



INOTEC Sicherheitstechnik GmbH is a medium-sized business creating innovative and customer-oriented developments in the field of emergency and safety lighting.

A dynamic team with flexible and competent staff provides reliable advice on all matters concerning products, planning and regulations.

Modern, technically sophisticated products set new standards worldwide, such as emergency lighting systems with JOKER technology or the D.E.R. dynamic escape routing guidance system.

This catalogue provides an overview of the various product groups available from INOTEC Sicherheitstechnik GmbH. Should you require further information, please do not hesitate to contact our regional technical sales staff directly.

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Subject to technical changes.

The emergency systems in this catalogue are not compatible to monitoring systems of type INOTEC SVPC, SV-central or multifunctional controller.

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Function of Joker technology

- ▶ Three switching modes can be operated simultaneously and in a mixed configuration on INOTEC emergency lighting devices. In addition to the system, Joker electronic ballasts, or standard ballasts for INOTEC safety and emergency exit luminaires, are also required, or an INOTEC J/SV module/S is connected upstream of a third-party electronic ballast. On both components, the desired switching mode and monitoring address are configured using microswitches.
- ▶ JOKER technology, patented by INOTEC, makes planning and installation of safety lighting systems much simpler resulting in significant cost savings.
- ▶ The example opposite shows to what extent reductions are possible in installation.
- ▶ For the conventional installation with three required standard switching modes, maintained lighting, non-maintained lighting and switched maintained lighting, 6 final circuits are required to provide 9 safety and emergency exit luminaires in this section of the building.
- ▶ Using the JOKER technology can drastically reduce the number of circuits. In the example only 2 circuits are necessary since all switching modes can be combined as required within a circuit.
- ▶ The different switching modes are only active during mains operation. In the event of a mains failure, all connected luminaires are powered by the battery and switched on, regardless of the default switching mode.

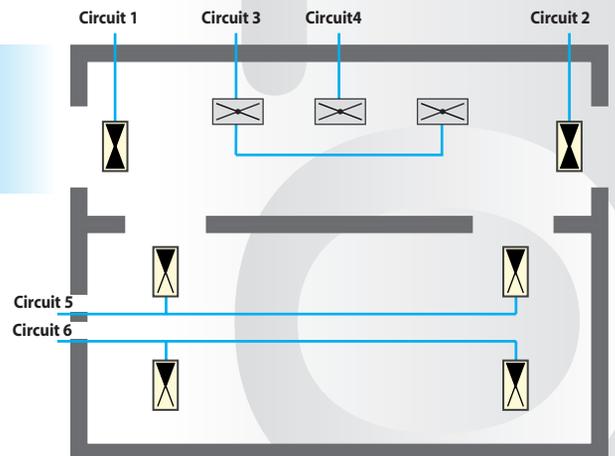
Benefits of JOKER technology

- ▶ Simple circuit routing planning
- ▶ Amount of materials required is reduced
- ▶ Shorter installation times
- ▶ Optimized use of final circuits
- ▶ Subsequent or direct assignment of switching mode to each luminaire

JOKER technology, the "original"

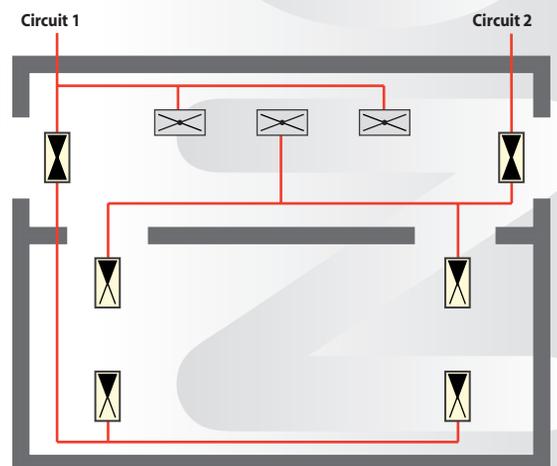
Conventional installation

Required:
6 final circuits



JOKER technology with

2 final circuits



Maintained
 Non-maintained
 Switched maintained



German patent number:

DE 19807844

European patent number:

EP 0939476

With the CLS 24 system, INOTEC, as an innovative emergency lighting manufacturer, is setting a new trend which reflects changes in the market for light fixtures and current regulations.

