LIFE SAFETY BROCHURES INDEX

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Soru ve talepleriniz için bize ulaşın:

Telefon : +90 216 464 20 20

E-posta : infoEGTurkey@Eaton.com

Web: https://www.eaton.com/tr/tr-tr.html

Talep Formu: http://electricalsector.eaton.com/tr-tr_EatonCare?_ga=2.196266988.110908585.1592902700-980342204.1571992380

AE-CU Adaptive Escape Routing
for Emergency Lighting

From static to adaptive escape routing

Powering Business Worldwide

*Work*Safe
Protect your people and property

Specify superior escape route management technology in complex buildings with Eaton's unique adaptive **emergency lighting evacuation system.**

Risk management for commercial buildings is evolving rapidly. An increasingly urbanised and complex environment, combined with a rising diversity of safety threats, compels the owners and managers of buildings to re-evaluate the way they protect the people, property and business continuity that may be at risk in an emergency. It is not only a legal obligation but a moral, financial and reputational imperative. In situations involving fire, terrorism, major crime, extreme weather and civil unrest, buildings must be able to detect, alert and evacuate. The safe and timely completion of this process is dependent on planning, equipment, training and infrastructure being in place. However, evacuation poses particular challenges when a proportion of occupants are unfamiliar with layout and procedures, and particularly if they are in large, densely-populated, high-risk or complex premises such as railway stations, shopping centres, airports, stadia, government buildings or leisure facilities. Research into crowd behaviour and advances in scenario-modelling technology have highlighted the need for evacuation strategies that are more adaptable to differing circumstances and buildings. In particular, fixed emergency exit routes, indicated by static signage, can lead to congestion, delays and, in some instances, may direct people towards a hazard. Panic is heightened and decision-making can be impaired. Eaton has developed an Adaptive Evacuation System that is capable of identifying the safest exit route in a given circumstance and guiding people towards it via digital signage. The ability of such systems to enhance safety has been confirmed by academic research and technical organisations.

Adaptive evacuation

Adaptive:
Capable of changing in response to changes in environment.

Building upon decades of expertise in the delivery of life safety systems, and particularly emergency lighting technologies, Eaton's Adaptive Evacuation System enables faster, safer and more agile evacuations, particularly when deployed alongside a public address/voice alarm solution that provides additional guidance. When installed, the system is programmed with a range of potential exit routes. Based on information from CCTV, fire detection and other devices that pinpoint the nature and location of a hazard, it can select the safest and fastest route for occupants and an appointed system operator within the building is given the opportunity to accept or reject this recommendation, so that occupants can be directed accordingly. Unlike 'active' and 'dynamic' systems, Eaton's technology is fully adaptable and its instructions can be modified in real-time. It has been extensively tested and conforms with current regulatory requirements, although the technology is so new that standards are still to be fully defined.

Adaptive escape sign luminaires for building evacuation as a supportive system-technical measure.

Aim of protection:

Safe self-rescue to ensure that rescue forces can take care of injured or disabled persons.

Benefits:

- More efficient, quicker and saver evacuation
- Escape routing adapt continuously to the risk
- Assistance to save oneself
- Relief of the rescuers
- Possible compensation measure for constructional scarcities

Facing the diverse risks of fire, terrorism, violent crime, extreme weather and civil unrest, the owners and managers of commercial buildings must ensure the ability to detect, alert and evacuate, which is dependent on planning, equipment, training and infrastructure being in place. However, evacuation poses additional challenges when occupants may include visitors who are not familiar with layout and procedures, and particularly if they are in large, highly-populated, high-risk or complex premises such as railway stations, shopping centres, airports, stadia, government buildings or leisure facilities. Fixed emergency exit routes, denoted by static signage, are inflexible to changing circumstances and may inadvertently direct people towards danger, as in the case of the deadly attack on Nairobi's Westgate shopping mall in 2013. Building upon decades of expertise in the delivery of life safety systems, Eaton has pioneered the development of an Adaptive Evacuation System, which is capable of switching between a number of predefined routes and guiding people towards the safest available exit in a given scenario.

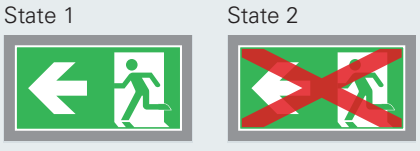
In hazard situations caused by e.g. fire, attacks, technical plant faults (e.g. gas accidents) and natural catastrophes, only safe escape routes can be used.

Static escape route guidance:

Exit sign luminaires designate the escape route out of the building always in the same direction, **independently** of a danger situation.

Dynamic escape route guidance:

Exit sign luminaires **block** unsafe escape routes in evacuation situations, thereby guiding those fleeing out of the building via the safe escape routes.



Adaptive escape route guidance:

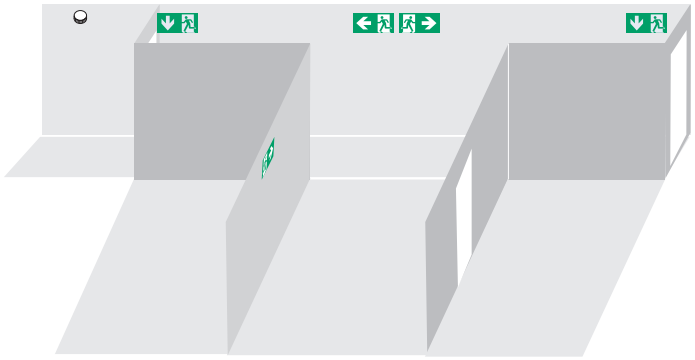
Exit sign luminaires **block** unsafe escape routes and **release these as soon as they become safe again**. This enables dynamic hazard situations (e.g. in case of fire or attacks) to be flexibly responded to.

Adaptive Evacuation

Benefits of adaptive Evacuation

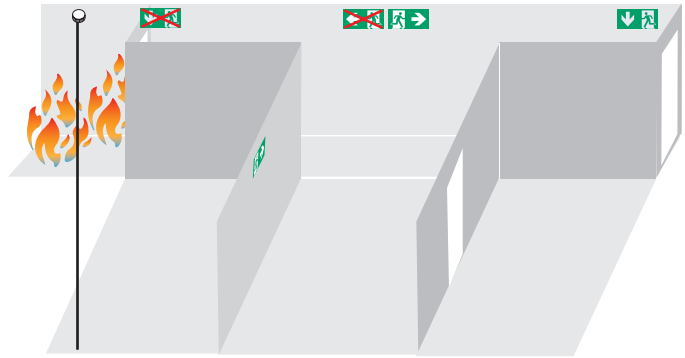
Representation of an adaptive Evacuation:

Before the occurrence:



Exit sign luminaires shows the fastet exit route.

During the occurrence:

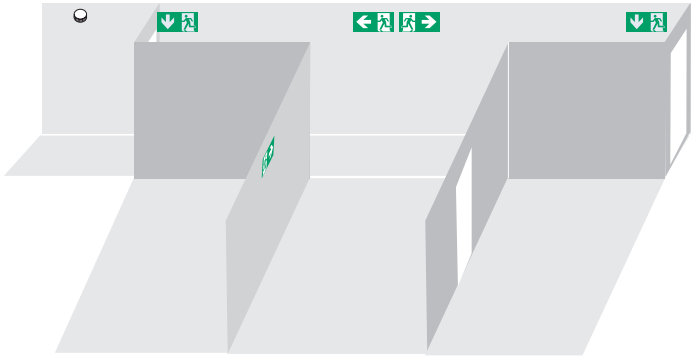


Exit sign luminaires block the unsafe exit route as they receive an information of e.g. a Fire detector, video monitoring, locking systems, evacuation systems. The safest exit route out of the building is now shown.

Alarm e.g. via:

Fire detector,
video monitoring,
locking systems,
evacuation systems

After the occurrence:



Once the exit route is open again, the exit sign luminaires shows it. Therefore it can be flexible and dynamic reacted on hazard e.g. fire or attacks.

Benefits of adaptive Evacuation:

- AE-CU technology in combination with GuideLed DXC exit sign luminaires enable dynamic danger situations such as in cases of fire, attacks or natural catastrophes to be actively responded to
- Decentral configuration of the AE-CU for up to 240 GuideLed DXC exit sign luminaires. This enables flexible, low-cost planning.
- Short circuit and open circuit resistant loop bus technology. This means no E30 cable routing of the loop bus line is required because these are fail-safe with the first fault case.
- Separate operating units for safety lighting and for the programming of scenarios provides increased safety with subsequent modifications.
- Due to separate cable routing of the 230V end circuits and 24V loop bus line to the adaptive GuideLed DXC exit sign luminaires, the hybrid operation of static and adaptive exit sign luminaires and the integration of escape luminaires and luminaires for general lighting is possible in the same circuit.
- An integrated search function automatically detects all GuideLed DXC exit sign luminaires connected up during installation.
- Self-addressing of the connected DXC luminaires simplifies the process for installation and commissioning.
- The control unit with nonvolatile program memory and large touch display automatically monitors and controls all components in the AE-CU system as well as the functionality of the connected adaptive luminaires.
- Connection of central visualization is possible via an interface.
- Networking the AE-CU with EATON fire detection technology provides system integrity between alerting and evacuation
- Already installed ZB-S systems could be expanded with the AE-CU

Adaptive Evacuation

Performance

From static to adaptive escape route guidance

System-technical measures for ensuring self-rescue in cases of evacuation have top priority in dynamic hazard situations. AE-CU technology in combination with GuideLed DXC exit sign luminaires enable dynamic danger situations such as in cases of fire, attacks or natural catastrophes to be actively responded to. The shortest route out of a building is not always the safest.

The AE-CU system reliably triggers up to 240 adaptive exit sign luminaires via a short circuit and open circuit resistant loop bus.

The hazard scenario can be freely assigned to each adaptive exit sign luminaire via the AE-CU.

The control unit with nonvolatile program memory and large touch display automatically monitors and controls all components in the AE-CU system as well as the functionality of the connected adaptive luminaires. Faults occurring are shown on the display, forwarded via signal contacts and saved to an inspection book.

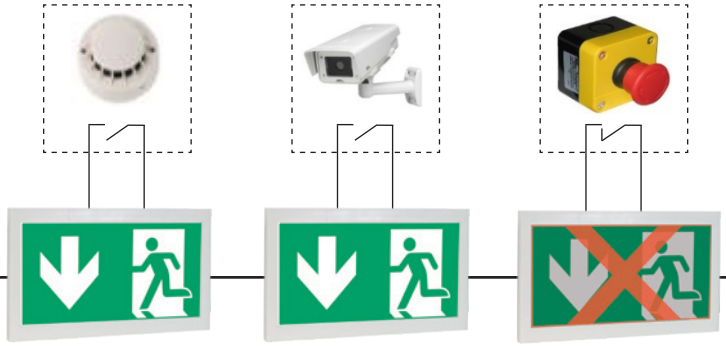
An integrated search function automatically detects all GuideLed DXC exit sign luminaires connected up during installation. Connection of central visualization is possible via an interface.

The solution for simple structured applications

Application example:
Triggering of GuideLed DX luminaires via potential-free contacts:

Potential-free signal contacts of fire detectors, CCTV or key switches to indicate areas as „locked, blocked or unsafe". As an example for areas where entry is forbidden for a specific time due to constructi-on measures. Parallel connection of the DX inputs is not possible.

ZB-S/18 C3



GuideLed DX CG-S for connection of potential-free contacts

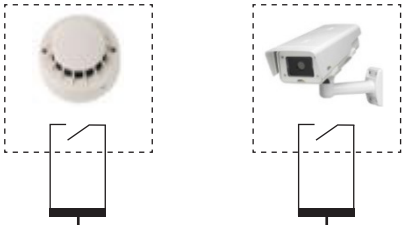
Mains lighting

Final circuit

The solution for simple and complex structured applications

Application example:
Actuation of GuideLed DXC luminaires via the loop bus:

Loop bus and power supply via separate cabling. Therefo-re the hybrid operation of DXC luminaires, static luminai-res and third-party luminaires is possible in one circuit.



AE-CU

Scenario Connection via potential-free signal contacts

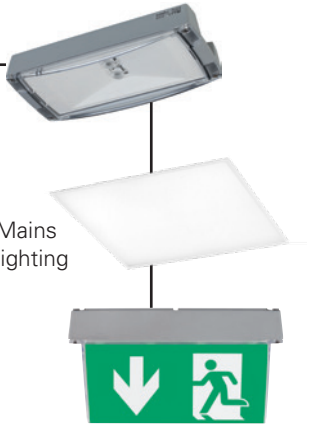
Max. Loop length: 2 km per Loop (Esample: input module)

Loop Bus

Information: Fault and scenario activ

ZB-S/18 C3

GuideLed DXC CG-S with access for loop bus



Mains lighting

Final circuit

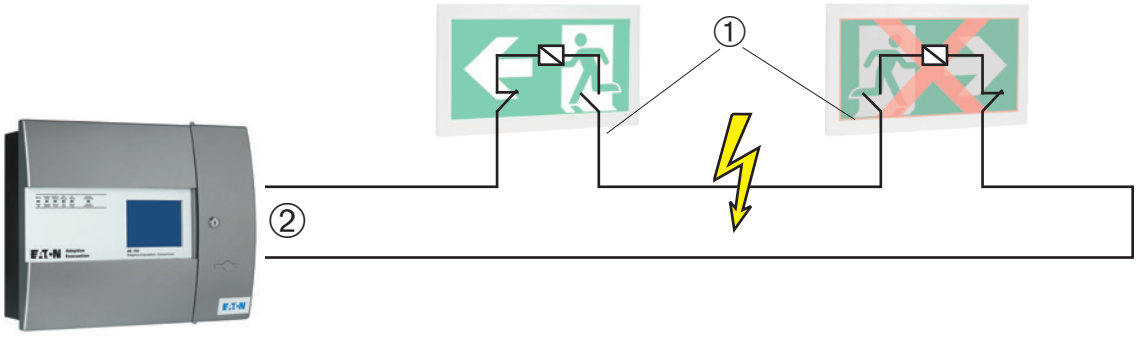
Adaptive Evacuation

control matrix

Application example:
Short circuit and open circuit resistant loop bus technology

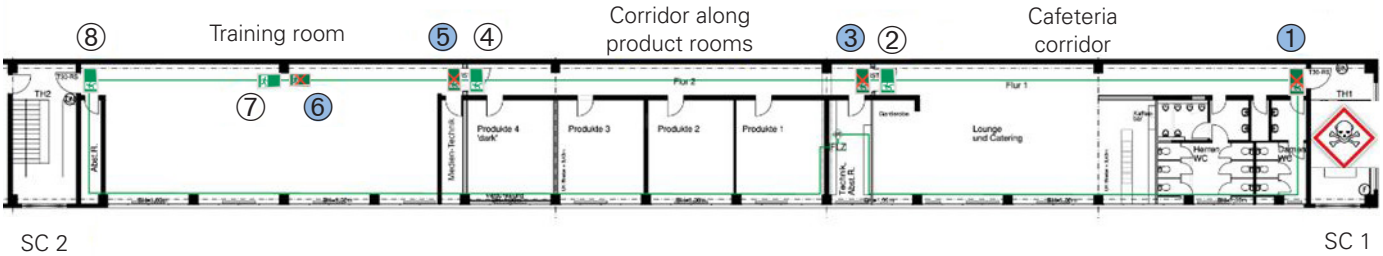
① short circuit-isolated separation

② **still** safeguarded via loop communication
after isolation of the short circuit



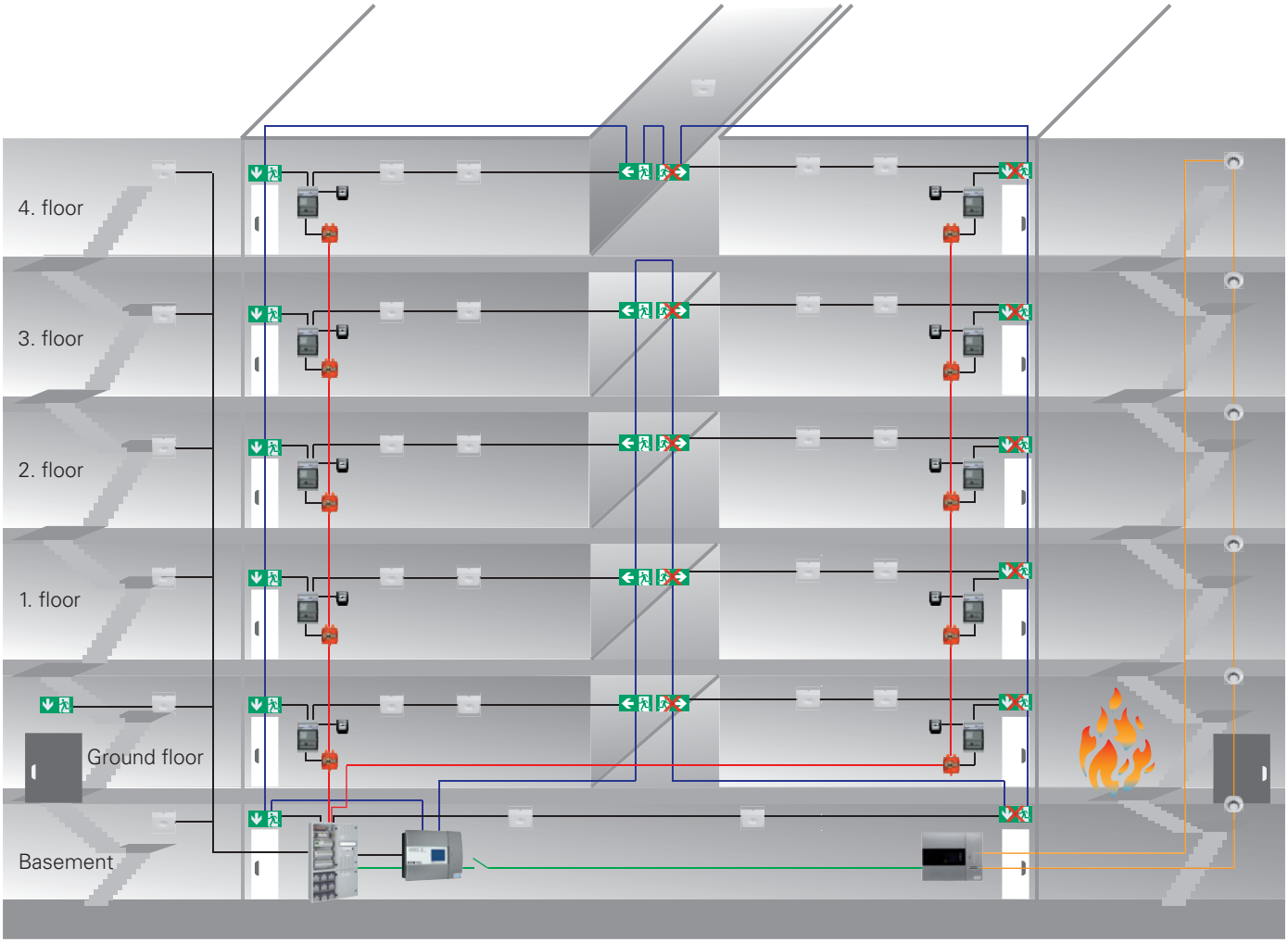
AE-CU control matrix

Example: Client training center at a workplace



No.	Luminaire description:	Scenario:	SC 1 blocked	Corridor 1 + Cafeteria blocked	Corridor 2 + product rooms blocked	Training room blocked	SC 2 blocked
①	Corridor 1, at door to SC 1		X				
②	Corridor 1, at door to corridor 2				X	X	X
③	Corridor 2, at door to corridor 1		X	X			
④	Corridor 2, at door to training room					X	X
⑤	Training room at door to corridor 2		X	X	X		
⑥	Training room middle direction corridor 2		X	X	X		
⑦	Training room middle direction SC 2						X
⑧	Training room at door to SC 2						X

Adaptive evacuation – installation example



* Due to simplifocation, only one circuit is shown pro fire zone/staircase/flat

= adaptive exit sign luminaire

= active adaptive exit sign luminaire

= escape luminaire

= central fire alarm system

= fire detector

= meter reader

= Luminaire circuit*

= loop bus

= fire detection bus

= E30 cable

= detection scenario

Adaptive Evacuation

AE-CU-W wall housing

AE-CU-W

AE-CU-W

Adaptive Evacuation Control Unit for wall mounting with integrated battery-supported power supply using loop technique for controlling addressable adaptive exit sign luminaires with 230V / 216V AC/DC technology for safety lighting systems acc. to DIN VDE 0100-560, DIN EN 50172 and V DIN V VDE 0108-100. With automatic testing device and monitoring of loop bus communication and individual display of condition and name of loop BUS connection per GuideLed DXC luminaire.

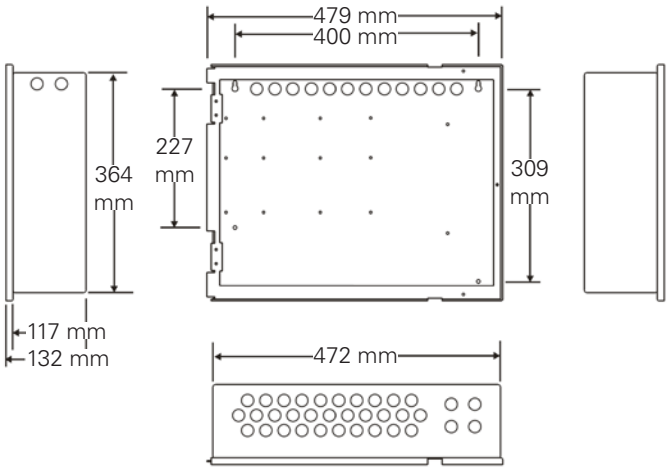
- Adaptive system – Escape routing adapt continuously to the risk
- Self-addressing of the connected DXC luminaires simplifies the process for installation and commissioning
- Simple handling by Touch Display and optional PC programming software
- AE-CU for the adaptive control of up to 240 GuideLed DXC luminaires
- Four short circuit and open circuit resistant loop lines each with 60 GuideLED DXC luminaires
- Two scenarios freely programmable for building evacuation, factory provided integrated. More than two scenarios on request
- A maximum of six ZB-S/US-S systems can be connected per AE-CU. More than six ZB-S systems on request
- Automatic software address-setting of all GuideLed DXC luminaires for scenario control
- Number of scenarios could be extended via scenario boxes with 8 or 16 scenarios
- Number of scenario inputs individual extendable
- Functionality also at power failure by inbuilded battery suppply
- Universal applicable and with hazard alert systems combinable by potential free scenario inputs
- No E30 cable routing of the loop bus line is required because these are fail-safe with the first fault case

Primary rated voltage	230 V AC +10%,-15%
Primary rated current	75 mA
Nominal frequency	50 Hz
Protection rating	IP 30
Insulation class	I
Ambient temperature	-5°C to+40°C
Secondary rated voltage	18,5 V- 29,5 V
Battery	2 x 12 V / 12 Ah
Max. battery current	3.5 A
Charge characteristic	Constant voltage temperature-compensated
Min. backup power time	30 h
Weight with battery	14 kg
Dimensions (HxWxD in mm)	395 x 495 x 180
Basic housing material	Sheet steel, powder-coated
Material of front	Plastic
Inputs	
Addressable loop line	4
Scenario active inputs	2 (more on request)
Maximum ring length	2,000 m / I(ST)Y 4 x 2 x 0.8 mm
Maximum number of GuideLed DX/ DXC luminaires per loop	60
Outputs	
Zero-potential changeover contact	2
Contact load	24 V / 1 A
Fuse	1.35 A

Ordering details

Type	Scope of supply	Order No.
AE-CU-W	Surface- / Recessed mounted wall housing	40071361359

Dimensions in mm



1 LED displays:

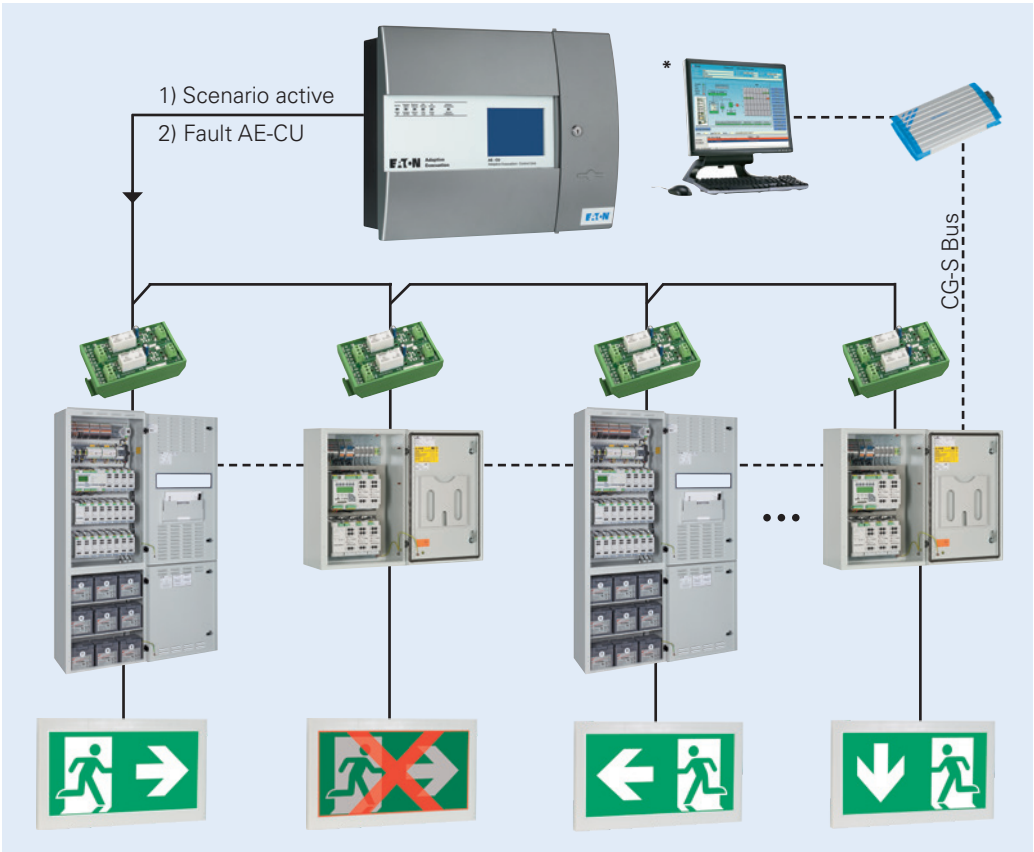
Power On, Scenario Active, General Fault, CPU Fault, Power Fault, General Disablement

2 Touch display, operating messages:

Scenario Active, Fault, Disablement

3 Fault messages:

Battery fault (AE-CU wall assembly), double address, earth fault, loop short circuit, charge fault, mains fault, loop communication fault, loop driver fault, trouble fault relay, CPU fault, loop overload, loop break at address, break-loop +loop



* At connection of a CGVision the messages „Scenario active" and „sum failure AE-CU"are shown on the control unit of the systems and on the CGVision. This messages are also listed in the test book with date and time.

