

# D.E.R. Dynamic Escape Routing



# Contents



FL 1530

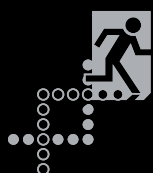


FL 7188 / 7288

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**Interface and  
control modules**

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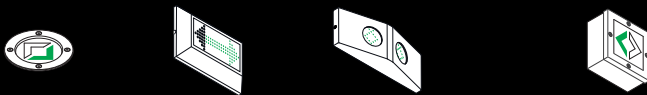
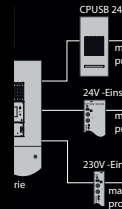


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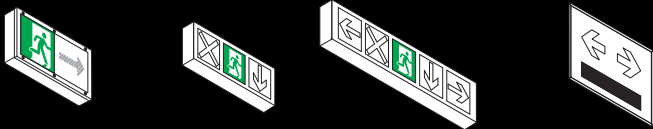
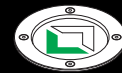
The D.E.R.-system for  
dynamic escape route guidance

Connection diagrams



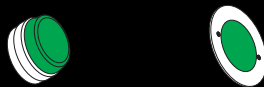
FS 1100 FS 2000 FS 7000 FS 804.1

Floor- and wall luminaires with run light function



FL 808 / 828 FL 5103 / 5203 FL 5105 FL 3100

Dynamic emergency exit luminaires



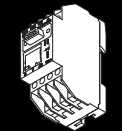
FB 5000 24V FB 5000 WE

Flashing lights



SEV Change-over devices and BUS substation D.E.R. Controller PSU

Control / Monitoring / Power supply



INOView INOWeb SVPCn Monitoring software



# INOTEC Sicherheitstechnik GmbH

## Innovative Emergency Lighting Technology



INOTEC Sicherheitstechnik GmbH is an innovative medium-sized company in Ense-Höingen, Westphalia with its own R&D department, production and a national and international sales and distribution.

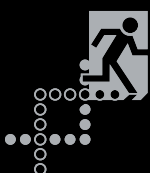
A competent team ensures the reliable support in all questions concerning products, planning, service and standards with flexible and committed employees.

Since the foundation in 1995 the INOTEC Sicherheitstechnik GmbH developed into a globally operating company with over 230 employees. Additional jobs were created with the numerous partners within Europe and Middle East. The production, storage and administration buildings increased in Germany on up to 14.000 m<sup>2</sup>.

Nowadays INOTEC Sicherheitstechnik GmbH is one of the leading producers of emergency and safety lighting. Modern, innovative and high-quality products „Made in Germany“ set new standards world-wide, such as the decentralised emergency lighting system CLS 24, the central battery units with JOKER-technology and the dynamic escape route guidance system D.E.R. .

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manufacturers permission.

Subject to technical changes.



## Why D.E.R.?



### Are escape routes always safe escape routes?

Emergency exit luminaires with fixed directional signs are used to identify escape routes and have the task of guiding people to places of safety in the event of a power failure or if an evacuation is necessary.

But what happens if fire and smoke are blocking the closest escape route? What should you do if thick smoke is already making it impossible to work out where you are? How can you find the escape route if the escape route signage is no longer visible?

### Do you have any objection to a higher level of safety?

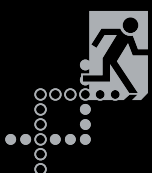
INOTEC Sicherheitstechnik GmbH has addressed the problem of smoke-filled escape routes by complementing static, inflexible escape route signage with dynamic escape route guidance.

A dynamic system has to satisfy two core objectives: firstly, to prevent people escaping into an area that is already filled with smoke and, secondly, to enable people who are already in a smoke-filled area to find a clear escape route.

The solution is Dynamic Escape Routing (D.E.R.). Emergency exit luminaires with integrated LED matrix or separate backlit compartments not only provide static escape route signage but can also be used to indicate an alternative escape route. In this way, smoke-filled areas or escape routes can be visually closed off with a red LED cross. Why should an escape route still be signposted when it is full of smoke and therefore no longer usable?

Luminaires are installed in the floor or at a short distance above it so that people are able to orientate themselves in a smoke-filled area. They are installed close to the floor because hot smoke rises, covering emergency exit luminaires set high in the walls. In case of fire, the direction indicator with run-light function of these low-location luminaires indicates the way to the escape door.

If a building needs to be evacuated for some other reason than fire, the D.E.R. system can be used as a support, for instance with its flashing function.



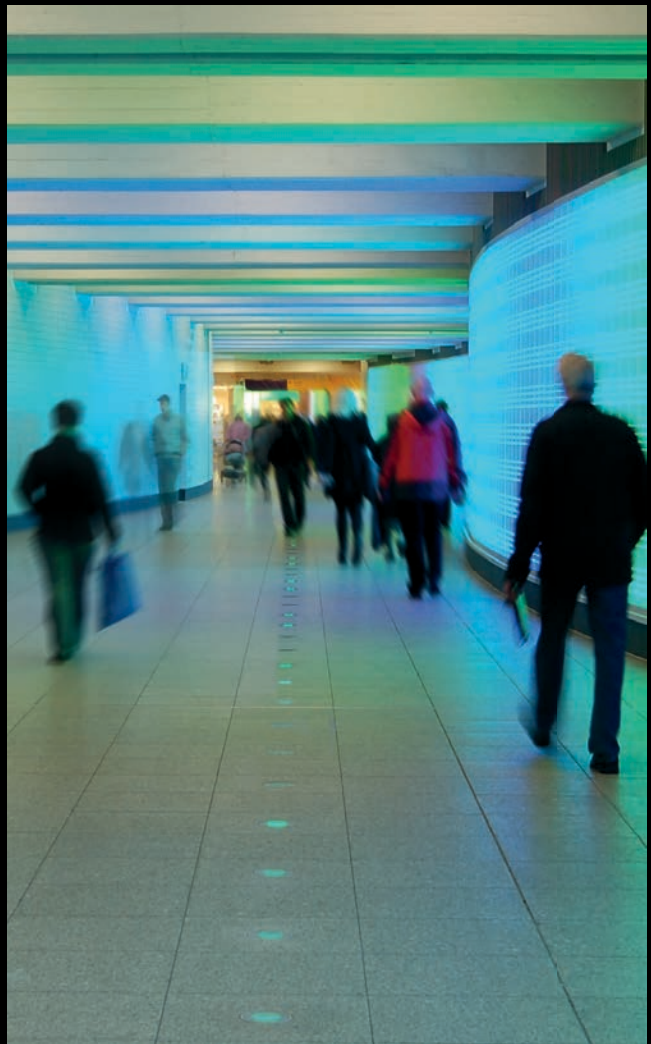
## Why D.E.R.?

### Functionality of the D.E.R.- system

The D.E.R. system communicates with the building's existing fire alarm system. Volt-free contacts, controlled by the fire alarm system, activate an input at the D.E.R. interface. The D.E.R. control system interprets the messages received from the fire alarm system and activates one of the pre-programmed escape route directional patterns. This automatically activates the D.E.R. luminaires, which indicate the safest escape route with a run light. Green LED arrows are used to indicate the direction. At the same time, the escape doors that can no longer be used are visually closed off with a flashing red LED cross. Low-location flash lights in the vicinity of escape doors further identify the escape routes, so that these remain clear in the presence of smoke. The D.E.R. system can also react to the fire and/or smoke spreading further by activating other escape route patterns and consequently illuminating alternate routings.

Even really small systems, as small as a single luminaire, can be implemented, with a reduced function, by actuating the luminaire directly via a fire alarm system's volt-free contact.

The D.E.R. system's great flexibility is characterised not only by this dynamism but also by the fact that it can be connected either to an INOTEC emergency system or to any other secure electrical network (AC/DC) with an appropriate voltage level.

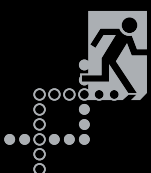


## Regulations

In the Technical Rules for Workplaces ASR A3.4/3 of May 2009, 'Emergency escape lighting, optical safety guidance systems', the German Committee for Workplaces (ASTA) describes in detail the implementation and operation of visual safety guidance systems for workplaces. In them, reference is made to ASR A2.3, which defines the conditions under which a visual safety guidance system is required for escape routes. This is the case where a heightened risk exists due to local or operational conditions. A heightened risk may exist, for example, in large interconnecting or multi-storey building complexes, where a significant percentage of the persons present are not familiar with the surroundings or where a large percentage of persons present have limited mobility (clinics, nursing homes, etc.). Such circumstances may require a safety guidance system that responds to any danger and indicates the best escape route (Dynamic Escape Routing).

In EN 50172 of January 2005, safety guidance systems are defined as systems that can increase efficiency when used in conjunction with the existing safety luminaires in escape routes.

Independently of the current regulations in force, additional applications for dynamic escape route guidance have emerged. For instance, a system of this kind may be used to compensate for inadequate constructional or technical fire safety measures.



# Made in Germany

## One-stop quality

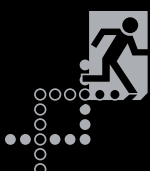
At INOTEC, you can fulfil all your emergency lighting requirements from a single source- and with the quality that comes from being made in Germany. We choose Germany as a business location not only for the development and design of our products but also for their manufacture.

To meet our own high demands and those of our customers, we focus on:

- Customer-oriented development
- Latest technologies
- Constant optimisation and development of our products
- Quality suppliers

At the same time, the safety our products stand for is one of our most important quality features. INOTEC also means innovative luminaire design and high-quality workmanship.

Because of the high level of responsibility placed on our products, quality assurance is a particular priority for INOTEC. Thanks to our intensive quality management, we are able to guarantee the optimum safety and long-lasting, problem-free functionality of our products.



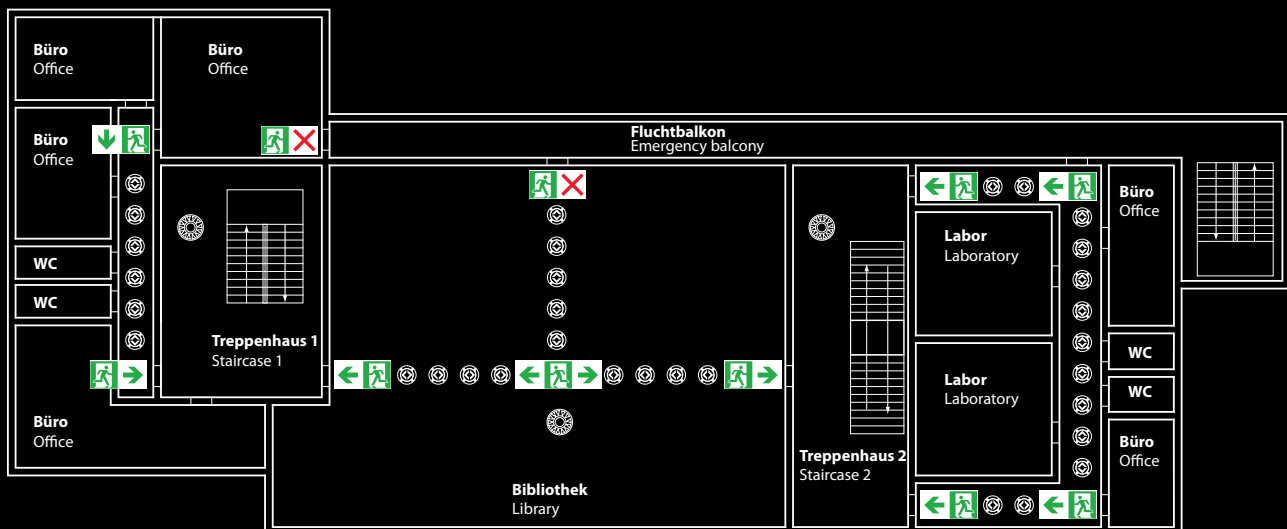


## Case study

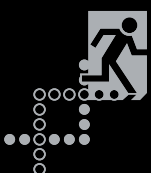
To achieve a continuous routing function with the D.E.R. system for persons inside and outside a smoke-filled building area, designers need to specify a combination of dynamic emergency exit luminaires (FL range) and low-location escape route segment luminaires with run-light function and direction indicators (FS range).

The dynamic emergency exit luminaires display a red cross to indicate that the related escape door can no longer be used. This prevents people being guided into a smoke-filled area. The low-location escape-route segment luminaires form route markings for people who are already inside a smoke-filled area. The run-light function is used to indicate the shortest escape route. The run-light function also facilitates evacuation of a building from areas that are not filled with smoke.

### Normal state

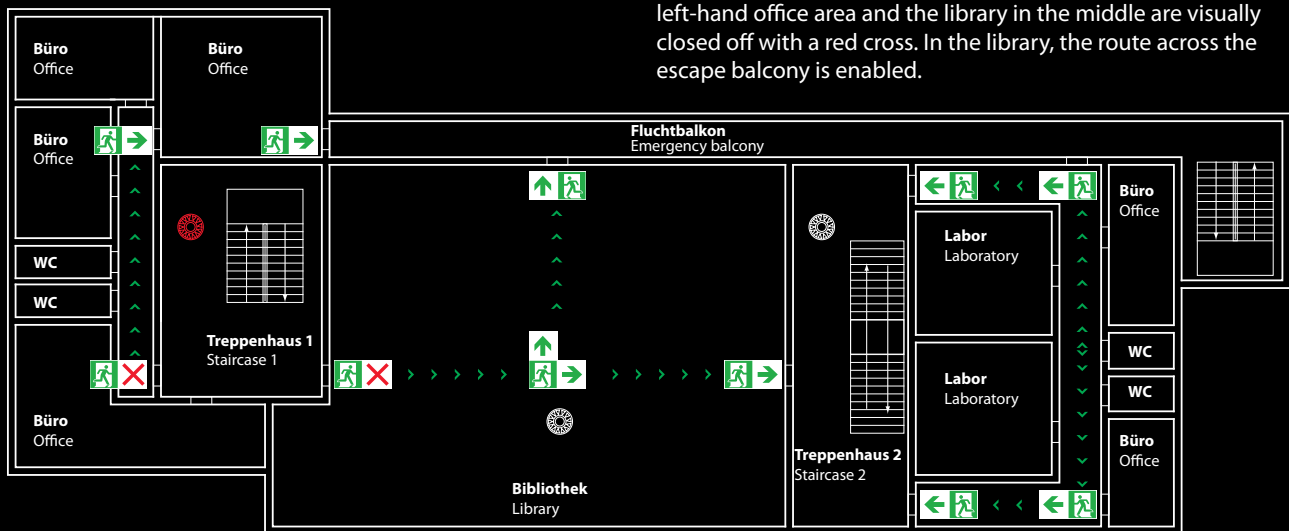


The floor plan displayed above shows the first floor of a building. In this case the staircases do not directly lead outside, but lead outside via a corridor or via an opened foyer at the right staircase. The normal mode is displayed here without a fire. The shortest escape routes via the staircase are marked, which can also be used in case of a power failure. The emergency balcony should not be used normally. This is why it is not marked or blocked visually (red cross). The recessed floor luminaires are turned off in normal mode.



