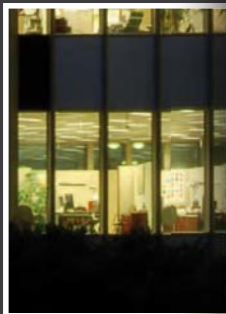
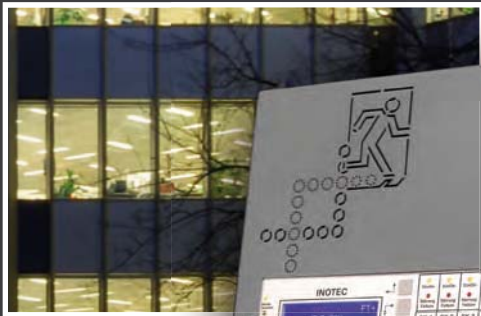
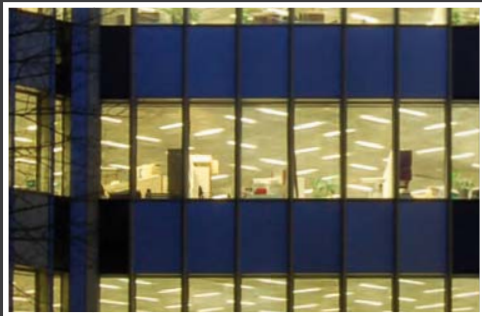


Decentral emergency- /
safety-lighting system
Type CLS 24/SV



Catalogue
CLS 24 SV

INOTEC
Sicherheitstechnik GmbH



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 contains the INOTEC emergency system CLS and complementary products. 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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CLS 24/SV

Safety target functional integrity

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.

An adaption of the system technology is needed, due to the application of LED in the section emergency lighting. LEDs provide advantages concerning durability, temperature range and use of energy.

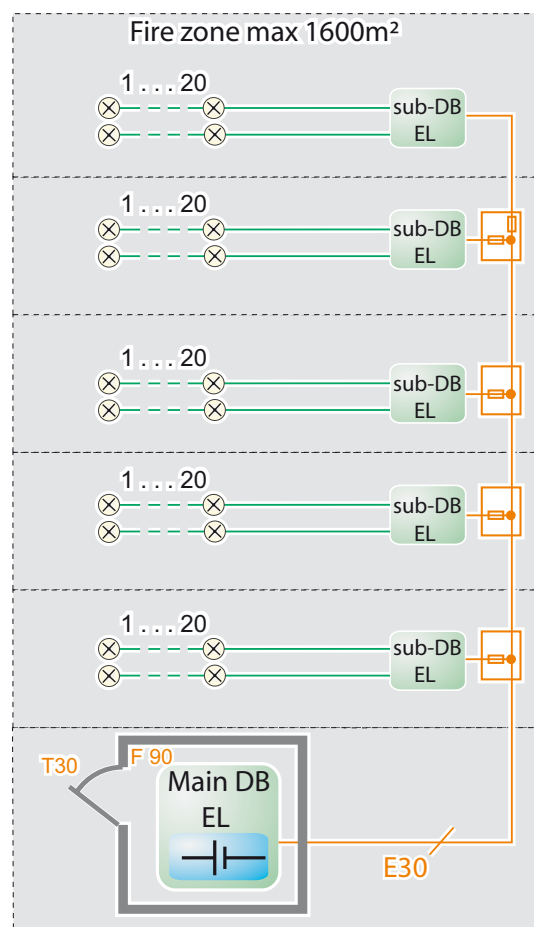
The self-sufficient CLS 24 system is designed to supply only luminaires within a fire zone. No cost-intensive circuitry is therefore required and an extremely high level of safety is achieved.

The CLS 24 system is an ideal combination, in relation to the emergency level and safety target, of the advantages of decentralized self-contained luminaires with the high handling comfort of a central battery system.