The self-sufficient CLS 24 system only supplies luminaires within a fire zone. No cost-intensive circuitry is therefore required and an extremely high level of safety is achieved.



System properties

- ▶ 24V emergency lighting system with automatic fault monitoring of the system and connected luminaires without additional data line.
- ▶ To supply 24V INOTEC LED luminaires
- ▶ Self-sufficient system with "JOKER technology function"
- ▶ Luminaires can be programmed, addressed and dimmed individually via the controller
- ▶ Integrated logbook for recording all data
- ▶ Controller with 4 x 20 character plain text display; configurable in various languages
- ▶ Control, management and fault display for 20 luminaires per output circuit
- ▶ 4 output circuits in protection class III (SELV) for up to 20 luminaire addresses
- ▶ 2 input switches can be freely assigned to each luminaire
- ▶ Assignment to programmable dimming values also possible
- ▶ Status info via system and luminaires in plain text using LEDs
- ▶ Volt-free signalling contacts for external status display
- ▶ Remote switch for blocking systems
- ▶ Integrated InoWeb interface (optional)
- ▶ Central dimming (optional)

Specifications

- ▶ Mains connection: 230V AC +/-10%
- ▶ Output voltage: 24V DC +/-20%
- ▶ 12 Ah - 48 Ah system
- ▶ Designed as housing for wall-mounting or sheet steel wall cabinet for surface installation.

CLS 24/SV

Function, Design and Properties

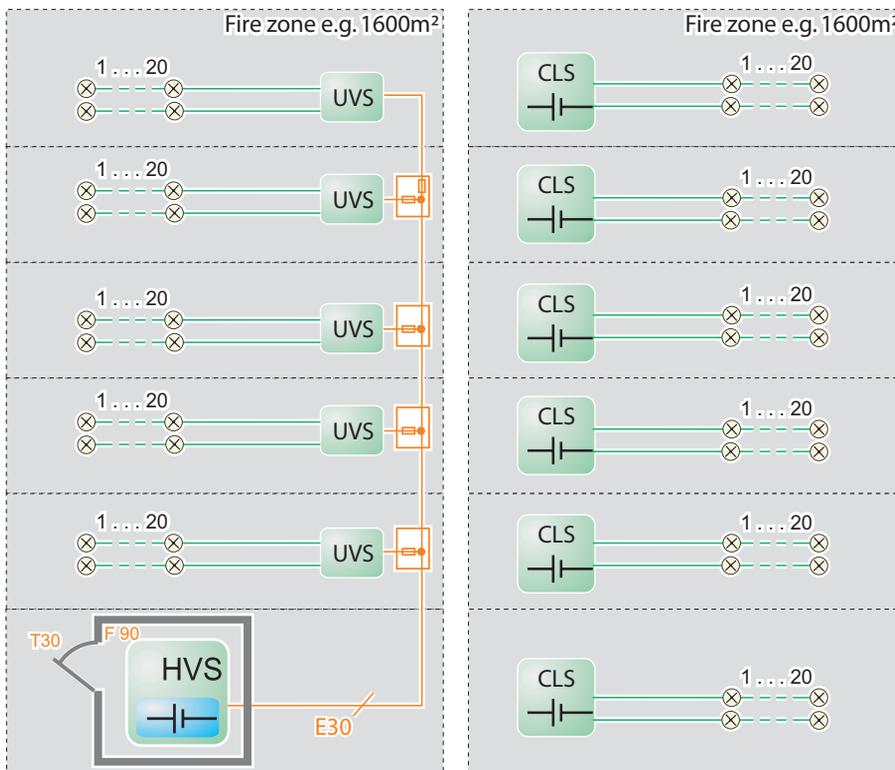
Through the use of the 24V technology in the CLS 24, the latest LED (light emitting diode) technology enables the construction of attractive luminaires which can be fitted seamlessly into modern architecture due to their discreet design.

With today's 100 lumens per watt light output, the LEDs are not only suitable for use in emergency exit luminaires but also for anti-panic and safety lighting.

In cinemas and theatres, it is possible to dim each luminaire individually via the controller. In emergency lighting mode, the unit is switched to 100% automatically.