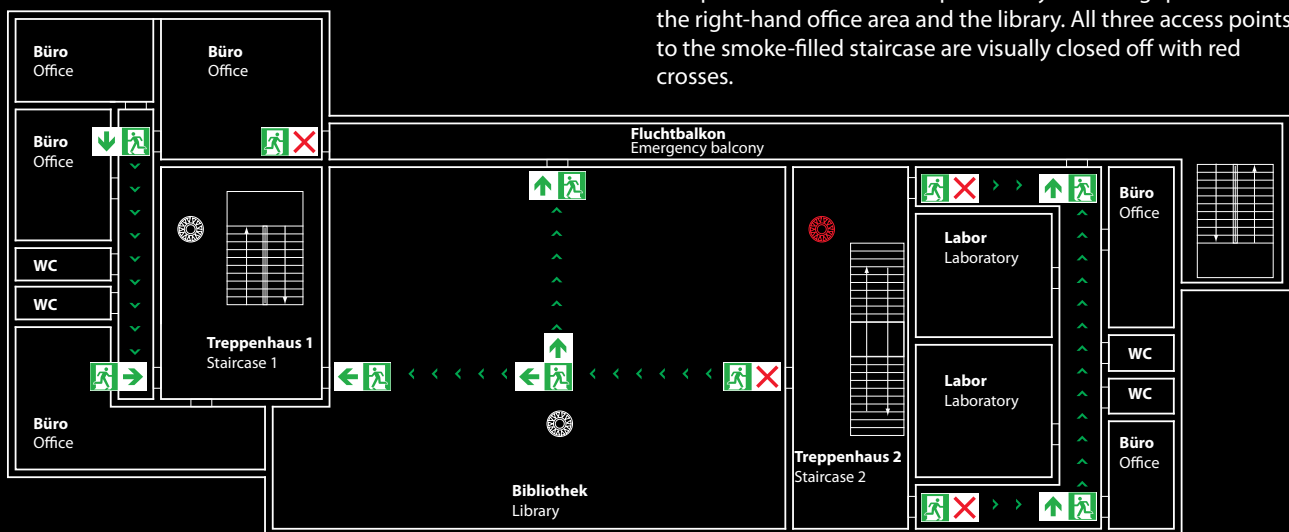
# Case study

## Fire case 1

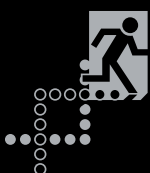


Fire case 1 represents the left-hand staircase and / or the continuation of the escape route on the ground floor being filled with smoke, so that this escape route can no longer be used. The floor luminaires come on throughout the building and indicate the safe, smoke-free escape route. In the left-hand office area, the second escape route is signposted, through an office and across the escape balcony. The staircase access points from the left-hand office area and the library in the middle are visually closed off with a red cross. In the library, the route across the escape balcony is enabled.

## Fire case 2

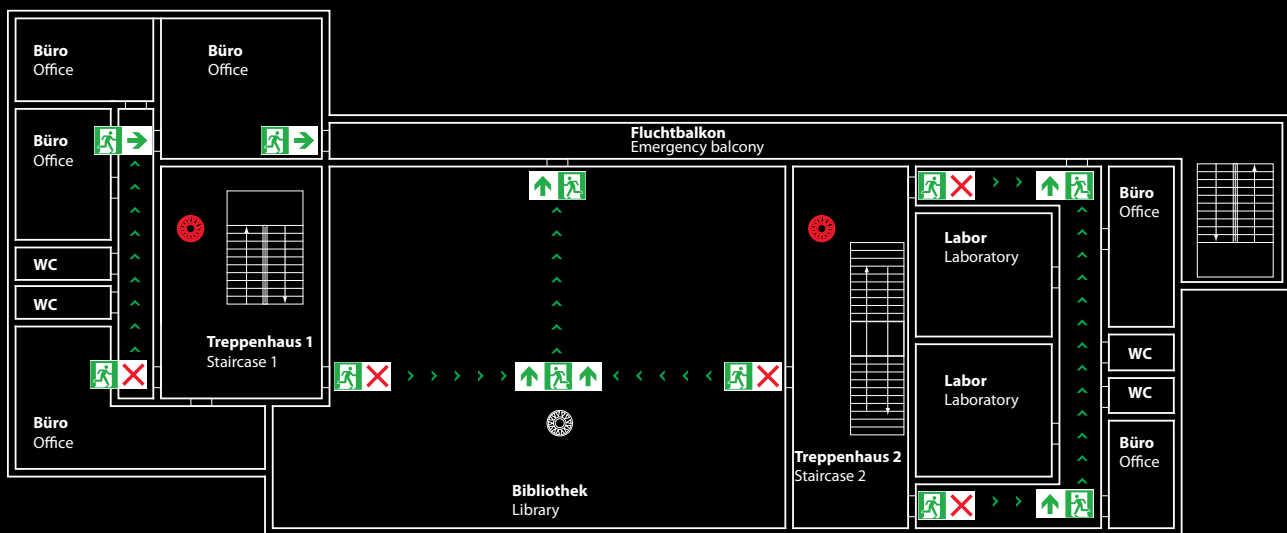


Fire case 2 represents the right-hand staircase and / or the continuation of the escape route on the ground floor being filled with smoke, so that this escape route can no longer be used. Here, too, the floor luminaires come on throughout the building and indicated the safe, smoke-free escape route. The second escape route across the escape balcony is now signposted in the right-hand office area and the library. All three access points to the smoke-filled staircase are visually closed off with red crosses.





Fire case 3 represents both escape staircases and/or the continuation of the escape route on the ground floor being filled with smoke, so that only the escape balcony can be used. In the case study, this situation is possible because both staircases may be affected by smoke from an event in the building's entrance area. In this case all the access points to both staircases are visually closed off with red crosses. Both the floor luminaires with run-light function and the dynamic emergency exit luminaires indicate only the escape route across the escape balcony.


### Fire case 3

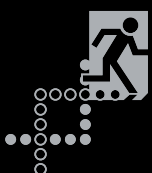


If the corridors and/or library are filled with smoke, the floor luminaires allow people to orient themselves, so that they can still find the safe escape doors.

 Dynamic emergency exit luminaires: depending on the fire event, the dynamic emergency exit luminaires in the FL range serve to signpost and/or change the escape routes with a green directional arrow, or to close them off with a red cross.

 Escape-route segment luminaires: the FS range of in-floor luminaires indicate the safe route in the event of a fire. The integrated direction indicator and the additional run-light function facilitate a building evacuation. The low location of the FS luminaires enables orientation in smoke-filled areas.

 Smoke detector (red background means fire detection)





Einspeisung  
Netz 230VAC



CP 425 CP 425 CP 425 CP 425 CP 425 CP 425



CPS 220 / 64



Menue



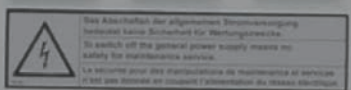
Einspeisung  
Batterie 216V DC



Ladeteil 220V / 7,5A



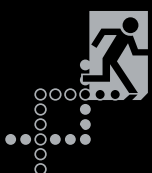
ACHTUNG! Nicht ohne Last schalten!  
ATTENTION! Ne pas ouvrir sans charge!  
ATTENZIONE! Non aprire senza carico!  
ATTENTION! Do not switch under load condition!



# Connection diagram

D.E.R. luminaires from INOTEC can be used anywhere. Any kind of implementation is possible, from connection to an INOTEC CLS decentralised emergency system and CPS 220/64/20 central battery system, with 24V or 230V supply voltage, right through to operation in pre-existing systems (e.g. emergency power systems).

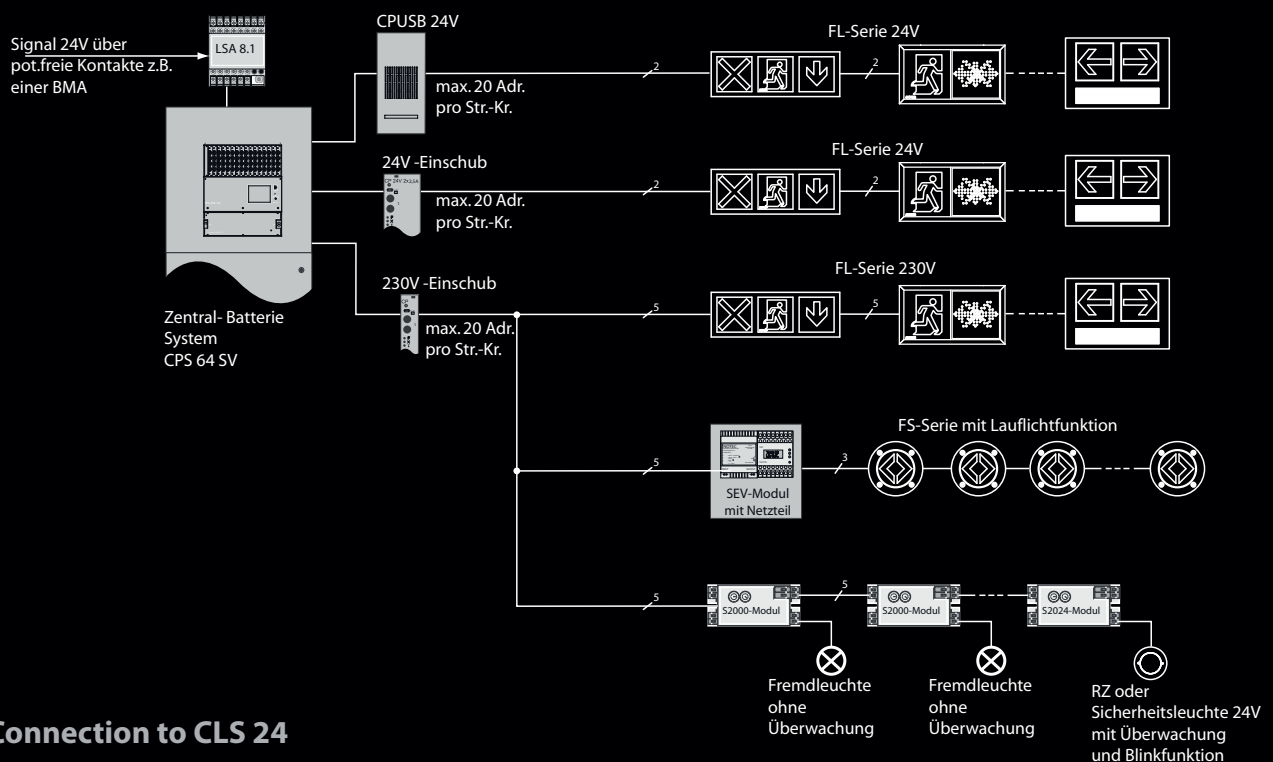
1. Connection to CPS 220/64/20 SV
2. Connection to CLS 24
3. Connection to SEV/A
4. Connection to D.E.R.-Controller



# Connection diagrams

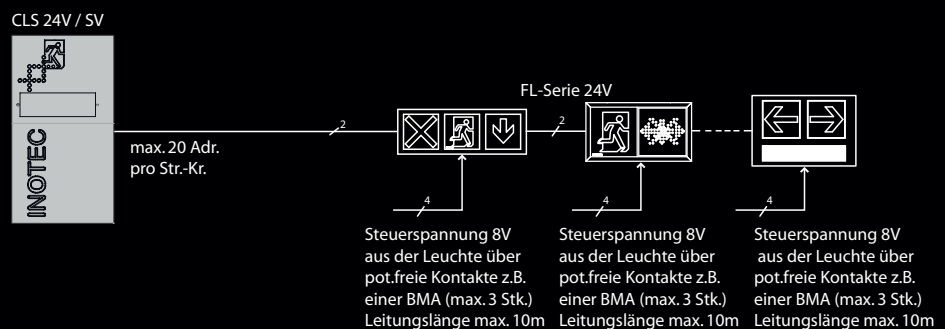
## Connection to CPS 220/64 SV or CPS 220/20 SV

Power supply, monitoring and rerouting are all managed centrally by the central battery system.  
Each luminaire, each SEV and each S-module can have max. 8 switching commands assigned to it.



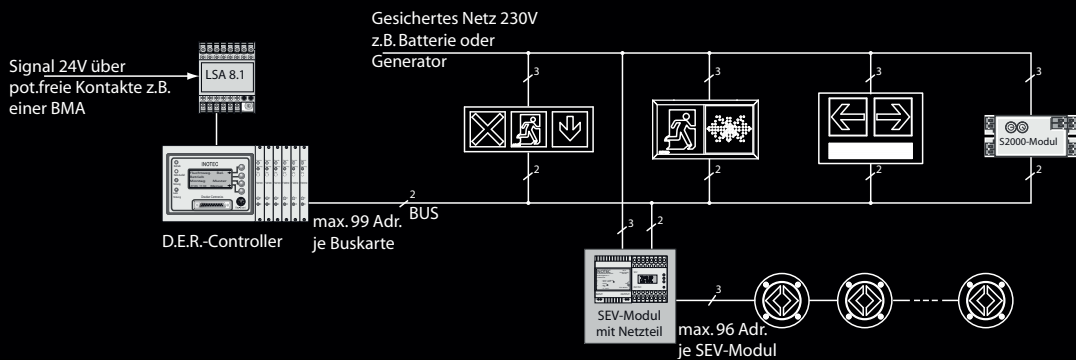
## Connection to CLS 24

Luminaire power supply and monitoring are managed by the CLS.  
The luminaires are activated via the internal input switches.



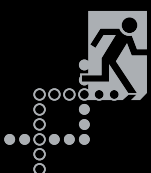
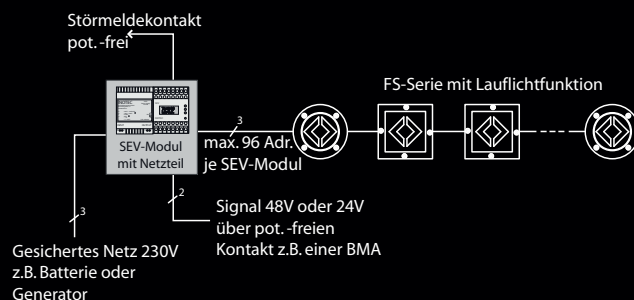
## Connection to D.E.R. Controller

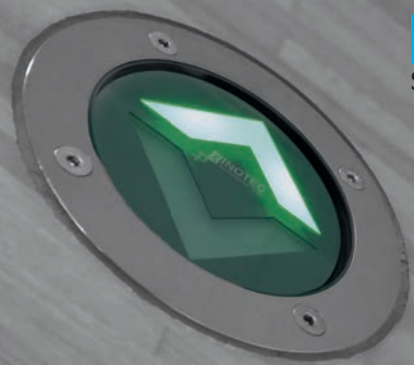
The power supply for all the connected components can come from any secured 230V AC or DC network. The controller can be equipped with max. 11 bus cards (incl. extension module). The components are activated and monitored by the controller. Switching commands, from a fire alarm system, for instance, are processed by the LSA8.1 interface (max. 3 parts).