Adaptive Evacuation

AE-CU-E installation variant

AE-CU-E

AE-CU-E

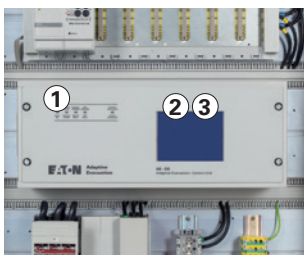
Adaptive Evacuation Control Unit for assembly in ZB-S/18-AE units using loop technique for controlling addressable adaptive exit sign luminaires with 230V / 216V AC/DC technology for safety lighting systems acc. to DIN VDE 0100-560, DIN EN 50172 and V DIN V VDE 0108-100. With automatic testing device and monitoring of loop bus communication and individual display of condition and name of loop BUS connection per GuideLed DXC luminaire.

Primary rated voltage	28.5 V/DC
Primary rated current	4.2 A
Protection rating	IP 20
Insulation class	I
Ambient temperature	-5°C to+40°C
Secondary rated voltage	18.5 V- 29.6 V
Weight	8 kg
Dimensions (HxWxD in mm)	200 x 500 x 190
Material	Sheet steel, powder-coated
Inputs	
Addressable loop line	4
Scenario active inputs	2 (more on request)
Maximum ring length	2,000 m / I(ST)Y 4 x 2 x 0.8 mm
Maximum number of GuideLed DX/ DXC luminaires per loop	60
Outputs	
Zero-potential changeover contact	2
Contact load	24 V / 1 A
Fuse	1.35 A

Ordering details

Type	Scope of supply	Order No.
*AE-CU-E	Installation variant for ZB-S/18-AE	40071361360

*note: not suitable for AT-S+ and LP-STAR systems



1 LED displays:

Power On, Scenario Active, General Fault, CPU Fault, Power Fault, General Disablement

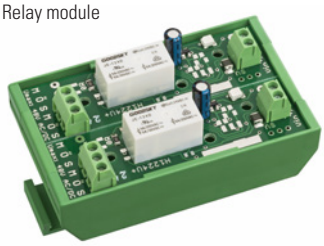
2 Touch display, operating messages:

Scenario Active, Fault, Disablement

3 Fault messages:

Battery fault (AE-CU wall assembly), double address, earth fault, loop short circuit, charge fault, mains fault, loop communication fault, loop driver fault, trouble fault relay, CPU fault, loop overload, loop break at address, break-loop +loop

Relay module



Relay module

Information units ‚scenario active' and ‚fault' are reported to the ZB-S by the AE-CU via the relay module (installed in a ZB-S/US-S). Six ZB-S/US-S can be connected per AE-CU. More on request.

Ordering details

Type	Scope of supply	Order No.
Relay module	Relay module connection set for use per ZB-S/US-S for connection to a AE-CU	40071361422

*Note: Relay module must be mounted externatly at sub stations with functional integrity.

Adaptive Evacuation – AE-CU-W and AE-CU-E

Description

AE-CU-W

AE-CU-W

Adaptive Evacuation Control Unit AE-CU-W for wall mounting with integrated battery-supported power supply using loop technique for controlling addressable adaptive exit sign luminaires with 230V / 216V AC/DC technology for safety lighting systems acc. to DIN VDE 0100-560, DIN EN 50172 and V DIN V VDE 0108-100. With automatic testing device and monitoring of loop bus communication and individual display of condition and name of loop BUS connection per GuideLed DXC luminaire.

Developed, manufactured and tested according to ISO 9001.

Pre-equipped for connection of 4 short circuit-resistant and open circuit resistant, faile-safe loop lines each for control of 60 adaptive exit sign luminaires and recording of two scenarios (more scenarios on request).

Free assignment of two scenarios for each individual adaptive exit sign luminaire via RS 232 interface and Windows-based configuration software.

Touchscreen display for display of operating states and operation of the controller.

Slot for network card

2 monitored outputs for scenario active for BMS connection

1 potential-free changeover contact General fault for BMS connection

1 x RS 232 interface

1 interface for optional protocol printer

Earth fault monitoring

Technical data:

Mains voltage: 230 V AC / 50 Hz

Power supply unit: 24 V DC / 3.0 A

Emergency power supply: 2 x 12 V / 12 Ah

Dimensions: W 497 x H 397 x D 180 mm

Type: CEAG AE-CU-W

Manufacturer: EATON

AE-CU-E

AE-CU-E

Adaptive Evacuation Control Unit AE-CU-E for assembly in ZB-S/18-AE units using loop technique for controlling addressable adaptive exit sign luminaires with 230V / 216V AC/DC technology for safety lighting systems acc. to DIN VDE 0100-560, DIN EN 50172 and V DIN V VDE 0108-100. With automatic testing device and monitoring of loop bus communication and individual display of condition and name of loop BUS connection per GuideLed DXC luminaire.

Developed, manufactured and tested according to ISO 9001.

Pre-equipped for connection of 4 short circuit-resistant and open circuit resistant, faile-safe loop lines each for control of 60 adaptive exit sign luminaires and recording of two scenarios (more scenarios on request).

Free assignment of two scenarios for each individual adaptive exit sign luminaire via RS 232 interface and Windows-based configuration software.

Touchscreen display for display of operating states and operation of the controller.

Slot for network card

2 monitored outputs for scenario active for BMS connection

1 potential-free changeover contact General fault for BMS connection

1 x RS 232 interface

Earth fault monitoring

Technical data:

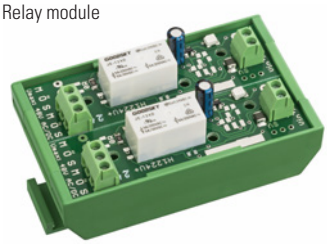
Supply voltage:
28,5 V DC

Dimensions: W 500 x H 200 x D 180 mm

Type: CEAG AE-CU-E

Manufacturer: EATON

Relay module



Relay module

Relay module for top hat rail installation, for connection of a central battery system of type ZB-S to the AE-CU via two zero-potential changeover contacts. With LED display for switching state of the relay.

Technical data:

Operating voltage:
22 V DC to 26 V DC

Current consumption:
7 - 9 mA

Ambient temperature:
-0°C to +55°C

SELV protection

Material: PCB material, PC for the plastic parts

Maximum of six relay modules per AE-CU

Dimensions:
H 77 x W 45 x D 40 mm

Type: CEAG Relay module

Manufacturer: EATON

Programming, commissioning and instruction

Programming and commissioning of the AE-CU by CEAG Service after successful installation by the electrical contractor and presentation of the scenario control matrix. Instruction of operating personnel regarding AE-CU device functionality.

Type: Programming, commissioning and instruction

Manufacturer: EATON

GuideLed DX 10011 CG-S

Wall mounting

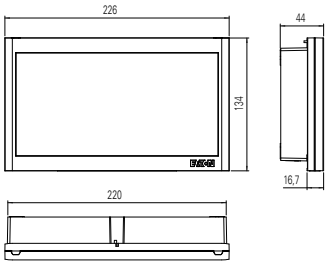
GuideLed DX 10011 CG-S

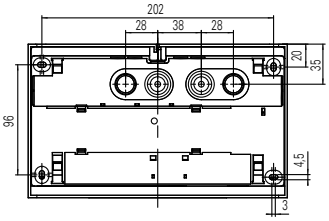
- Escape sign luminaire with LED Lightguide technology for wall-mounting.
- Additional function: Displaying a red 'X' to signify an area as closed or blocked
- Activated by a switching input on the supply module.
- Upgraded perception of the exit sign luminaire
- GuideLed 10011DX: connection to local input, e.g. smoke detector or panic switch via potential free contact
- Increased visibility in bright surroundings possible via additional selectable function modes, e.g. flashing red 'X'.
- Very good perceptibility on account of high luminance of the white contrasting colour > 500 cd/m² in keeping with standard ISO 3864-1 and high uniformity Lmin/Lmax > 0.8
- Reduced battery costs on account of especially low power consumption
- Minimum service requirement due to high service life of the LEDs (50 000 hours)
- Installation of the LED pictogram without tools on the mounting set.
- Without power supply: still visible pictogramm

GuideLed DX 10011 CG-S

Viewing distance	20 m
Luminous Φ_E/Φ_N at the end of rated operating time	100 %
Housing material	PC, PMMA
Housing colour	Light grey RAL 7035
Weight	0.65 kg
Type of mounting	Wall mounting
Connection terminal	Mains 3 x 2 x 2.5 mm² Switch input 2 x 2 x 1.5 mm²
Connection voltage	220 - 240 V AC, 50/60 Hz 176 V - 275 V DC
Current consumption - battery operation (220 V)	16 mA
Power consumption mains operation (apparent power / effective power)	8.0 VA / 3.9 W
Permissible ambient temperature	-20 °C to +40 °C
Light source	LED batten

Dimensions in mm





Please observe a distance of 10 mm above for mounting!

Ordering details - fastening set

Type	Scope of supply (LED pictograms must ordered seperate)	Order No.
GuideLed DX 10011 CG-S	Wall mounting set for GuideLed DX 10011 CG-S, Surface mounting, including LED supply with additional switching input and CG-S technology (20 addresses)	40071354646

Ordering details - LED pictograms (fastening set required)

Type	Scope of supply	Order No.
PL acc. ISO 7010 [1]	LED-Piktogramm für GuideLed DX 10011 CG-S, Pfeil links (PL) gem. ISO 7010, 20 m	40071354681
PR acc. ISO 7010 [1]	LED-Piktogramm für GuideLed DX 10011 CG-S, Pfeil rechts (PR), gem. ISO 7010, 20 m	40071354682
PU acc. ISO 7010 [1]	LED-Piktogramm für GuideLed DX 10011 CG-S, Pfeil unten (PU), gem. ISO 7010, 20 m	40071354683
PO acc. ISO 7010 [1]	LED-Piktogramm für GuideLed DX 10011 CG-S, Pfeil oben (PO), gem. ISO 7010, 20 m	40071354684

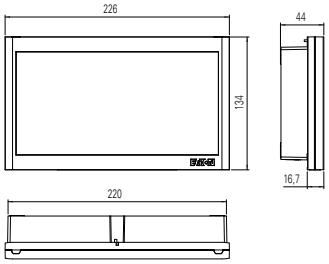
[1] with additional option: red X

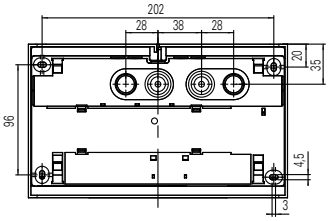
GuideLed DXC 10011 CG-S

- Escape sign luminaire with LED Lightguide technology for wall-mounting.
- Additional function: Displaying a red 'X' to signify an area as closed or blocked
- Activated by a switching input on the supply module.
- Upgraded perception of the exit sign luminaire
- GuideLed 10011DXC: connection to Eaton's Adaptive Evacuation with use of the EATON AE-CU via integrated bus interface
- Increased visibility in bright surroundings possible via additional selectable function modes, e.g. flashing red 'X'.
- Very good perceptibility on account of high luminance of the white contrasting colour > 500 cd/m² in keeping with standard ISO 3864-1 and high uniformity Lmin/Lmax > 0.8
- Reduced battery costs on account of especially low power consumption
- Minimum service requirement due to high service life of the LEDs (50 000 hours)
- Installation of the LED pictogram without tools on the mounting set.
- Without power supply: still visible pictogramm

GuideLed DXC 10011 CG-S

Dimensions in mm





Please observe a distance of 10 mm above for mounting!

Viewing distance	20 m
Luminous Φ_E/Φ_N at the end of rated operating time	100 %
Housing material	PC, PMMA
Housing colour	Light grey RAL 7035
Weight	0.65 kg
Type of mounting	Wall mounting
Connection terminal	Mains 3 x 2 x 2.5 mm² bus interface 2 x 2 x 1.5 mm²
Connection voltage	220 - 240 V AC, 50/60 Hz 176 V - 275 V DC
Current consumption - battery operation (220 V)	16 mA
Power consumption mains operation (apparent power / effective power)	8.0 VA / 3.9 W
Permissible ambient temperature	-20 °C to +40 °C
Light source	LED batten

Ordering details - fastening set

Type	Scope of supply (LED pictograms must ordered seperate)	Order No.
GuideLed DXC 10011 CG-S	Wall mounting set for GuideLed DXC 10011 CG-S, Surface mounting, including LED supply and CG-S technology (20 addresses), with integrated bus interface for connection to an AE-CU	40071355085

Ordering details - LED pictograms (fastening set required)

Type	Scope of supply	Order No.
PL acc. ISO 7010 [1]	LED-Piktogramm für GuideLed DX 10011 CG-S, Pfeil links (PL) gem. ISO 7010, 20 m	40071354681
PR acc. ISO 7010 [1]	LED-Piktogramm für GuideLed DX 10011 CG-S, Pfeil rechts (PR), gem. ISO 7010, 20 m	40071354682
PU acc. ISO 7010 [1]	LED-Piktogramm für GuideLed DX 10011 CG-S, Pfeil unten (PU), gem. ISO 7010, 20 m	40071354683
PO acc. ISO 7010 [1]	LED-Piktogramm für GuideLed DX 10011 CG-S, Pfeil oben (PO), gem. ISO 7010, 20 m	40071354684

[1] with additional option: red X

AE-CU with loop bus technology

GuideLed DX 10011 CG-S

GuideLed DX 10011 CG-S

GuideLed DX 10011 CG-S

One-sided LED exit sign luminaire in keeping with German / European standards EN 60598-1, DIN EN 60598-2-22, DIN 4844-1 and DIN EN 1838 with additional function for displaying a red 'X' to signify an area as closed or blocked. With wall surface mounting set.

Exit sign in LED lightguide technology for especially uniform and

bright illuminationof the pictogram:

Lm >= 500 cd/m² of the white contrasting colour and

Lm >= 200 cd/m² across the entire pictogram

Uniformity Lmin/Lmax > 0.8.

Additional lightguide for displaying a red 'X'.

Increased visibility possible in bright surroundings with complex visual distractions via additional selectable function modes, e.g. flashing red 'X'. Additionally, the escape sign will be dimmed during display of red 'X'.

High service life ensured by optimised LED operating conditions.

Increased safety ensured by use of high life time LEDs and optimized LED operating conditions.

Minimum service requirement due to high service life of the LEDs (50 000 hours).

With high light efficiency > 110 lm/W for reduced connected load.

Reduced battery costs on account of especially low power consumption.

Without power supply: still visible pictogramm.

Slender design with low mounting height of only 44 mm including pictogram and mounting set.

Installation of the LED pictogram without tools on the surface mounting set.

Special LED converter with integrated monitoring module for single luminaire monitoring with 20-digit address switches and additional switch input for connection to Eaton's Adaptive Evacuation with use of the EATON AE-CU, dataline and bus module or connection to local input, e.g. smoke detector.

Mixed operation of the connection systems (maintained light, non-maintained light and switched maintained light within a circuit without additional data or actuating cables to the luminaires is possible in combination with suitable group or central battery systems with STAR technology.

Viewing distance: 20 m

Luminous flux at the end of the rated service time: 100%

Housing material: PC, PMMA

Housing colour:
light grey RAL 7035

Connection terminal:
Mains 3 x 2 x 2.5 mm²
Switch input 2 x 2 x 1.5 mm²

Supply voltage:
220- 240 VAC, 50/60 Hz /
176- 275 VDC

Current consumption-
battery operation:
16 mA

Power consumption- mains operation: 8,0 VA / 3,9 W

Protection Class: II

Degree of protection: IP 20

Permissible ambient temperature:
-20° Celsius to +40° Celsius

Dimensions including wall mounting set:
W = 226, H = 134, D = 44

Type: CEAG GuideLed 10011 DX CG-S

Manufacturer: EATON

GuideLed DXC 10011 CG-S

GuideLed DXC 10011 CG-S

One-sided LED exit sign luminaire in keeping with German / European standards EN 60598-1, DIN EN 60598-2-22, DIN 4844-1 and DIN EN 1838 with additional function for displaying a red 'X' to signify an area as closed or blocked.

With wall surface mounting set. Integrated bus interface for connection to an AE CU controller.

Exit sign in LED lightguide technology for especially uniform and bright illuminationof the pictogram:

Lm >= 500 cd/m² of the white contrasting colour and

Lm >= 200 cd/m² across the entire pictogram

Uniformity Lmin/Lmax > 0.8.

Additional lightguide for displaying a red 'X'.

Increased visibility possible in bright surroundings with complex visual distractions via additional selectable function modes, e.g. flashing red 'X'. Additionally, the escape sign will be dimmed during display of red 'X'.

High service life ensured by optimised LED operating conditions.

Increased safety ensured by use of high life time LEDs and optimized LED operating conditions.

Minimum service requirement due to high service life of the LEDs (50 000 hours).

With high light efficiency > 110 lm/W for reduced connected load.

Reduced battery costs on account of especially low power consumption.

Without power supply: still visible pictogramm.

Slender design with low mounting height of only 44 mm including pictogram and mounting set.

Installation of the LED pictogram without tools on the surface mounting set.

Special LED converter with integrated monitoring module for single luminaire monitoring with 20-digit address switches and additional bus interface for connection to Eaton's Adaptive Evacuation with use of the EATON AE-CU.

Mixed operation of the connection systems (maintained light, non-maintained light and switched maintained light within a circuit without additional data or actuating cables to the luminaires is possible in combination with suitable group or central battery systems with STAR technology.

Viewing distance: 20 m

Luminous flux at the end of the rated service time: 100%

Housing material: PC, PMMA

Housing colour:
light grey RAL 7035

Connection terminal:
Mains 3 x 2 x 2.5 mm²

Bus interface 2 x 2 x 1.5 mm²

Supply voltage:
220- 240 VAC, 50/60 Hz /
176- 275 VDC

Current consumption- battery operation: 16 mA

Power consumption- mains operation: 8,0 VA / 3,9 W

Protection Class: II

Degree of protection: IP 20

Permissible ambient temperature:
-20° Celsius to +40° Celsius

Dimensions including wall mounting set:
W = 226, H = 134, D = 44

Type: CEAG GuideLed DXC 10011 CG-S

Manufacturer: EATON

Eaton
EMEA Headquarters
Route de la Longeraie 7
1110 Morges, Switzerland
www.eaton.eu

CEAG Notlichtsysteme GmbH
Senator-Schwartz-Ring 26
59494 Soest, Germany
Tel.: +49 (0) 2921 69-870
Fax: +49 (0) 2921 69-617
E-Mail: info-n@ceag.de
Web: www.ceag.de

Printed in Germany
Publication No. BR451009EN
Article No. 40071860322

Powering Business Worldwide

CrystalWay Emergency lighting luminaires
Product Brochure

Safety with total transparency

Powering Business Worldwide

A new standard in design

Completely homogeneous illumination of the pictogram, a purist design and harmonious lines set new standards in the world of emergency lighting.

The transparent frame and a reduction to the essentials with regard to visible technical details ensure a concise, discreet appearance.

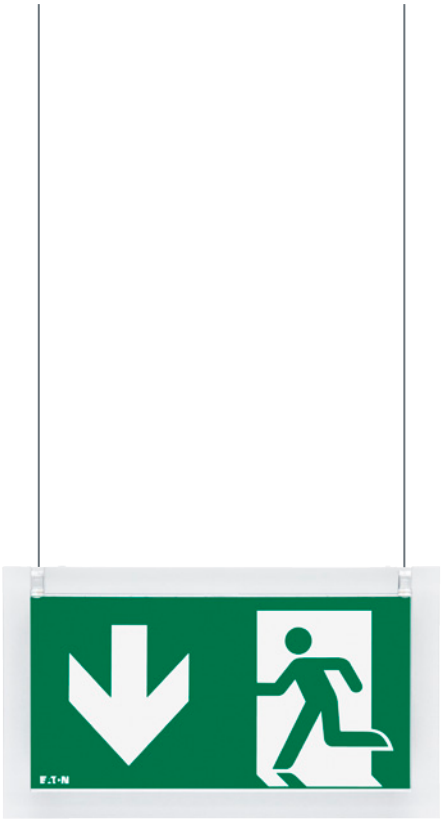
The compact housing size and a wide variety of mounting options achieve unobtrusive integration into the architectural surroundings.

Advantages

- Perfectly illuminated pictogram
- Transparent frame
- Identical housing design for wall and ceiling mounting
- Compact housing (height only 22 mm)
- Replaceable pictogram lies protected inside

Ceiling-surface mounting

Wall-surface mounting



Suspension kit option

Flag mounting

Solutions for every application

CrystalWay is available with two viewing distances (20 m and 30 m) for rapid, reliable recognition of the escape route in different buildings sizes.

The luminaires are supplied with all accessory parts for wall and ceiling-surface mounting, with a set of pictograms. This meets the needs of most mounting situations and pictogram configurations, and planning, procurement and stockkeeping complexity is significantly reduced.

Accessory sets for suspending from ceilings or recessing in walls and ceilings as well as further pictograms, e.g. for 90° wall mounting, enable a diversity of further applications and the simple integration of CrystalWay into highly different installation situations.

Advantages

- Two sizes: 20 and 30 m viewing distance
- Most frequently required mounting and pictogram configurations included as standard

20 m viewing distance

30 m viewing distance

For quick and easy installations

CrystalWay luminaires not only excel in functionality and design, but also feature installation with just a few twists of the wrist.

The lower housing section has terminals for connection and through-wiring in addition to easy-open cable glands. This enables simple, easy-to-access electrical connection.

After the pictogram panel has been equipped with the correct arrow direction, the luminaire is assembled simply and without tools and then clipped onto the lower housing section.

One order number – many applications

- A single order number for wall and ceiling mounting
- Includes pictogram set for most frequently used arrow directions:

Simple fixing and connection

- Simply fixed lower housing section with connection terminals for less mounting effort
- Four wall or ceiling-sided cable glands (2 x Ø 11 mm, 2 x Ø 13 mm), designed as flexible membranes and very easy to open but simultaneously always ensuring protection rating compliance
- One lateral cable gland for surface cables (as accessory for expanded spatial conditions)
- Screw-free through-wiring terminals (cross-section: 0.5 to 2.5mm^2)
- Screen-printed pictograms are simply placed inside and lie protected behind a transparent cover

Durable and economic

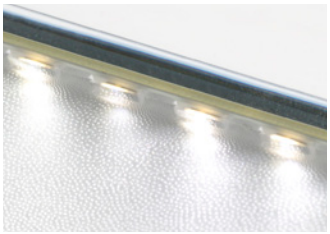
When designing the CrystalWay, a focus was placed on a reduced use of raw materials and energy.

Careful selection and dimensioning of the components ensures not only a low use of materials but also a high lifespan, providing significantly reduced maintenance costs. Low power consumption also ensures economic operation.

Thanks to integrated CG-S technology, luminaires with CEAG central battery systems can be remote-monitored, enabling mandatory, regular testing to be reliably and automatically implemented and logged. In addition, luminaires can be freely switched and programmed without a data line. The mixed operation of switching types in one circuit also reduces installation complexity.