Comparison of conventional system with decentralised CLS 24 system concept



In the event of mains power (HVS) failure → failure of entire safety lighting

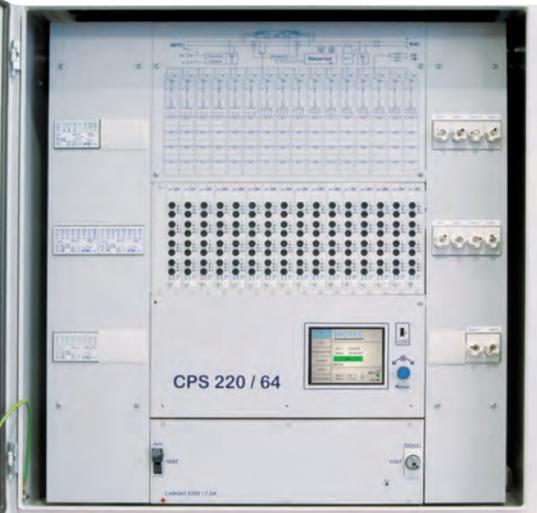
In the event of a fault in the cabling between the HVS and UVS → failure of all downstream UVS and therefore of safety lighting

Due to self-contained CLS system → failure of safety lighting only in affected area

The CPS 220 / 64 product family, with its modular design and additional available components, enables an optimised solution for all building circumstances. For smaller-scale project planning the CPS 220 / 20's central power system provides the same functionality.

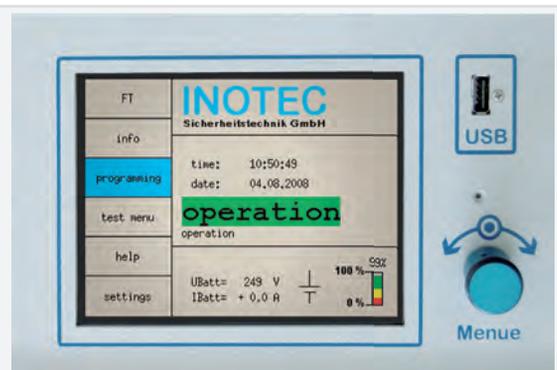
System properties

- ▶ Modular unit design, various cabinet dimensions, battery rack or cabinets
- ▶ Up to 128 circuits (64 via substations/64 in the system) each with 20 addresses can be supplied
- ▶ Minimal service costs due to central monitoring of the entire safety lighting system and all connected luminaires
- ▶ Automatic or manually triggered function testing unit with logbook for archiving status and error messages
- ▶ Isolation testing unit
- ▶ Isolating terminals for simple isolation measurement of luminaire circuits
- ▶ Sealed OGI block battery with service life >10 years
- ▶ Electrically isolated BUS system inside and outside of the device
- ▶ Separate monitoring and switching devices for maintained lighting/non-maintained lighting
- ▶ Patented "JOKER technology"
- ▶ Three input switches per circuit



Controller with network/graphics capability

- ▶ 5.6" TFT display
- ▶ Intuitive single button operation
- ▶ Password-protected programming
- ▶ Integrated network connection (InoWeb)
- ▶ USB interface
- ▶ Management of up to 128 circuits (up to 2560 luminaires – 20 luminaires per circuit)
- ▶ Fully automatic function monitoring including fault detection of individual luminaires and circuits without additional data line
- ▶ Integrated logbook for recording all data over a period >2 years
- ▶ Freely programmable switching modes
- ▶ Various freely definable languages



CPS 220/64/SV

Function, Design and Properties

BUS substation

For optimum implementation of project-specific requirements, separate external BUS substations enable expansion of the central battery unit. The BUS substations in the fire zone are also supplied with power via the 3-wire supply lead in the event of a mains failure. Monitoring and programming is done using the central power system controller via the three wire bus line.

These are also available in 24V technology, meaning that the CLS 24 system luminaires and their technical benefits are also available when using the central battery unit.