## Connection to SEV/A

The 48V power supply for the FS range of luminaires and the SEV/A module comes from a controlled power supply such as a PSU48, connected to any fused 230V network (AC or DC). Monitoring and programming are managed via the SEV/A module. The luminaires and the module are rerouted via a volt-free contact, for instance from a fire alarm system. There is a group alarm contact for malfunction messages.








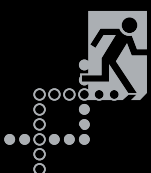


# Dynamic escape-route segment luminaires FS range

The low-location escape-route segment luminaires in the FS range indicate the safe route in the event of a fire. The integrated direction indicator and the additional run-light function facilitate a building evacuation. Thanks to their low location and division into different light strings (segments), the FS luminaires enable orientation even in smoke-filled areas. Depending on the model, the luminaires can be installed in either the floor or the wall.



<b>FS 1100</b>	<b>18</b>
	
<b>FS 2000</b>	<b>19</b>
	
<b>FS 7000</b>	<b>20</b>
	
<b>FS 804.1</b>	<b>21</b>



Dynamic Escape Route luminaire for floor installation to display the safe escape route depending on the smoke situation inside a building via run light functionality. Power supply by a PSU 48.

**Technical data**

**Material :** Stainless steel A4 brushed (panel)

**Illuminant :** LEDs

**Nominal voltage DC :** 48V ± 10%

**Nominal current batt.:** 35 mA

**Terminals :** 1.5 mm<sup>2</sup> for feed-through wiring

**Temperature ta :** -15°C... +40°C

**Protection category :** IP65

**Protection class :** III

acc. to DIN EN 1838, EN 60598-2-22 and DIN EN 55015

**Colour of the inboard panel freely selectable.**

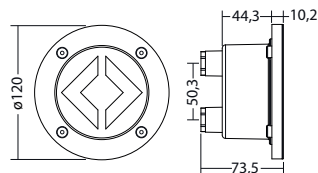
Colours:	Art. No.	Colour code
White aluminium (RAL 9006) ...	...	L10
Slate grey (RAL 7015) ...	...	L16
Special colours ...	...	L99

Add colour code to the article number e.g. **800 014 LXX**

**FS 1100 BE LED 48V**

Art. Nr. 800 161

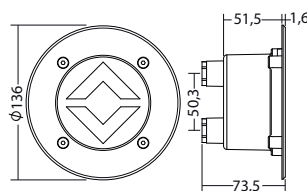
Recessed floor mounting



**FS 1100 TE LED 48V**

Art. Nr. 800 160

Carpet mounting



**Escape-route segment-luminaire**

control by segment controller SEV, SEV/A or SEV / CP D.E.R. 230V

Dynamic Escape Route luminaire for segmental use, including run light functionality, for indication of the safe escape route, depending on the location of detected smoke or fire. Made of stainless steel with a high protection category.

**Technical data**

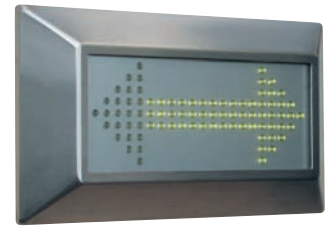
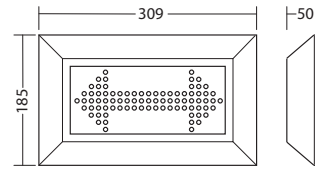
<b>Material :</b>	Stainless steel A4 brushed
<b>Illuminant :</b>	LEDs
<b>Nominal voltage DC :</b>	48V ± 10%
<b>Nominal current :</b>	200 mA
<b>Terminals :</b>	2.5 mm <sup>2</sup> for feed-through wiring
<b>Temperature ta :</b>	-15°C...+40°C
<b>Protection category :</b>	IP54
<b>Protection class :</b>	III

acc. to DIN EN 60598-1, DIN EN 60598-2-22, DIN 4844-1 and DIN EN 1838

**FS 2000 LED 48V**

Art. no. 800 030

Wall mounting



**Escape-route segment-luminaire**

control by segment controller SEV, SEV/A or SEV / CP D.E.R. 230V

Dynamic Escape Route luminaire for segmental use, including run light functionality, for indication of the safe escape route, depending on the location of detected smoke or fire. Made of stainless steel with a high protection category.

**Technical data**

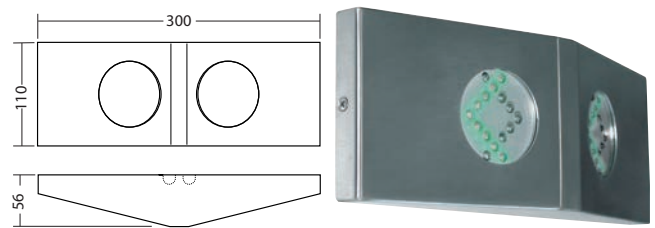
<b>Material :</b>	Stainless steel A4 brushed
<b>Illuminant :</b>	LEDs
<b>Nominal voltage DC :</b>	48V ± 10%
<b>Nominal current :</b>	63 mA
<b>Terminals :</b>	2.5 mm <sup>2</sup> for feed-through wiring
<b>Temperature ta :</b>	-15°C...+40°C
<b>Protection category :</b>	IP54
<b>Protection class :</b>	III

acc. to DIN EN 60598-1, DIN EN 60598-2-22, DIN 4844-1 and DIN EN 1838

**FS 7000 LED 48V**

Wall mounting

Art. no. 800 170



**Escape-route segment-luminaire**

Control by segment controller SEV, SEV/A or SEV / CP D.E.R.

Dynamic Escape Route luminaire for segmental use, including run light functionality, for indication of the safe escape route, depending on the location of detected smoke or fire. Power supply by PSU 48.

**Technical data**

- Material :** Stainless steel brushed
  - Illuminant:** LEDs
  - Nominal current DC :** 48V ± 10%
  - Nominal current batt. :** 35 mA
  - Terminals :** 2.5 mm<sup>2</sup> for feed-through wiring
  - Temperature ta :** -15°C... +40°C
  - Protection category:** IP65
  - Protection class :** III
- acc. to DIN EN 1838, EN 60598-2-22 and DIN EN 55015

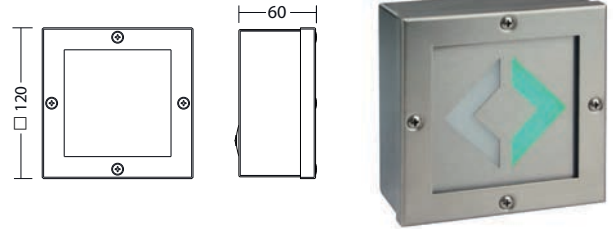
Housing-colours	Art. No.	Colour code
Slate grey (RAL 7015)	...	L16
Stainless steel	...	L30
Special colour	...	L99

Attach colour code to the article number e.g. **800 014 LXX**

**FS 804.1 W LED 48V**

Art. Nr. 800 028

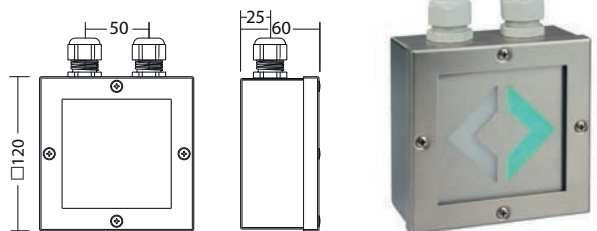
Wall mounting



**FS 804.1 W AP LED 48V**

Art. Nr. 800 029

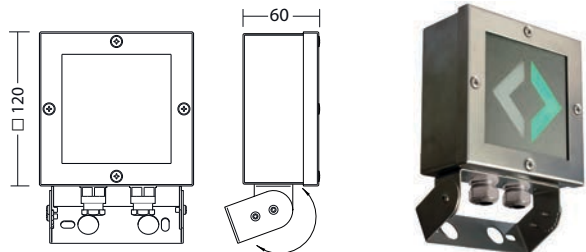
Wall mounting for exposed wiring



**FS 804.1 WA LED 48V**

Art. Nr. 800 027

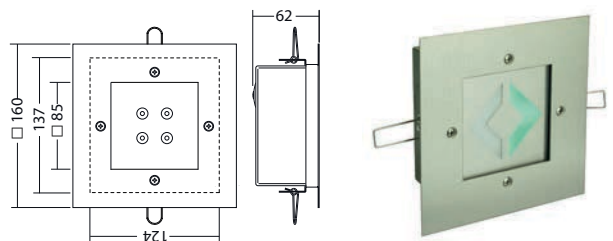
Wall bracket mounting



**FS 804.1 WE LED 48V**

Art. Nr. 800 031

Recessed wall mounting











# Dynamic emergency exit luminaires FL-Series

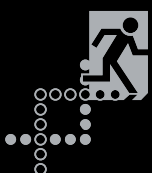
With the dynamic emergency exit luminaires from the FL range, escape routes can be signposted, closed off or changed, depending on the fire event.

Luminaires FL 1530, FL 7188 and FL 808 are particularly suitable for use in a mix of dynamic and static emergency exit luminaires in a building, as these luminaire types are also available as static luminaires.

In place of the static direction indicator, an arrow matrix indicates the safe route in the event of a fire, or closes off a smoke-filled area.

The FL range offers luminaires for almost every application – from robust stainless-steel luminaires with a high protection rating right through to state-of-the-art, elegantly designed luminaires from the ‘Straight Line’ range.

	<b>FL 1530</b>	24
	<b>FL 7188 / 7288</b>	28
	<b>FL 808 / 828</b>	32
	<b>FL 5103 / 5203</b>	36
	<b>FL 5105</b>	40
	<b>FL 3100</b>	42



Single-sided dynamic Straight-Line emergency exit luminaire made of high quality aluminium. Ideal to display the safe escape route depending on the smoke situation inside a building.

**Technical data**

- Viewing distance :** 30 m
  - Material :** Aluminum powder-coated
  - Illuminant :** LEDs
  - Nominal voltage AC :** 230V ± 10%, 50/60Hz
  - Nominal voltage DC :** 220V ± 20%
  - Nominal current :** 33 mA
  - Power consumption :** 14.3 VA
  - Terminals :** 2.5 mm<sup>2</sup> for feed-through wiring
  - Temperature ta :** -15°C... +40°C
  - Protection category :** IP40
  - Protection class :** I
- acc. to DIN EN 60598-1, DIN EN 60598-2-22, DIN 4844-1 and DIN EN 1838

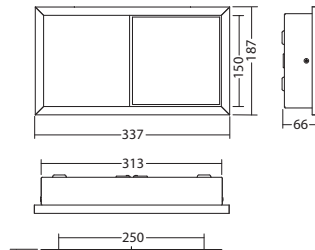
**Pictograms exchangeable without tools**

Housing-colours	Part.no.	Colour code
White (RAL 9016)	...	L04
Special colours	...	L99
Attach the colour code to part number e.g.	<b>800 014</b>	<b>LXX</b>

**FL 1530 PM LED 230V**

Art. no. 800 141V

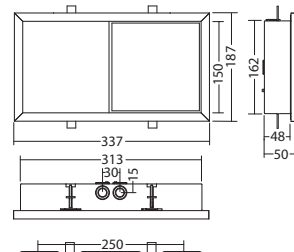
Parallel to wall mounting



**FL 1530 WE LED 230V**

Art. no. 800 143V

Recessed wall mounting





Single-sided dynamic Straight-Line emergency exit luminaire made of high quality aluminium. Ideal to display the safe escape route depending on the smoke situation inside a building.

**Technical data**

- Viewing distance :** 30 m
  - Material :** Aluminum powder-coated
  - Illuminant :** LEDs
  - Nominal voltage DC :** 24V ± 20%
  - Nominal current :** 200 mA
  - Terminals :** 2.5 mm<sup>2</sup> for feed-through wiring
  - Temperature ta :** -15°C...+40°C
  - Protection category :** IP40
  - Protection class :** III
- acc. to DIN EN 60598-1, DIN EN 60598-2-22, DIN 4844-1 and DIN EN 1838

**Pictograms exchangeable without tools**

**Housing-colours                      Part.no.    Colour code**

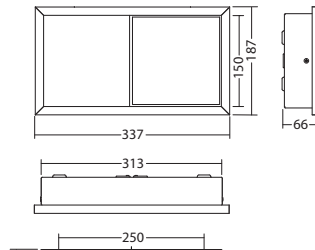
- White (RAL 9016)                      ...            L04
- Special colours                      ...            L99

Attach the colour code to part number e.g.                      **800 014 LXX**

**FL 1530 PM LED 24V**

Art. no. 800 140V

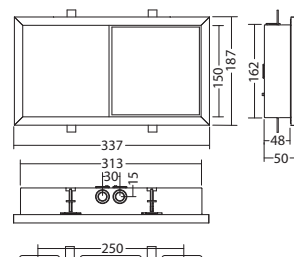
Parallel to wall mounting



**FL 1530 WE LED 24V**

Art. no. 800 142V

Recessed wall mounting



Double-sided dynamic Straight-Line emergency exit luminaire made of high quality aluminium. Ideal to display the safe escape route depending on the smoke situation inside a building.

**Technical data**

- Viewing distance :** 30 m
  - Material :** Aluminum powder-coated
  - Illuminant :** LEDs
  - Nominal voltage AC :** 230V ± 10%, 50/60Hz
  - Nominal voltage DC :** 220V ± 20%
  - Nominal current :** 33 mA (single-sided)  
66 mA (double-sided)
  - Power consumption :** 14.3 VA (single-sided)  
28.6 VA (double-sided)
  - Terminals :** 2.5 mm<sup>2</sup> for feed-through wiring
  - Temperature ta :** -15°C... +40°C
  - Protection category :** IP40
  - Protection class :** I
- acc. to DIN EN 60598-1, DIN EN 60598-2-22, DIN 4844-1 and DIN EN 1838

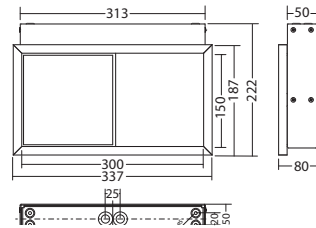
**Pictograms exchangeable without tools**

Housing-colours	Part.no.	Colour code
White (RAL 9016)	...	L04
Special colours	...	L99
Attach the colour code to part number e.g.	<b>800 014</b>	<b>LXX</b>

**FL 1530 D LED 230V**

Art. no. 800 147V

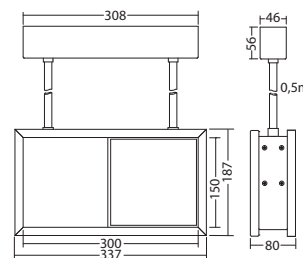
Ceiling mounting



**FL 1530 P LED 230V**

Art. no. 800 145V

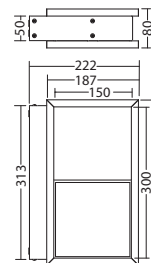
Pendulum mounting



**FL 1530 WA LED 230V**

Art. no. 800 149V

Wall bracket mounting



Double-sided dynamic Straight-Line emergency exit luminaire made of high quality aluminium. Ideal to display the safe escape route depending on the smoke situation inside a building.