Economic operation

- Low connected load of only 1.6 W (20 m) and 3.7 W (30 m) for reduced operating costs
- Reduced inspection effort due to CEWA GUARD technology – automatic functional monitoring in combination with CEAG ZB-S central battery systems
- Long service life of LEDs ensure reduced maintenance costs



Ecological design

- Optimized use of resources across the complete life cycle (production / use / recycling)
- Reduced use of materials
- Low connected load, therefore less CO_2 consumption
- Long component service life
- Reduced installation effort due to STAR technology

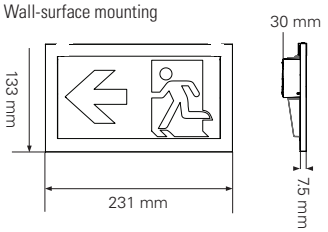
CrystalWay 19021 CG-S

Exit Sign Luminaires

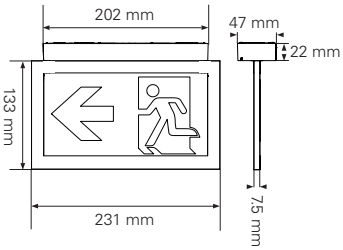
Wall-surface mounting

Ceiling-surface mounting

Wall-surface mounting



Ceiling-surface mounting



Wire suspension kit

Recessed base

Add-on housing

CrystalWay 19021 CG-S

- Exclusive escape sign panel luminaire with LED technology
- Concise design with highly transparent frame and replaceable inner screen-printed pictograms
- Includes set of pictograms (arrow right, left, down, up, blind) for the most common applications
- Only one order number for wall or ceiling mounting
- Expandable with extensive accessories, e.g. housing for ceiling recessing, wire suspension, pictograms for 90° wall mounting
- Unobtrusive, thin & slim electronic base (Height: only 22mm)
- Optimal recognition via high luminance of white contrast colour > 500 cd/m² according to DIN 4844-1 / ISO 3864-1 (for bright surroundings), and high uniformity Lmin/Lmax > 0.8
- Reduced battery costs on account of especially low power consumption
- Low operating costs on account of low effective power of 1.6 W only.
- Minimum maintenance effort and increased safety via use of LEDs with high service life (50,000 hours)
- Shortened inspection effort due to CEWA GUARD Technology
- Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation expenditures by STAR Technology

Viewing distance	20 m
Luminous flux Φ_E/Φ_{Nenn} at end of rated operating time	100 %
Housing material	Polycarbonat
Housing colour	RAL 9003
Weight	0.4 kg
Type of mounting	Wall and ceiling mounting
Connection terminals	2 x 3 x 2.5 mm²
Connection voltage	220 - 240 V AC, 50/60 Hz 176 - 275 V DC
Power consumption mains operation (apparent power/effective power)	3.5 VA / 1.6 W
Current consumption- battery operation (220 V)	7 mA
Permissible ambient temperature	-20 °C to +40 °C
Light source	LED strip

Ordering details

Type	Order-No.
CrystalWay 19021 CG-S	40071354592

Ordering details - Accessories

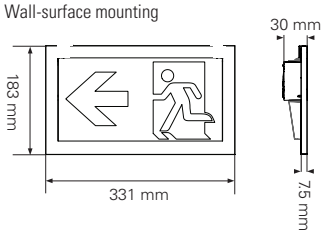
Type	Order-No.
Wire suspension kit, 20 m + 30 m	LUM10560
Recessed base, for ceiling mounting, 20 m	LUM10561
Recessed base with cover, for ceiling mounting, 20 m	LUM10563
Concrete box (suitable for recessed base with cover), 20 m	LUM10565
Add-on housing for CrystalWay 20 m for expanded spatial conditions, for wiring and cable infeed	LUM10567
Pictogram PU, ISO 7010, 20 m	LUM10573
Pictogram PL, ISO 7010, 20 m	LUM10574
Pictogram PR, ISO 7010, 20 m	LUM10575
Pictogram PA, ISO 7010, 20 m	LUM10577
Pictogram PU vertical, ISO 7010, 20 m	LUM10584
Pictogram PL vertical, ISO 7010, 20 m	LUM10585
Pictogram PR vertical, ISO 7010, 20 m	LUM10586

30 m | LED | IP42 | IK04 | DIN 4844 | S TAR | S+ TAR

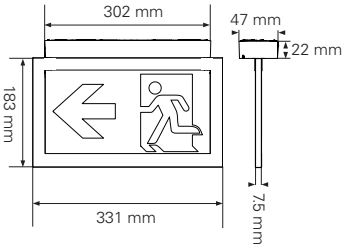
Wall-surface mounting

Ceiling-surface mounting

Wall-surface mounting



Ceiling-surface mounting



Wire suspension kit

Recessed base with cover

CrystalWay 19022 CG-S

- Exclusive escape sign panel luminaire with LED technology
- Concise design with highly transparent frame and replaceable inner screen-printed pictograms
- Includes set of pictograms (arrow right, left, down, up, blind) for the most common applications
- Only one order number for wall or ceiling mounting
- Expandable with extensive accessories, e.g. housing for ceiling recessing, wire suspension, pictograms for 90° wall mounting
- Unobtrusive, thin & slim electronic base (Height: only 22mm)
- Optimal recognition via high luminance of white contrast colour > 500 cd/m² according to DIN 4844-1 / ISO 3864-1 (for bright surroundings), and high uniformity Lmin/Lmax > 0.8
- Reduced battery costs on account of especially low power consumption
- Low operating costs on account of low effective power of 3.7 W only.
- Minimum maintenance effort and increased safety via use of LEDs with high service life (50,000 hours)
- Shortened inspection effort due to CEWA GUARD Technology
- Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation expenditures by STAR Technology

Viewing distance	30 m
Luminous flux Φ_E/Φ_{Nenn} at end of rated operating time	100 %
Housing material	Polycarbonat
Housing colour	RAL 9003
Weight	0.7 kg
Type of mounting	Wall and ceiling mounting
Connection terminals	2 x 3 x 2.5 mm²
Connection voltage	220 - 240 V AC, 50/60 Hz 176 - 275 V DC
Power consumption mains operation (apparent power/effective power)	6.5 VA / 3.7 W
Current consumption- battery operation (220 V)	15 mA
Permissible ambient temperature	-20 °C to +40 °C
Light source	LED strip

Ordering details

Type	Order-No.
CrystalWay 19022 CG-S	40071354593

Ordering details - Accessories

Type	Order-No.
Wire suspension kit, 20 m + 30 m	LUM10560
Recessed base, for ceiling mounting, 30 m	LUM10562
Recessed base with cover, for ceiling mounting, 30 m	LUM10564
Concrete box (suitable for recessed base with cover), 30 m	LUM10566
Pictogram PU, ISO 7010, 30 m	LUM10587
Pictogram PL, ISO 7010, 30 m	LUM10588
Pictogram PR, ISO 7010, 30 m	LUM10589
Pictogram PA, ISO 7010, 30 m	LUM10591
Pictogram PU vertical, ISO 7010, 30 m	LUM10592
Pictogram PL vertical, ISO 7010, 30 m	LUM10593
Pictogram PR vertical, ISO 7010, 30 m	LUM10594

Eaton is dedicated to ensuring that reliable, efficient and safe power is available when it's needed most. With unparalleled knowledge of electrical power management across industries, experts at Eaton deliver customized, integrated solutions to solve our customers' most critical challenges.

Our focus is on delivering the right solution for the application. But, decision makers demand more than just innovative products. They turn to Eaton for an unwavering commitment to personal support that makes customer success a top priority. For more information, visit **www.eaton.com/electrical**.

To find your contact person, visit **www.ceag.de**.

Eaton Industries Manufacturing GmbH
Electrical Sector EMEA
Route de la Longeraie 7
1110 Morges, Switzerland
www.eaton.eu

CEAG Notlichtsysteme GmbH
Senator-Schwartz-Ring 26
59494 Soest, Germany
Phone: +49 (0) 2921 69-870
Fax: +49 (0) 2921 69-617
E-Mail: info-n@eaton.com
Web: www.ceag.de

Printed in Germany
Publication No. CA451009EN
Order No. 40071860290
02.16

Powering Business Worldwide

CEAG GuideLed AT

Cost-efficient and environment-friendly exit sign luminaire

Powering Business Worldwide

Overview GuideLed AT

1 LED Lightguide technology

- Uniform brightness acc. to EN 1838
- Low energy requirements
- LEDs for increased safety with 50,000 h service life

2 Automatic test electronics

- Fully automatic function test (weekly) or duration test (every 6 months) for low inspection efforts
- Universal use: For maintained mode, non-maintained mode and switched mode via L' input

3 Display and test unit

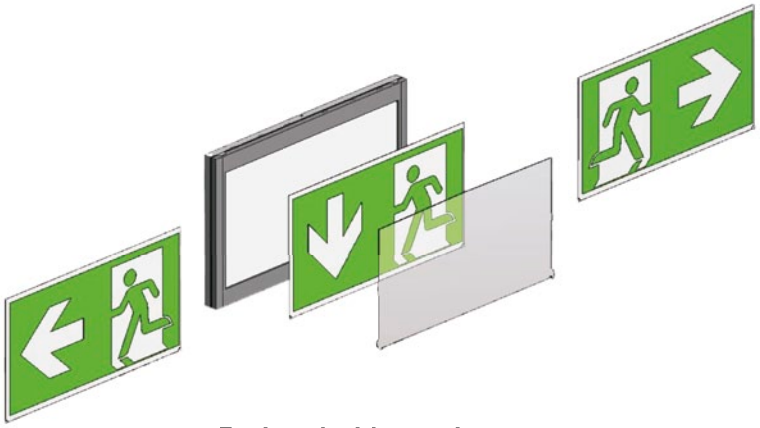
- Testing button for manual triggering of function test and duration test
- Simple fault analysis and status information via display with bicolor LED

4 Optimised connection technology

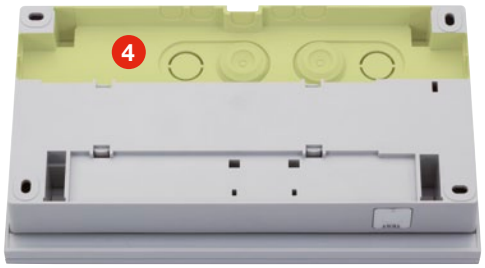
- Spacious insertion areas
- Equipped for through-wiring of mains cable via double terminals and 2 cable infeeds
- For easy installation

5 Innovative Lilon technology

- Large capacity with small construction size for compact luminaire design
- Only 1 version for 1 h, 2 h and 3 h emergency lighting operation eases replacement purchase
- Simple replacement via polarity reversal-protected plug-in contacts and snap mounting



Equipped with snap-in pictogram set for universal application



Efficient technology

LEDs for increased safety

Longevity, instant start-up, high efficiency and small construction size are the features that make LEDs especially suitable for emergency and safety lighting. But precise matching along with low temperatures and low operating current guarantees high luminous efficacy with maximum service life.

Lightguide technology for optimal illumination

The highly developed Lightguide technology converts the high point-sourced luminance of the LED into an illuminated surface with absolutely homogeneous brightness. As such the exit sign always remains easily recognisable even with poor visibility conditions.

Lithium ion battery technology

Lithium ion batteries with identical capacity require much less space than NiCd or NiMh cells. This leaves more space for compact designs and cable routing.

The so-called memory effect familiar with NiCd and NiMh cells is irrelevant with lithium ion cells.

- Low spacial requirement
- No memory effect
- Environmentally friendly

Permanent safety

Capacity losses from ageing have been considered by corresponding dimensioning of the cells.

A multiple protective circuit integrated in the battery ensures safe operation and high reliability.

NiCd and NiMh batteries have a significantly higher self-discharge and are therefore permanently charged. This is no longer necessary with the GuideLed AT luminaires, saving additional energy costs.

It's not only our pictograms that are green

The new lithium ion batteries are completely devoid of toxic heavy metals such as lead and cadmium.

In addition due to low self-charging, less energy is required for recharging.

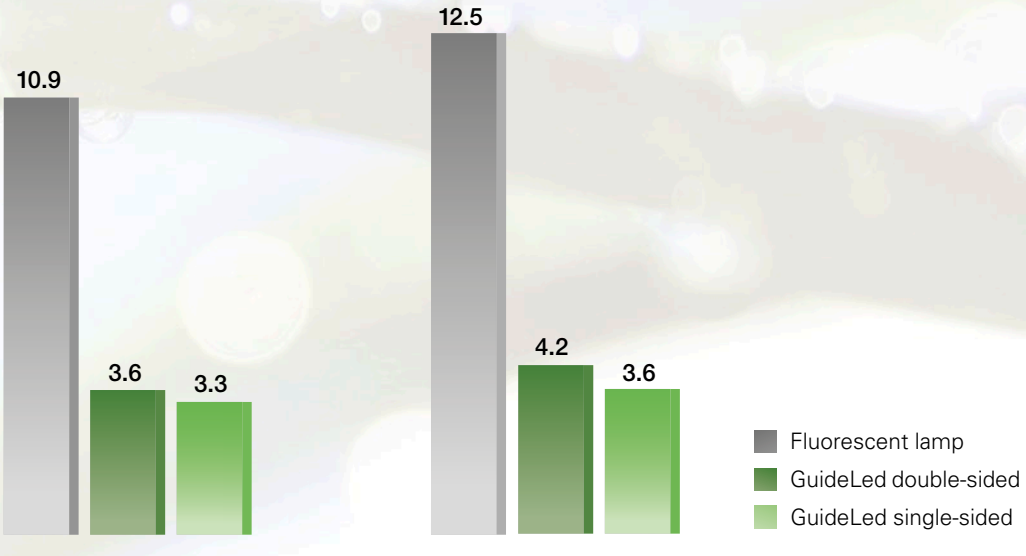
In combination with the efficient LED Light guide technology, electricity consumption of a GuideLed exit sign is up to 60 % less than comparable self-contained luminaires with fluorescent lamps.

Safely saving on maintenance costs

Fluorescent lamps in safety lighting have typical service lives that mean at least one round of relamping yearly according to daily operational times.

Effort for maintenance is significantly reduced due to the high LED service life of approximately 50,000 hours.

Comparison of the system effective power P_{sys} in watts with mains operation



GuideLed AT

Exit sign luminaire

20 m | Li-Ion | LED | AT

IP20 / IP40 10611 | EN 1838

GuideLed 10611, 10621, 10625 AT

- LED self contained luminaire with automatic test for reduced inspection effort
- Universal use for maintained and non-maintained operation and for 1 h, 2 h or 3 h operation
- Including pictogram kit (arrow down, left, right) acc. to ISO 7010
- Environmentally-friendly due to modern lithium ion technology
- Low operating costs via low connected load
- Minimum maintenance effort and increased safety via use of LEDs with high service life (50,000 hours)
- Optimal recognition via bright pictogram with high uniformity $L_{min}/L_{max} > 0.6$
- Photometric data according to EN 1838 and ISO 30061
- Simple fault analysis and status display via bicolor LED and testing button
- 1 minute switch-back delay after mains return (according to DIN VDE 0100-718)

GuideLed 10611 AT

GuideLed 10621 AT

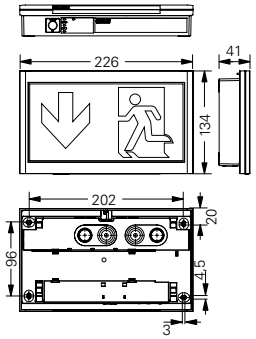
GuideLed 10625 AT

Viewing distance	20 m
Luminous flux Φ_E/Φ_{nom} at end of rated operating time	80 % at 1 h; 80 % at 2 h; 75 % at 3 h
Housing material	Polycarbonate
Weight	0.64 kg (10611 AT) 0.70 kg (10621 AT) 0.71 kg (10625 AT)
Housing colour	Light grey RAL 7035
Type of mounting	Insulation class II (protective earth required)
Terminals	Through-wiring from mains (L, L', N, PE) to 2.5 mm²
Connection voltage	220- 240 V, 50 Hz
Power consumption mains operation (apparent power/effective power)	3.8 VA / 3.3 W 10611 4.0 VA / 3.6 W 10621/10625
Permissible ambient temperature	Maintained mode -5 °C to +30 °C Non-maintained mode 0 °C to +35 °C
Battery	Lithium ion 3.7 V/2000 mAh with multiple protective circuit
Light source	LED strip

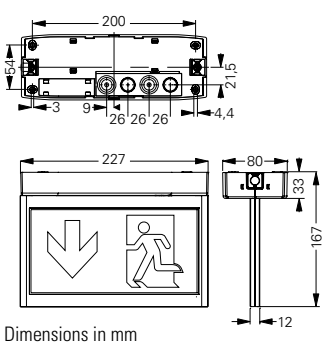
Ordering details

Type	Scope of supply	Order No
GuideLed 10611 AT	GuideLed 10611 1-3h/D AT-Set-e for wall mounting, including LED-supply and pictogram kit (LED pictogram + ISO arrow down, left, right), 20 m	40071353575
GuideLed 10621 AT	GuideLed 10621 1-3h/D AT-Set-e for ceiling mounting, including LED-supply and pictogram kit (LED pictogram + ISO arrow down, left, right + blind), 20 m	40071353576
GuideLed 10625 AT	GuideLed 10625 1-3h/D AT-Set-e for rope suspension, including LED-supply and pictogram kit (LED pictogram + ISO arrow down, left, right + blind), 20 m	40071353577

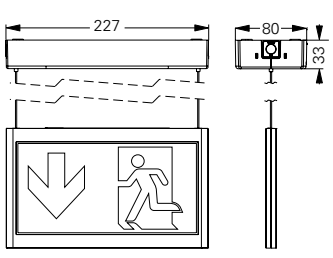
GuideLed 10611 AT



GuideLed 10621 AT



GuideLed 10625 AT



Dimensions in mm

30 m | Li-Ion | LED | AT

IP20 / IP40 11611 | EN 1838

GuideLed 11611 AT

GuideLed 11621 AT

GuideLed 11625 AT

GuideLed 11611, 11621, 11625 AT

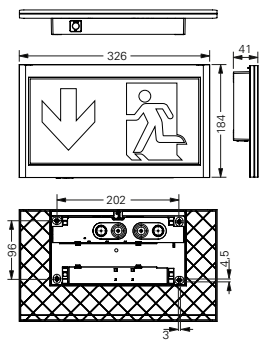
- LED self contained luminaire with automatic test for reduced inspection effort
- Universal use for maintained and non-maintained operation and for 1 h, 2 h or 3 h operation
- Including pictogram kit (arrow down, left, right) acc. to ISO 7010
- Environmentally-friendly due to modern lithium ion technology
- Low operating costs via low connected load
- Minimum maintenance effort and increased safety via use of LEDs with high service life (50,000 hours)
- Optimal recognition via bright pictogram with high uniformity $L_{min}/L_{max} > 0.6$
- Photometric data according to EN 1838 and ISO 30061
- Simple fault analysis and status display via bicolor LED and testing button
- 1 minute switch-back delay after mains return (according to DIN VDE 0100-718)

Viewing distance	30 m
Luminous flux Φ_E/Φ_{nom} at end of rated operating time	95 % at 1 h; 95 % at 2 h; 90 % at 3 h 85 % at 1 h; 80 % at 2 h; 60 % at 3 h
Housing material	Polycarbonate
Weight	0.77 kg (11611 AT) 1.04 kg (11621 AT) 1.06 kg (11625 AT)
Housing colour	Light grey RAL 7035
Type of mounting	Insulation class II (protective earth required)
Terminals	Through-wiring from mains (L, L', N, PE) to 2.5 mm²
Connection voltage	220- 240 V, 50 Hz
Power consumption mains operation (apparent power/effective power)	4.0 VA / 3.6 W 11611 4.5 VA / 4.2 W 11621/11625
Permissible ambient temperature	Maintained mode -5 °C to +30 °C Non-maintained mode 0 °C to +35 °C
Battery	Lithium ion 3.7 V/2000 mAh with multiple protective circuit
Light source	LED strip

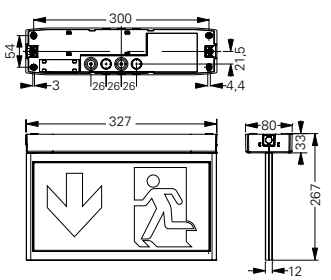
Ordering details

Type	Scope of supply	Order No
GuideLed 11611 AT	GuideLed 11611 1-3h/D AT-Set-e for wall mounting, including LED-supply and pictogram kit (LED pictogram + ISO arrow down, left, right), 30 m	40071353572
GuideLed 11621 AT	GuideLed 11621 1-3h/D AT-Set-e for ceiling mounting, including LED-supply and pictogram kit (LED pictogram + ISO arrow down, left, right + blind), 30 m	40071353578
GuideLed 11625 AT	GuideLed 11625 1-3h/D AT-Set-e for rope suspension, including LED-supply and pictogram kit (LED pictogram + ISO arrow down, left, right + blind), 30 m	40071353579

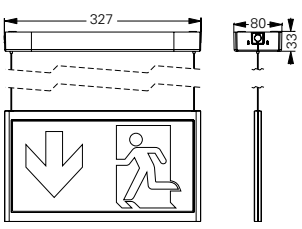
GuideLed 11611 AT



GuideLed 11621 AT



GuideLed 11625 AT



Dimensions in mm

Eaton is dedicated to ensuring that reliable, efficient and safe power is available when it's needed most. With unparalleled knowledge of electrical power management across industries, experts at Eaton deliver customized, integrated solutions to solve our customers' most critical challenges.

Our focus is on delivering the right solution for the application. But, decision makers demand more than just innovative products. They turn to Eaton for an unwavering commitment to personal support that makes customer success a top priority. For more information, visit **www.eaton.com/electrical.**

To find your contact person, visit **www.ceag.de/en**.

Eaton Industries Manufacturing GmbH
Electrical Sector EMEA
Route de la Longeraie 7
1110 Morges, Switzerland
www.eaton.eu

CEAG Notlichtsysteme GmbH
Senator-Schwartz-Ring 26
59494 Soest, Germany
Phone: +49 (0) 2921 69-870
Fax: +49 (0) 2921 69-617
E-Mail: info-n@eaton.com
Web: www.ceag.de