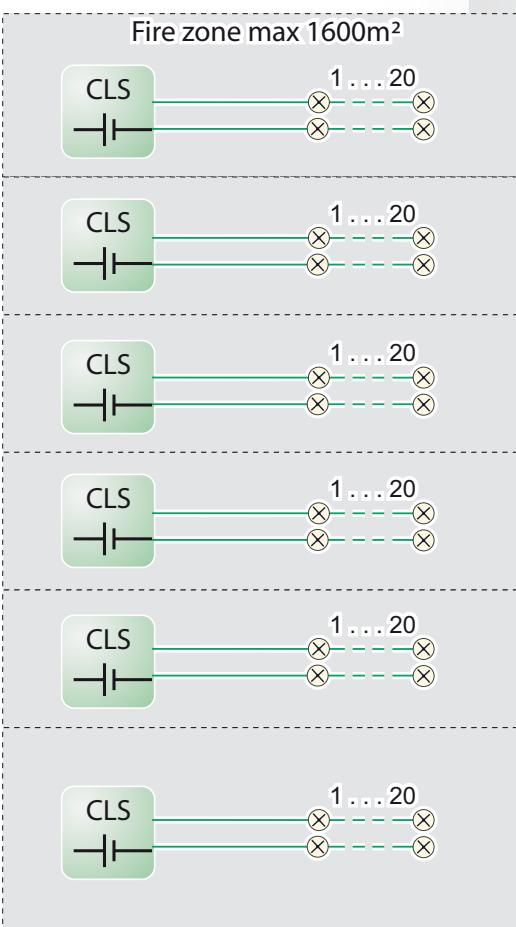
The CLS 24 system guarantees the secure supply of all emergency- and escape route luminaires during normal/battery operation as well as the automatic testing of the device and every single luminaire (up to 20 per final circuit). Even the proved "Joker-Technology-Function", to realise a combination of non-maintained and switch-maintained luminaires in one final circuit, is included in the CLS 24.

Comparison of conventional system with decentralised CLS 24 system concept

Conventional structure



Decentralized structure



Comparison safety target - Conventional and decentralized structure

In the event of main DB EL failure	→ failure of entire safety lighting
In the event of a fault in the cabling between the main DB EL and sub-DB EL	→ failure of all downstream sub-db EL and therefore of safety lighting
Due to self-contained CLS systems	→ failure of safety lighting only in affected area

- ▶ 24V emergency lighting system with automatic monitoring of the system and connected luminaires without additional data line. To supply 24V INOTEC LED luminaires.
- ▶ Self-sufficient system with "JOKER technology function": combined operation of non-maintained, maintained and switch-maintained luminaires
- ▶ Luminaires can be programmed, addressed and dimmed individually via the controller.
- ▶ Integrated logbook for recording all data for a period > 2 years
- ▶ Controller with 4 x 20 characters plain text display; configurable in various languages
- ▶ Control, management and failure detection of 20 luminaires per final circuit
- ▶ 4 final circuits in protection class III (SELV) for up to 20 luminaires
- ▶ 2 input switches can be assigned to each luminaire

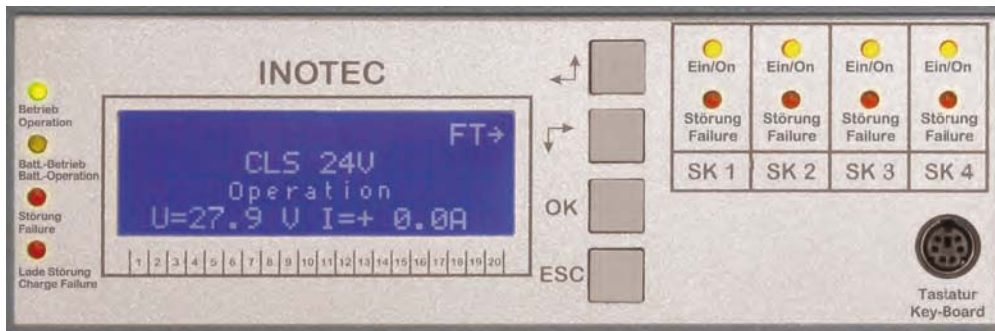


- ▶ Assignment to programmable dimming values also possible
- ▶ Status info of system and luminaires in plain text and by LEDs
- ▶ Volt-free signalling contacts for external status display
- ▶ Remote switch for blocking system
- ▶ Integrated InoWeb interface (optional)
- ▶ Central dimming (optional)