**Technical data**

- Viewing distance :** 30 m
  - Material :** Aluminum powder-coated
  - Illuminant :** LEDs
  - Nominal voltage DC :** 24V ± 20%
  - Nominal current :** 200 mA (single-sided)  
400 mA (double-sided)
  - Terminals :** 2.5 mm<sup>2</sup> for feed-through wiring
  - Temperature ta :** -15°C... +40°C
  - Protection category :** IP40
  - Protection class :** III
- acc. to DIN EN 60598-1, DIN EN 60598-2-22, DIN 4844-1 and DIN EN 1838

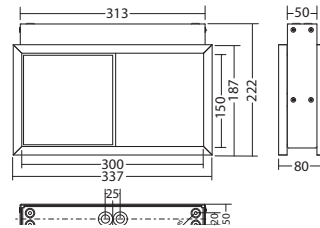
**Pictograms exchangeable without tools**

Housing-colours	Part.no.	Colour code
White (RAL 9016)	...	L04
Special colours	...	L99
Attach the colour code to part number e.g.	<b>800 014</b>	<b>LXX</b>

**FL 1530 D LED 24V**

Art. no. 800 146V

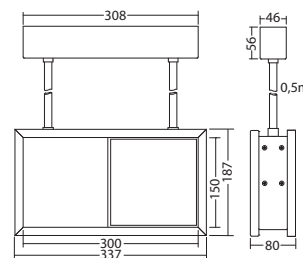
Ceiling mounting



**FL 1530 P LED 24V**

Art. no. 800 144V

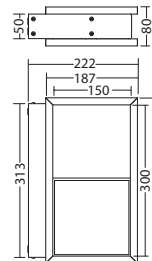
Pendulum mounting



**FL 1530 WA LED 24V**

Art. no. 800 148V

Wall bracket mounting



Dynamic single-sided emergency exit luminaire made of high quality aluminium profile. Ideal to display the safe escape route depending on the smoke situation inside a building.

**FL 7188 LED 230V**

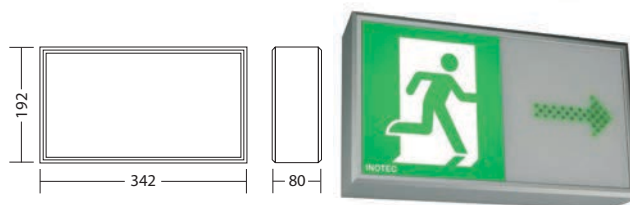
Wall mounting

Art. no. 800 101V

**Technical data**

<b>Viewing distance :</b>	35 m
<b>Material :</b>	Aluminum
<b>Illuminant :</b>	LEDs
<b>Nominal voltage AC :</b>	230V ± 10%, 50/60Hz
<b>Nominal voltage DC :</b>	220V ± 20%
<b>Nominal current :</b>	33 mA
<b>Power consumption :</b>	14.3 VA
<b>Terminals :</b>	2.5 mm <sup>2</sup> for feed-through wiring
<b>Temperature ta :</b>	-15°C...+40°C
<b>Protection category :</b>	IP40
<b>Protection class :</b>	I

acc. to DIN EN 60598-1, DIN EN 60598-2-22, DIN 4844-1 and DIN EN 1838

**Housing-colours                      Part.no.    Colour code**

Special colours                      ...                      L99

Attach the colour code to  
part number e.g.                      **800 014 LXX**



Dynamic single-sided emergency exit luminaire made of high quality aluminium profile. Ideal to display the safe escape route depending on the smoke situation inside a building.

**FL 7188 LED 24V**

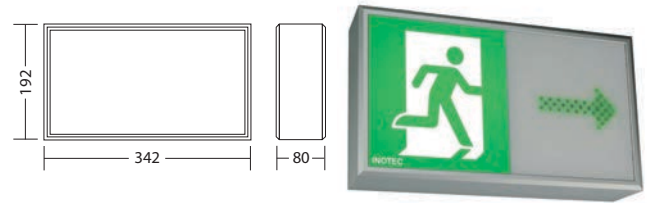
Art. no. 800 100V

Wall mounting

**Technical data**

<b>Viewing distance :</b>	35 m
<b>Material :</b>	Aluminum
<b>Illuminant :</b>	LEDs
<b>Nominal voltage DC :</b>	24V ± 20%
<b>Nominal current :</b>	200 mA
<b>Terminals :</b>	2.5 mm <sup>2</sup> for feed-through wiring
<b>Temperature ta :</b>	-15°C...+40°C
<b>Protection category :</b>	IP40
<b>Protection class :</b>	III

acc. to DIN EN 60598-1, DIN EN 60598-2-22, DIN 4844-1 and DIN EN 1838



<b>Housing-colours</b>	<b>Part.no.</b>	<b>Colour code</b>
Special colours	...	L99
Attach the colour code to part number e.g.	<b>800 014</b>	<b>LXX</b>



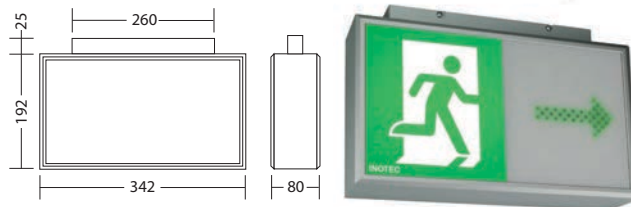
Dynamic double-sided emergency exit luminaire made of high quality aluminium profile. Ideal to display the safe escape route depending on the smoke situation inside a building.

**Technical data**

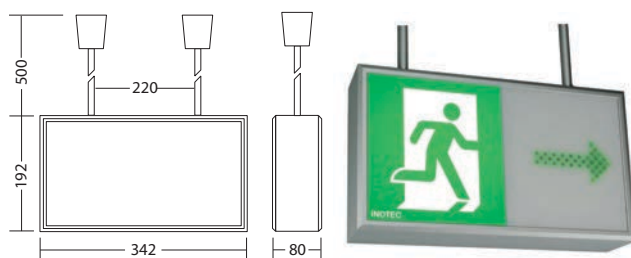
- Viewing distance :** 35 m
  - Material :** Aluminum
  - Illuminant :** LEDs
  - Nominal voltage AC :** 230V ± 10%, 50/60Hz
  - Nominal voltage DC :** 220V ± 20%
  - Nominal current :** 33 mA (single-sided)  
66 mA (double-sided)
  - Power consumption :** 14.3 VA (single-sided)  
28.6 VA (double-sided)
  - Terminals :** 2.5 mm<sup>2</sup> for  
feed-through wiring
  - Temperature ta :** -15°C... +40°C
  - Protection category :** IP40
  - Protection class :** I
- acc. to DIN EN 60598-1, DIN EN 60598-2-22, DIN 4844-1 and DIN EN 1838

Housing-colours	Part.no.	Colour code
Special colours	...	L99
Attach the colour code to part number e.g.	<b>800 014</b>	<b>LXX</b>

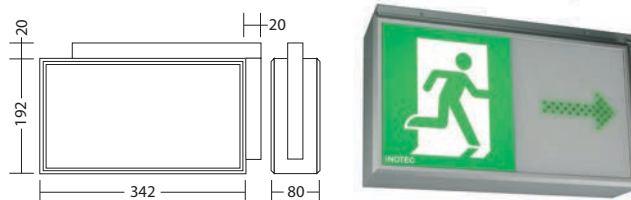
**FL 7288 D LED 230V** Ceiling mounting  
Art.no.800 103V



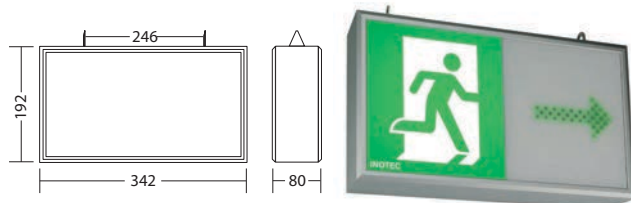
**FL 7288 P LED 230V** Pendulum mounting  
Art.no.800 107V



**FL 7288 WA LED 230V** Wall bracket mounting  
Art.no.800 105V



**FL 7288 K LED 230V** Chain mounting  
Art.no.800 109V



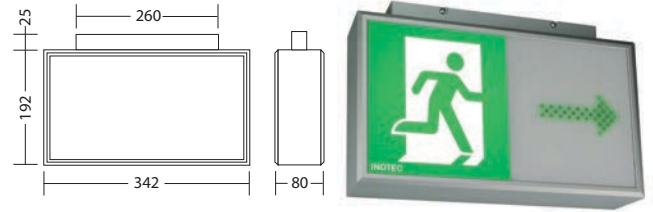
Dynamic double-sided emergency exit luminaire made of high quality aluminium profile. Ideal to display the safe escape route depending on the smoke situation inside a building.

**Technical data**

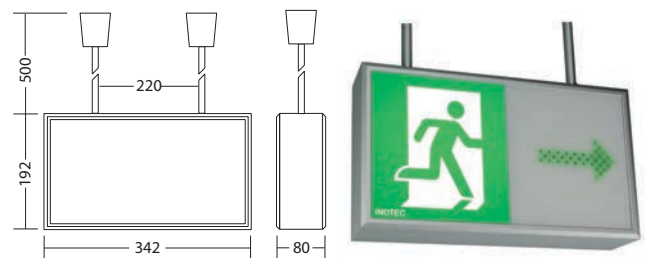
- Viewing distance :** 35 m
  - Material :** Aluminum
  - Illuminant :** LEDs
  - Nominal voltage DC :** 24V ± 20%
  - Nominal current :** 200 mA (single-sided)  
400 mA (double-sided)
  - Terminals :** 2.5 mm<sup>2</sup> for feed-through wiring
  - Temperature ta :** -15°C... +40°C
  - Protection category :** IP40
  - Protection class :** III
- acc. to DIN EN 60598-1, DIN EN 60598-2-22, DIN 4844-1 and DIN EN 1838

Housing-colours	Part.no.	Colour code
Special colours	...	L99
Attach the colour code to part number e.g.	<b>800 014</b>	<b>LXX</b>

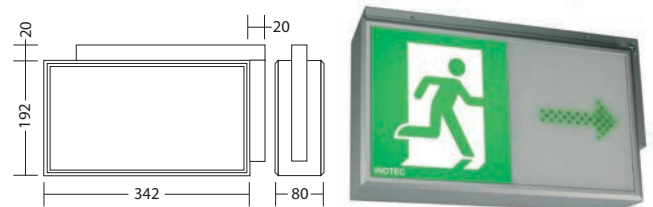
**FL 7288 D LED 24V** Ceiling mounting  
Art. no. 800 102V



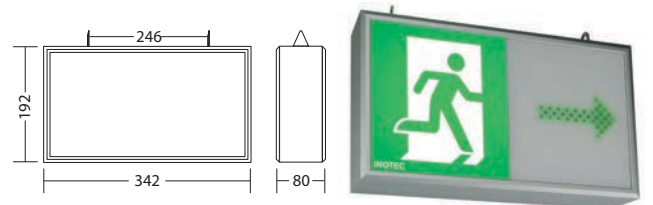
**FL 7288 P LED 24V** Pendulum mounting  
Art. no. 800 106V



**FL 7288 WA LED 24V** Wall bracket mounting  
Art. no. 800 104V



**FL 7288 K LED 24V** Chain mounting  
Art. no. 800 108V



Dynamic single-sided emergency exit luminaire made of robust stainless steel with high protection category. Ideal to display the safe escape route depending on the smoke situation inside a building.

**Technical data**

<b>Viewing distance :</b>	30 m
<b>Material :</b>	Stainless steel A4 brushed
<b>Illuminant :</b>	LEDs
<b>Nominal voltage AC :</b>	230V ± 10%, 50/60Hz
<b>Nominal voltage DC :</b>	220V ± 20%
<b>Nominal current :</b>	33 mA
<b>Power consumption :</b>	14.3 VA
<b>Terminals :</b>	2.5 mm <sup>2</sup> for feed-through wiring
<b>Temperature ta :</b>	-15°C...+40°C
<b>Protection category :</b>	IP65
<b>Protection class :</b>	I

acc. to DIN EN 60598-1, DIN EN 60598-2-22, DIN 4844-1 and DIN EN 1838

Housing-colours	Part.no.	Colour code
White (RAL 9016)	...	L04
Dark grey (RAL 7015)	...	L16
Special colours	...	L99

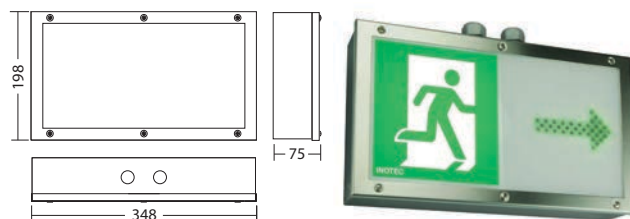
Attach the colour code to part number e.g.

**800 014 LXX**

**FL 808 LED 230V**

Art. no. 800 181V

Wall mounting





Dynamic single-sided emergency exit luminaire made of robust stainless steel with high protection category. Ideal to display the safe escape route depending on the smoke situation inside a building.

**Technical data**

<b>Viewing distance :</b>	30 m
<b>Material :</b>	Stainless steel A4 brushed
<b>Illuminant :</b>	LEDs
<b>Nominal voltage DC :</b>	24V ± 20%
<b>Nominal current :</b>	200 mA
<b>Terminals :</b>	2.5 mm <sup>2</sup> for feed-through wiring
<b>Temperature ta :</b>	-15°C...+40°C
<b>Protection category :</b>	IP65
<b>Protection class :</b>	III

acc. to DIN EN 60598-1, DIN EN 60598-2-22, DIN 4844-1 and DIN EN 1838

Housing-colours	Part.no.	Colour code
White (RAL 9016)	...	L04
Dark grey (RAL 7015)	...	L16
Special colours	...	L99

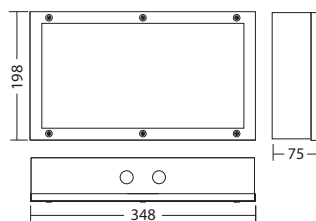
Attach the colour code to part number e.g.

**800 014 LXX**

**FL 808 LED 24V**

Art. no. 800 180V

Wall mounting



Dynamic double-sided emergency exit luminaire made of robust stainless steel with high protection category. Ideal to display the safe escape route depending on the smoke situation inside a building.