Printed in Germany
Publication No. CA451007EN
Order No. 40071860158
X.X/06.15/XX

Powering Business Worldwide

CEAG LP-STAR
Compact emergency lighting power supply with STAR technology

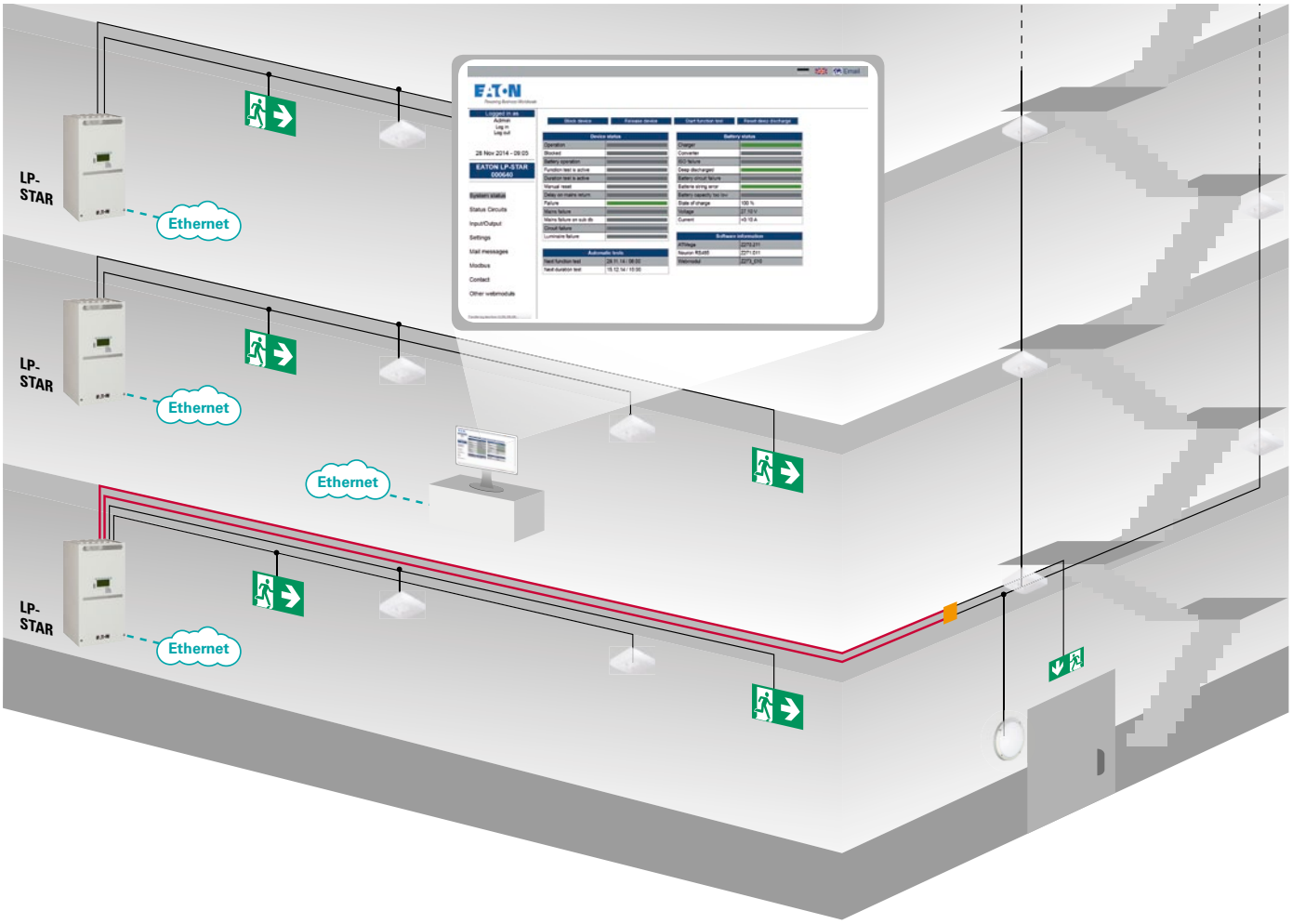
LP-STAR

Safe and cost efficient operation with installation per area

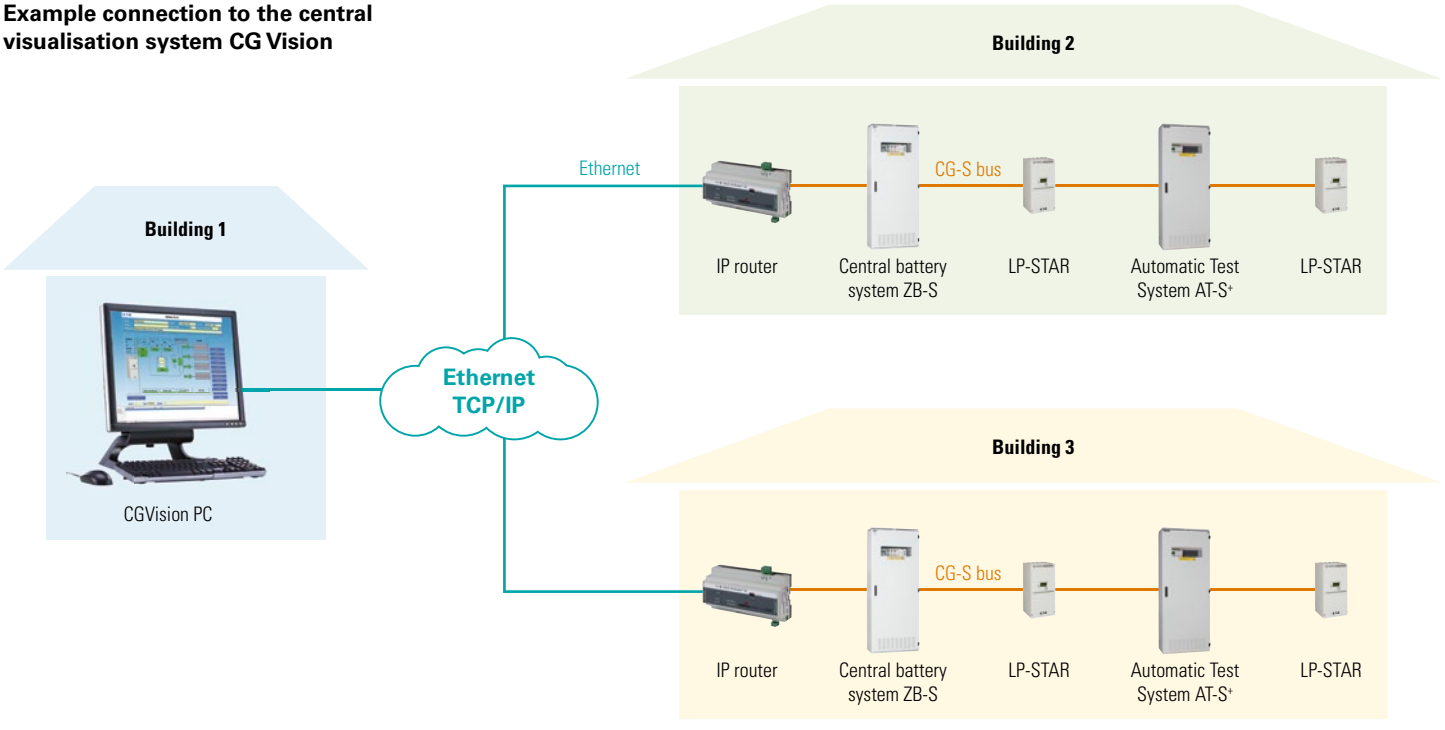
EATON
Powering Business Worldwide

LP-STAR emergency lighting power supply in a compact design

Installation example



Example connection to the central visualisation system CG Vision



Simple installation and reliable power supply

LP-STAR is especially recommended in case of the separate supply of emergency lighting systems of individual fire areas to save on installation costs incurred by installing E30 cabling to cover different fire areas.

The LP-STAR System supplies reliable power to the escape luminaires and exit sign luminaires (230V AC/220 V DC) according to EN 50171 and BGV A3. It is suitable for emergency lighting systems according to DIN VDE 0100-718, DIN EN 50172 and E DIN VDE 0108-100.

The system performs an automatic self-check and monitors all CG-S luminaires connected (up to 20 luminaires per circuit) simply through a feed line. The circuit type of each connected CG-S luminaire can be programmed freely in the 50 Hz or 60 Hz supply network with the control module based on the STAR technology. This means that the same power circuit is used for mixed operation including maintained light, switched maintained light and non-maintained light, all this without an additional data cable!

The control module including a non-volatile program memory as well as a big graphical display that monitors and controls the LP-STAR device and checks all functions of the connected emergency luminaires according to EN 62034 and it reports the operating states of the entire system. The integrated search function detects all luminaires addressed during installation automatically. A central monitoring system can be connected using the optional bus interface.

The main scope for the protection of electrical rooms is the protection of the environment against the hazards involved with technical devices, transformer stations and switching stations of over 1 kV. At the same time, for example in case of fire, the operation of safety-relevant systems, central battery systems and fixed power generators must be maintained for a specific period of time.

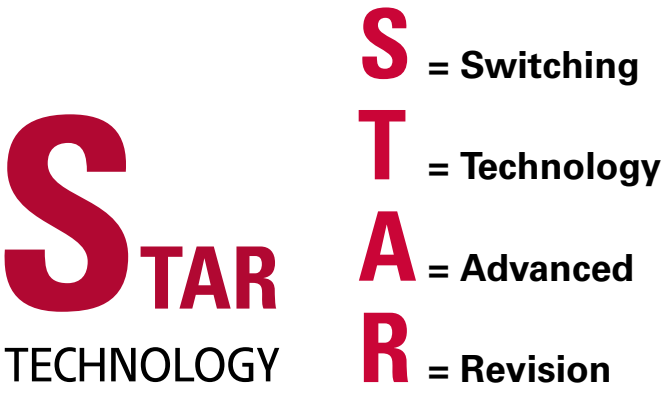
The LP-STAR System was designed to meet the requirements concerning batteries and these have been verified according to EN 60950 and EN 50272-2.

Features

- No special requirements concerning the housing on functionality in case of installation in separate fire areas
- Cost savings as E30 wiring is not required because devices are installed in separate fire areas
- Natural ventilation is generally sufficient due to the closed form and low capacity of batteries
- Additional safety even in case of fire due to the decentralised arrangement of systems
- Simple operation and commissioning based on a smart programming and operating plan
- 230V AC / 220V DC supply voltage selectable to power the escape luminaires and exit sign luminaires to comply with architectural issues
- Standard integrated phase monitor for monitoring general power supply conditions
- Additional phase monitor input including line monitoring for an external phase monitor
- Standard eight digital 230 V input channels for switching each luminaire separately, for example, freely programmable
- Optional webmodule for the automatic monitoring of LP-STAR according to EN 62034
- Optional CG-S interface for connecting to the CG-S bus for CGVision or master/slave operation for connecting several LP-STAR devices
- Shorter inspection time using the CEWA GUARD technology, automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation costs due to the STAR technology, freely programmable mixed operation of switching modes per luminaire in a single circuit without an additional data cable
- Automatic luminaire search function
- Plain text display at the control module for all luminaires
- Flexible data memory for the test log and device configuration using the Secure Digital card
- Absence of retroactive effect of different circuits in case of a short-circuit due to the automatic, selective shut-off function
- EoL shut-off, programmable as standard

LP-STAR emergency lighting power supply in a compact design

What is STAR?



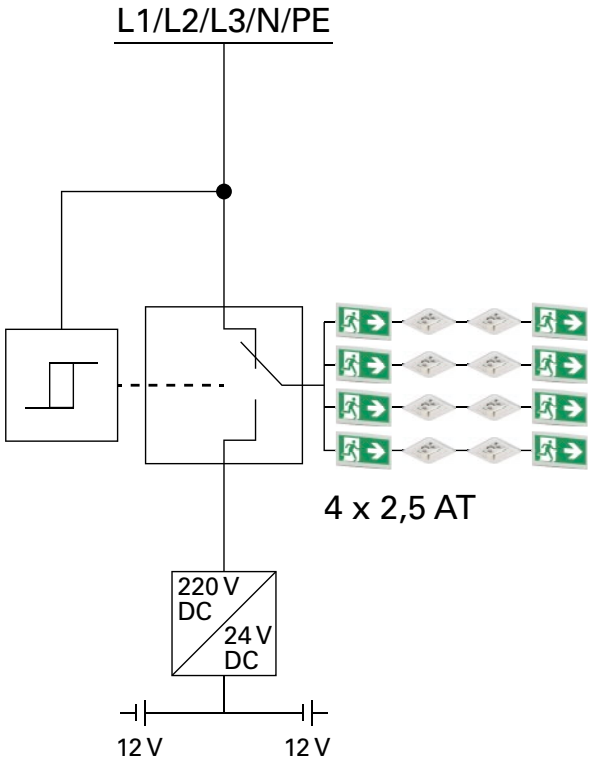
Switch to safety!

The continuing development of the CEWA GUARD monitoring system has led to the creation of the

Switching
Technology
Advanced
Revision,

or **STAR** for short. This **CG-STAR**-technology allows different switching modes to be implemented in the same circuit, and the switching mode of each individual luminaire can be re-programmed at any time.

As a result, this technology offers not just the proven CEWA Guard safety when it comes to operating a safety lighting system, it also gives planners the confidence and flexibility of knowing that the system can respond and adapt at any time to any changes that are made to a building and its use.



LP-STAR emergency lighting power supply in a compact design

STAR technology – easy planning

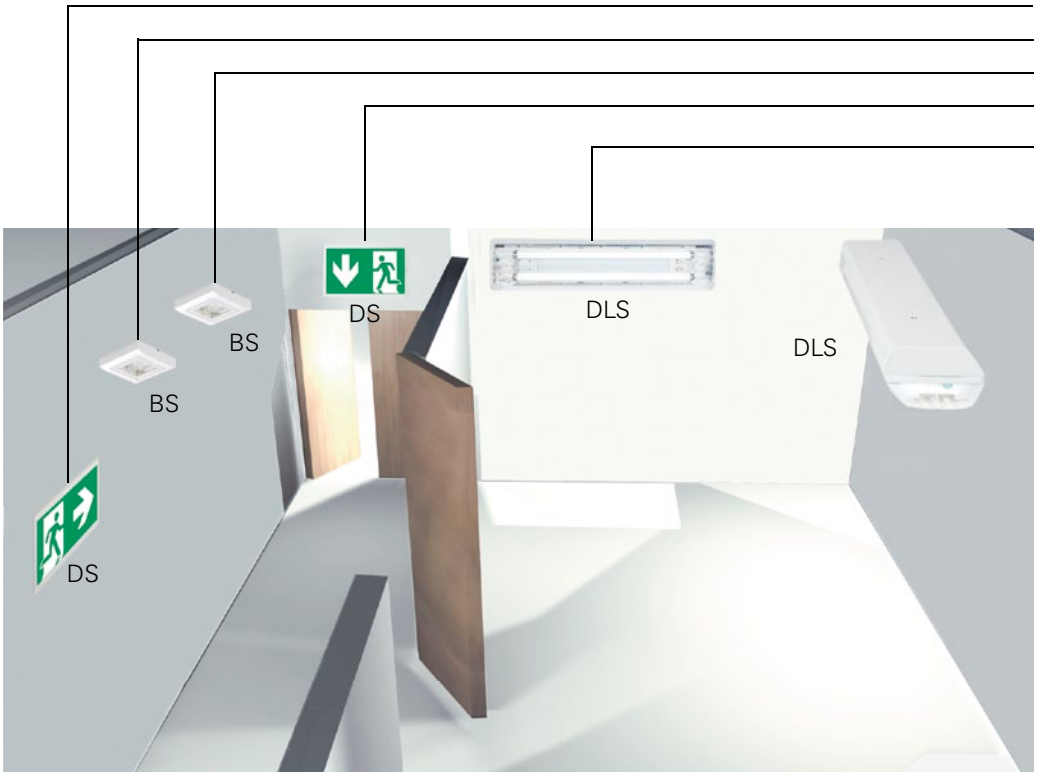
Your Advantages:

The number of outgoing circuits needed can be sharply reduced, since continuously operating, stand-by and switchable permanent lighting can be realised in one common circuit.

This allows the use of shorter cable distances, reduces installation costs and minimises the effects of burning materials. Any mode of operation can be assigned at a later date – **without encroachment in the lighting installation.** This enables simple project planning without having to take all possible types of operation into account.

As with CEWA GUARD technology, the patented STAR technology requires no additional data cable to the luminaires.

STAR TECHNOLOGY



Conventional Installation:

Maintained light 1 (DS)

Non-maintained light 1 (BS)

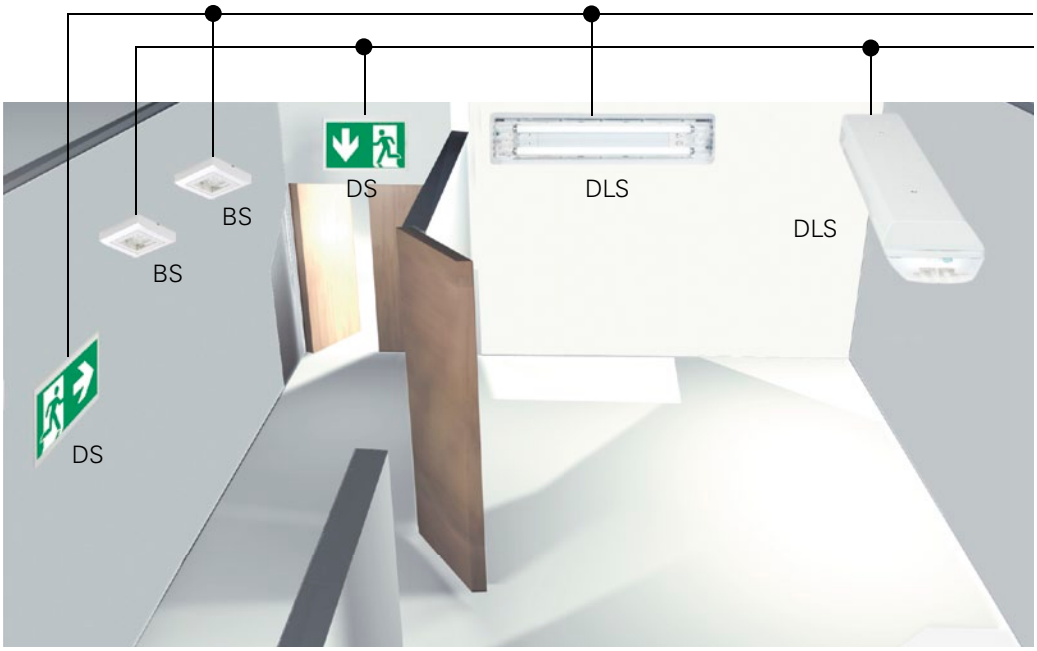
Non-maintained light 2 (BS)

Maintained light 2 (DS)

Switched maintai-
ned light 1 (DLS)

Switched maintained light (DLS)

- Each type of switching mode requires two circuits
- Only one type of switching mode is possible per circuit
- Any later modifications involve a large amount of work and expense



ZB-S Installation with STAR-Technology:

All types of switching modes

All types of switching modes

- Only two outgoing circuits for all types of switching modes
- Maintained light, non-maintained light and switched maintained light are possible in one common circuit
- Later circuit modifications do not pose any problems

LP-STAR emergency lighting power supply in a compact design

Construction

Overview of connections

1 Grid connection terminal

3-phase feed-in incl. phase monitoring function

2 Connection for end circuits

Double assignment, 2.5 mm² solid/flexible

3 Connection for disable switch

Control loop for disabling the system during operating downtimes with differential loop monitoring for short circuit and wire breakage detection. Differential monitoring: Short circuit or interruption lead to the system going into standby.

4 24 V connection for external phase monitors

24 V power loop for the emergency luminaires with differential loop monitoring for short circuit and wire breakage detection. Differential monitoring: Short circuit or interruption lead to the system switching on (maintained light) immediately.

5 Connection for potential-free indicator contacts and buzzer

4 relays with a separate root, each 1x changeover contact, 24 V 0.5 A.

The four potential-free contacts and the buzzer can be assigned freely to one or several of 12 different messages. The DIN VDE specification can be loaded any time and used as a default setting.

6 Connection for digital inputs

8 freely assignable inputs 230V, programmable as inverted and non-inverted for example start/stop function test, start/stop duration test, block/release device, manual reset, turn on/off maintained light, turn on emergency lighting as corridor lighting, for light switch query and switching emergency lighting depending on the general lighting conditions (DLS function).

7 Optional interface (factory-installed)

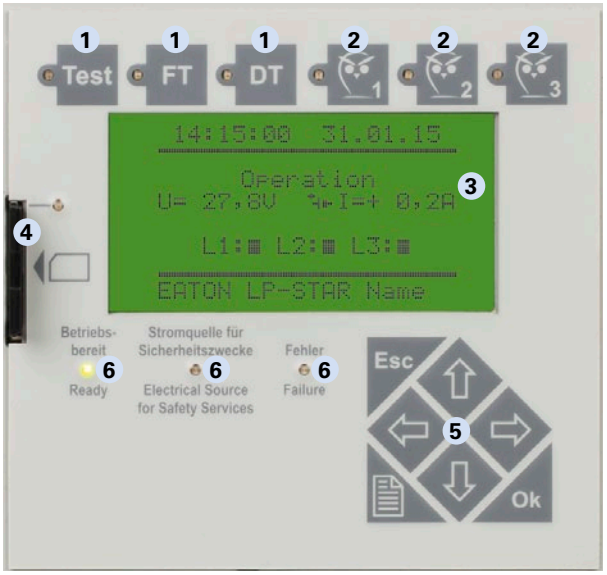
The interface for connecting to a CGVision can be installed on site, see page 13.

8 Webmodule connection

9 Battery connection, wires 1-4

Maximum 4 sets per 2 battery blocks, 12 V.

Freely programmable control module



1 Separate buttons for:

- Test (emergency luminaire function)
- Function test
- Duration test

2 Three freely assignable function keys

3 128 x 64 pixel graphical display

Back-lit, adjustable contrast and brightness

4 Log book and device configuration

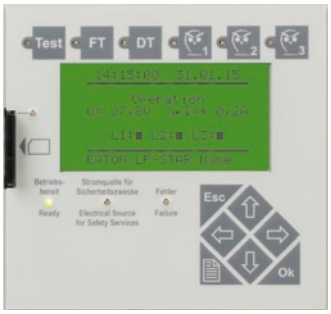
Save the log book and device configuration comfortably on the memory card. Easily programmable on the PC using an SD card reader and the CEAG software.

5 Seven control buttons for a user-friendly navigation

6 Function display using LEDs

LP-STAR emergency lighting power supply in a compact design

Construction



Control module

A freely programmable control module with a non-volatile program memory and 4-lines, alphanumeric, graphic display monitors and controls the LP-STAR system. All functions such as loading, mains/emergency switch-over and deep discharge protection of devices and the connected emergency luminaires are automatically inspected. The errors are reported immediately. A central monitoring system can be connected using the interface. In case of a short circuit or interruption of control current loops, differential monitoring leads to the system immediately switching on (maintained light) or to the system being put in standby.

- Non-volatile program memory
- Automatic luminaire search function
- Single luminaire monitoring
- Manual reset
- Password function
- Fuse monitoring of the end circuits
- Control module with master/slave function

Display includes:

- Date/time
- Charge fault
- Deep discharge protection
- Battery voltage/charge current (+)
- Battery discharge current in test or failure (-)
- Manual reset
- Test mode
- Delay-time on mains return (remaining time in minutes)
- Luminaire failure with location label
- Insulation fault
- Power failure UV-AV (target location information)
- Failure/programming information

Sealed keypad with 3 buttons for:

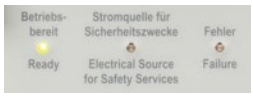
- Test (mains failure- battery operation)
- Start/stop function test
- Start/stop duration test

3 freely assignable function keys for:

- Block/release device
- Manual reset
- Stop function test
- Display error list
- Turn on/off maintained light
- Turn on complete emergency lighting (continuity lighting)
- Power failure simulation UV-A (emergency operation)
- Confirm deep discharge protection

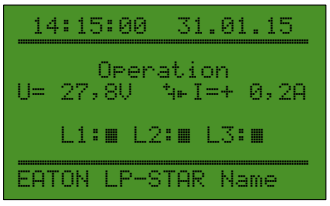
7 control keys

for a user-friendly navigation



LED indicators for:

- Ready
- Operation through the electrical source for safety services
- Failure



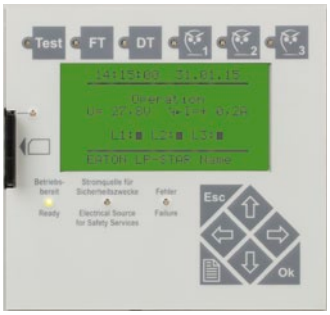
Graphic display:

128 x 64 pixels, back-lit, program adjustable contrast and brightness.

LP-STAR emergency lighting power supply in a compact design

Components and options

Control module



Graphical display	128 x 64 pixel adjustable contrast
Illumination	Adjustable background luminosity
Keypad	Sealed, with 6 function and 7 control keys
Readout	Battery voltage Battery charge current (+) Battery discharge current in test or by failure (–) Charge Fault Luminaire failure with location label Deep discharge protection Manual reset Delay-time on mains return Fault UV-AV (location label) Test mode Date/time Insulation fault with circuit label Failure information Programming information
Status	• Ready • Electrical source for safety services • Failure

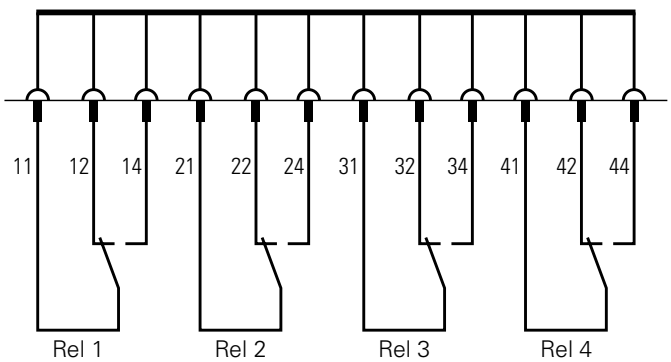
Potential-free signal contacts, buzzer

4 relays with a common potential, 1x switching contact each, 24 V 0.5 A.

The three potential-free contacts and the buzzer can be assigned freely to one or several of 12 different messages. The DIN VDE specification can be loaded any time and used as a default setting.

Default settings LP-STAR

Name	Relay 1	Relay 2	Relay 3	Relay 4	Buzzer
Mains operation		X			
Mains failure	X		X		
UV mains failure	X				
Charge fault	X				
Circuit fault	X				
Luminaire fault	X				
Common system fault	X				
Total discharge protection	X				
ISO fault	X				
Function test		X			
Duration test		X			
Device fault					



Note:

NO = Normal Open (normally open)
NC = Normal Closed (normally closed)

The device is fitted with 4 potential-free signal contacts (relay outputs) and an integrated buzzer.

Signal contacts freely programmable including:
1 x changeover contact
1 x 24 V; 0.5 A capacity

SD card

SD card reader

Secure Digital card

Flexible memory for device and inspection log book configuration, for example for archiving the device configuration and the prescribed inspection log book information over a minimum of 4 years.

The device can be programmed using any PC with the optional SD card reader and the CEAG software. The text messages can be introduced also using the control module.