Special D.E.R. system luminaires can also be connected to CPS 220 / 64 systems with a TFT controller and D.E.R. circuit. Therefore, no extra D.E.R. controller is needed for dynamic escape route guidance. (available from quarter 3, 2010)



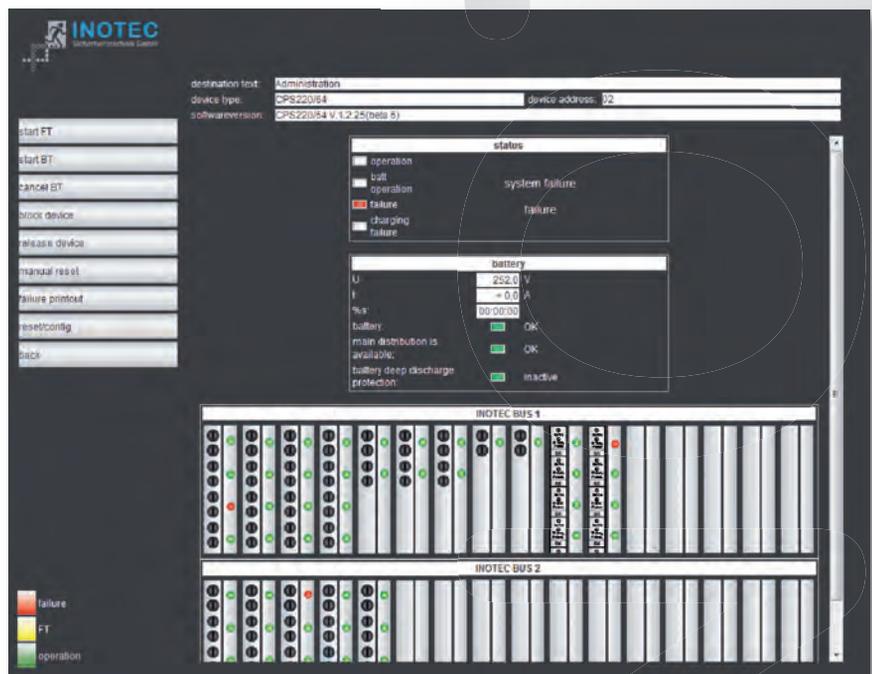
Central monitoring

Device information can be accessed via a web browser without installing additional software. The operator can therefore access the central power system's status information from any computer in the network.

An existing on-site network infrastructure may be used.

Using the InoWeb Control software it is also possible to monitor complex installations consisting of multiple systems (also of different types, e.g. CPS 220/48/SV or CLS 24/SV) from a central location.

For this simply connect the comfort TFT controller for the CPS 220/64/SV central power system with integrated InoWeb function to an existing network.

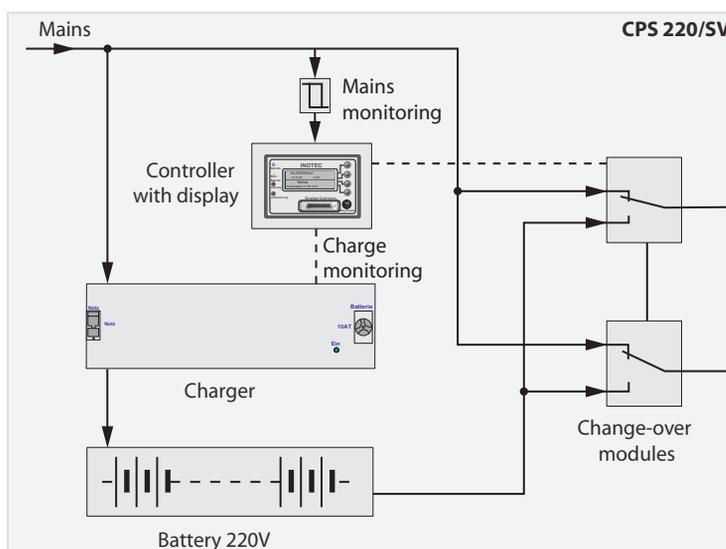


Nr	IP	G	ID	Zielort	Status	System Status	Webseite
01	ops220	1	INOTEC CPS 220, Adr. 01	1 basement db	Operation	System error: none	http://ops220
02	192.100.100.114	2	INOTEC CPS 220/64, Adr. 00	Ground floor db	Test	System error	http://192.100.100.114
03	192.100.100.111	3	INOTEC CPS 220/64, Adr. 00	1 first floor db	Failure	Circuit failure	http://192.100.100.111
04	192.100.100.112	4	INOTEC CPS 220/64, Adr. 00	[no destination specified]	blocked	[DL and ML]	http://192.100.100.112
05							
06							
07							
08							
09							

The CPS 220 / 48.1 product range provides a combination of the proven CPS 220 / 48 technology and the functions of the CPS 220 / 64 system. Up to 96 circuits are now supported by two internal device buses, each one capable of monitoring up to 20 luminaires.