**Technical data**

- Viewing distance :** 30 m
- Material :** Stainless steel A4 brushed
- Illuminant :** LEDs
- Nominal voltage AC :** 230V ± 10%, 50/60Hz
- Nominal voltage DC :** 220V ± 20%
- Nominal current :** 33 mA (single-sided)  
66 mA (double-sided)
- Power consumption :** 14.3 VA (single-sided)  
28.6 VA (double-sided)
- Terminals :** 2.5 mm<sup>2</sup> for feed-through wiring
- Temperature ta :** -15°C... +40°C
- Protection category :** IP65
- Protection class :** I

acc. to DIN EN 60598-1, DIN EN 60598-2-22, DIN 4844-1 and DIN EN 1838

Housing-colours	Part.no.	Colour code
White (RAL 9016)	...	L04
Dark grey (RAL 7015)	...	L16
Special colours	...	L99

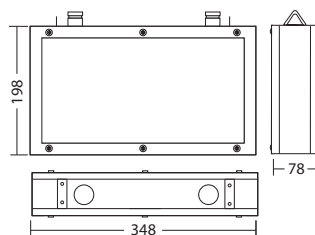
Attach the colour code to part number e.g.

**800 014 LXX**

**FL 828 K LED 230V**

Art. no. 800 183V

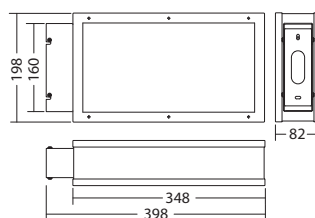
Chain mounting



**FL 828 WA LED 230V**

Art. no. 800 185V

Wall bracket mounting



Dynamic double-sided emergency exit luminaire made of robust stainless steel with high protection category. Ideal to display the safe escape route depending on the smoke situation inside a building.

### Technical data

- Viewing distance :** 30 m  
**Material :** Stainless steel A4 brushed  
**Illuminant :** LEDs  
**Nominal voltage DC :** 24V ± 20%  
**Nominal current :** 200 mA (single-sided)  
 400 mA (double-sided)  
**Terminals :** 2.5 mm<sup>2</sup> for feed-through wiring  
**Temperature ta :** -15°C... +40°C  
**Protection category :** IP65  
**Protection class :** III  
 acc. to DIN EN 60598-1, DIN EN 60598-2-22, DIN 4844-1 and DIN EN 1838

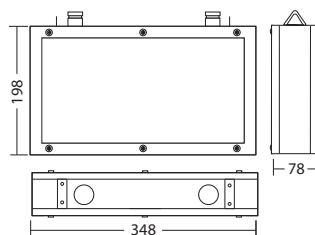
Housing-colours	Part.no.	Colour code
White (RAL 9016)	...	L04
Dark grey (RAL 7015)	...	L16
Special colours	...	L99

Attach the colour code to part number e.g. **800 014 LXX**

### FL 828 K LED 24V

Art. no. 800 182V

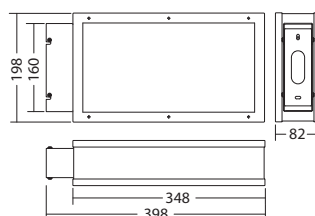
Chain mounting



### FL 828 WA LED 24V

Art. no. 800 184V

Wall bracket mounting



Single-sided emergency exit luminaires in modular design with freely selectable equipping. Displaying the escape route depending on the smoke situation inside a building.

**Technical data**

- Viewing distance :** 20 m
  - Material :** Sheet steel powder-coated
  - Illuminant :** LEDs
  - Nominal voltage AC :** 230V ± 10%, 50Hz/60Hz
  - Nominal voltage DC :** 220V ± 20%
  - Nominal current batt :** 9 mA per module (white+green LEDs) or 18 mA (red LEDs)
  - Apparent power :** 2.0 VA per module (white+green LEDs) or 4.0 VA (red LEDs)
  - Terminals :** 2.5 mm<sup>2</sup> for feed-through wiring
  - Temperature ta :** -15°C... +40°C
  - Protection category :** IP40
  - Protection class :** I
- acc. to DIN EN 60598-1, DIN EN 60598-2-22, DIN 4844-1 and DIN EN 1838

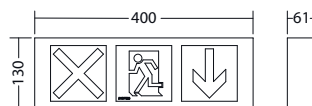
Housing-colours	Art. No.	Colour code
White (RAL 9016)	...	L04
Slate grey (RAL 7015)	...	L16
Special colour	...	L99

Attach colour code to the article number e.g. **800 014 LXX**

**FL 5103 LED 230V**

Wall mounting

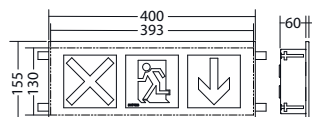
Art. Nr. 800 018V



**FL 5103 WE LED 230V**

Recessed wall mounting

Art. Nr. 800 019V



for connection to D.E.R.-Controller, CP 24V 2x2.5A or CLS 24 SV

Single-sided emergency escape luminaires in modular design with freely selectable equipping. Displaying the escape route depending on the smoke situation inside a building.

**Technical data**

**Viewing distance :** 20 m  
**Material :** Sheet steel powder-coated  
**Illuminant :** LEDs  
**Nominal voltage DC :** 24V ± 20%  
**Nominal voltage batt :** 63 mA per module (white+green LEDs) or 150 mA (red LEDs)  
**Terminals :** 2.5 mm<sup>2</sup> for feed-through wiring  
**Temperatur ta :** -15°C... +40°C  
**Protection category :** IP40  
**Protection class :** III  
 acc. to DIN EN 60598-1, DIN EN 60598-2-22, DIN 4844-1 and DIN EN 1838

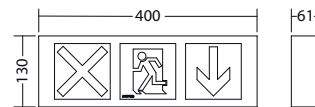
Housing-colours	Art. No.	Colour Code
White (RAL 9016)	...	L04
Slate grey (RAL 7015)	...	L16
Special colour	...	L99

Attach colour code to the article number e.g **800 014 LXX**

**FL 5103 LED 24V**

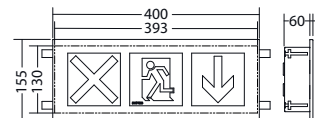
Art. Nr. 800 012V

Wall mounting

**FL 5103 WE LED 24V**

Art. Nr. 800 013V

Recessed wall mounting



Single- or double-sided emergency exit luminaire in modular design with freely selectable equipping. Displaying the escape route depending on the smoke situation inside a building.

**Technical data**

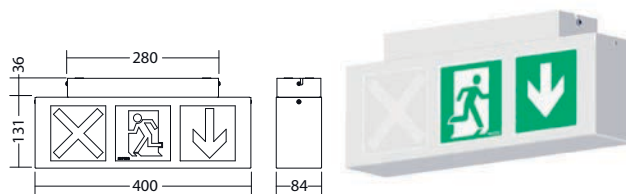
- Viewing distance :** 20 m
  - Material :** Steel sheet powder-coated
  - Illuminant :** LEDs
  - Nominal voltage AC :** 230V ± 10%, 50Hz/60Hz
  - Nominal voltage DC :** 220V ± 20%
  - Nominal current batt :** 9 mA per module (white+green LEDs) or 18 mA (red LEDs)
  - Apparent power :** 2.0 VA per module (white+green LEDs) or 4.0 VA (red LEDs)
  - Terminals :** 2.5 mm<sup>2</sup> for feed-through wiring
  - Temperature ta :** -15°C... +40°C
  - Protection category :** IP40
  - Protection class :** I
- acc. to DIN EN 60598-1, DIN EN 60598-2-22, DIN 4844-1 and DIN EN 1838

Housing colour	Art. No.	Colour code
White (RAL 9016)	...	L04
Slate grey (RAL 7015)	...	L16
Special colour	...	L99
Attach colour code to the article number e.g.	<b>800 014</b>	<b>LXX</b>

**FL 5203 D LED 230V**

Ceiling mounting

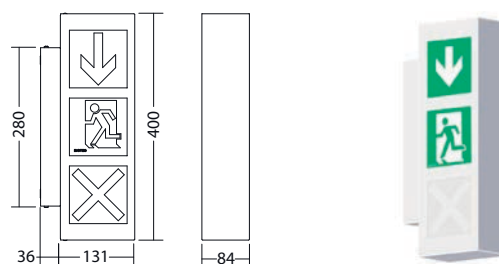
Art. Nr. 800 300V



**FL 5203 WA LED 230V**

Wall bracket mounting

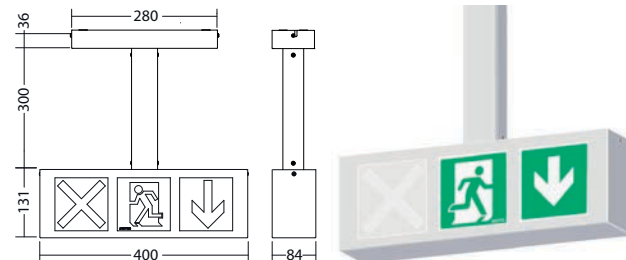
Art. Nr. 800 300V



**FL 5203 P LED 230V**

Pendulum mounting

Art. Nr. 800 304V



Single- or double-sided emergency exit luminaire in modular design with freely selectable equipping. Displaying the escape route depending on the smoke situation inside a building.

**Technical data**

- Viewing distance :** 20 m
  - Material :** Steel sheet powder-coated
  - Illuminant :** LEDs
  - Nominal voltage DC :** 24V ± 20%
  - Nominal current batt :** 63mA per module (white+green LEDs) or 150 mA (red LEDs)
  - Terminals :** 2.5 mm<sup>2</sup> for feed-through wiring
  - Temperature ta :** -15°C... +40°C
  - Protection category :** IP40
  - Protection class :** III
- acc. to DIN EN 60598-1, DIN EN 60598-2-22, DIN 4844-1 and DIN EN 1838

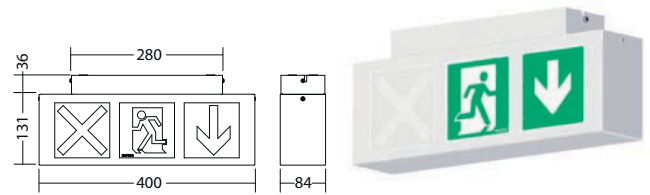
Housing colour	Art. No.	Colour code
White (RAL 9016)	...	L04
Slate grey (RAL 7015)	...	L16
Special colour	...	L99

Attach colour code to the article number e.g. **800 014 LXX**

**FL 5203 D LED 24V**

Art. Nr. 800 302V

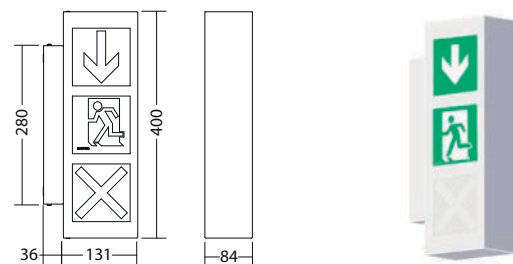
Celing mounting



**FL 5203 WA LED 24V**

Art. Nr. 800 302V

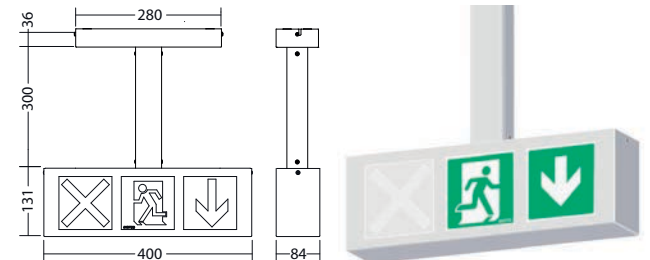
Wall bracket mounting



**FL 5203 P LED 24V**

Art. Nr. 800 306V

Pendulum mounting



Single-sided dynamic emergency exit luminaire in modular design with freely selectable equipping. Displaying the escape route depending on the development of the smoke.

**Technical data**

- Viewing distance :** 20 m
  - Material :** Steel sheet powder-coated
  - Illuminant :** LEDs
  - Nominal voltage AC :** 230V ± 10%, 50Hz/60Hz
  - Nominal voltage DC :** 220V ± 20%
  - Nominal current batt :** 9 mA per module (white+green LEDs) or 18 mA (red LEDs)
  - Apparent power :** 2.0 VA per module (white+green LEDs) or 4.0 VA (red LEDs)
  - Terminals :** 2.5 mm<sup>2</sup> for feed-through wiring
  - Temperatur ta :** -15°C... +40°C
  - Protection category :** IP40
  - Protection class :** I
- acc. to DIN EN 60598-1, DIN EN 60598-2-22, DIN 4844-1 and DIN EN 1838

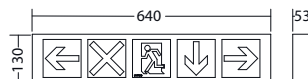
Housing colours	Art. No.	Colour code
White (RAL 9016)	...	L04
Slate grey (RAL 7015)	...	L16
Special colour	...	L99

Attach colour code to the article number e.g. **800 014 LXX**

**FL 5105 LED 230V**

Wall mounting

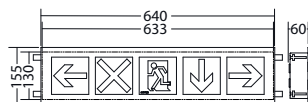
Art. Nr. 800 022V



**FL 5105 WE LED 230V**

Recessed wall mounting

Art. Nr. 800 023V





Single-sided dynamic emergency exit luminaire in modular design with freely selectable equipping. Displaying the escape route depending on the development of the smoke of the fire.

**Technical data**

- Viewing distance :** 20 m
  - Material :** Steel sheet powder-coated
  - Illuminant :** LEDs
  - Nominal voltage DC :** 24V ± 20%
  - Nominal current batt :** 63 mA per module (white+green LEDs) or 150 mA (red LEDs)
  - Terminals :** 2.5 mm<sup>2</sup> for feed-through wiring
  - Temperature ta :** -15°C... +40°C
  - Protection category :** IP40
  - Protection class :** III
- acc. to DIN EN 60598-1, DIN EN 60598-2-22, DIN 4844-1 and DIN EN 1838

Housing colours	Art. No.	Colour code
White (RAL 9016)	...	L04
Slate grey (RAL 7015)	...	L16
Special colour	...	L99

Attach colour code to the article number e.g. **800 014 LXX**

**FL 5105 LED 24V**

Art. Nr. 800 014V

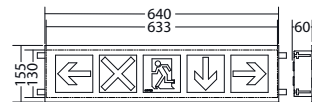
Wall mounting



**FL 5105 WE LED 24V**

Art. Nr. 800 015V

Recessed wall mounting



Dynamic modular luminaire with freely selectable equipping. Displaying the escape route depending on the smoke situation inside a building. With integrated LED safety luminaire.