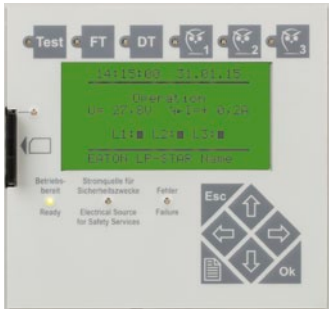
Storing of:

- 360.000 log book entries
- Luminaire target location texts (20 characters per luminaire)
- Circuit names (20 characters per circuit)
- LP-STAR name (20 characters)

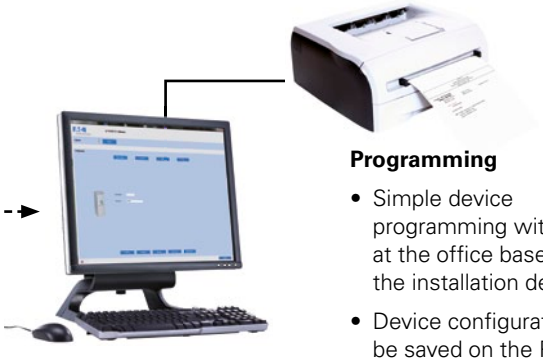
Ordering details

Type	Model	Order No.
SD card	SD card formatted for LP-STAR	40071347911
SD card reader	SD card reader for USB port	40064070561
Software	Software for the external programming of the LP-STAR device using a PC	40071347152

SD card (Secure Digital Card)



Removable SD card with configuration and inspection log book data



PC with CEAG software for programming and evaluating the SD card data

Programming

- Simple device programming with a PC at the office based on the installation designs
- Device configuration can be saved on the PC

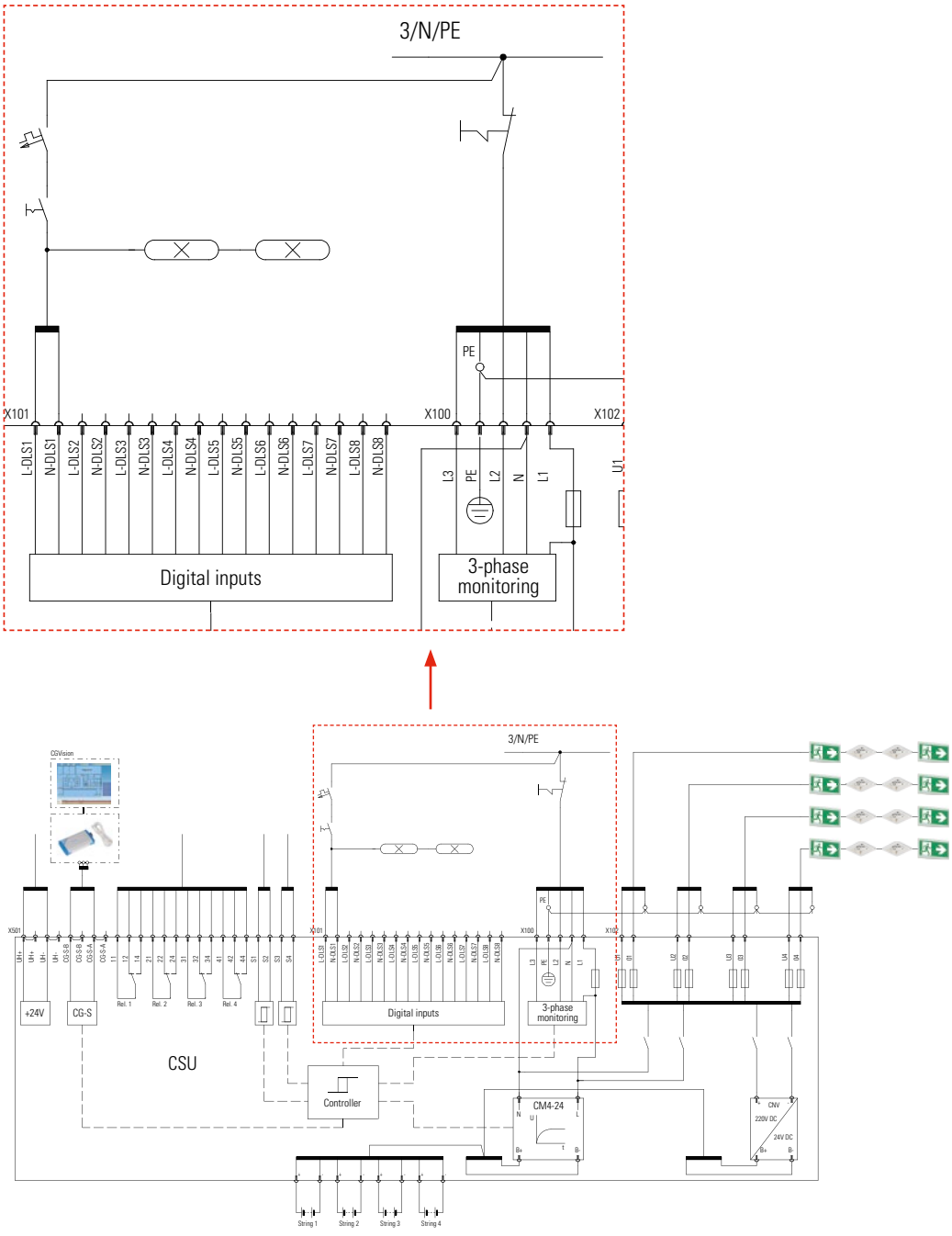
LP-STAR emergency lighting power supply in a compact design

Components and options

Digital inputs, for example light switch query

The standard 8 digital inputs (two for each circuit) can be used to query the switch for the combined switching of emergency and general lighting.

Schematic diagram



F3 remote indication

F3 remote indication

The F3 remote indication ensures that the most important device functions are displayed even in case of a power failure based on its battery supply. The emergency lighting operation can be blocked during operating downtimes with a key switch. The battery maintenance charging is not affected by blocking the emergency operation. A differential loop monitoring leads to the system going into standby in case of short circuit or breakage detection. LED displays: System readiness, source for safety services, failure. The F3 remote indication thus meets the requirement that remote operation is only possible if it cannot be activated by unauthorized persons.

Connection terminals wall surface-mounting	2.5 mm² solid or flexible
Dimensions in mm (W x H x D)	160 x 80 x 55
Connection terminals for flush-mounting	1.5 mm² rigid or 1 mm² flexible
Dimensions in mm (W x H x D)	80 x 80 x 55
Housing colour	similar to RAL 7035 light grey

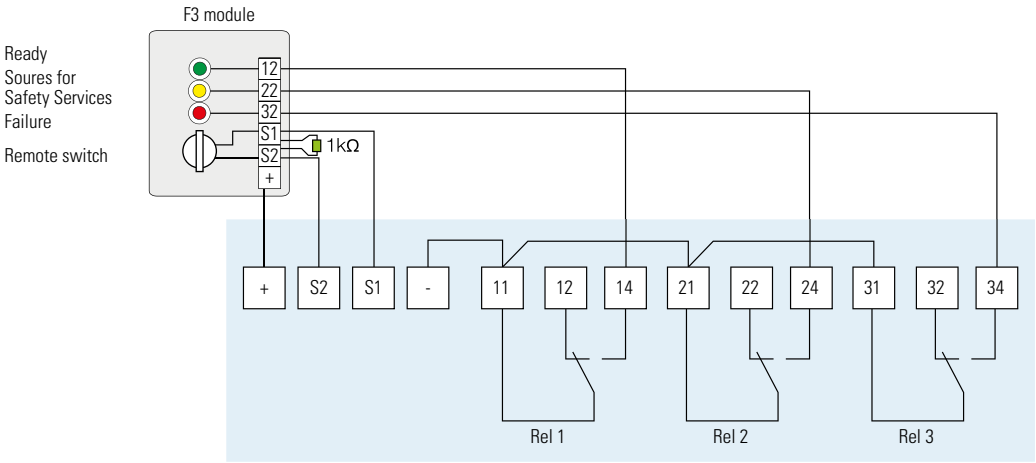
F3 remote indication for flush-mounting

Ordering details

Type	Scope of supply	Order No.
F3 remote indication	Module surface mounting	40071338497
F3 remote indication recessed	Performance for installation in the flush-mounted switch or empty space box according to DIN VDE 0606	40071347490

Remote switch

Control loop for blocking LP-STAR during operating downtimes with differential loop monitoring for short circuit and wire breakage detection.



Differential monitoring:	Short circuit or interruption lead to unlock LP-STAR
F3 switch closed:	Device ready
F3 switch open (1 kΩ):	Device blocked

I/O ethernet module

I/O ethernet module

- Connection as F3 interface with F3 module (optionally available) to CGVision
- Control and monitoring of external devices via up to seven pot. free relay outputs or up to eight digital inputs
- Integrated web server, for control/monitoring via standard web browsers (e.g. Firefox)
- Blocking input (input 8) with differential loop monitoring (closed-circuit principle)
- Integrated e-mail program, can be freely configured for up to ten e-mail recipients
- Voltage supply either 230V/AC or 24V/DC

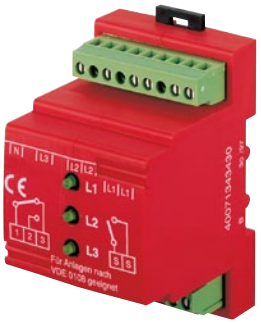
Ordering specifications I/O ethernet module

Scope of delivery	Order No.
I/O ethernet module (via LAN), for DIN rail	40071360115

LP-STAR emergency lighting power supply in a compact design

Components and options

Three-phase monitoring



Three-phase monitoring

Three-phase monitoring is used for monitoring the distributors of general lighting systems. In case of a phase failure, the component switches a relay contact and interrupts the standard electronic 24 V power loop in the LP-STAR device.

The emergency luminaires in non-maintained mode are switched to mains operation as long as the LP-STAR system is supplied by mains voltage.

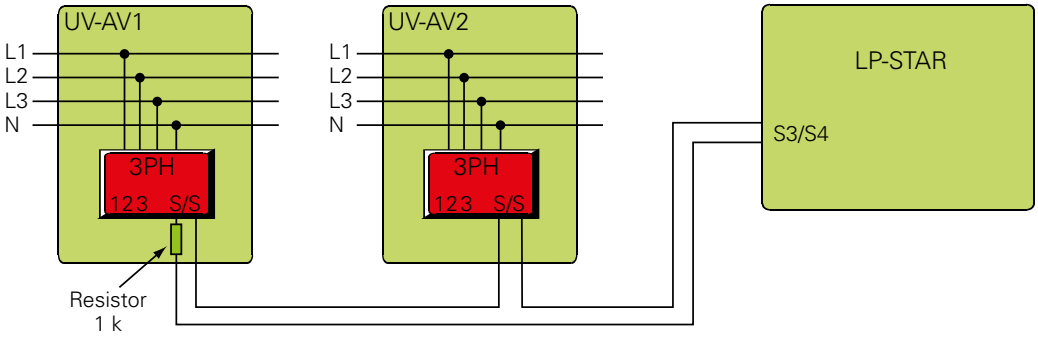
Dimensions in mm (W x H x D)	85 x 52.5 x 65
Housing	Plastic, red
Connection terminals	2.5 mm² rigid or flexible
Type of mounting	DIN mounitng rail
Contact	0.5 A/24 V AC/DC, 1 x open contact, 1 x change-over contact
Trigger threshold	U< 85 % UN
Grid size	3 units

Ordering details

Type	Scope of supply	Order No.
Three-phase monitoring	Module ready for mounting	40071343430

Current loop

24V current loop for emergency lighting request with differential loop monitoring for short circuit and wire breakage detection.



Differential monitoring:	Short circuit or interruption lead to the system immediately switching on (maintained light)
Phase monitor switch closed (1 kΩ):	Normal system mode

CGVision Package III

CGVision Package III (Basic or Pro) includes the CG-S/USB interface (USB box), for connecting the CG-S bus-based emergency luminaire systems like the LP-STAR, ZB-S and AT-S⁺ to the CGVision visualisation software using a standard bus cable and an optional CG-S Bus Interface.

Up to 480 devices of the LP-STAR, ZB-S or AT-S⁺ systems can be connected, even in mixed mode. However, systems must be assigned to their own device groups in CGVision.

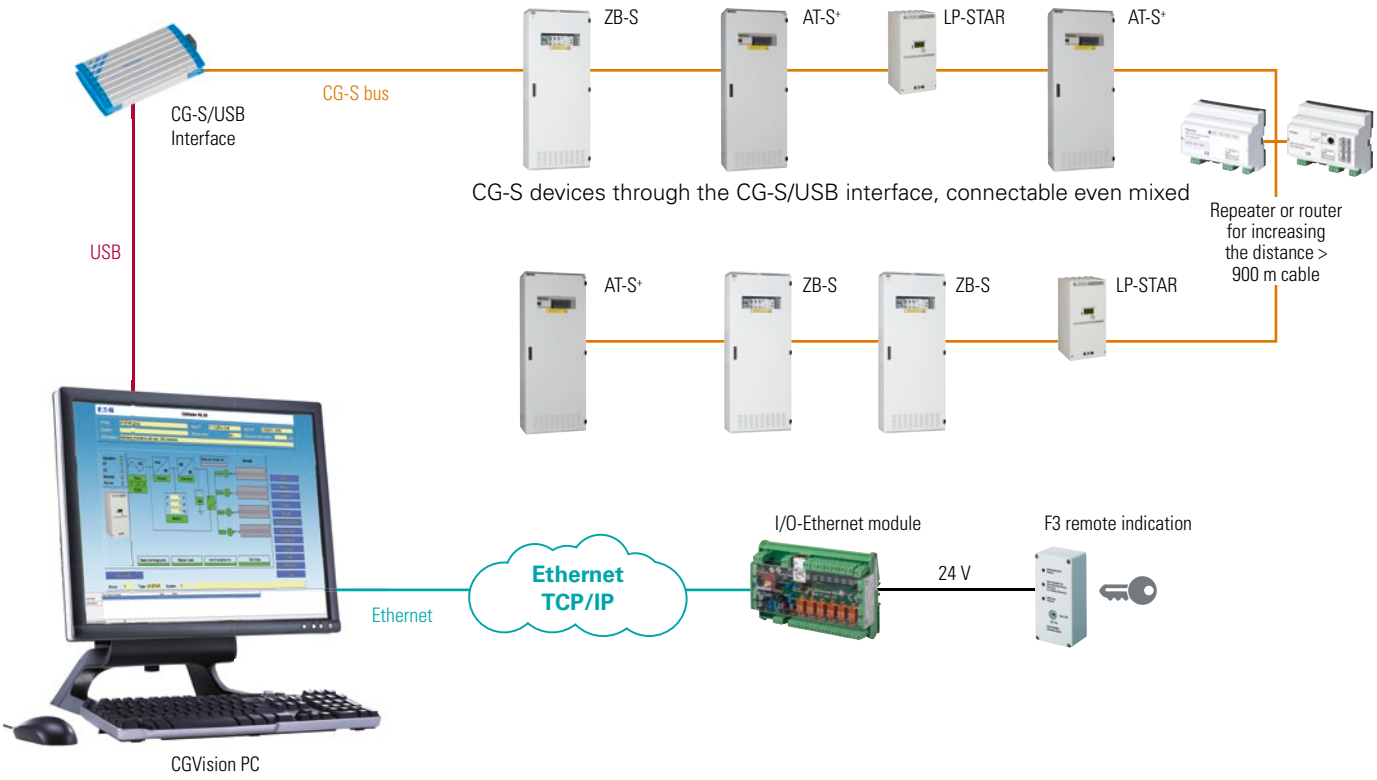
The bus cable can be extended with an optionally available repeater or router.

The CGVision Package III also includes all dongle licences for EGA devices (ZB96, EuroZB.1, GVL24.1, CG48 or ZVL220), CGLine or Ethernet I/O module on CGVision.

CG-S bus

- Max. bus length: 900 m
- The bus length can be extended using a router/repeater
- Double terminated Bus
- No stub lines allowed
- Recommended cable: JY (ST) Y 4 x 2 x 0.8 mm² Ø twisted pair (double twisted pair), shielded
- Termination resistor: 105 Ω on both sides

CGVision Package III application example



Ordering details

Type	Scope of supply	Order No.
CG-S Bus Interface	Plug-in card*	40071071178

* **Attention:** The CG-S Bus Interface must be installed by the manufacturer. The module can be installed later on site only with the replacement of the entire CSU module.

LP-STAR emergency lighting power supply in a compact design

Components and options

PC programming software LP-STAR

Programming software for pre-configured LP-Star memory cards for quick pre-programming on the PC and for easy reading and processing of the inspection log book memory.
All data can be saved on the memory card and hard disk for documentation.

Prints for documentation:
Detailed prints of programmed system configuration with the following information:

- Individual device name (20 characters) + 100 characters of additional information
- Date and time of automatic duration test incl. Distance in months
- Date and time of automatic function test incl. Distance in days
- Manual reset: Yes/No
- Delay in mains return: 0-99 min
- LON switch: Yes/No
- Capacity in Ah
- Rated operating time in h
- Operating limit time in %
- Assignments of the 4 relays
- Assignments of the 3 function keys
- Assignments of the 8 optional inputs

Detailed print of the programmed circuits (wiring diagrams)
with the following information for each circuit:

- Circuit/ SKU number and type
- Individual circuit name
- Monitoring type for circuit
- Switch type for circuit
- Number of luminaires
- Address and individual name of each luminaire
- Circuit type for each luminaire

Print of inspection log book with following options:

- Fault events (35 various fault events selectable separately or fully)
- Inspection log book period (from – to for date and time)
- Individual comment per print
- For luminaire failure: Information on individual luminaire and circuit names

Ordering details

Type	Scope of supply	Order No.
Software	PC software for LP-STAR for alternative programming of the system configuration on PC	40071347152

Webmodule LP-STAR

Example: Device status

Example: Circuit status

Webmodule LP-STAR

Webmodule LP-STAR for visualisation and monitoring an LP-STAR device on the local Ethernet (LAN) or Internet (WWW) with a conventional WEB browser. Access to the webmodule via internet (WWW) must be appropriately administered and set up on site by a competent IT department. Integrated mail program for convenient, event-related error notification via email, for up to 5 email recipients. 1 webmodule is required for each LP-STAR device.

- Simple menu navigation
- Any type of display devices can be used with a WEB browser, for example notebook, tablet PC, IPad or smartphone
- Complete visualisation and monitoring of an LP-STAR device through the local Ethernet (LAN) with a regular WEB browser, no additional software required for all functions
- Retrieving and indicating all current operating states
- Localised fault indicators for every emergency luminaire circuit and luminaires with target location information in plain text connected to a function test
- Continuous up-to-date information on charging unit and battery
- Parallel access from various PC workstations to a webmodule possible (max. 8)
- Integrated email program for each webmodule for convenient error notification via email
- Adjustable email dispatch acc. to type of error or function test
- Up to 5 email recipients programmable
- Adjustable update cycle for web browser via the webmodule
- Authenticated access via administrator account with password protection
- Configurable guest account for restricted access with password protection
- Static or dynamic (DHCP) IP addressing possible
- Any number of webmodules operable in parallel
- Overview of all active webmodules on the local Ethernet with status display and hyperlink function
- Independent parallel operation of a CGVision visualisation possible

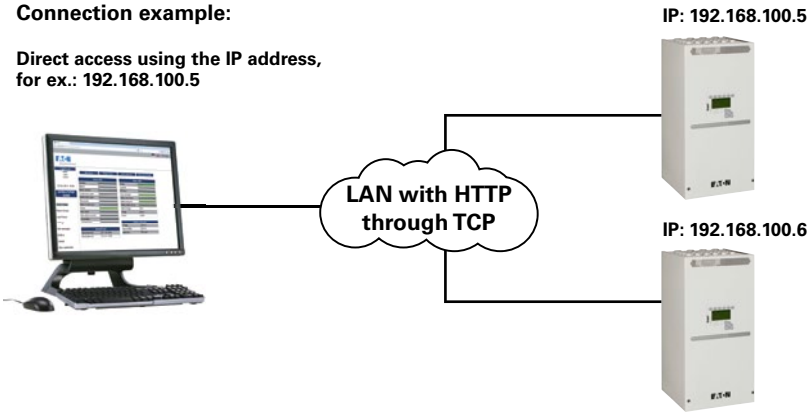
Device supply voltage	24 V DC
Rated power	< 1.5 W
Connection	RJ45
Degree of protection	IP20
Weight	0.1 kg
Dimensions	90 x 35 x 58
Housing	Polycarbonate

Ordering details

Type	Scope of supply	Order No.
Webmodule LP-STAR	Module for DIN rail mounting, incl. connection without RJ45 patch cable, mounted ex works	40071361188
Webmodule LP-STAR	Module for DIN rail mounting, incl. connection without RJ45 patch cable, for retrofitting	40071361187

Connection example:

Direct access using the IP address, for ex.: 192.168.100.5



LP-STAR emergency lighting power supply in a compact design

Technical Data

LP-STAR-4-24

Optional battery compartment

Input	
Rated voltage AC	1 ~ 220-240 V
Rated frequency	50/60 Hz
Max. rated current AC	5.5 A
Rated voltage DC	19.2- 28.8 V
Battery	VRLA, 2x6 cells in series, 20 °C

Output	
Rated voltage AC	220-240 V AC / 220 V DC constant
Total current	4.7 A AC / 2.45 A DC
Total power	1080 VA / 540 W
Circuit power	345 VA / 330 W
Rated breaking capacity	1500 A @ 300 V DC

	LP-STAR 4-12	LP-STAR 4-24	LP-STAR-4-36	LP-STAR-4-48
Circuits	4	4	4	4
Max. battery size (C10; 1.8 V/Z, +20 °C)	2 x 12 V / 12 Ah	4 x 12 V / 24 Ah	6 x 12 V / 36 Ah	8 x 12 V / 48 Ah
Dimensions (W x H x D)	550 x 260 x 260 mm		730 x 260 x 260 mm	
Max. ambient temperature	For storage: -20 °C to + 40 °C, For operation*: -5 °C to + 35 °C			
Sound pressure level at mains operation / emergency mode (converter operation)	0 dB / 50 dB			
Housing colour	RAL 7035			
Degree of protection / insulation class	IP20 / I			
Weight (approx.) without battery	17 kg		21 kg	

* Maximum Design Lifetime at +20 °C: 10 years

Ordering details

Type	Model	Order No.
LP-STAR 4-12	LP-STAR-4-12, incl. control module, 1 charging unit, 4 circuits and battery packs 2 x 12 V / 12 Ah	40071362120
LP-STAR 4-24	LP-STAR-4-24, incl. control module, 1 charging unit, 4 circuits and battery packs 4 x 12 V / 24 Ah	40071362240
LP-STAR 4-36	LP-STAR-4-36, incl. control module, 1 charging unit, 4 circuits and battery packs 6 x 12 V / 36 Ah	40071362360
LP-STAR 4-48	LP-STAR-4-48, incl. control module, 1 charging unit, 4 circuits and battery packs 8 x 12 V / 48 Ah	40071362480

LP-STAR-4-24

Battery

Rated capacity AhK10, 1,8 V/Z, +20 °C	Dimensions of one battery L x W x H (mm)	Number of batteries U_B = 12 V pieces	Total weight of all batteries (kg)
10 Y: 12 Ah	152 x 98 x 102	max. 8	4 pieces: 15.25 8 pieces: 30.50

Battery ordering details

Type	Model	Order No.
12 V/12 Ah	Battery block, period of use: 10 years	40066071147

Period of use specified for a max. battery temperature of +20 °C

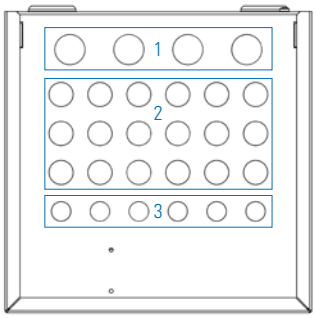
Fuse ordering details

Type	Model	Order No.
Final circuit fuses	2.5 AT / 250 V (packaging unit 10 pieces)	400713611235
Mains feed-in circuits	6.3 AT / 250 V (packaging unit 10 pieces)	400713611234

Accessories ordering details

Type	Model	Order No.
Clamping gland set, 28 pieces	4 x M25, 18 x M20, 6 x M16	40071361159

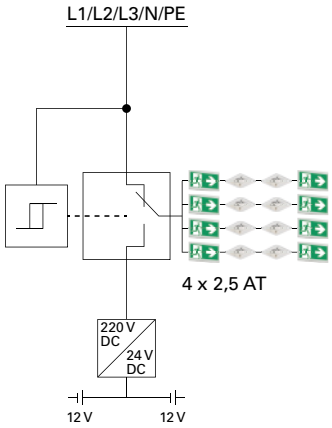
Pre-cut cable entries LP-STAR



1 = 4 x M25
2 = 18 x M20
3 = 6 x M16

LP-STAR emergency lighting power supply in a compact design

Technical Data



Circuit change-over module

The circuit change-over module supplies 230 V AC in mains operation and 220 V DC in emergency lighting operation to the luminaires of the emergency lighting system according to EN 60598-2-22.

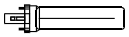
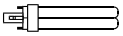
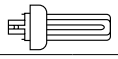
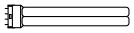
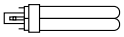
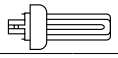
The CEWA GUARD monitoring checks the operation of the connected luminaires. Up to 20 luminaires can be connected.

Mechanical structure	Circuit board
Fuse	2,5 AT / 250 V 5 x 20 mm
Max. operating time in battery operation	Maximum 330 W per circuit and total maximum 540 W for all circuits
Max. power in mains operation	Maximum 345 VA per circuit and total maximum 1080 W for all circuits
Max. inrush current transformer output	250 A
Output voltage	220 V constant
For the luminaires	EVG

Luminaire series	Luminaire type	Luminaire output [W]*	Mains operation [VA]*	Inrush current [A]
GuideLed	10011 ... 10026 CG-S	1.9	4.0	1.5
	10021 ... 10026 CG-S	2.9	5.5	
	11011 ... 11026 CG-S	2.6	5.0	
	11021 ... 11026 CG-S	4.1	7.1	
	13011 ... 13022 CG-S SL	5.0	8.5	
	10011 ... 10013 CG-S FSL	4.0	7.2	
Style LED	22011 LED CG-S	4.4	7.6	
	22021 LED CG-S	5.8	9.5	
	51011, 51021 LED CG-S	5.8	9.5	
Spirit LED	Spirit LED 16	1.7	3.8	
	Spirit LED 28	3.7	6.6	
Brillant LED	1503 ... 1803 LED CG-S	2.9	5.5	
	1504 ... 1804 LED CG-S	4.1	7.1	
	1903 LED CG-S	3.0	5.5	
Aluminium housing	70011 LED CG-S	2.0	4.36	
	70021 LED CG-S	3.1	5.8	
	71011 LED CG-S	3.1	5.8	
	71021 LED CG-S	5.8	9.5	
Escape luminaires	3503.1 LED CG-S	4.4	7.6	
	3604.1 LED CG-S	5.8	9.5	
Atlantic	Atlantic LED S CG-S	5.0	8.5	
	Atlantic LED D CG-S	5.0	8.5	
	Atlantic LED R/O/Wand CG-S	5.0	8.5	

* Power consumption of the luminaires during battery or mains operation in case of an ambient temperature of +20 °C.