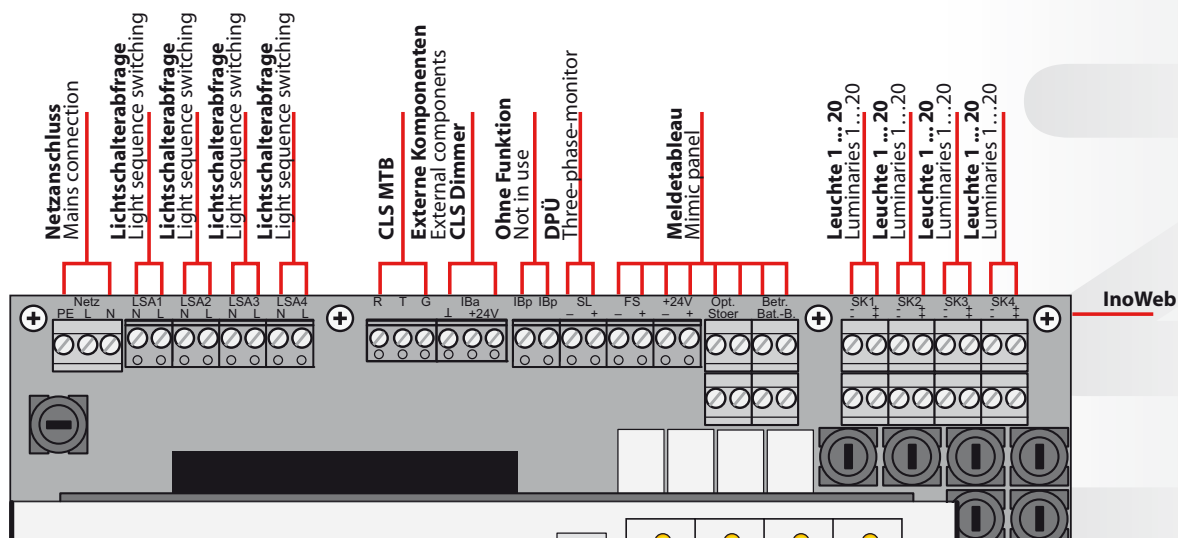
CLS 24/SV

Function, design and features

The controller, with non-volatile memory and large, 4 x 20 characters display, allows a detailed status indication of the system and of all connected luminaires. This is done plain texts and status LEDs.