**Technical data**

- Material :** Steel sheet powder-coated
  - Illuminant:** LEDs
  - Nominal voltage AC :** 230V ± 10%, 50Hz/60Hz
  - Nominal voltage DC :** 220V ± 20%
  - Nominal current batt. :** 9 mA per module (white+green LEDs)
  - Apparent power :** 2.0 VA per module (white+green LEDs)
  - Terminals :** 2.5 mm<sup>2</sup> for feed-through wiring
  - Temperature ta :** -15°C... +40°C
  - Protection category :** IP40
  - Protection class :** I
- acc. to DIN EN 60598-1, DIN EN 60598-2-22, DIN 4844-1 and DIN EN 1838

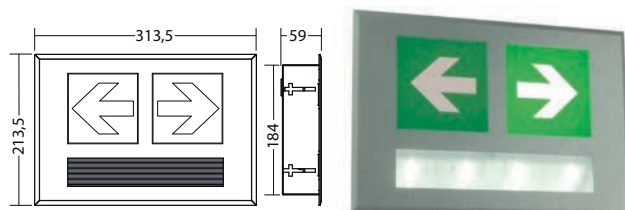
Housing-colours	Art. No.	Colour code
White (RAL 9016)	...	L04
Slate grey (RAL 7015)	...	L16
Special colour	...	L99

Attach colour code to the article number e.g. **800 014 LXX**

**FL 3100 WE LED 230V**

Art. Nr. 800 152V

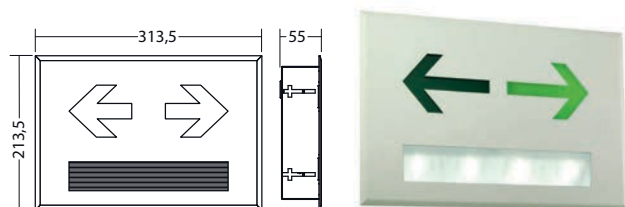
Recessed wall mounting



**FL 3100 WE\_S LED 230V**

Art. Nr. 800 152V

Recessed wall mounting



Dynamic modular luminaire with freely selectable equipping. Displaying the escape route depending on the smoke situation inside a building. With integrated LED safety luminaire.

**Technical data**

- Material :** Stahlblech pulverbeschichtet
  - Illuminant :** LEDs
  - Nominal voltage DC :** 24V ± 20%
  - Nominal current batt. :** pro Modul 63 mA (weiße+grüne LEDs)
  - Terminals :** 2,5 mm<sup>2</sup> für Durchgangsverdrahtung
  - Temperature ta :** -15°C... +40°C
  - Protection category :** IP40
  - Protection class :** III
- acc. to DIN EN 60598-1, DIN EN 60598-2-22, DIN 4844-1 and DIN EN 1838

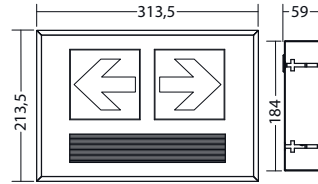
Housing-colours	Art.Nr.	Farbcode
White (RAL 9016)	...	L04
Slate grey (RAL 7015)	...	L16
Special colour	...	L99

Attach colour code to the article number e.g. **800 014 LXX**

**FL 3100 WE LED 24V**

Art. Nr. 800 151V

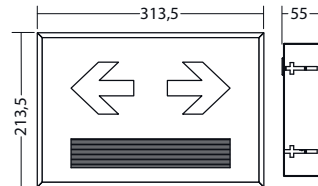
Recessed wall mounting



**FL 3100 WE\_S LED 24V**

Art. Nr. 800 151V

Recessed wall mounting





# Flash lights

## FB series

Flash lights are ideal as additional identification marking for escape doors. The luminaires are equipped with a bright xenon light source. In the event of a fire, the luminaires are activated and clearly indicate a safe escape door with a bright xenon light illuminant.



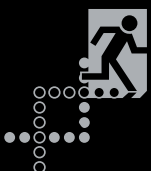
**FB 5000 24V**

46



**FB 5000 WE**

47



Xenon-flash luminaire for surface mounting to display the safe escape route.

**FB 5000 24V**

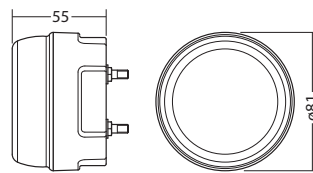
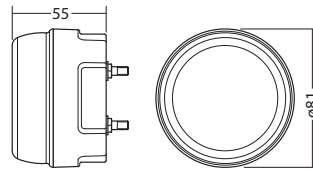
Art. no. 800 021

Wall or ceiling mounting

**Technical data**

<b>Material :</b>	Polycarbonate
<b>Illuminant :</b>	Xenon flashing lamp
<b>Nominal voltage DC :</b>	24V ± 20%
<b>Nominal current :</b>	117 mA
<b>Terminals :</b>	1.5mm <sup>2</sup>
<b>Temperature ta :</b>	-15°C... +40°C
<b>Protection category :</b>	IP67
<b>Protection class :</b>	III

acc. to DIN EN 60598-1, DIN EN 60598-2-22, DIN 4844-1 and DIN EN 1838



Xenon-flash luminaire designed for mounting in 68mm switch-box to display the safe escape route.

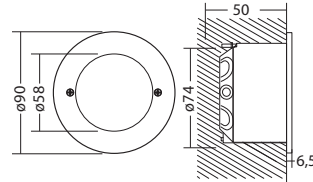
**FB 5000 WE 230V**

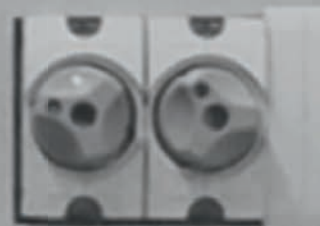
Art. no. 800 130

Recessed wall mounting

**Technical data****Material :** Stainless steel A4 brushed**Illuminant :** Xenon flashing lamp**Nominal voltage AC :** 230V ± 10%, 50/60Hz**Nominal voltage DC :** 220V ± 20%**Nominal current :** 20 mA**Power consumption :** 7.3 VA**Terminals :** 1.5mm<sup>2</sup>**Temperature ta :** -15°C...+40°C**Protection category :** IP20**Protection class :** I

acc. to DIN EN 60598-1, DIN EN 60598-2-22, DIN 4844-1 and DIN EN 1838





Einspeisung  
Batterie  
216V DC

Batterie

10AT



ACHTUNG ! Nicht unter  
ATTENZIONE  
Non aprire sotto ten  
ATTENSON  
Ne pas connecter sous  
ATTENTION ! Do not se  
load conditor

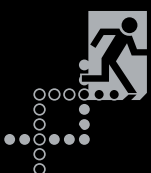




# Control Monitoring Power supply

INOTEC offers a wide range of control and monitoring systems. Modules for controlling third-party luminaires, system-independent control units and SKUs for INOTEC central power systems provide the right solution for every type of application. Different power supply units ensure a controlled power supply for the FS luminaires, or create a control voltage.

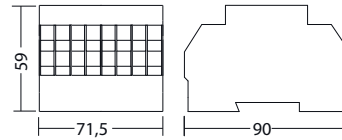
<b>Interface and control module</b>	<b>50</b>
<b>SEV</b>	<b>51</b>
<b>Change-over devices and BUS sub-station</b>	<b>53</b>
<b>D.E.R.-Controller</b>	<b>54</b>
<b>PSU</b>	<b>55</b>



Interface for connection to D.E.R. controller (max. 3 per controller). Pre-programmed escape route patterns can be activated in the D.E.R. controller via 8 input switches.  
The input voltage of the LSA 8.1 channels may be 15V–30V DC. It is switched via volt-free contacts, those of a fire alarm system, for instance.

## LSA 8.1 24V

Art. Nr. 850 007



Function-monitored control module for connection to FW99 card and a secured power supply system e.g. CPS D.E.R. 2x2.5A 230V change-over device for the INOTEC central battery system CPS 220/64/20 (consider the according part no.).  
The module can be used to switch loads of up to 120W.

### Technical data

<b>Housing material:</b>	Polycarbonate UL V0
<b>Input voltage:</b>	230V 50 Hz /60 Hz, 220V +/- 20% DC
<b>Output voltage:</b>	230V 50 Hz /60 Hz, 220V +/- 20% DC
<b>Amb. temp. range:</b>	- 15°C...+ 50°C
<b>Protection class:</b>	I
<b>Leiteranschluss:</b>	2,5mm <sup>2</sup> eindrätig oder 1,5mm <sup>2</sup> Litze mit Aderendhülse

Monitoring, supply and control module for 1–6 power LEDs for connection to the FW99 card of a D.E.R. controller (bus), and a secured power supply system e.g. CP D.E.R. 2x2.5A 230V change-over device for the INOTEC central battery system CPS 220/64/20 (consider the acc. part no.).  
Flashing function, on-/off-switching for connected LEDs.  
2-pin header for connecting LEDs.  
Also suitable for powering and controlling the 24V flash light FB 5000 24V.

### Technical data

<b>Housing material:</b>	Polycarbonate UL V0
<b>Input voltage:</b>	230V 50 Hz /60 Hz, 220V +/- 20% DC
<b>Output voltage:</b>	24V DC
<b>Amb. temp. range:</b>	- 15°C...+ 50°C
<b>Protection class:</b>	I
<b>Leiteranschluss:</b>	2,5mm <sup>2</sup> eindrätig oder 1,5mm <sup>2</sup> Litze mit Aderendhülse

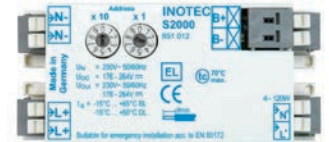
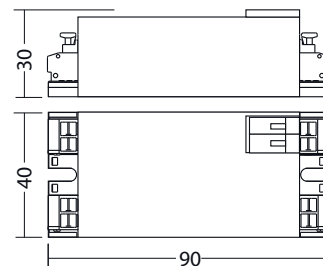
## S 2000

Art. Nr. 851 012

Art. Nr. 851 048

for FW 99 card

for CP D.E.R. 2x2.5A 230V



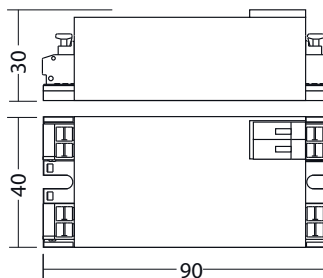
## S 2024

Art. Nr. 851 037

Art. Nr. 851 047

for FW 99 card

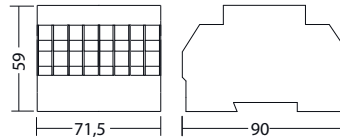
for CP D.E.R. 2x2.5A 230V



### SEV/CP D.E.R.

Art. Nr.

Module for programming, controlling, managing and testing up to 96 FS luminaires. Connection to CP D.E.R. change-over device for central battery systems CPS 220/64 and CPS 220/20. Two-line display, programming and testing buttons, red LED for fault indication. Input voltage of 48V via a controlled power supply such as PSU 48.



#### Technical data

<b>Housing material:</b>	Polycarbonate DIN rail housing
<b>Input voltage:</b>	48V
<b>Output voltage:</b>	48V
<b>Address range:</b>	SEV 01-99 Luminaires 01-96
<b>Terminals:</b>	Twin terminal 1.5mm <sup>2</sup>
<b>Amb. temp. range:</b>	- 15°C...+ 50°C
<b>Power consumption:</b>	max. 1.7W
<b>Protection category:</b>	IP 20
<b>Maße:</b>	90mm x 70mm x 58mm (HxBxT)

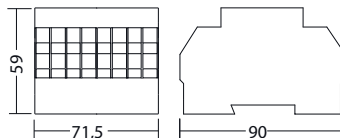
Module for programming, controlling managing and testing up to 96 FS luminaires. Connection to D.E.R.-controller via 2-wire bus line. Two-line display, programming and testing buttons, red LED for fault indication. Input voltage of 48V via a controlled power supply such as PSU 48.

### SEV

Art. Nr. 990 053

#### Technical data

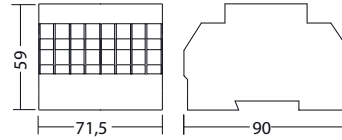
<b>Housing material:</b>	Polycarbonate DIN rail housing
<b>Input voltage:</b>	48V
<b>Output voltage:</b>	48V
<b>Address range:</b>	SEV 01-99 Luminaires 01-96
<b>Terminals:</b>	Twin terminal 1.5mm <sup>2</sup>
<b>Amb. temp. range:</b>	- 15°C...+ 50°C
<b>Power consumption:</b>	max. 1.7W
<b>Protection category:</b>	IP 20
<b>Dimensions:</b>	90mm x 70mm x 58mm (HxWxD)



Stand alone module for programming, controlling, managing and testing up to 96 FS luminaires.  
Two-line display, programming and testing buttons, red LED for fault indication.  
Wide voltage input (24V to 48V DC) for creating scenarios.  
Two scenarios can be programmed. Automatic function test.  
Volt-free fault-signalling contacts (NO-contacts)  
48V input voltage via a controlled power supply such as PSU 48.

### SEV/A

Art. Nr. 990 065



### Technical data

<b>Housing material:</b>	Polycarbonate DIN rail housing
<b>Input voltage:</b>	48V
<b>Output voltage:</b>	48V
<b>Address range:</b>	SEV 01-99 Luminaires 01-96
<b>Terminals:</b>	Twin terminal 1.5mm <sup>2</sup>
<b>Amb. temp. range:</b>	- 15°C...+ 50°C
<b>Power consumption:</b>	max. 1.7W
<b>Protection category:</b>	IP 20
<b>Dimensions:</b>	90mm x 70mm x 58mm (HxWxD)



230V change-over device for central battery systems CPS 220/64 and CPS 220/20 in combination with TFT control unit for powering, controlling and monitoring 230V D.E.R. luminaires (FL Series), S modules and FS luminaires (FS luminaires only in combination with SEV/CP D.E.R. and PSU 48).

- 2 circuits, each with 2-pole fusing
- one bus per change-over device
- individual luminaire control and monitoring
- max. 20 luminaires per circuit
- 5-core circuit wiring
- every luminaire (every device address) can have 8 input switches freely assigned to it

### CP D.E.R. 2x2,5A 230V

Art. Nr. 979 010



24V change-over device with 2 circuits for central battery systems CPS 220/64 and CPS 220/20 in combination with TFT control unit for powering, controlling and monitoring 24V D.E.R. luminaires (FL Series). Mixed operation within a circuit with 24V INOTEC LED-system luminaires.

- 2-pole fusing for each circuit
- individual luminaire control and monitoring
- max. 20 luminaires per circuit
- controlling and monitoring without data line
- luminaires can be individually programmed and addressed
- 2 output circuits in protection class III (SELV) @ 2,5A
- every luminaire can have 8 input switches freely assigned to it

### CP 24V 2x2,5A

Art. Nr. 979 009



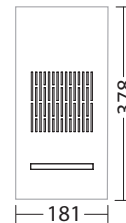
Bus sub-station CPUSB with 2 circuits for connection to central battery system CPS 220/64 in combination with TFT control unit for powering, controlling and monitoring 24V D.E.R. luminaires (FL Series). Mixed operation within

a circuit with 24V INOTEC LED-system luminaires

- 2-pole fusing per circuit
- individual luminaire control and monitoring
- max. 20 luminaires per circuit
- controlling and monitoring without data line
- luminaires can be individually programmed and addressed
- 2 output circuits in protection class III (SELV) @ 2,5A
- every luminaire can have 8 input switches freely assigned to it

### CPUSB 220/64/1-2,5/24V

Art. Nr. 922 261



Fully automated microprocessor-controlled testing device for monitoring max. 1584 addresses in combination with INOTEC FS Series luminaires, S2000 or S2024 modules and SEV segment controllers. Suitable for max. 6 cards (FW99 and Visu).

Serial data bus via a 2-core unshielded data line, e.g. YR 2 x 0.8.