Connection cable/W for the luminaires with:

International term	Lamp cap	EVG Type EVG ...	Lamp load in [W]	Battery operation P [W] at a luminous flux Φ_E/Φ_{Rated} = 75 %	Mains operation S [VA]	Inrush current [A]
T 16	G5	13.3 ...	4	4.5	8	3
		13.3 ...	6	5.5	12	3
		13.3 ...	8	7.25	16	3
		13.3 ...	13	12.5	23	3
TC-SEL	2G7	13.3 ...	5	5.0	10	3
		13.3 ...	7	6.4	13	3
		13.3 ...	9	8.0	16	3
		13.3 ...	11	10.0	18	3
TC-DEL	G24q-1	13.3 ...	10	8.5	16	3
		13.3 ...	13	12.5	23	3
TC-TEL	GX24q-1	13.3 ...	13	12.5	23	3
						
T 26	G13	18 ...	18	16.0	30	8
TC-F	2G10	18 ...	18	16.0	30	8
						
TC-L	2G11	18 ...	18	16.0	30	8
						
TC-DEL	G24q-2	18C ...	18	16.0	30	8
						
TC-TEL	GX24q-2	18C ...	18	16.0	30	8
						

Continuous output = start output

N-EVG 54 W V-CG-S

Rated value N-EVG ... V-CG-S in case of mains and battery operation

Term	T5	T5	T5	T5	T5	T5
Lamp cap	G5	G5	G5	G5	G5	G5
Type N-EVG ... V-CG-S	14 / 21 / 28 / 35 W	14 / 21 / 28 / 35 W	14 / 21 / 28 / 35 W	14 / 21 / 28 / 35 W	24/39 W	24/39 W
Lamp load [W]	14	21	28	35	24	39
Battery operation, incl. converter efficiency [W] in switch position (luminous flux Φ_E/Φ_{Rated} in %)						
100 %	21	28	39	47	34	49
90 %	18	26	34	41	31	44
80 %	17	23	31	36	26	39
70 %	15	21	28	34	23	34
60 %	13	18	26	28	21	31
50 %	12	16	23	26	18	28
40 %	10	14	21	23	17	26
30 %	9	13	18	21	15	23
Power consumption [VA]	22	30	38	46	32	49
Inrush current [A]	10					
System power lamp + EVG acc. EN 50294 [W]	16	23	30	37	25	41

LP-STAR emergency lighting power supply in a compact design

Technical Data

N-EVG 58 W V-CG-S

Term	T5	T5	T5	T8	T8
Lamp cap	**G5**	**G5**	**G5**	**G13**	**G13**
Type N-EVG ... V-CG-S	**49W**	**54W**	**80W**	**36W**	**58W**
Lamp load [W]	**49**	**54**	**80**	**36**	**58**
Power consumption [A] at 220 V battery operation in switch position (luminous flux Φ_E/Φ_{Rated} in %)					
100 %	62	67	98	44	65
90 %	54	60	88	39	57
80 %	49	54	78	36	52
70 %	44	47	70	31	47
60 %	39	41	62	28	41
50 %	36	39	54	26	36
40 %	31	34	49	23	34
30 %	28	31	44	21	28
Power consumption [VA]	65	68	100	43	65
Inrush current [A]	10	10	12	10	10
System power lamp + EVG acc. EN 50294 [W]	52	57	84	34	53

The required battery current is determined based on luminous flux conditions (30% ... 100%).
Dim mode 30% only down to 10°C, 60% only down to 0°C allowed.
When used outdoors, the 100% setting should only be used.

Calculation example

The following luminaires should be connected to one power circuit:

8 pieces of GuideLed 10011 CG-S RZ
4 pieces of 35 W/T5 with N-EVG 54 W V-CG-S, luminous flux 40 %
2 pieces of GuideLed 13011 CG-S SL

There are the following conditions:

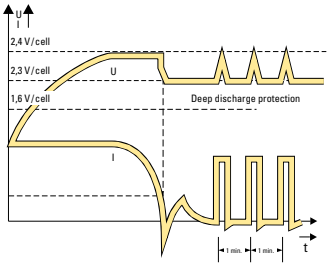
Battery operation:			**Mains operation:**
max. cont. output:		330 W	max. 345 VA apparent power max. inrush current 250 A
Start output:			
10011 CG-S: 8 x 1.9 W	=	15.2 W	
35 W/T5: 4 x 47 W (100 %)	=	188.0 W	
13011 CG-S: 2 x 5 W	=	10 W	
Total	=	213.2 W	**< 330 W --> OK**
max. inrush current:			
10011 CG-S: 8 x 1.5 A	=	12.0 A	
35 W/T5: 4 x 10 A	=	40.0 A	
13011 CG-S: 2 x 1.5 A	=	3.0 A	
Total	=	55.0 A	**< 250 A --> OK**
max. mains power:			
10011 CG-S: 8 x 4 VA	=	32.0 VA	
35 W/T5: 4 x 46 VA	=	184.0 VA	
13011 CG-S: 2 x 8.5 VA	=	17.0 VA	
Total	=	233.0 VA	**< 345 VA --> OK**

Attention!

The connected load of all circuits in total may not exceed 540 W and 1080 VA per LP-STAR device.

LP-STAR emergency lighting power supply in a compact design

Components and options

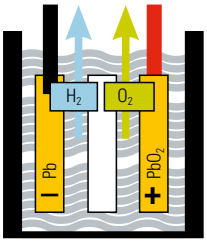


CM 4-24

The completely sealed lead batteries are charged gradually based on an IU0U charging curve in function of temperature. Boost charge is activated in function of the battery charge level to ensure that the batteries are charged without exceeding the gassings voltage.

The charge monitoring procedure verifies the charging process continuously and it reports any faults immediately, including interruption of the battery circuit, faulty charging unit or a high impedance battery cell.

End-of-charge voltage boost charge at +20 °C	28.8 V
End-of-charge voltage trickle charge at +20 °C	27.6 V
Deep discharge protection [1.6 V/Z]	20.4 V
Maximum charging current	4 A
Maximum rated power at boost charge	130 VA
Maximum rated power at trickle charge	10- 120 VA

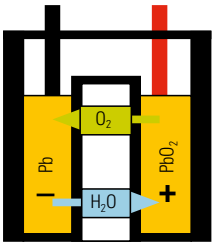


In conventional lead-acid batteries with free electrolyte, water is broken down into oxygen at the positive plate and hydrogen at the negative plate in case of overcharging the battery. To protect the battery from drying, this loss of water must be compensated for at regular intervals.

Max. battery discharge power [W] [1)]

Rated operating time	P-Batt min 12 Ah	P-Batt min 24 Ah	P-Batt min 36 Ah	P-Batt min 48 Ah
1.0 h	133	303	468	540
2.0 h	50	142	232	320
3.0 h	24	86	149	212
8.0 h	-	16	38	66

C10/1.8 V/C at +20 °C



The extremely low gas emission absorption cells are designed to ensure that the positive plate is charged completely before the negative plate and consequently the released oxygen diffuses to the negative plate. On the negative plate it reacts with the lead to form lead-oxide which in turn reacts with the sulphuric acid electrolyte and forms lead-sulphate and water to prevent any loss of water.

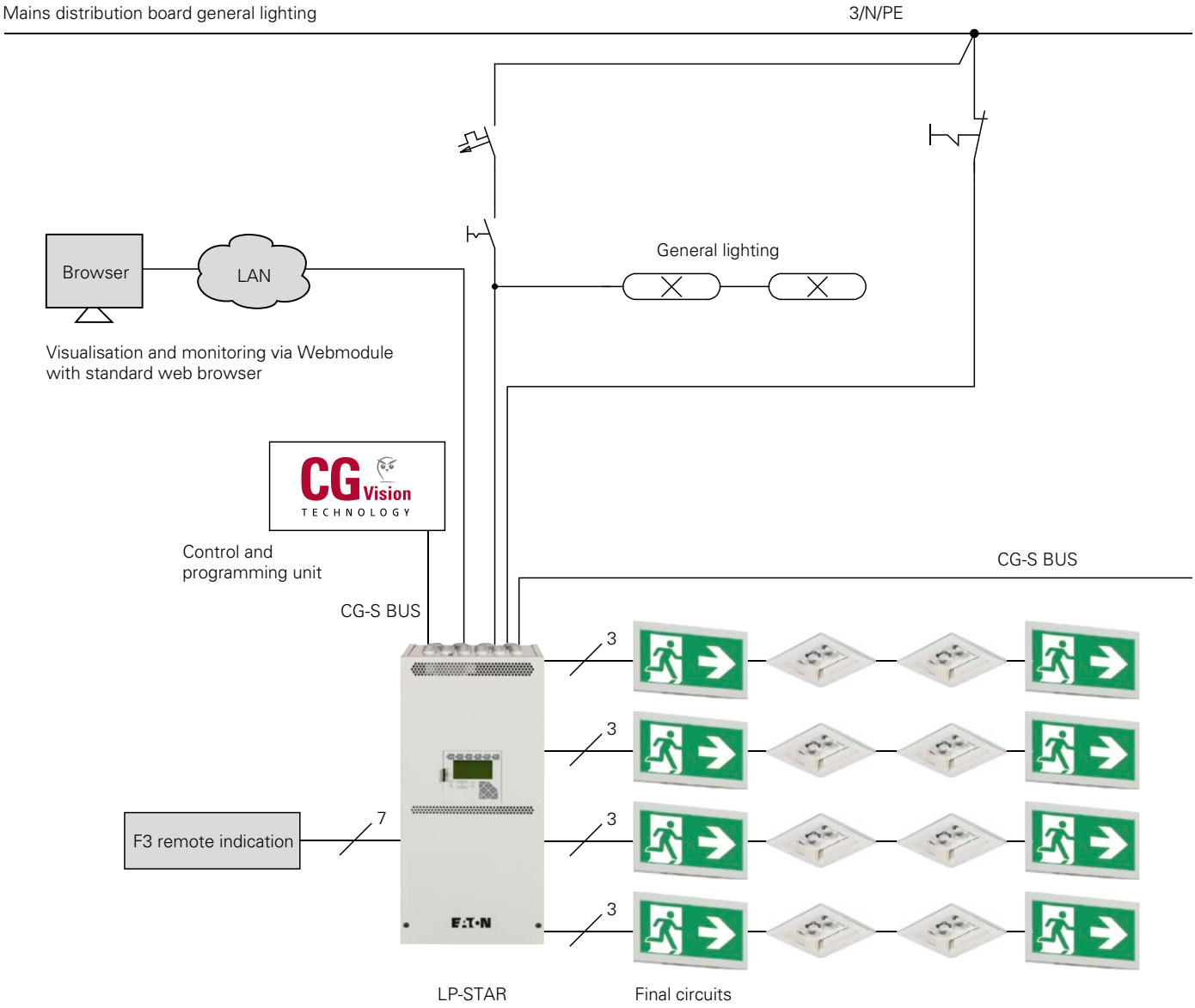
Evaluation of aeration and deaeration of electrical service rooms according to DIN EN 50272-2

Capacity	12	24	36	48
Air volume flow required for the aeration of the location room [l/h], calculated for boost charge*	57.6	115.2	172.8	230.4
Vent cross-section of the air inlets and outlets of the place of installation [cm²], calculated for boost charge*	1.6	3.2	4.8	6.5
Air volume flow required for the aeration of the location room [l/h], calculated for trickle charge*	7.2	14.4	21.6	28.8
Vent cross-section of the air inlets and outlets of the place of installation room [cm²], calculated for trickle charge*	0.2	0.4	0.6	0.81

* If boost charge is not frequently used (for example once a month), the air flow rate can be calculated based on the trickle charge current.

LP-STAR emergency lighting power supply in a compact design

Installation example



LP-STAR emergency lighting power supply in a compact design

Description

LP-STAR

LP-STAR emergency lighting power supply in a compact design

Low Power System according to EN 50171 and BGV A3 for the power supply of escape luminaires and exit sign luminaires 230V / 216V AC/DC. It is suitable for emergency lighting systems according to DIN VDE 0100-718, DIN EN 50172 and V DIN V VDE 0108-100. With an automatic test device and monitoring and displaying the state and name of individual luminaires connected to system-specific EVG/LED supply module including a monitoring component without an additional data cable.

The switching operation of each escape luminaire and exit sign luminaire with system-specific EVG/LED supply module or monitoring component is programmed freely in the control module without an additional control cable to the luminaires.

The CEAG STAR technology results in a severe reduction of end circuits, because the mixed operation including maintained light, switched maintained light and non-maintained light is implemented in a single circuit.

The control module assigns the different operating modes without any modification of the luminaire installation. The operating modes: non-maintained light or maintained light cannot be selected at the monitoring module or EVG/LED supply module using slide switches, coding switches or jumpers respectively. The additional costs incurred due to the use of parts made by other manufacturers or additional components on the installation lines cannot be claimed.

Simple connection technology using plug-in, back of hand proof clamp connections.

Bus technologies

CG-S bus technology based on LONWorks® technology

For data communication a 2-pole, bidirectional CG-S data bus, is integrated optimally in the control module of LP-STAR.

Using the optionally available CG-S Bus Interface, any building control systems based on the LONWorks® technology can communicate with the system on the CG-S bus.

Alternatively, any OPC compatible building control system can be connected to the optionally available OPC server and the Interface-Box using the CG-S bus.

Thus extensive status messages and commands can be queried through the CG-S bus.

The following data can thus be directly communicated:

- Status messages such as device disabled, deep discharge protection, battery interruption, battery voltage, current and temperature, insulation error, charging unit fault, bus communication error, mains failure, circuit faults etc.
- Input commands such as Start function test, Start and cancel duration test, Manual reset, Disable and release system.

16 virtual switching inputs can be used to directly and independently switch circuits or even individual luminaires via external LON sensors.

Interconnection of all LP-STAR distribution boards also possible via various media such as fibre optic cables, Ethernet and LAN using optional components.

Status and error messages can be retrieved for each individual luminaire.

Communication with system-oriented luminaires takes place only through the connected power line.

Using the search function, the luminaires connected to the system addressed during installation are automatically detected.

Control module

A freely programmable control module with a non-volatile program memory and alphanumeric graphic display monitors and controls the LP-STAR system. All functions such as loading, mains/emergency switch-over and deep discharge protection of devices and the connected emergency luminaires are automatically inspected. Errors arising will be reported immediately.

An interface provides a connection to a central monitoring device.

In case of a short circuit or interruption of control current loops, differential monitoring leads to the system immediately switching on (maintained light) or to the system being put in standby.

Graphical display:
128 x 64 pixels, back-lit, program-adjustable contrast and brightness.

Display values:
battery voltage, battery charge current (+), battery charge current in test mode or in case of fault (–), charge fault, luminaire fault with location information in plain text, deep discharge protection, manual reset, delayed emergency light (remaining time in minutes), test mode, date/time, insulation fault, UV-AV fault, fault information, programming information, test log book.

LED displays:
System readiness, supply from the source for safety services, failure.

Sealed keypad:

- individual buttons for device test, function test and duration test.
- 3 freely programmable function keys for example: Lock/unlock device, manual reset, turn on/off maintained light, display fault list, turn on/off continuity lighting, simulation mains failure UV.
- 7 control buttons for user-friendly navigation in query and programming mode.

Programming options:
Individual luminaire monitoring, circuit monitoring, individual name (20 characters) per device, circuit, luminaire, device address, selective manual reset, delayed emergency light (1-15 min.), LON switch, timer function, automatic function and duration test, selection of menu language, automatic daylight savings time setting, password protection.

Connection for disable switch:
Control loop for disabling the system during operating downtimes with differential loop monitoring for short circuit and wire breakage detection.

Differential monitoring: Short circuit or interruption lead to the system going into standby.

Connection for phase monitor:
24V current loop for emergency light requirement with differential loop monitoring for short circuit and wire breakage detection.

Differential monitoring: Short circuit or interruption lead to the system switching on (maintained light) immediately.

Connection for potential-free indicator contacts, buzzer:
4 potential-free indicator contacts with a separate root. Every potential-free contact can have one or more of the 11 different alerts assigned to it. Freely programmable, DIN VDE specification retrievable at any time as default setting.

Connection for 230 V digital inputs without phase monitor function: 8 freely assignable inputs 230V, programmable as inverted and non-inverted for example for start/stop function test, start/stop duration test,

manual reset, turn on/off maintained light, turn on emergency lighting as continuity lighting.

Memory card:
Memory card for archiving the device configuration and the mandatory inspection log book information over a minimum of 4 years.

Storing:

- 360.000 inspection log book entries
- Luminaire target location texts (20 characters per luminaire)
- Circuit names (20 characters per circuit)
- Device name (20 characters)

Using The device can be programmed offline on a PC using the optional CEAG software.

Charging technology

The sealed maintenance-free lead batteries are charged gradually based on an microprocessor-controlled IU charging curve in function of temperature. Force charge is activated in function of the battery charge level to ensure that the batteries are charged without exceeding the gas development voltage. The charge monitoring procedure verifies the charging process continuously and it reports any faults immediately, including interruption of the battery circuit, faulty charging unit or a high impedance battery cell.

- with ISO test device according to DIN VDE0100 Part 410
- LED displays for charging unit on, boost charge on, insulation fault, charge fault, mains available
- potential-free contacts charge fault, boost charge, insulation fault
- Temperature sensor built into the battery compartment

Circuit components

The circuit switch-over supplies and monitors emergency luminaires with electronic ballasts for DC operation. The CEWA GUARD monitoring checks the operation of the connected luminaires.

- Monitoring of up to 20 luminaires per circuit with individual status display
- Mixed operation of continuous lighting, switched maintained light and non-maintained light within a single circuit. (an additional data line to the luminaires is not required)
- Output voltage in battery operation: 220 V DC
- Typical switch-over time mains/battery: 450 ms
- freely programmable for maintained light, switched maintained light or maintained mode
- fuses easily accessible on the front part of the component
- permanent monitoring of fuses
- automatic luminaire search function

Webmodule

Webmodule for visualising and monitoring a LP-STAR device on the local Ethernet (LAN) or Internet (WWW) with a regular WEB browser. Access to the webmodule via internet (WWW) must be appropriately administered and set up on site by a competent IT department.

Integrated email program for convenient, event-related error notification via email, for up to 5 email recipients.

- Simple menu navigation
- Complete visualisation and monitoring of an LP-STAR through the local Ethernet (LAN) with a regular WEB browser
- Retrieving and indicating all current operating states
- Localised fault indicators for every emergency luminaire circuit and luminaires with target location information in plain text connected to a function test
- Continuous up-to-date information on charging device and battery
- Parallel access from various PC workstations to a web-module possible (max. 8)
- Integrated email program for a convenient error notification via email
- Adjustable email dispatch acc. to type of error or function test
- Up to 5 email recipients programmable
- Adjustable update cycle for web browser via the webmodule
- Authenticated access via administrator account with password protection
- Configurable guest account for restricted access with password protection
- Static or dynamic (DHCP) IP addressing possible
- Any number of webmodules operable in parallel
- Overview of all active web-modules on the Intranet with status display and hyperlink function

Supply voltage:	24V DC
power consumption:	< 1.5W
Connection:	RJ45

Housing made of polycarbonate for installation on DIN rail, 2TE

Dimensions (L x W x H): 90 mm x 35 mm x 58 mm Weight: ca. 100 g Protection rating: IP20

24V OGiV block battery

Only closed and non-spillable OGiV batteries are used. Rated operating time 1, 3 and 8 hours respectively

- extremely low gas emissions
- Period of use: 10 years at 20°C
- low self-discharge
- Design according to IEC60896-21/-22
- electrolyte and air oxygen sealed terminals

CEAG is a member of the "Stiftung Gemeinsames Rücknahmesystem Batterien [joint battery recycling programme] (GRS)".

In this manner batteries undergo a controlled and complete recycling cycle. This means that possible polluting materials are recovered and reused for new products.

Specifications have been quoted based on CEAG products. Specifications can be compared based on this product. The tenderer can submit a tender based on a variant solution including an equivalent product (proof by the tenderer). Detailed product descriptions must be attached to the offer for the evaluation of equivalence:

References

CEAG Notlichtsysteme GmbH
Senator-Schwartz-Ring 26
D-59494 Soest/Germany
Telephone +49 (0) 2921/69-870
Fax +49 (0) 2921/69-617
Internet www.ceag.de
Email info-n@ceag.de

A DIN EN ISO 9001:4500 certification must be further provided as proof.

Manufacturers without the DIN EN ISO 9001:4500 certification are not permitted.

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Powering business worldwide

As a global diversified power management company, we help customers worldwide manage the power needed for buildings, aircraft, trucks, cars, machinery and businesses.

Eaton's innovative technologies help customers manage electrical, hydraulic and mechanical power more reliably, efficiently, safely and sustainably.

EATON

Powering Business Worldwide

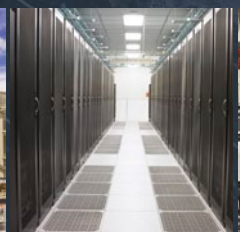


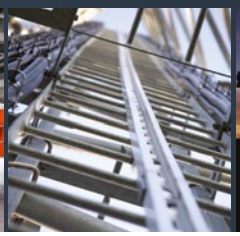

We deliver:

- **Electrical solutions** that use less energy, improve power reliability and make the places we live and work safer and more comfortable
- **Hydraulic and electrical solutions** that enable machines to deliver more productivity without wasting power
- **Aerospace solutions** that make aircraft lighter, safer and less costly to operate, and help airports operate more efficiently
- **Vehicle drivetrain and powertrain solutions** that deliver more power to cars, trucks and buses, while reducing fuel consumption and emissions

We provide integrated solutions that help make energy, in all its forms, more practical and accessible.

With 2012 sales of $16.3 billion, Eaton has approximately 103,000 employees around the world and sells products in more than 175 countries.

Eaton's electrical business

Eaton is a global leader with expertise in:

- Power distribution and circuit protection
- Backup power protection
- Solutions for harsh and hazardous environments
- Lighting and security
- Structural solutions and wiring devices
- Control and automation
- Engineering services

Eaton is positioned through its global solutions to answer today's most critical electrical power management challenges. With 100 years of electrical experience behind us, we're energized by the challenge of powering up a world that demands twice as much energy as today. We're anticipating needs, engineering products, and creating solutions to energize our markets today and in the future.

We are dedicated to ensuring that reliable, efficient and safe power is available when it's needed most.

Eaton.com

Eaton is dedicated to ensuring that reliable, efficient and safe power is available when it's needed most. With unparalleled knowledge of electrical power management across industries, experts at Eaton deliver customized, integrated solutions to solve our customers' most critical challenges.

Our focus is on delivering the right solution for the application. But, decision makers demand more than just innovative products. They turn to Eaton for an unwavering commitment to personal support that makes customer success a top priority. For more information, visit **www.eaton.com/electrical.**

To find your contact person, visit **www.ceag.de**.