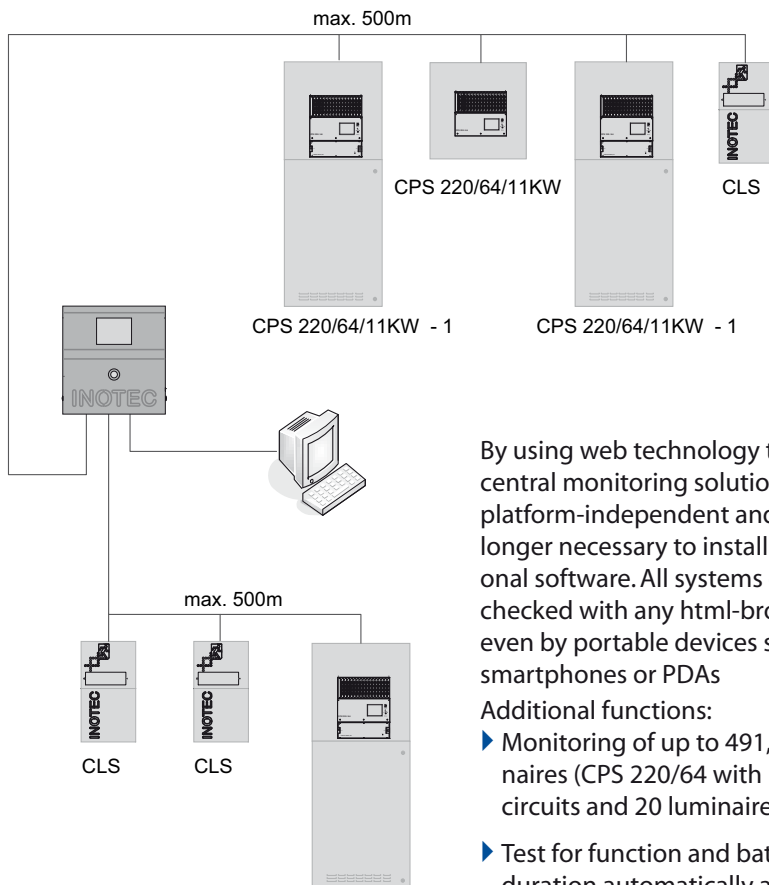
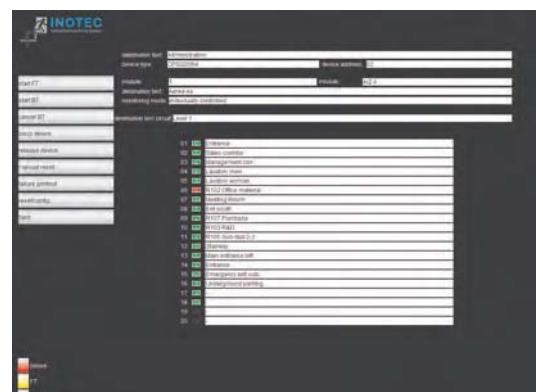
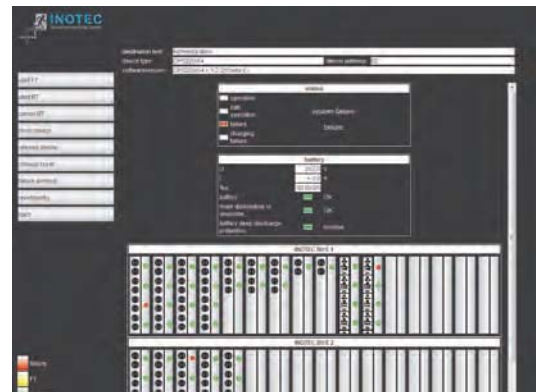
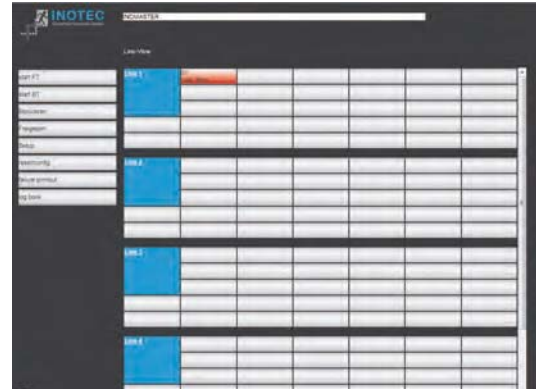


- ▶ Keyboard-interface for system/luminaire programming
- ▶ Integrated logbook storable by INOSTICK
- ▶ Several languages adjustable
- ▶ Control, management and failure detection of 20 luminaires per final circuit
- ▶ 4 buttons for manual input/requests
- ▶ Integrated 4-channel light switch application (standard and inverted)
- ▶ Monitoring by InoWeb possible
- ▶ For installation per fire zone





INOMASTER, the central monitoring solution for using the RTG-cabeling of INOTECH emergency systems. Up to 192 devices can be operated combined in 6 lines.



By using web technology the central monitoring solution is platform-independent and it's no longer necessary to install additional software. All systems can be checked with any html-browser, even by portable devices such as smartphones or PDAs

Additional functions:

- ▶ Monitoring of up to 491,520 luminaires (CPS 220/64 with 128 2-A circuits and 20 luminaires)
- ▶ Test for function and battery duration automatically activated at freely definable intervals
- ▶ Failure printout for all connected devices
- ▶ Support of CPS 220/64, CPS 220/48.1 and CLS 24
- ▶ Configuration software (installation required) for system programming available soon
- ▶ Possible to set password to protect access rights
- ▶ Overall status is displayed in INOMASTER

CLS 24/SV

Central monitoring

CLS 24/SV with integrated INOWEB function for centralised monitoring of the emergency lighting device via the Intranet/Internet. An existing network is used for connection purposes.

The emergency lighting devices are monitored by accessing the controller's INOWEB functionality (by means of the web browser). Every system, circuit and luminaire status can be checked by the password-protected (optional) website.