Freely programmable auto function test for all connected luminaires, modules and segment controllers.

Error messages:

- defective luminaire
- communication failure
- device failure

The following functions are available as standard:

- all the test results of the past two years are automatically saved and can be retrieved at any time (up to 2000 events)
- printer interface for maintaining the required logbook as per DIN VDE 0108
- volt-free group alarm contact

Options:

The controller can be expanded with expansion modules (max. 16 cards per controller).

### Technical data

<b>Housing material:</b>	Polycarbonate
<b>Nominal voltage:</b>	230 V AC $\pm$ 10 %, 50 Hz /60 Hz 220 V DC $\pm$ 20 %
<b>Protection class:</b>	II
<b>Protection category:</b>	IP30

### Accessories

#### FW 99 module

Card for D.E.R. controller for controlling, managing and testing up to 99 bus nodes such as luminaires in the FL range, SEV segment controllers, or an S 2000 or S 2024 module.

#### Visu module

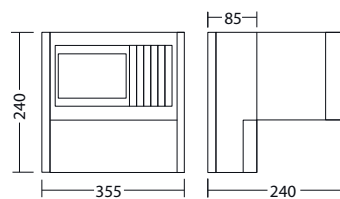
Card for D.E.R. controller as interface for data transmission to a PC with SVPCn software in association with an InoLan module for visualising a D.E.R. system.

#### INOLan module

Converter between Ethernet and serial INOTEC-RTG data bus or RS 232.

### D.E.R.-Controller

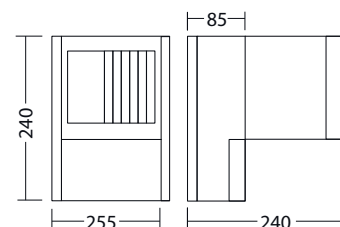
Art. Nr. 869 011



### Expansion module

Art. Nr. 851 008

### D.E.R.-Controller



### FW 99 module

Art. Nr. 851 011



### Visu-Modul

Art. Nr. 851 024

### INOLan

Art. Nr. 990 063



Controlled power supply with mains and overload indication using LED (only PSU 24 and 48-1).

Output electrically isolated in accordance with EN 60950 (Low Voltage Directive).

Suitable for switchboard installation on DIN rails.

Various models are available with different output currents to power SEV segment controllers with luminaires in the FS range (48V) and the LAS8 interface (24V).

### Technical specifications (PSU 24 and 48-1)

<b>Housing material:</b>	Thermoplastic (depending on the version)
<b>Input voltage:</b>	230 V +/- 15% AC, 184V - 260V DC
<b>Output voltage:</b>	24V (PSU 24) or 48V (PSU 48-1)
<b>Output current:</b>	1.5A (PSU 24) and 1A (PSU 48-1)
<b>Overload capacity:</b>	Short-circuit proof
<b>Amb. temp. range:</b>	-20°C ... +55°C
<b>Protection category:</b>	IP20 (terminal)
<b>Protection class:</b>	I

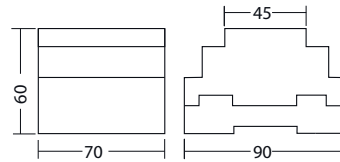
### Technical specifications (PSU 48-1.6 and 48-5)

<b>Housing material:</b>	Aluminium
<b>Input voltage:</b>	230V AC, 120V - 370V DC
<b>Output voltage:</b>	48V DC
<b>Output current:</b>	1.6A (PSU 48-1.6) and 5A (PSU 48-5)
<b>Overload capacity:</b>	Short-circuit proof
<b>Amb. temp. range:</b>	-10°C ... +60°C
<b>Protection category:</b>	IP20 (terminal)
<b>Protection class:</b>	I

### PSU 24

Art. Nr. 965 301

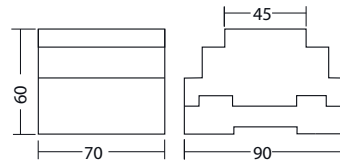
Power supply unit



### PSU 48-1

Art. Nr. 965 300

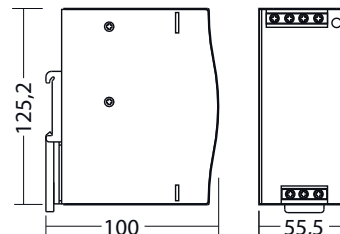
Power supply unit



### PSU 48-1,6

Art. Nr. 146 012

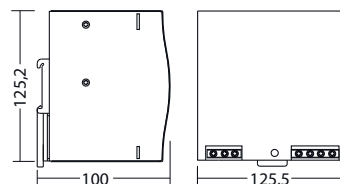
Power supply unit

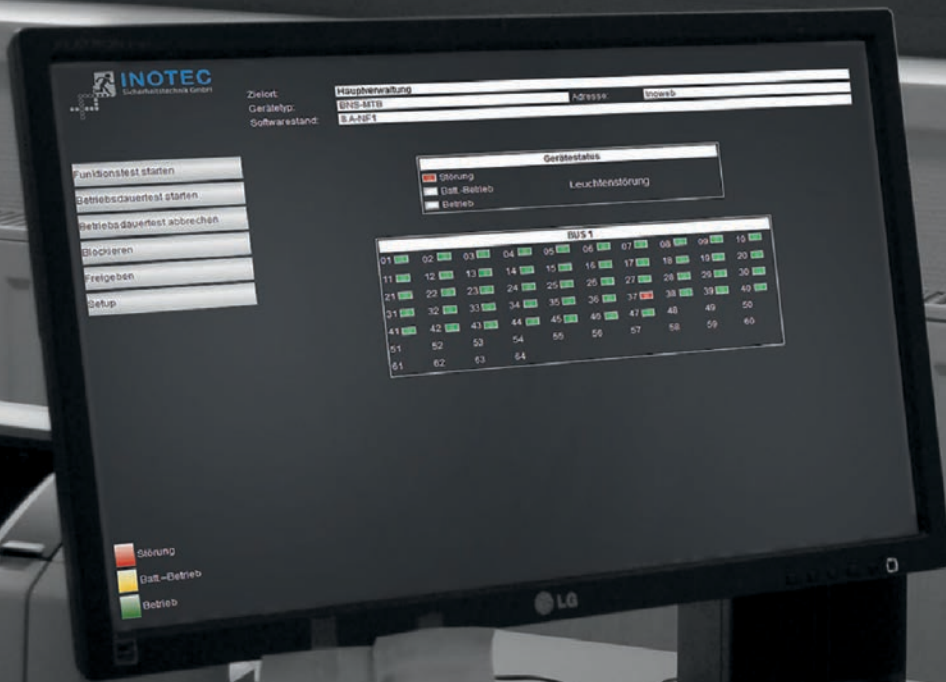


### PSU 48-5

Art. Nr. 146 013

Power supply unit







# Monitoring software

The convenient solution for centrally monitoring the D.E.R. system from your PC via a bus line and/or a network connection

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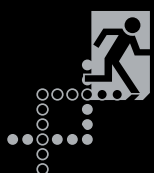
**INOView** 58

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**INOWeb / INOWeb-Control** 61

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**SVPCn** 62



# Central monitoring

## Clear and easy to use

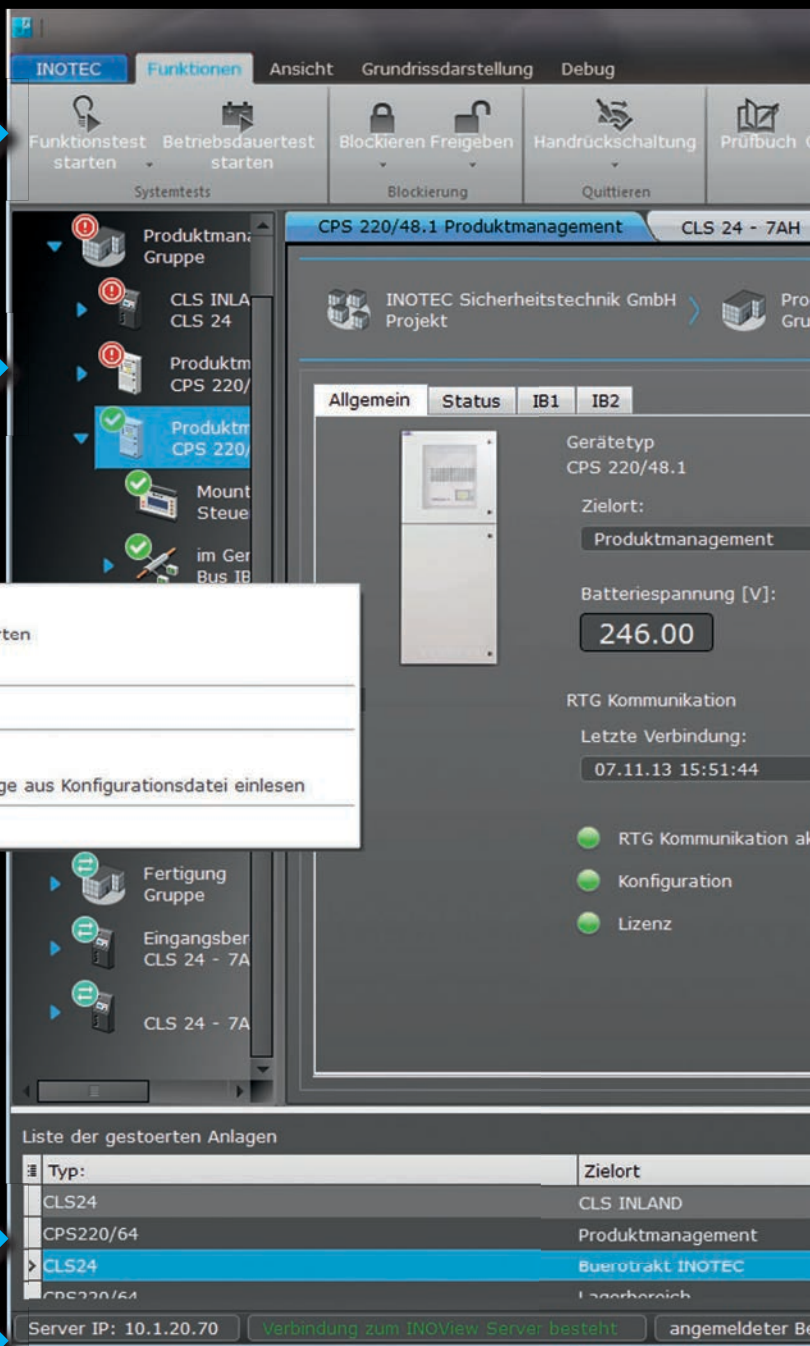
The customisable user interface makes it easy to quickly locate a fault.

The detailed view is key to its use. The outline view on the left is used to select the entry to be displayed in the detailed view. With the INOView software, multiple detailed views can be opened at the same time.

In this way, for instance, the status of a central power system can be displayed in one detailed view, while another shows the information about the battery.

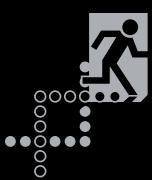
The right-hand mouse button calls up a context menu with more functions.

A list of the faulty systems shows immediately where action is needed. A double click opens the corresponding emergency system in the detailed view.



- 1 Menu bar
- 2 Tree view of the registered emergency systems
- 3 Opened detailed views
- 4 Detailed view
- 5 List of faulty emergency lighting systems
- 6 Status bar
- 7 Context menu
- 8 Navigation path
- 9 System status

- 5
- 6



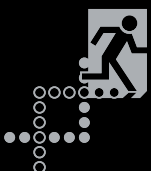
# INOView ease of use

The screenshot shows the INOView Client interface. The top menu bar includes options like 'Gerätestörungen', 'Steuerteil Einstellungen', 'Anmelden Abmelden', 'Benutzerverwaltung', 'BCS View', 'Einstellungen', and 'Hilfe'. The main area displays 'CLIS 24 CLS INLAND' and 'Produktmanagement CPS 220/48.1'. A status bar at the bottom shows 'Gesamtzustand: Betrieb' with a green progress bar, 'Batteriestrom [A]: 0.20', and 'Batteriekapazität [%]: 100.00'. A table at the bottom lists system events with columns for 'Status' and 'gestört seit'.

Status	gestört seit
Stoerung	30.10.13 09:12:27
Stoerung	07.11.13 12:00:12
Offline	30.10.13 09:12:27
Offline	30.10.13 09:12:27

Numbered callouts in the image:

- 3: Points to the 'Anmelden Abmelden' button.
- 4: Points to the 'Produktmanagement CPS 220/48.1' breadcrumb.
- 8: Points to the 'Produktmanagement CPS 220/48.1' breadcrumb.
- 9: Points to the 'Gesamtzustand: Betrieb' status indicator.



# INOView - flexible monitoring

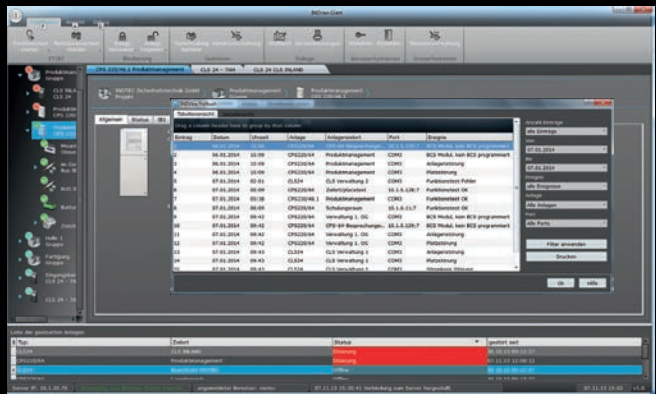
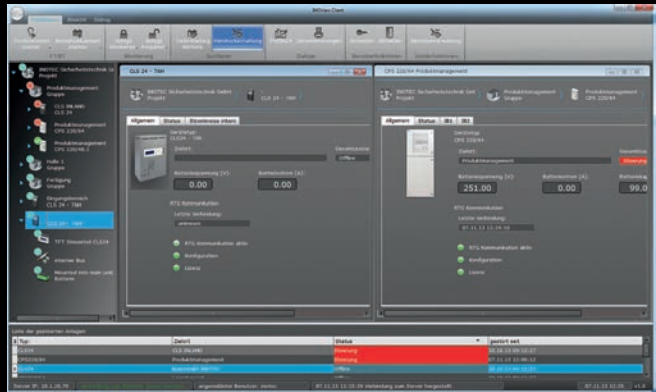
INOView is the main monitoring solution for all INOTEC emergency lighting systems. This software is used wherever a flexible application is required that can grow with the project. The devices are monitored via a 3-core RTG bus and/or a network connection.

## Everything at a glance for personal safety in the buildings

The ease of use was the main focus when developing the visualisation software INOView. Hereby the intuitive user interface was created with clearly structured system overviews and description texts. At just a glance, the user recognises the overall condition of the emergency lighting systems and may optionally quickly take measures to guarantee the safety of people in the building. The INOView software ensures transparency and provides comprehensive and detailed information on the overall and detailed system status.