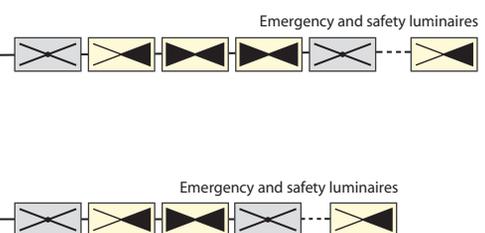
System properties

- ▶ Modular design of device, range of cabinet sizes, battery rack or cabinets
- ▶ Up to 96 circuits (48 per device bus) each with 20 addresses can be supplied.
- ▶ Minimal service costs due to central monitoring of the entire safety lighting system and all connected luminaires
- ▶ Automatic or manually triggered function testing unit with logbook for archiving status and error messages
- ▶ Isolation testing unit
- ▶ Isolating terminals for simple isolation measurement of luminaire circuits
- ▶ Sealed OGI block battery with service life >10 years
- ▶ Electrically isolated BUS system inside and outside of the device
- ▶ Separate monitoring and switching devices for maintained lighting/non-maintained lighting
- ▶ Patented "JOKER technology": Mixed operation of maintained lighting, non-maintained lighting and switched maintained lighting
- ▶ Three input switches per circuit



Functionality:

With a healthy mains supply, the consumer is supplied with power from the existing network and the battery is charged. In the event of failure of the normal supply, the consumer is supplied from the battery.



CPS 220/48.1/SV

Function, Design and Properties

Change-over devices

- ▶ Individual circuit change-over device in 19" plug-in design with double pole fuse
- ▶ Monitoring option configurable for each circuit (unmonitored, monitoring of circuits or individual luminaires)
- ▶ Switching mode configurable for each circuit (maintained lighting, non-maintained lighting, switched maintained lighting, Joker mode)
- ▶ Monitoring without data line
- ▶ LEDs in front panel display switching mode and circuit status
- ▶ Fully wired on 3-level 4mm² terminal with neutral isolation

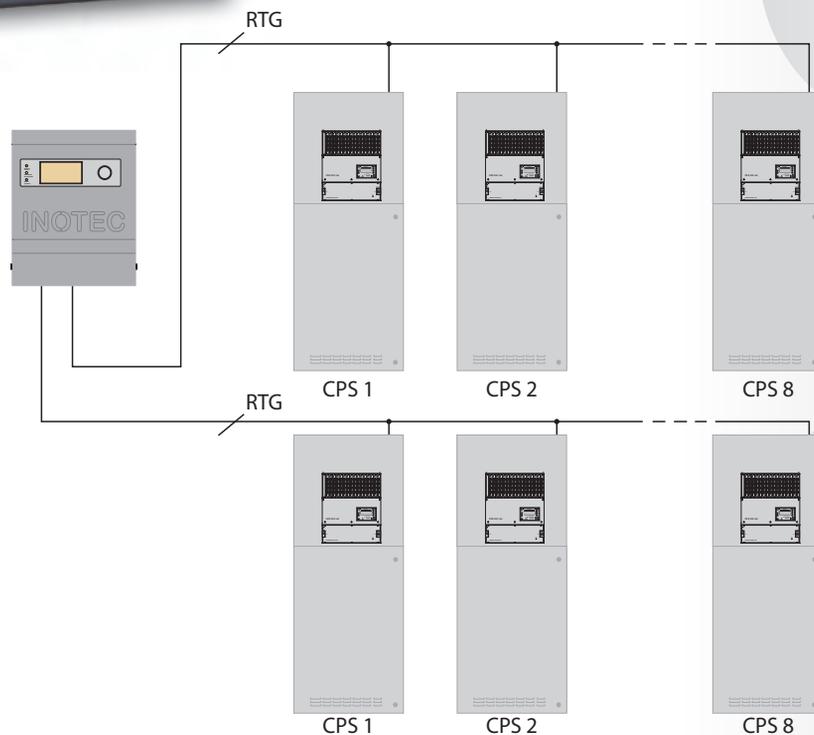


CPS-MTB 220 / 48.1

Graphical CPS-MTB indicator board for CPS 220 / 48.1 for connection of up to 16 devices, displays fault reports in plain text on OLED display up to luminaire level.