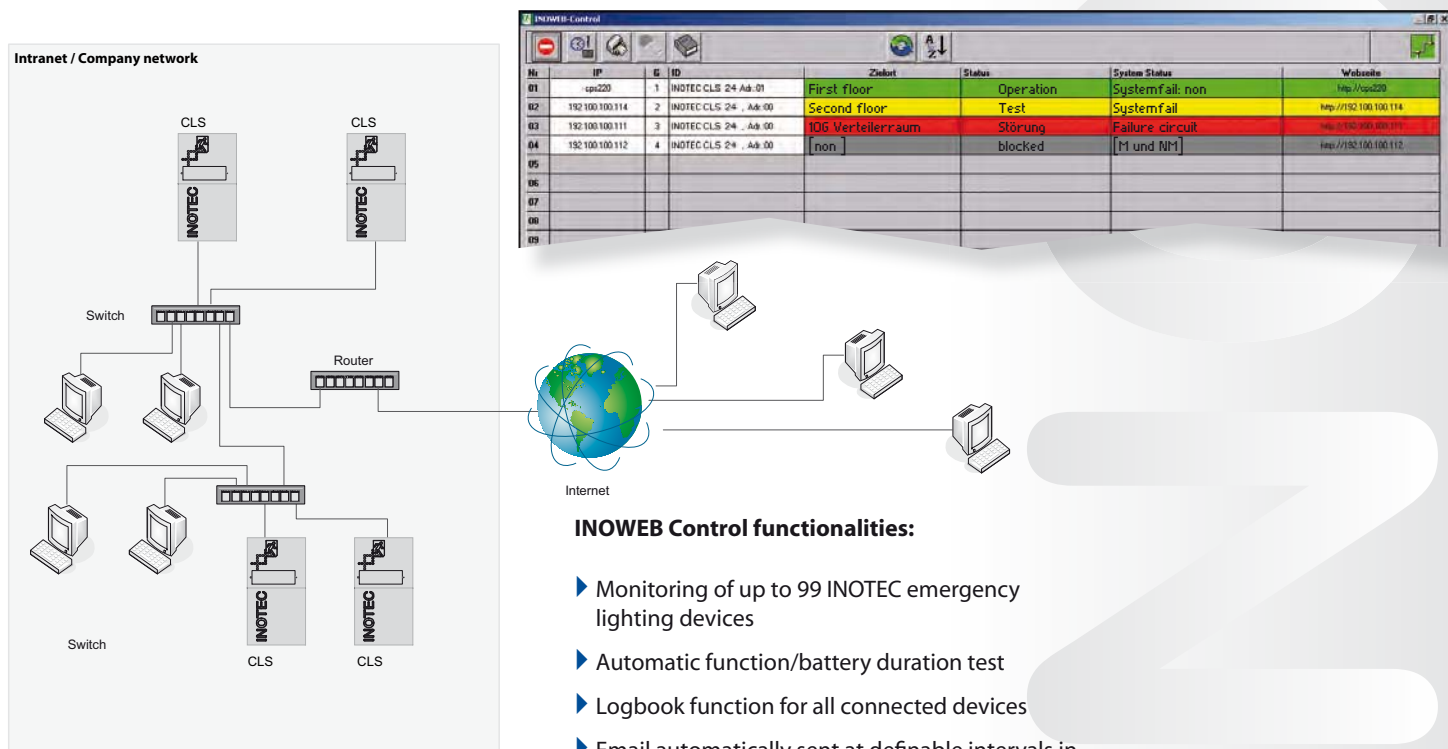
It is also possible to monitor systems on a PC with Internet access if an Internet connection is already in place. For demonstration purposes, please contact your regional technical sales team.

Functions:

- ▶ Starting a function test / battery duration test
- ▶ Blocking / Releasing
- ▶ Failure printout
- ▶ Linking of files / webpages per final circuit



It is also possible to monitor complex installations containing a range of system types from a single centralised location (using the INOWEB Control software). To perform this process, the CLS 24/SV must be connected to the available network.