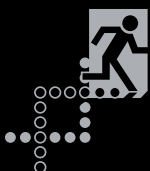
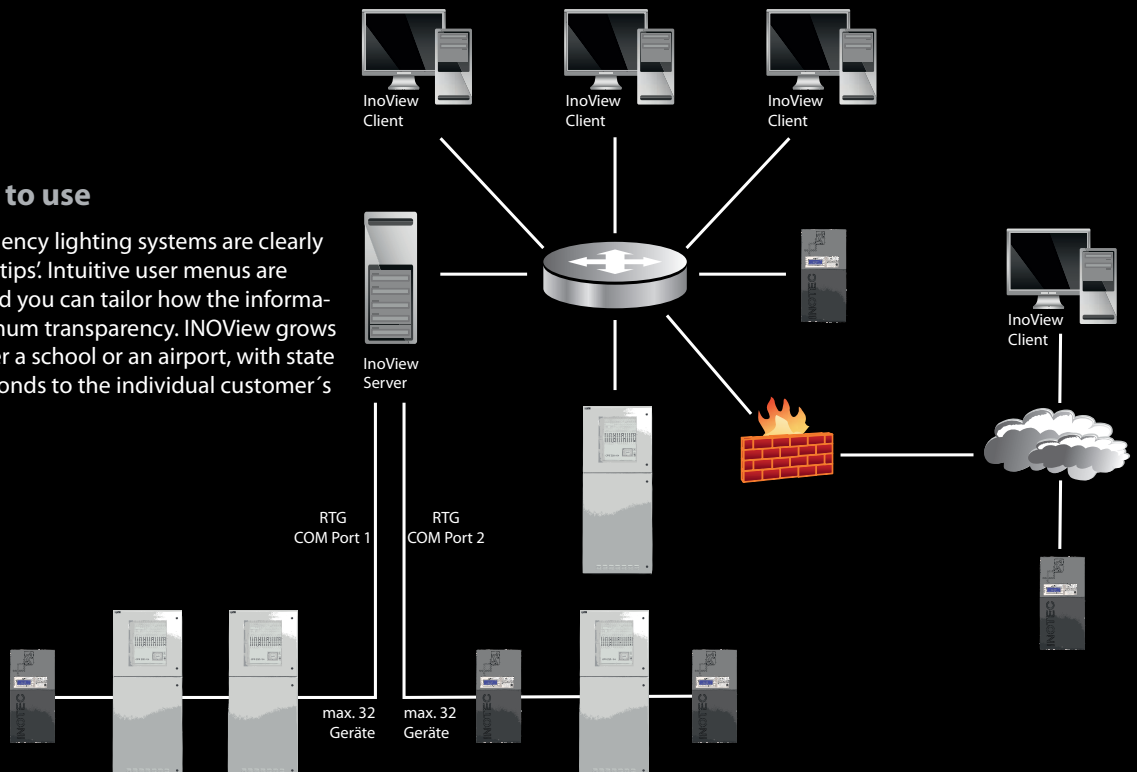
## State-of-the-art client / server architecture

State-of-the-art client / server architecture means that this is a secure, future-proof investment. Multiple users on the network can access the information in the INOView software simultaneously, via the clients. Integrated user administration protects the software against unauthorised access.



## Powerful and easy to use

With INOView, your emergency lighting systems are clearly laid out and 'at your fingertips'. Intuitive user menus are simple and easy to use, and you can tailor how the information is displayed for maximum transparency. INOView grows with its challenge. Whether a school or an airport, with state of the art technology responds to the individual customer's requirements.



# INOWeb

**INOWeb function for centrally monitoring the CPS 220/64 and CPS 220/20 central battery systems, together with the CLS decentralised emergency system over an intranet or the Internet. Connection has to be done to an existing network.**

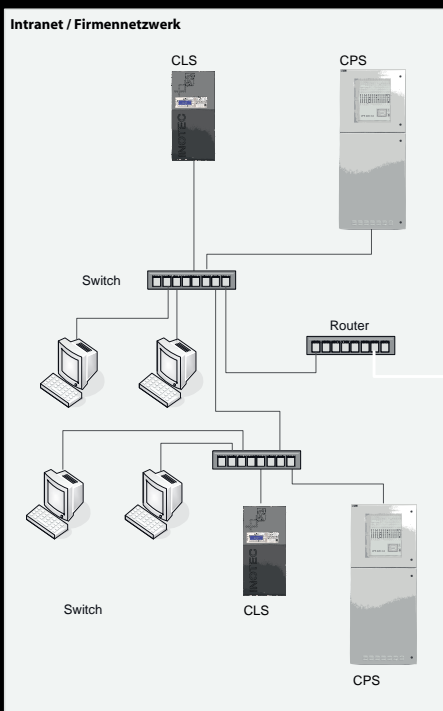
The emergency lighting systems are monitored by accessing the controller's INOWeb functionality via a web browser. The status of each system, circuit and luminaire can be checked from the (optionally) password-protected website.

With an existing connection to the Internet, it is also possible to use a PC with internet access for monitoring. Please contact your regional technical sales team for a demonstration.

## Functions

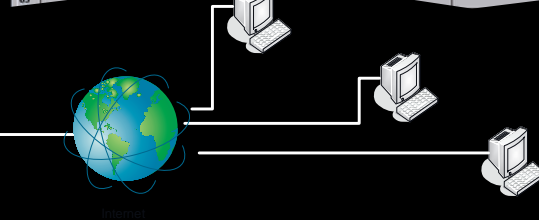
- Starting a function test/ battery duration test
- Blocking /releasing
- Failure printout
- Linking files / websites by circuit

**Using the INOWeb-Control software, complex installations with different system types can be monitored from a central location. The devices just have to be integrated into the existing network.**



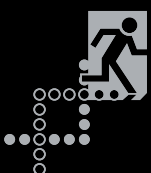
The screenshot shows the INOWeb-Control software interface with a table of system status. The table has columns for 'Nr.', 'IP', 'G.', 'ID', 'Zielort', 'Status', 'System Status', and 'Webseite'.

Nr.	IP	G.	ID	Zielort	Status	System Status	Webseite
01	epu200	1	INOTEC CLS 24 Ad-01	1 UG Verteilerraum	Betrieb	Systemfehler: Keiner	http://rg-020
02	192.100.100.114	2	INOTEC CLS 24 Ad-00	E6 Verteilerraum	Test	Systemfehler	http://192.100.100.114
03	192.100.100.111	3	INOTEC CLS 24 Ad-00	I06 Verteilerraum	Störung	Störung Stromkreis [DL und NL]	http://192.100.100.111
04	192.100.100.112	4	INOTEC CLS 24 Ad-00	[Kein Zielort vergeben]	blockiert		http://192.100.100.112
05							
06							
07							
08							
09							



## INOWeb-Control functionalities :

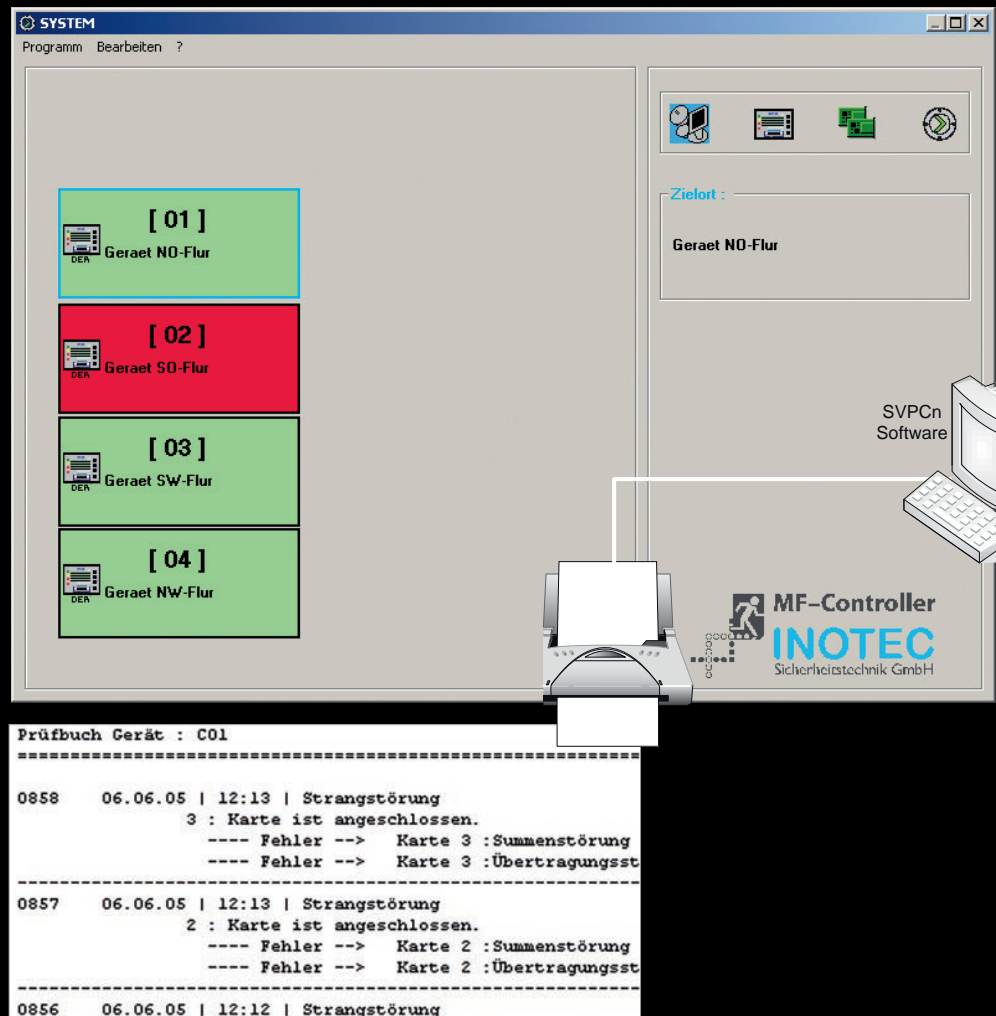
- Monitoring up to 32 INOTEC emergency lighting systems
- Automatic function/ battery duration test programmable
- Logbook function for all connected systems
- Automatic email transmission, at user-defined intervals, in case of test or failure
- Overall status of all systems is indicated by a symbol in the taskbar



# SVPCn

## Central monitoring and data backup

Central, PC-based monitoring is advisable, especially in case of complex installations. INOTEC SVPCn software supports you both when commissioning and programming your installations and when carrying out the tests and logging required in their day-to-day operation. The specific project requirements will determine what is used for connecting to the PC: the INOTEC-specific RTG bus, an existing network or the Internet.

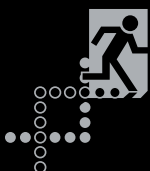


### Functionality

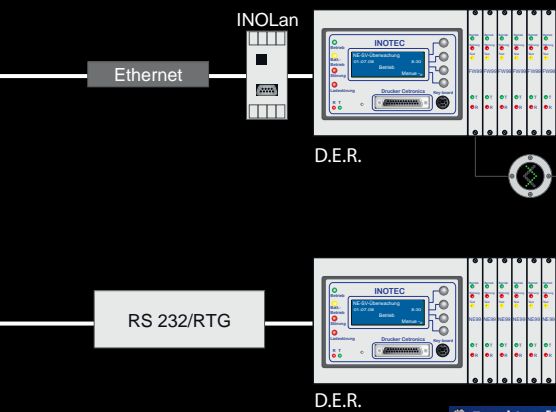
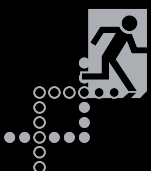
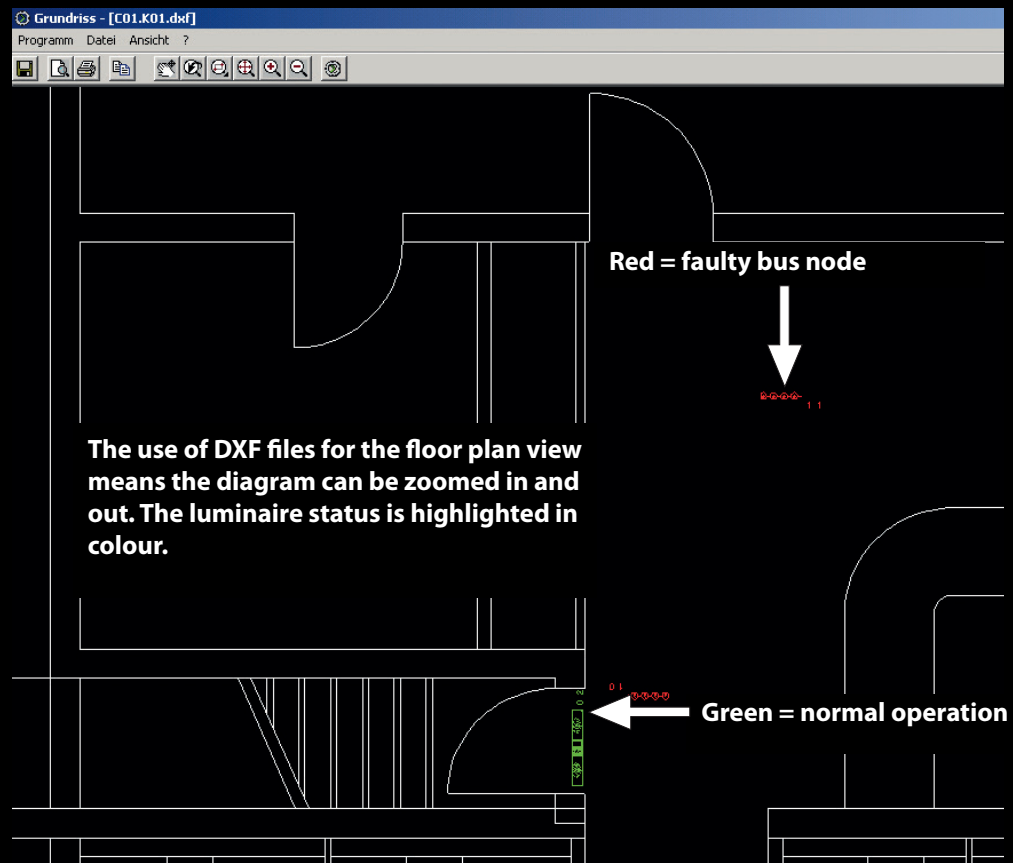
- Monitoring up to 32 D.E.R. controllers
- Individual reporting from up to 47,520 device addresses
- Automatic function test
- Zoomable floor plan view (DXF files)
- Logbook can be accessed and printed from the controllers
- Each individual luminaire can be programmed from the user interface
- Transmission via the existing Ethernet
- Programming can be password protected against unauthorised access

### System requirements

Operating system: Win98/2000/XP/Vista/7  
Business/Vista Enterprise  
Screen: VGA (640x480), 256 colours and more  
Interface: INOLan module via the RJ45 connection  
RS 232 / USB



Detailed status information is available for each luminaire. The user interface also displays their precise location reference from the controller. Every setting can be programmed in the controller or from the PC.



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