Eaton Industries Manufacturing GmbH
Electrical Sector EMEA
Route de la Longeraie 7
1110 Morges, Switzerland
www.eaton.eu

CEAG Notlichtsysteme GmbH
Senator-Schwartz-Ring 26
59494 Soest, Germany
Phone: +49 (0) 2921 69-870
Fax: +49 (0) 2921 69-617
E-Mail: info-n@ceag.de
Web: www.ceag.de

Printed in Germany
Publication No. CA451001EN
Order No. 40071860249
1.75/04.15/WD

Powering Business Worldwide

CEAG GuideLed safety luminaires

New GuideLed safety luminaires

Linear design combined with high economy

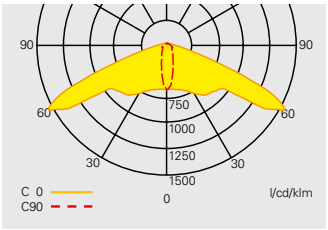
Powering Business Worldwide

GuideLed SL 13011.1, 13021.1 CG-S

Recessed mounting

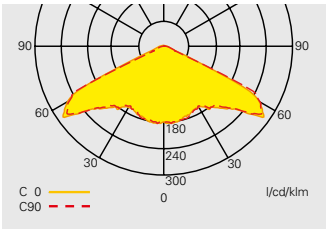
EN 1838 | LED | IP41* | S TAR | S+ TAR

GuideLed SL 13011.1 CG-S



Light distribution curve
GuideLed SL 13011.1 CG-S recessed with asymmetric optics

GuideLed SL 13021.1 CG-S



Light distribution curve
GuideLed SL 13021.1 CG-S recessed with symmetric optics

Sqare bezel for
GuideLed SL 130x1.1 CG-S

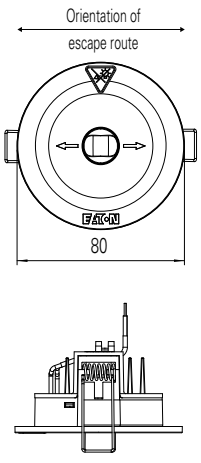
GuideLed SL 13011.1, 13021.1 CG-S

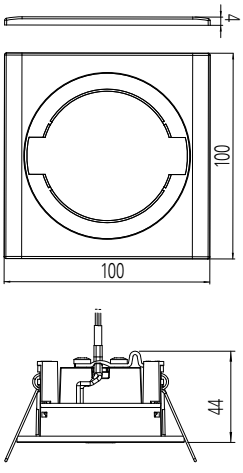
- Safety luminaire with LED technology for recessed mounting
- Unobtrusive, discrete appearance with round design and low installation depth of only 40 mm
- Conversion to square design with optional bezel to fit to the ceiling plan if necessary
- Special LED optics ensure especially efficient escape route illumination or uniform anti-panic illumination
- High Spacing by exact light direction and highly-efficient HighPowerLEDs
- Up to 27 m from luminaire to luminaire with optics for escape route illumination
- Up to 12 m from luminaire to luminaire with optics for antipanic illumination
- Minimum service requirement due to high service life of the LEDs (50,000 hours)

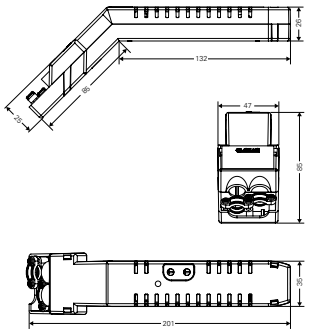
Luminous flux Φ_N	Asymmetric optics 250 lm Symmetric optics 250 lm
Luminous flux Φ_E/Φ_N at end of rated operating timer	100%
Housing material	PC, aluminium
Housing colour	White RAL 9016
Weight	0.25 kg
Type of mounting	Recessed mounting
Terminals	Clamp terminal 2 x 3 x 2.5 mm²
Connection voltage	220- 240 V AC, 50/60 Hz 176- 275 V DC
Current consumption- battery operation (220 V)	20 mA
Power consumption mains operation (apparent power/effective power)	8.0 VA / 3.9 W
Permissible ambient temperature	-20°C bis +40°C
Light source	HighPower LED 1 x 2 W

Ordering details

Scope of supply	Order No.
GuideLed SL 13011.1 CG-S, recessed mounting with asymmetric optics for escape route illumination, LED supply and CG-S technology (20 addresses) in housing* with strain relief	40071354480
GuideLed SL 13021.1 CG-S, recessed mounting with symmetric optics for anti-panic or open space illumination, LED supply and CG-S technology (20 addresses) in housing* with strain relief	40071354481
Sqare bezel GuideLed SL 130x1.1 CG-S	40071354488
Plastic enclosure for installation in concrete (suitable from 160 mm ceiling depth), for GuideLed SL 130x1.1 CG-S	40071353169







Module housing

64 - 68 mm ⌀

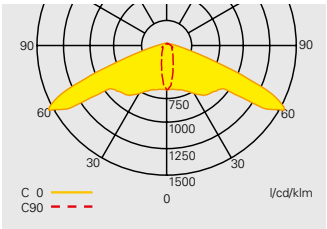
* Degree of protection of the luminaire: IP41
Degree of protection of module enclosure: IP20

EN 1838 | LED | IP41 | S TAR | S+ TAR

GuideLed SL 13012.1, 13022.1 CG-S

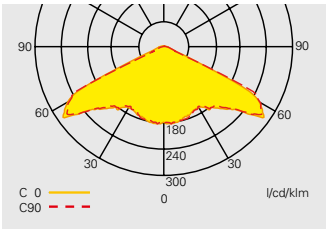
- Safety luminaire with LED technology for surface mounting
- Slender, discrete design with low height of 32 mm
- Special LED optics ensure especially efficient escape route illumination or uniform anti-panic illumination
- High spacing by exact light direction and highly-efficient HighPowerLEDs
- Up to 27 m from luminaire to luminaire with optics for escape route illumination
- Up to 12 m from luminaire to luminaire with optics for antipanic illumination
- Minimum service requirement due to high service life of the LEDs (50,000 hours)

GuideLed SL 13012.1 CG-S



Light distribution curve
GuideLed SL 13012.1 CG-S surface
with asymmetric optics

GuideLed SL 13022.1 CG-S

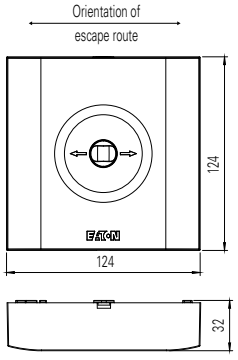


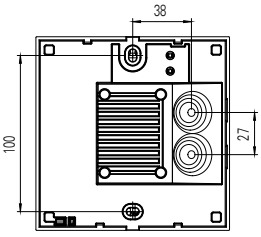
Light distribution curve
GuideLed SL 13022.1 CG-S surface
with symmetric optics

Luminous flux Φ_N	Asymmetric optics 250 lm Symmetric optics 250 lm
Luminous flux Φ_E/Φ_N at end of rated operating time	100%
Housing material	PC, Aluminium
Housing colour	White RAL 9016
Weight	0.33 kg
Type of mounting	Surface mounting
Terminals	2 x 3 x 2,5 mm²
Connection voltage	220- 240 V AC, 50/60 Hz 176- 275 V DC
Current consumption- battery operation (220 V)	20 mA
Power consumption mains operation (apparent power/effective power)	8.0 VA / 3.9 W
Permissible ambient temperature	-20°C bis +40°C
Light source	HighPower LED 1 x 2 W

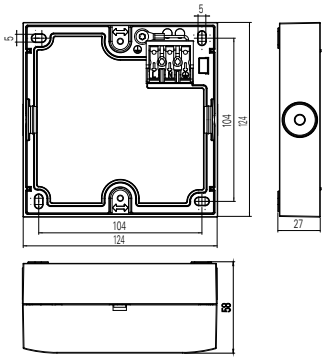
Ordering details

Scope of supply	Order No.
GuideLed SL 13012.1 CG-S surface mounting with asymmetric optics for escape route illumination, LED supply and CG-S technology (20 addresses)	40071354482
GuideLed SL 13022.1 CG-S surface mounting with symmetric optics for anti-panic or open space illumination, LED supply and CG-S technology (20 addresses)	40071354483
Additional enclosure for GuideLed SL 130x2.1, for more space for wiring and cable entry, including through-wiring terminal and connection cable to luminaire	40071354489

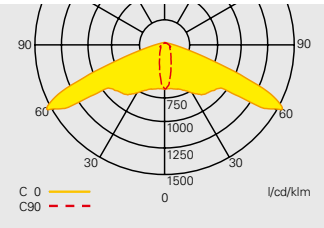


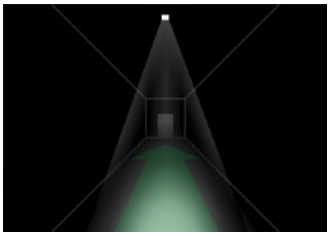


Additional enclosure



GuideLed SL CG-S

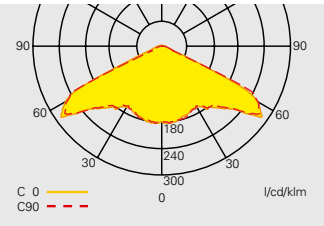


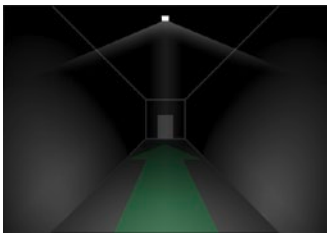


Escape route illumination
with asymmetric optics

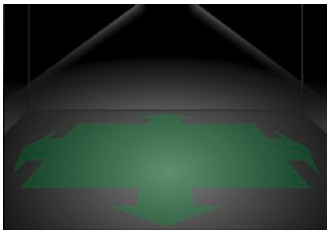
Planning assistance for GuideLed SL CG-S with asymmetric optics for E = 1.0 lx (0.5 lx)
Measuring height 0.02 m, maintenance factor MF = 80 %, battery operation

Mounting height [m]	Type of mounting	L1	L2	L3	L4
2.5	Ceiling mounting	2.3 (3.4)	6.8 (8.3)	6.4 (7.1)	14.1 (15.6)
3.0	Escape route	2.3 (3.2)	6.4 (9.2)	7.3 (8.1)	16.1 (17.8)
3.5	centre	2.3 (3.2)	6.5 (9.7)	8.1 (9.0)	17.9 (19.9)
4.0		2.3 (3.3)	6.5 (9.4)	8.8 (9.9)	19.7 (21.9)
4.5		2.3 (3.3)	6.6 (9.1)	9.5 (10.7)	21.4 (23.7)
5.0		2.2 (3.3)	6.6 (9.2)	10.0 (11.5)	23.0 (25.6)
5.5		2.1 (3.3)	6.6 (9.2)	10.4 (12.2)	24.4 (27.4)
6.0		2.0 (3.3)	6.5 (9.3)	10.7 (12.9)	25.8 (29.1)
6.5		1.9 (3.2)	6.4 (9.4)	7.9 (13.5)	27.0 (30.8)
7.0		1.8 (3.1)	6.2 (9.4)	7.6 (14.0)	26.0 (32.3)
7.5		1.7 (3.1)	6.1 (9.3)	7.3 (14.5)	25.9 (33.7)
8.0		1.6 (2.9)	5.8 (9.3)	7.0 (14.8)	26.2 (35.2)
8.5		1.4 (2.8)	5.7 (9.3)	6.7 (15.1)	26.4 (36.6)
9.0		1.2 (2.8)	5.5 (9.1)	6.1 (14.9)	26.1 (37.8)
9.5		1.0 (2.7)	5.3 (9.0)	4.7 (10.9)	21.9 (37.6)
10.0		0.6 (2.5)	5.0 (8.8)	2.5 (10.7)	21.4 (36.7)





Escape route illumination
with symmetric optics



Room illumination
with symmetric optics

Planning assistance for GuideLed SL CG-S with symmetric optics for E = 1.0 lx (0.5 lx)
Measuring height 0.02 m, maintenance factor MF = 80 %, battery operation

Mounting height [m]	Type of mounting	L1	L2	L3	L4
2.5	Ceiling mounting	4.4 (5.0)	9.9 (10.4)	4.4 (4.9)	9.8 (10.4)
3.0	Escape route	4.6 (5.9)	11.2 (12.3)	4.6 (5.7)	11.2 (12.1)
3.5	centre	4.5 (6.2)	12.3 (14.0)	4.6 (6.2)	12.3 (13.8)
4.0		3.5 (6.4)	12.5 (15.2)	3.8 (6.4)	12.5 (15.2)
4.5		2.9 (6.6)	13.0 (16.4)	3.2 (6.6)	12.7 (16.4)
5.0		2.4 (6.2)	12.3 (17.4)	2.4 (6.4)	12.4 (17.4)
5.5		1.9 (5.3)	10.6 (17.5)	1.8 (5.5)	11.0 (17.6)
6.0		0.7 (4.7)	9.4 (17.8)	0.9 (4.8)	9.6 (17.9)
2.5	Ceiling mounting	4.3 (4.4)	9.8 (10.3)	4.1 (10.3)	9.5 (10.3)
3.0	Room illumination	4.4 (5.2)	11.1 (12.0)	4.6 (5.2)	11.0 (11.9)
3.5		4.7 (5.6)	12.2 (13.6)	5.0 (5.8)	12.2 (13.5)
4.0		2.9 (5.9)	12.1 (15.0)	2.9 (6.3)	12.4 (15.0)
4.5		2.7 (6.2)	12.6 (16.3)	2.5 (6.5)	12.5 (16.3)
5.0		1.0 (6.4)	12.2 (17.2)	0.5 (6.8)	12.5 (17.4)
5.5		0.5 (4.3)	11.8 (17.2)	0.7 (4.5)	11.5 (17.6)
6.0		1.0 (3.5)	11.7 (17.4)	0.7 (3.7)	11.4 (17.5)
6.5		0.5 (2.8)	12.2 (17.8)	0.5 (1.1)	11.6 (18.0)
7.0		0.5 (1.1)	12.1 (17.3)	0.5 (0.7)	11.2 (17.8)
7.5		0.5 (0.5)	11.8 (14.5)	0.5 (2.9)	11.2 (20.5)
8.0		0.5 (2.4)	11.0 (20.3)	0.5 (0.5)	10.9 (14.8)
8.5		0.7 (0.8)	9.4 (21.7)	0.7 (0.7)	9.3 (13.7)
9.0		0.6 (0.5)	8.4 (17.8)	0.6 (0.5)	8.3 (16.5)

Requirements of EN 1838: illuminance of 5 lx for safety equipment

The aim of emergency lighting is to enable people to exit a room or building safely. It must also ensure that fire fighting and safety equipment can be easily found and operated when needed. This equipment includes (but not exclusively):

- First aid stations
- All fire fighting equipment and all alarm devices

Lighting is required near each first aid kit, near each alarm and piece of fire fighting equipment, as well as each sign indicating a fire alarm system. In accordance with EN 1838, „near" generally means a distance of no greater than 2 metres, measured horizontally (this corresponds with Distance a in the diagram below).

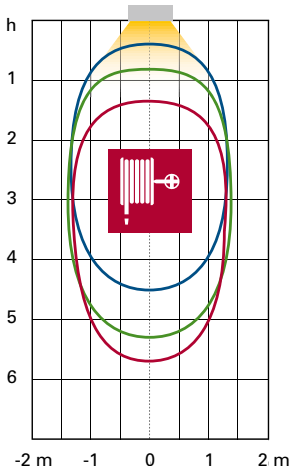
The required level of illuminance on the equipment is 5 lx measured vertically- i.e. perpendicular to the usual horizontal illuminance measurements on one level.

In comparison to the escape route requirement for 1 lx horizontally, different requirements apply in this situation for the light distribution from the safety luminaires, due to the flatter light angle of incidence.

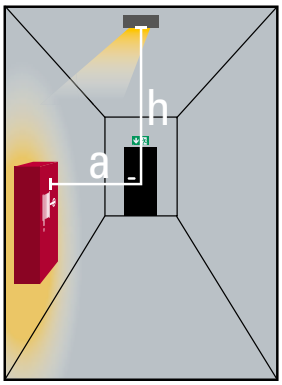
GuideLed SL 13851 and 13852 CGLine as well as 13851 and 13852 CGLine meet the specific requirements of EN 1838

In order to meet the requirements of EN 1838, the new GuideLed safety luminaires have special optics to guarantee the required illuminance of 5 lx vertically over a wide area. Hence mounting at heights of up to 5.6 m, and a breadth of illumination of up to 2.8 metres, are possible.

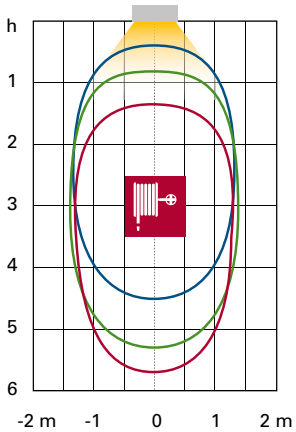
Engineering help, GuideLed SL 13051 and 13052 CG-S



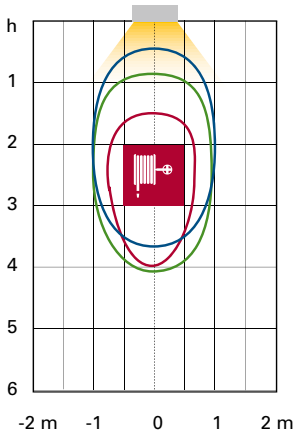
Engineering help, GuideLed SL 13851 and 13852 CGLine



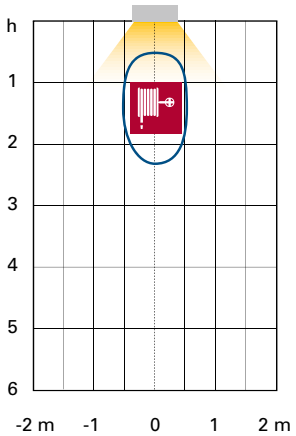
Rated operating time 1 h



Rated operating time 3 h



Rated operating time 8 h



Area in which a minimum illuminance of 5 lx (maintenance factor 0.8) is achieved, depending on distance a and the rated operating time:

a = 1,0 m a = 1,5 m a = 2,0 m

GuideLed SL 13051, 13052 CG-S

Ceiling recessing, ceiling surface-mounting for illuminance of 5 lx vertically

EN 1838 · LED · IP41 * · S TAR · S+ TAR · 13052 · 13051

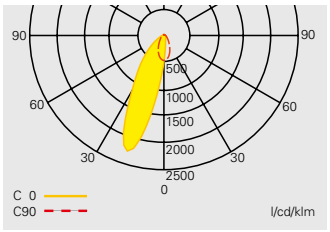
GuideLed SL 13051, 13052 CG-S

- Safety luminaire in LED technology for recessed and ceiling surface-mounting
- Unobtrusive design through optics integrated in the luminaire
- Special asymmetric optics for illumination of 5 lx vertically for first aid stations, fire fighting equipment and safety equipment acc. to EN 1838
- Suitable for mounting heights up to 5.6 m above the illuminated equipment
- The illuminated area has a width of up to 2.8 m.
- Minimum service requirement due to high service life of the LEDs (50,000 hours)

GuideLed SL 13051 CG-S

GuideLed SL 13052 CG-S

Luminous flux Φ_N	310 lm
Luminous flux Φ_E/Φ_N at end of rated operating time	100%
Housing material	Polycarbonate, aluminium
Housing colour	White, similar to RAL 9010
Weight	0.43 kg
Type of mounting	Ceiling recessing, ceiling surface-mounting
Terminals	2 x 3 x 2.5 mm²
Connection voltage	220- 240 V AC, 50/60 Hz 176- 275 V DC
Current consumption- battery operation (220 V)	21.5 mA
Power consumption mains operation (apparent power/effective power)	8.5 VA / 5.0 W
Permissible ambient temperature	-20 °C bis +40 °C
Light source	HighPower LEDs 2 x 1.6 W

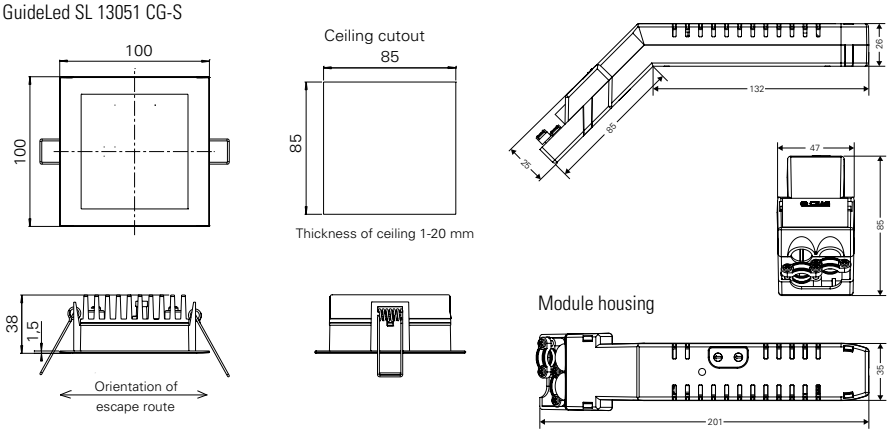


Light distribution curve
GuideLed SL 13051, 13052 CG-S

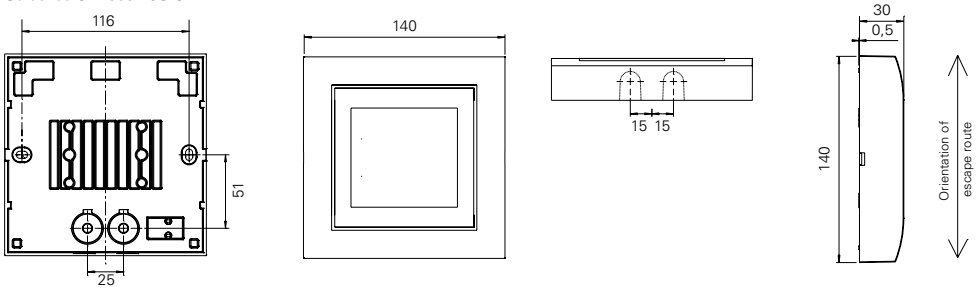
Ordering details

Scope of supply	Order No.
GuideLed SL 13051 CG-S, recessed mounting with asymmetric optics for illuminance of 5 lx vertically, incl. LED supply and CG-S Technology (20 addresses)	40071353415
GuideLed SL 13052 CG-S, surface mounting with asymmetric optics for illuminance of 5 lx vertically, incl. LED supply and CG-S Technology (20 addresses)	40071353416

GuideLed SL 13051 CG-S



GuideLed SL 13052 CG-S



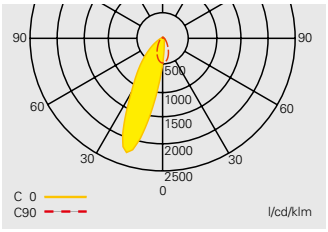
* GuideLed SL 13051 CG-S:
Degree of protection of the luminaire: IP41
Degree of protection of the module enclosure: IP20

EN 1838 | LED | IP41* | CG Line

Li-Ion | 13851 | 13852

GuideLed SL 13851 CGLine

GuideLed SL 13852 CGLine



Light distribution curve
GuideLed SL 13851, 13852 CGLine

GuideLed SL 13851, 13852 CGLine

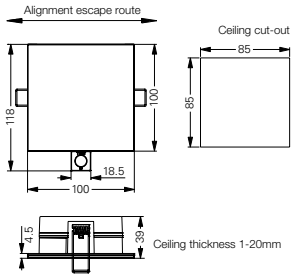
- LED self-contained safety luminaire with automatic test for reduced inspection effort
- Universal use for maintained and non-maintained operation and for 1 h, 3 h or 8 h operation
- For autonomous installation or connection to the CGLine monitoring system
- Environmentally-friendly due to modern lithium ion technology
- Low operating costs via low connected load
- Minimum maintenance effort via high LED service life (50,000 hours)
- Special asymmetric optics for illumination of 5 lx vertically for first aid stations, fire fighting equipment and safety equipment acc. to EN 1838
- Simple fault analysis and status display via bicolor LED and testing button
- 1 minute switch-back delay after mains return
- Blocking function prevents unintended discharge during idle operating times (only with CGLine monitoring systems)

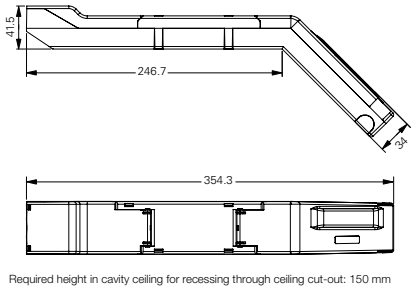
Luminous flux Φ_N (mains operation)	310 lm
Luminous flux Φ_E/Φ_N at end of rated operating time	100 % at 1 h; 55 % at 3 h; 20 % at 8 h
Housing material	Polycarbonate, aluminium
Housing colour	White, similar to RAL 9010
Weight	0.62 kg (13851 CGLine) 0.86 kg (13852 CGLine)
Type of mounting	Ceiling recessing, ceiling surface-mounting
Terminals	Through-wiring from mains (L, L`, N, PE) to 2.5 mm² CGLine Bus through wiring to 1.5 mm²
Connection voltage	220- 240 V AC, 50 Hz
Power consumption mains operation (apparent power/effective power)	6.9 VA / 6.7 W
Permissible ambient temperature	Maintained mode -5 °C bis +30 °C Non-maintained mode 0 °C bis +35 °C
Battery	Lithium-Ion 3.7 V/4000 mAh with multiple protective circuit
Light source	HighPower LEDs 2 x 1.6 W

Ordering details

Scope of supply	Order No.
GuideLed SL 13851 1-8h/D CGLine, ceiling recessed with asymmetric optics for illuminance of 5 lx vertically, clamping range for ceiling thickness 0-20 mm	40071353417
GuideLed SL 13852 1-8h/D CGLine, ceiling surface-mounted with asymmetric optics for illuminance of 5 lx vertically	40071353418

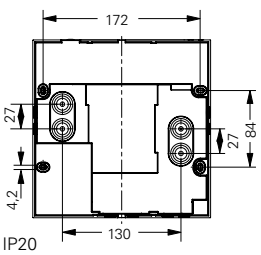
GuideLed SL 13851 CGLine

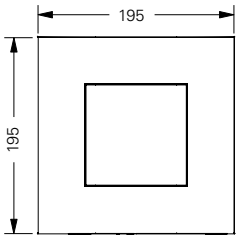


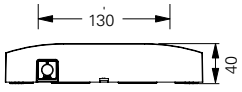


Required height in cavity ceiling for recessing through ceiling cut-out: 150 mm

GuideLed SL 13852 CGLine







* GuideLed SL 13851 CGLine:
Degree of protection of the luminaire: IP41
Degree of protection of the module enclosure: IP20

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Eaton Industries Manufacturing GmbH
Electrical Sector EMEA
Route de la Longeraie 7
1110 Morges, Switzerland
www.eaton.eu

CEAG Notlichtsysteme GmbH
Senator-Schwartz-Ring 26
59494 Soest, Germany
Phone: +49 (0) 2921 69-870
Fax: +49 (0) 2921 69-617
E-Mail: info-n@eaton.com
Web: www.ceag.de

Printed in Germany
Publication No. CA451003EN
Order No. 40071860277
1.0/03.15/WD

Powering Business Worldwide

CEAG Self-contained luminaire system CGLine+

Simply the most flexible, reliable monitoring for peace of mind

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Powering Business Worldwide




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Powering Business Worldwide

Enhanced safety by providing reliable and efficient monitoring

Bringing all the best features from existing platforms, Eaton's portfolio of life safety products has now been enhanced with the launch of its latest emergency lighting monitoring system for self-contained luminaires. Offering best in class functionality CGLine+ is the evolution of three existing systems combined into one. For smaller buildings a simple web based HMI is available and for larger sites supported by CGVision software, the system is capable of monitoring from 1 to over 25000 luminaires offering the scalability your project requires.