Rotating knob enables simple and intuitive operation.

All connected devices can be blocked via the integrated remote switch input. The volt-free relay contacts enable alarms to be forwarded to other alarm systems.



Exit-luminaires

Function, Design and Properties

By using the latest LED technologies for emergency exit luminaires, these comply with the current regulations and standards and will help you keep operating and maintenance costs to a minimum.



INOTEC emergency exit luminaires are available in many different specifications so they can be integrated in keeping with the architecture. Colour, material, size or mounting options - we can supply you with the right luminaire for any application.

Should you fail to find the right luminaire for your project in our standard range, simply contact us. The INOTEC design department will work with you to develop the perfect solution to your problem.



We will happily also draft your own personal pictogram with you for luminaires not falling within the scope of the standard.



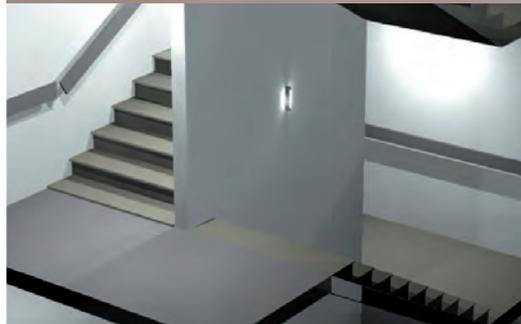
Innovation in emergency exit luminaires

In spite of its shallow housing depth, the new INOTEC panel luminaire's brightness and homogenous illumination make it stand out. It is therefore ideally suited to use in bright environments. Its clean modern contours mean it can be fitted into the building's architecture quite unobtrusively. (available from quarter 3, 2010)

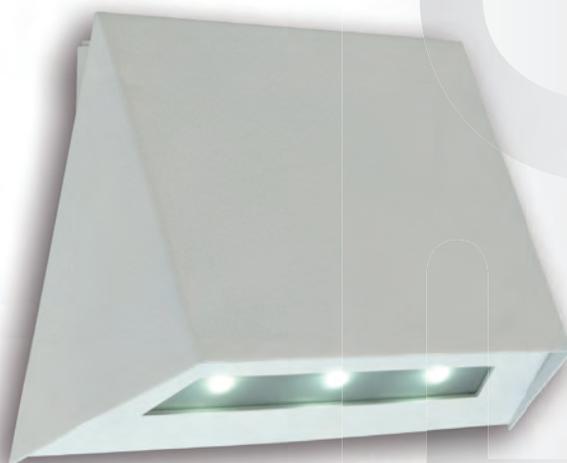
Safety luminaires

Function, Design and Properties

LED technology is also increasingly widespread in the field of safety lighting. Bright LEDs now provide comparable values at the same suspension height and lighting level as a conventional fluorescent lamp and for a longer life time. INOTEC therefore offers a 5-year warranty on all LED illuminants.



INOTEC safety luminaires using LED technology are available in the widest range of specifications. Whether you are looking for an architectural eye-catcher or something a little more unobtrusive, INOTEC has just the thing in its range of LED luminaires.



As standard all monitored INOTEC LED luminaires can be dimmed and switched to during mains operation individually to illuminate escape routes at full brightness. A function frequently used in theatres or cinemas.

For use in harsh environments such as outside or in industrial areas, the robust INOTEC stainless steel luminaires with a high protection category is ideal.



Are escape routes always escape routes?

Emergency exit luminaires with fixed directional signs are used to mark escape routes and fulfil the task of enabling people to reach safe locations in the event of a power failure or a necessary evacuation.

But what happens if fire and smoke are blocking the nearest escape route?

What to do when heavy smoke emissions mean it is no longer possible to work out where you are?

How do you find the escape route when the escape route sign is no longer visible?



Do you have anything against a higher level of safety?

INOTEC Sicherheitstechnik GmbH has taken on the problem of smoky escape routes with the aim of complementing fixed, unchangeable escape route signage with dynamic escape route guidance.

A dynamic system has to fulfil two key tasks, namely on the one hand preventing anyone from escaping into an escape route that is

already smoke-filled and on the other, ensuring that the people in smoky areas can still find their way to the escape route.

The solution is the Dynamic Escape Routing guidance system (D.E.R.). Luminaires with integrated LED matrices ensure not only fixed escape route signage but also display an alternative escape route and visible blocking of the escape route with a cross of red LEDs. For why should an escape route remain signposted when it is smoky and no longer usable?