Nr	IP	G	ID	Zielort	Status	System Status	Webseite
01	ip:220	1	INOTEC CLS 24 Ad. 01	First floor	Operation	Systemfail: non	Http://ip:220
02	192.100.100.114	2	INOTEC CLS 24 , Ad. 00	Second floor	Test	Systemfail	Http://192.100.100.114
03	192.100.100.111	3	INOTEC CLS 24 , Ad. 00	106 Verteilerraum	Störung	Failure circuit	Http://192.100.100.111
04	192.100.100.112	4	INOTEC CLS 24 , Ad. 00	[non]	blocked	[M und NM]	Http://192.100.100.112
05							
06							
07							
08							
09							

INOWEB Control functionalities:

- ▶ Monitoring of up to 99 INOTEC emergency lighting devices
- ▶ Automatic function/battery duration test
- ▶ Logbook function for all connected devices
- ▶ Email automatically sent at definable intervals in the event of tests or faults
- ▶ Overall status displayed (of all systems) by an icon in the task bar



Technical data:	CLS 24 - 12Ah*	CLS 24 - 24Ah*	CLS Power 24Ah	CLS Power 48Ah
Protection class: I Protection category: IP20 Perm. ambient temperature for system: -5°C bis +25°C for battery: see battery data sheet Battery: 24V DC				
Supply voltage:	1~N/PE, 230V AC ±10%, 50/60Hz	1~N/PE, 230V AC ±10%, 50/60Hz	1~N/PE, 230V AC ±10%, 50/60Hz	1~N/PE, 230V AC ±10%, 50/60Hz
Battery capacity	12 Ah	24 Ah	24 Ah	48 Ah
max. discharging current	1 h	6,6 A	6,6 A	12 A
	3 h	2,9 A	5,8 A	11,6 A
	8 h	1,3 A	2,6 A	5,2 A
Final circuits	4	4	4	4
max. load per final circuit	3 A	3 A	3 A	3 A
Noise level	ca. 40 dB	ca. 40 dB		
Conductor cross section, max. (mm²):				
Supply cable	4	4	4	4
Final circuits	4	4	4	4
Data line (RTG)	2,5	2,5	2,5	2,5
24V monitoring	2,5	2,5	2,5	2,5
Light switch application	2,5	2,5	2,5	2,5
Remote switch	2,5	2,5	2,5	2,5
+24V -Output	2,5	2,5	2,5	2,5
Voltfree contacts	4	4	4	4
Cable inlets	9 x M 20	9 x M 20	1 x M 25	1 x M 25
	6 x M 16	6 x M 16	9 x M 20	9 x M 20
	top, from behind	top, from behind	6 x M 16	6 x M 16
			top	top
Weight incl. battery	15 kg	25,7 kg	37,5 kg	56,5 kg

*also available with fanless silent converter

CLS 24/SV

Technical data CLS 24V

Luminaire	Equipment	Power values
SNP 1216	6 x LED 0.5W	0,125A
SNP 1214	4 x LED 0.5W	0,100A
SNP 1018 SNP 1118 SN 8124.1-41 SN 9124.1-41 SN 804 SN 2518	4 x LED 1W	0,200A
SNP 1016 SNP 1116 SN 6204	3 x LED 1W	0,150A
SN 6114 SN 6109 SN 6205 SNP 7188 SNP 7286	2 x LED 1W	0,115A
SNP 7186 SN 8124.1-11 SN 9124.1-11 SN 9024	1 x LED 1W	0,080A
SNP 1520 PM, WE	LED	0,070A
SNP 1520 D, P, S	LED	0,130A
SNP 1530 PM, WE	LED	0,100A
SNP 1530 D, P, S	LED	0,180A

Max. voltage drop on cable = 3,5V !!!

Fuse protection per final circuit: 5A

Max. load per final circuit: 3A

Max. wire lengths for max. voltage drop of 3,5V:

Load	Cross section	Length
3A	1,5 mm ²	49m
2A	1,5 mm ²	74m
1A	1,5 mm ²	147m
3A	2,5 mm ²	82m
2A	2,5 mm ²	123m
1A	2,5 mm ²	245m



**DPÜ
Three Phase Monitor**

To detect phase- or circuit failures in general lighting sub-distribution panels
 With volt-free failure indication contact

- LED-indication for L1, L2, L3
- free selectable phase connections
- 1 change over contact
- monitoring low voltage and mains failure in three-phase systems
- also for single-phase monitoring acc. to IEC 255
- for DIN rail mounting

For the connection to INOTEC CLS input systems.

