fire detection and fire alarm systems which are installed in buildings. The A1 amendment of this standard specifies the additional requirements to those parts of the system that are software controlled and adapts them to the current state-of-the-art technology. The interference immunity checks for the electro-magnetic compatibility requirements were updated as well.

### Guidance needed

Whoever deals with the planning and/or installation of fire detection systems can barely escape from the freshly reforested jungle of standards and should always be able to fall back on a compass in the form of current documents or at least some sources of information which can lead the way back into the light of day. It is once again up to the manufacturers to update their products to the current standards within the time allotted.

One of the most important changes in standards is the implementation of the requirements regarding fire detection control panel displays and energy supply units. One new requirement that was added to EN Part 4 A2 for example is that the batteries used for the realization of emergency energy supply have to be monitored cyclically with regard to their dynamic internal resistance in order to recognize early any decrease in battery capacity due to aging effects and display it as a fault in the system.

### Supplementation of EN 54

Previous fire detection systems usually only monitor the accumulator and/or battery voltage at a load arbitrarily set by the manufacturer of the fire detection system. Should the measured voltage fall below a certain threshold value, the emergency energy supply is displayed as being faulty. Furthermore, the description of the statuses of fire alarm, failure, deactivation and test were specified as were those of the standardized input and output interfaces.

### Fast adaptation

Concepts such as the Construction Products Directive [CPD] or ATEX as an acronym for the French denomination "ATmosphères EXplosibles" do not have to be thought of as being 'scary'. The manufacturers have to react whenever a standard is changed and have to adjust their product portfolio in the sense of the new requirements, as is the case with the EN 54-2 (fire alarm control panels) and EN 54-4 (power supplies). This is particularly valid for fire alarm control panels which have just been introduced to the market such as the FlexES control by ESSER. The operator can be sure that these new norms have already been taken into consideration.

# International Fairs 2010

Show	Dates	City	Country
MIPS .....	19.-22.4.2010 .....	Moscow .....	Russia
Securex .....	26.-29.4.2010 .....	Poznan .....	Poland
Altenpflege .....	23.-25.3.2010 .....	Hannover .....	Germany
Sicur .....	2.-5.3.2010 .....	Madrid .....	Spain
Hopitalex po .....	May .....	Paris .....	France
Light&Building .....	11.-16.4.2010 .....	Frankfurt .....	Germany
Interschutz .....	7.-12.6.2010 .....	Leipzig .....	Germany
Expop rotection .....	November .....	Paris .....	France
Security .....	5.-8.10.2010 .....	Essen .....	Germany
China Fire 2010 .....	October .....	Beijing .....	China
Medica .....	17.-20.11.2010 .....	Düsseldorf .....	Germany

## European standards conformity

Once the harmonized European standard in accordance with the EN 54-20 came into effect, ESSER's portfolio of aspirating smoke detection systems has been adjusted to meet these current requirements. While the Vesda models are still available under the same part numbers the Titanus EB systems were expanded technically and are therefore described with new part numbers for easier differentiation.



More information about all aspirating smoke detection systems and their corresponding part numbers at [www.esser-systems.com](http://www.esser-systems.com).

# FlexES control Fire Alarm Control Panel wins GIT Security Award 2010

The name says it all: Flexibility plays a major role, when it comes to the latest innovation from Honeywell Fire Systems. Esser by Honeywell introduces the FlexES control and sets a milestone in the development of technical fire protection. Not even yet officially launched the FlexES control is already the winner of the GIT Security Award 2010.

FlexES control is a highly flexible fire system with 1 to 18 loops and a cascading power supply, which reduce the risk of planning and installation errors. The customer only purchases the software functionality that is currently required, but has all the flexibility for further extension with additional features and functionalities at a later date. An innovative HMI with the hidden-until-lit technology enables intuitive operation, even for untrained personnel. Customized functionality keys

expand the use of the fire panel and speed up maintenance and service processes. The new fieldbus FlexES com allows simultaneous transmission of pictures and live speech with communication to detectors and transponders on one pair of wire, which reduces installation cost considerably, while adding new features and functionalities to a fire panel.

It is only available with FlexES control. The flexible fire system FlexES control guarantees that the installed unit will never be oversized, yet at the same time leaves enough space for future extension, which is a general expectation today.

The system will only be sold to customers, specially trained in this technology.



<http://www.pro-4-pro.com/en/Safety-Security/Poll/index.html>



# Airport

Honeywell Life Safety Austria as a center  
address systems in airports

When it comes to airport protection, Honeywell Life Safety Austria with ESSER's VARIODYN® D1 is one of the world players, not just because the company is the first on the growing market of voice alarm and public address systems able to offer systems conforming to standards: The 3rd generation of the VARIODYN® D1 system now also contains among other things a 24V voltage supply to guarantee cost-effective emergency power operation over a longer period.

## Secure connection

Due to the option of being able to connect even extremely varied fire alarm systems via intelligent interfaces such as ETHERNET/BACnet/EIA 232 with voice alarm and public address (VA/PA) systems, it is possible to provide an evacuation system with just one reporting alarm information coming from many other systems with several thousands of I/O points. That is how Honeywell Life Safety Austria won projects like the Delhi/India airport. In the Indira Gandhi International Airport, a fire alarm system was merged with 38,000 fire detectors and the VARIODYN® D1 network. In addition, the fire alarm system, building automation, airfield lighting, the energy supply system and even the distribution network all come from Honeywell as well.

## International competence

Some other current projects in the area airport protection are: the Vnukovo International Airport in Moscow, equipped with a VARIODYN® D1 voice alarm system (68 networked voice alarm control panels, 53 communication units, 105,000 W amplification power), an IQ8 fire detection system including 18,000 fire detectors and a BMS WINMAGplus. A similar, somewhat smaller solution was realized for the Esenboga Airport in Ankara, Turkey. Other examples include the Chiang Kai-shek Airport in Taipei, Taiwan, as well as other airports in Europe, just as Istanbul, Athens, Larnaka, Vienna, Basel, Lyons, Cologne-Bonn, Dusseldorf, Nuremberg and Dresden – all equipped with VARIODYN® VA/PA systems.

## **i** Information

### **Standardization as a safety contribution**

What are fire alarm systems with sensitive early detection systems good for, if the reaction time is delayed due to a lack of information? The new EN 54-16 makes an essential contribution to safety because it specifies how data processing is to be made, what the maximum reaction time is to be and how to report error messages. The requirements contained therein were developed based on experience and research as well as expert knowledge. With this new standard, valid in most EU countries, new safety requirements apply to VA/PA systems.

The VARIODYN® D1 system fulfills these with a 24V voltage supply which ensures cost-effective emergency power operation for the time stipulated.

# protection worldwide

of excellence for voice alarm and public

Esenboga Airport, Ankara (Turkey)



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