Use of the Dynamic Escape Routing (D.E.R.) guidance system therefore significantly improves personal protection in the event of a fire and helps avoid or reduce panic and also speeds up evacuation of a building, not only in the event of a fire.



D.E.R.-System

Dynamic Escape Routing System

Functionality of the D.E.R. system

The D.E.R. system corresponds with the building's existing fire detection system. The D.E.R. controller analyses the defined messages from the fire detection system via an interface and activates the escape route guidance plan stored in the controller. Should the fire or smoke spread further, the D.E.R. system can respond by activating other escape route plans and rearrange the luminaires accordingly.



Regulations

As a result of use of the innovative D.E.R. system in airports, clinics, theatres, train stations etc., there has also been a response in terms of regulations. In January 2001, the German Association of Commercial and Industrial Workers' Compensation Insurance Carriers (HVBG) issued the set of rules BGR 216 "Visible Safety Guidance Systems (incl. Safety Lighting)" in which the use of low level safety guidance systems is recommended for high-risk buildings. These include, for example, buildings containing a high percentage of external people and those with a high percentage of people with reduced mobility (bedridden or disabled people). In the Technical Rules for Workplaces (ASR A3.4/3), "Safety Lighting, Visible Safety Guidance Systems" ASR A3.4/2 of May 2009, the Committee on Workplaces (ASTA) describes in detail the use of visible safety guidance systems for workplaces with reference to ASR A2.3, which in turn governs the scenarios in which the use of a visible safety guidance system is necessary for escape routes.



The D.E.R. system was honoured by fire safety experts as a key development for increasing the safety of people by being awarded the Germany Fire Safety Award 2004.

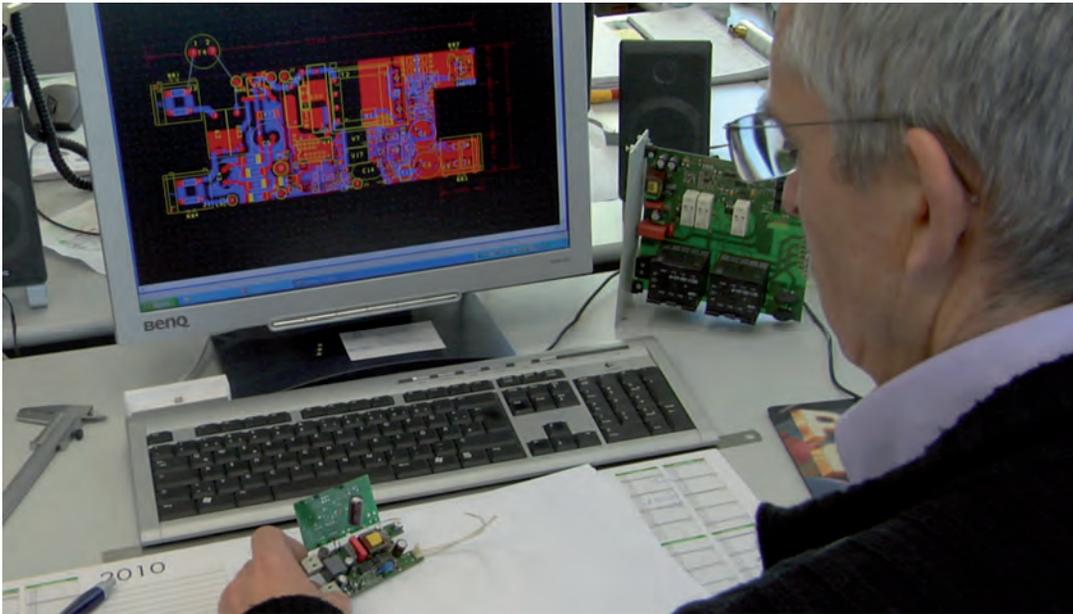


Fire Safety Award

INOTEC world-wide

Made in Germany

Since the company was founded in 1995, INOTEC Sicherheitstechnik GmbH has been supporting you in all areas associated with the issue of safety and emergency lighting and has established itself as an expert on the market.



The products designed in the in-house design department ensure the requisite safety in many properties, both inside and out. Using the latest software, the products are developed in accordance with applicable standards and regulations.