Voltage: 230V/400V AC 50/60 Hz
 Threshold: 0,85U_N
 Perm. temp.: -20°C ... +60°C
 EMC protected acc. to EN 55015
 Dimension: H =58, W = 17,5, D = 90(mm)



**CLS Dimmer
Central Dimming modul**

Allows the ceentral dimming of luminaires in different final circuits. The programmed luminaires can be dimmed in 10% steps from 0% (luminaire off) to 100% by using:

- integrated push button
- external push button
- 0-10V control voltage

Ideal for cinemas, theatres and projection rooms.

Perm. temp.: -15°C bis +40°C
 EMC protected acc. to EN 55015
 Dimension: H =58, W = 17,5, D = 90 (mm)



INOSTICK

For programming and saving the CLS device configuration. This configuration is simple to create or change in Microsoft Windows using the provided programming software.

System requirements: Microsoft Windows XP, Microsoft Windows Vista

Min. Microsoft.NET Framework 2.0

Min. resolution: 1024 x 768 pixel

CLS 24/SV

System components and options



MTB

The MTB-remote mimic panel (MTB/AP = wall mounting, MTB/UP = recessed wall-/panel mounting) are used for external status- and failure indication of emergency lighting systems. Furthermore it allows to block the system via the integrated key-switch.

Functions:

Key-switch free programmable for:

- maintained and non maintained light ON / OFF
- maintained light ON / OFF

Displayed:

- Green LED - operation
- Yellow LED - battery operation
- Red LED - failure general

Connection to RIF-module of CPS-system; max cable length with 0,5mm² 500m

Voltage: U_N= 24V DC +/-10%

Mode: Permanent operation

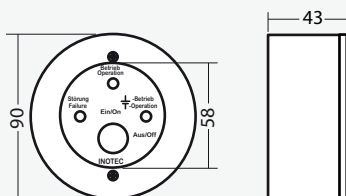
Temp.-range: -15°C ... +40°C

Protection category: IP30

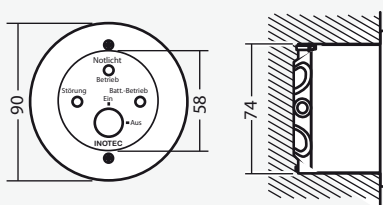
Housing: Stainless steel/polycarbonate

EMC protection acc. to EN 55015

Wall mounting (MTB/AP).



Recessed wall mounting (MTB/UP):



CLM-MTB

For external status and failure indication of up to 16 connected CLS 24 systems using a three-core RTG-BUS (system- / circuit- / luminaire-status). Manual and automatic function and battery duration test is activated centrally at freely definable intervals. The status of the emergency lighting systems is displayed via three status LEDs and on the OLED graphic display in clear text. It is also indicated acoustically by the integrated buzzer.

Functional displays:

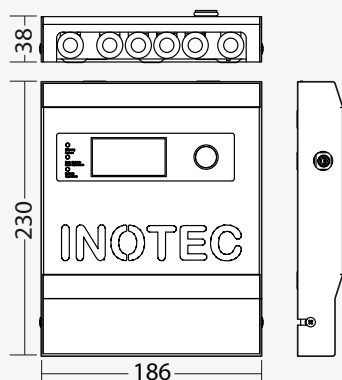
- Green LED – Operation
- Yellow LED – Battery operation
- Red LED – failure (general)

The status of the emergency lighting devices can also be signalled by four volt-free contacts:

- Operation
- Battery operation
- Failure
- Free programmable

Current loop to block or unblock the connected emergency lighting systems.

EMC protection in acc. with EN 55015





INOTEC Sicherheitstechnik GmbH
Am Buschgarten 17
D - 59 469 Ense

Tel +49 29 38/97 30-0

Fax +49 29 38/97 30-29

info@inotec-licht.de

www.inotec-licht.de