Made in Germany

A continuously monitored production process and qualified production staff ensure INOTEC's well-known quality and the "Made in Germany" quality seal. Final assembly and examination of our systems and luminaires takes place in our main factory in Ense.



INOTEC world-wide

Always close to our customers



Our large domestic and overseas sales network is available to assist you in emergency and safety lighting matters and planning within your projects.

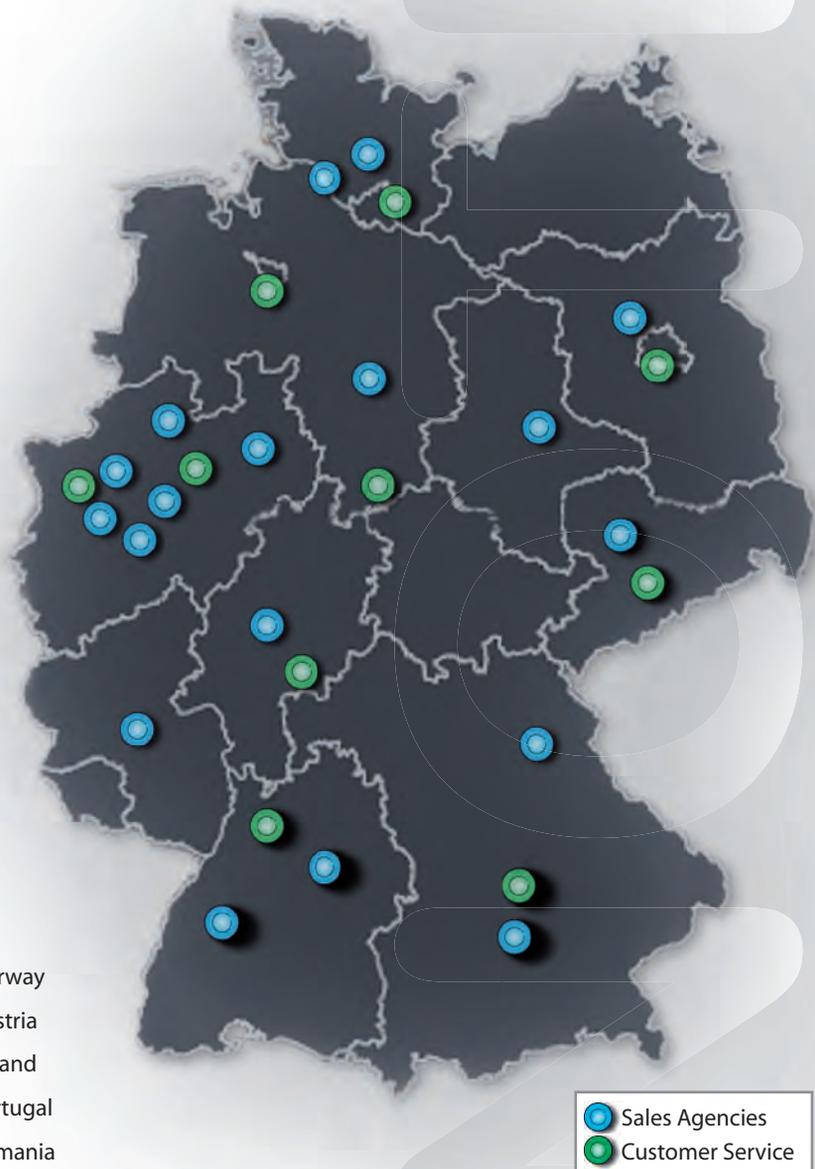


For maintenance and servicing of emergency and safety lighting systems, there are eleven suitable customer service representatives available in the various regions of Germany. Overseas this is carried out by staff from our agencies trained at INOTEC.

If you are unable to find the right solution for your problem within our product range, simply contact us. With your help we will come up with a project-specific solution for your property.

Outside Germany our products are available through our foreign sales partners:

- ▶ Belgium
- ▶ Denmark
- ▶ Italy
- ▶ Luxemburg
- ▶ The Netherlands
- ▶ Norway
- ▶ Austria
- ▶ Poland
- ▶ Portugal
- ▶ Romania
- ▶ Switzerland
- ▶ Slovakia
- ▶ Czech Republic
- ▶ Hungary
- ▶ United Arab Emirates





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