Individual building plans can be uploaded into the system creating a graphical representation of the location of each luminaire, allowing quick and easy identification in the event of any maintenance requirements. The Auto-ID function eliminates the manual addressing of the luminaries which reduces commissioning time and the automatic testing of each individual luminaire reduces maintenance cost.

CGLine+ issues an alert and pinpoints the location for any remedial work as soon as its detected. Also all events and tests are auto-populated into the digital log book where history and system configuration are securely backed up providing reliable efficient monitoring of your emergency lighting system and allowing you to comply with regulations.

This easy to use system supports a legal responsibility to ensure the safety of people in the building as well as giving you peace of mind by creating an environment that helps keep your business running safe and strong.

Content

All safety luminaires are important. They help protect the life and health of people.

Emergency lighting must be fully functional to provide protection in case of failure of the general lighting.

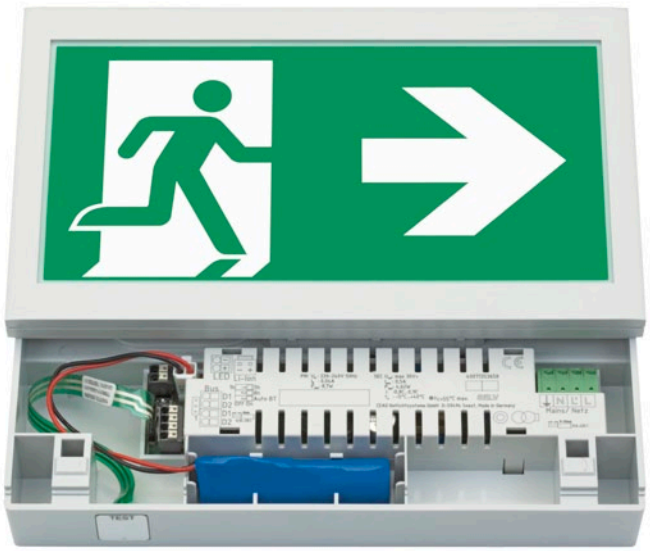
Even if a single safety luminaire or exit sign luminaire fails, depending on the particular local conditions, there is a significant risk of accidents, for example in a stairway. For this very reason legislation requires continuous testing of the emergency lighting. The operation of the luminaires in battery mode for example (function test) must be verified at least once a week.

Self-contained luminaires without an automatic test function

The function test is performed in case of single self-contained luminaires by pressing a button on the luminaire, and the result must be recorded by hand in a log book. An additional duration test for the duration of the rated operating time (1, 3 or 8 hours) must be performed once a year. This test checks whether there is still sufficient battery capacity available. All log book entries must be kept on file for 4 years. If there are a large number of luminaires, manual testing is an extremely laborious process and therefore involves significant costs.

Automatic testing simplifies the process

Eaton has implemented automatic test functions in all CGLine+ self-contained luminaires. A microprocessor monitors and controls all functions of the luminaires automatically. The required tests, the function test and the duration test, are performed automatically. The test results are shown on site on the luminaire by a status indicator. Without a central monitoring device, the results must be recorded by hand in the log book and kept on file in paper form for at least 4 years.



CGLine+ exit sign luminaires like the GuideLed CGLine+ are fitted with a microprocessor controller, and perform all luminaire tests completely automatically.

Central controller provides more safety

The new CGLine+ Web-Controller initiates the tests, displays the results centrally and stores them with ease in a paperless form in an electronic log book. The electronic log book can be printed off and shown on demand. This process ensures the safe operation of the building, and the building operator meets his duty of documentation.

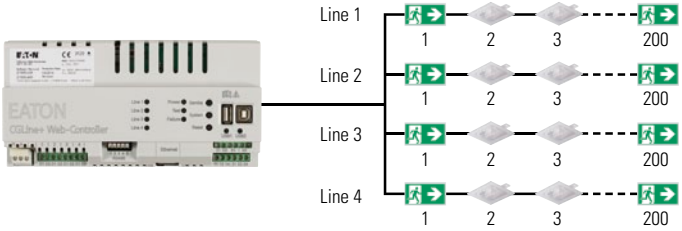
CGLine+: More luminaires. More convenience. More safety!

The new CGLine+ Web-Controller

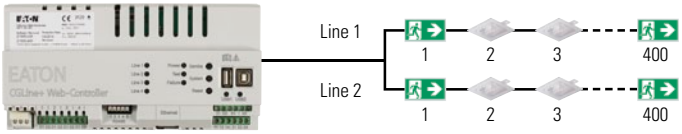
The tried and tested self-contained luminaire system CGLine 400 has been used since 2004 for the safe monitoring of self-contained luminaires. The new CGLine+ system is a more powerful system to make the operation of self-contained luminaire systems safer and even more convenient.

Now up to 800 luminaires monitored

The new CGLine+ Web-Controller can visualise a total of 800 CGLine+ luminaires (four lines of maximum 200 luminaires each or two lines of maximum 400 luminaires each). The number of luminaires is doubled as compared to the monitoring capacity of a controller of the CGLine 400 system. This lowers investment costs for larger-scale projects.



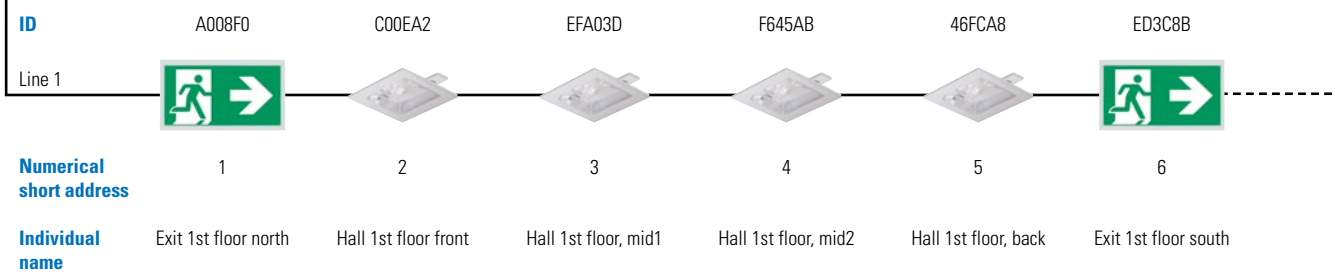
Typical installation with max. 4 lines of 200 luminaires each (above) or 2 lines of 400 luminaires each (below).



Addressing CGLine+ luminaires

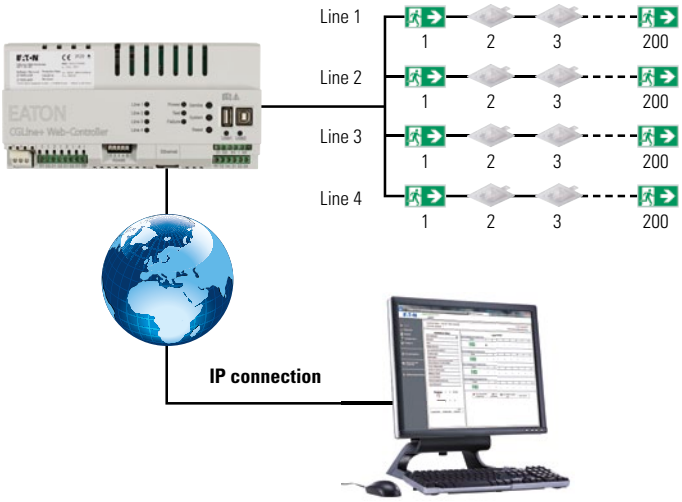
Luminaires do not need to be manual addressed in the CGLine+ system. CGLine+ luminaires are fitted with a unique address by the manufacturer consisting of a six-digit ID number in hex code format. Using this address the Web-Controller identifies the luminaires automatically when the system is launched.

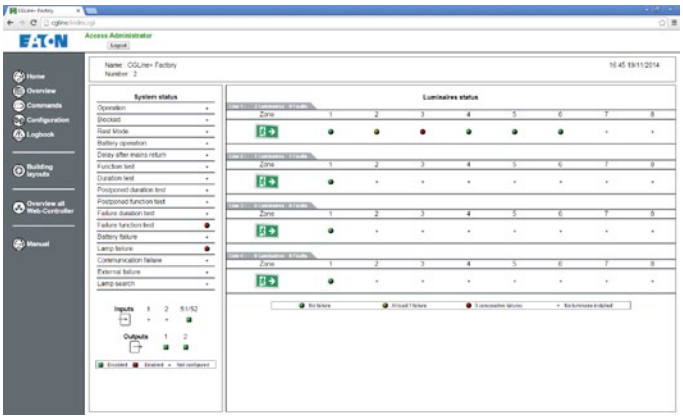
In addition, each luminaire can be configured to receive a short digital address and an individual name with a maximum of 20 characters. Hence it is possible to use a name which corresponds to the name of the location according to the planning documents. This simplifies the localisation of luminaires in the building and additional repair procedures can even be remotely planned in case of failure.



Safety under control worldwide

An integrated web server is available for convenient visualization, control and monitoring of all connected CGLine+ luminaires. The controller can be accessed from any PC with an IP connection and a regular web browser without requiring any special software. The controller provides an overview of faulty luminaires, regardless of where the maintenance personnel are located. Safety issues caused by failed luminaires can be evaluated and the relevant correct measures can be implemented. Regardless of location, completed maintenance works can then be conveniently checked. This means greater efficiency for the building operator, making it simpler to meet his obligations to eliminate any safety hazards as quickly as possible.

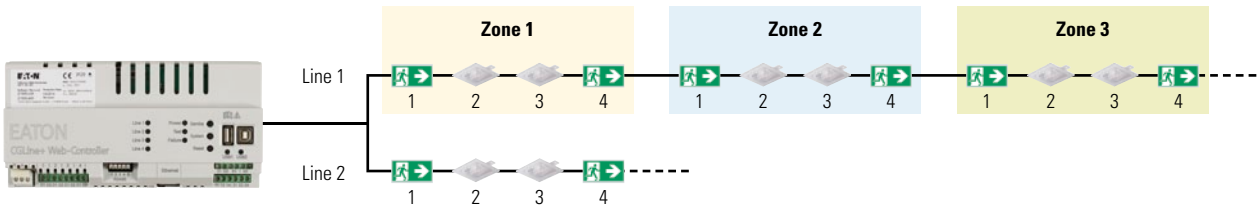




Presentation of zones on the first page in a browser view

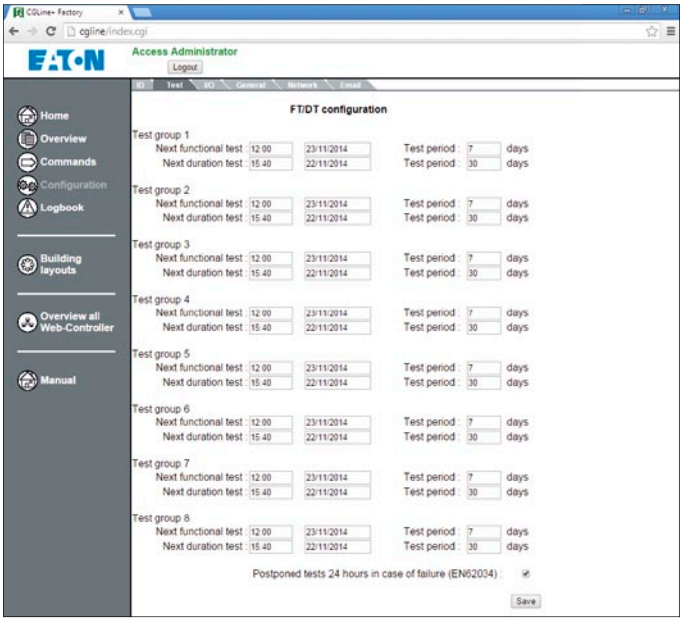
Maintain an overview: Allocate the luminaires to zones

Maintaining an overview is important if there are a large number of luminaires. Luminaires of each line can be allocated to up to 8 zones (up to 16 zones in case of installing only two lines). The zones can be areas where the luminaires need be brought together, for example on a floor, in an area or in a room. The exit sign luminaires can be switched off or blocked in different parts of a building which are not being used at certain times. By doing this, energy costs are reduced. By blocking the signs, unintentionally discharging batteries when the mains power is switched off is avoided, for example when maintenance work is being carried out. The zone can be used immediately after turning on the mains power, because batteries have not been discharged and the luminaires can perform their safety function immediately being unblocked.

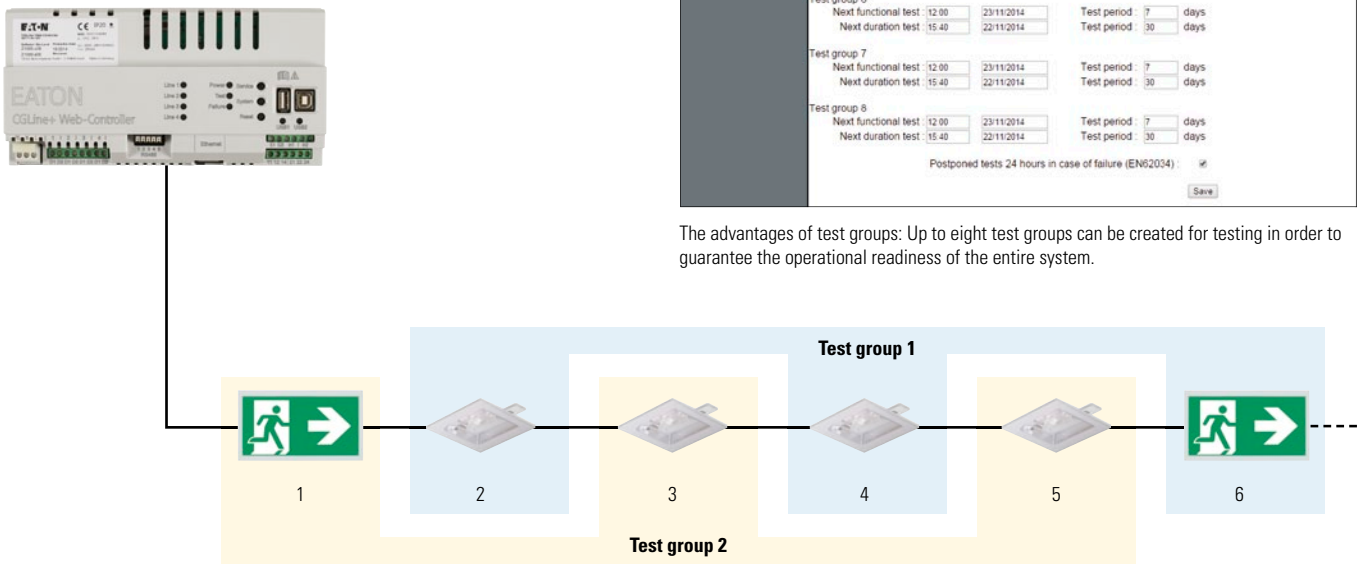


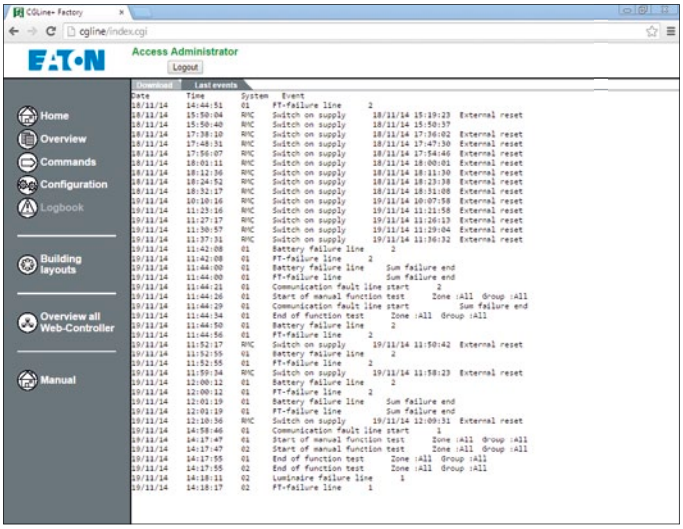
Tests are not forgotten, and are carried out at the right intervals for maximum safety

The timing and the intervals of regular function and duration tests can be conveniently and precisely set down to the minute, ensuring that the equipment is ready for operation at any time during the operating hours of the building. This allows luminaires to be grouped into up to eight test groups for this purpose, for example to ensure that duration testing of luminaires installed next to each other is not started at the same time. The image below shows the luminaires of a floor allocated into two test groups. The period between tests is completely adjustable.



The advantages of test groups: Up to eight test groups can be created for testing in order to guarantee the operational readiness of the entire system.





The log book is available at any time using a web browser. Data are stored for at least four years in compliance with standards.

The electronic log book saves the need for manual logging

All test results are stored in the electronic log book for at least four years, in compliance with standards. The data is available directly using a web browser. The log book can be downloaded directly from the controller through a web server for further analysis of the log book in TXT or DAT file format. The DAT file can then be stored and transported using a regular USB memory stick. The CGLine+ PC software is used for reading the log book in DAT format, providing efficient and convenient analysis of the test results.

The electronic log book simplifies the requirement for the building operator to provide documentation, and it removes the need for laborious, manual logging.

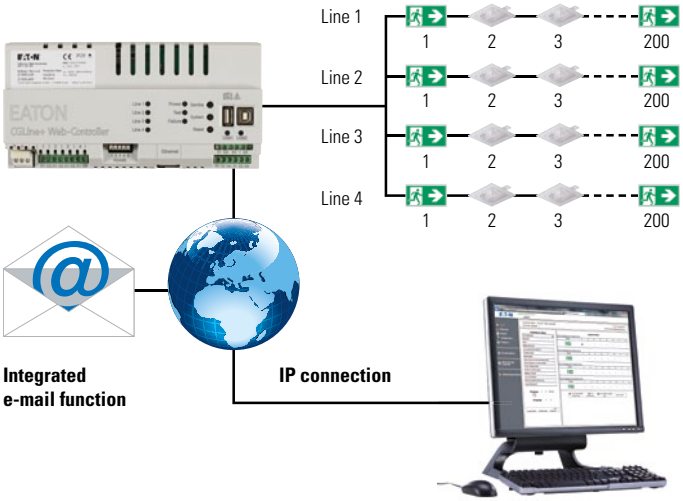
CGLine+ self-contained luminaire system

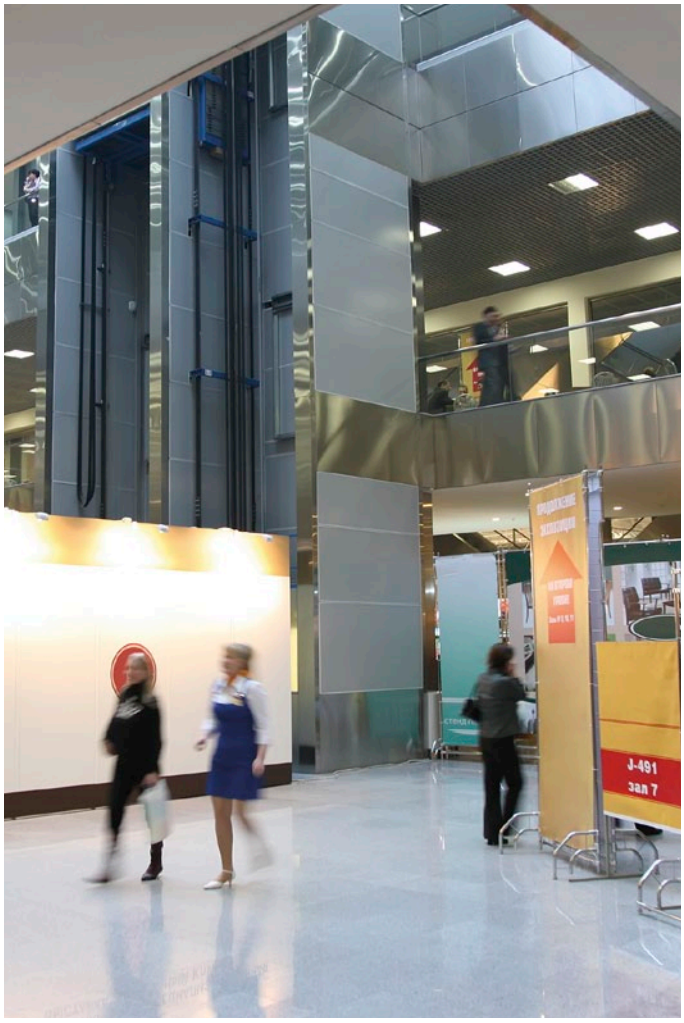
Enhanced safety by providing reliable and efficient monitoring

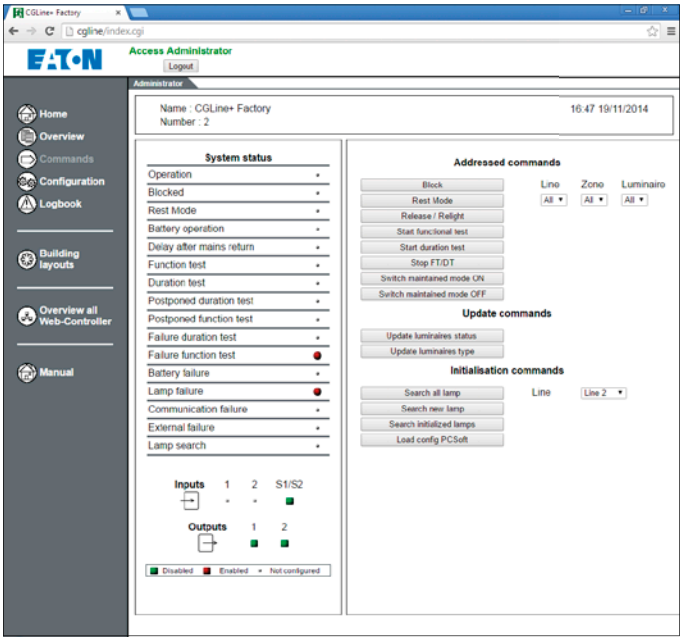
Automatic e-mail notification in case of faults

The integrated e-mail service automatically sends e-mails to up to ten recipients in case of allocatable events, for example in case of a luminaire failure being detected following an automatic function test. The aim of this function is to actively notify without delay those persons responsible for building safety about any faults, even if they have no direct connection with the controller at that point in time.

E-mail addresses can be divided into two groups to implement hierarchical escalation. This ensures that when a recipient in the first group is unexpectedly absent, other people are informed to ensure the safety of visitors of the building.







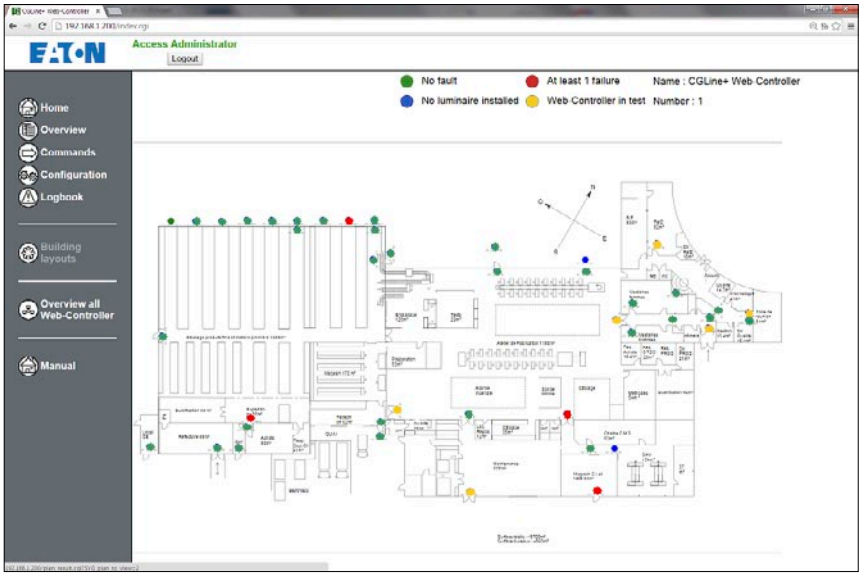
Selective assignment of commands

The web browser interface is useful for

- Blocking/unblocking instructions
- Manual starting/stopping the function test and duration tests
- Switching on/off maintained light

This can be done in detail for all luminaires, for a line, for a zone and down to individual luminaires.

Furthermore this view offers a system status overview with the most important status messages and the operating condition of the input and output contacts.



Keep your bearings in complex buildings

The programming of building layout function offers new opportunities. Building layouts can be loaded in the program to display the status of luminaires at the installation location on the floor. Up to 30 different building layouts can be displayed for each controller. Luminaires are displayed with colour codes according to their current status. By touching a luminaire with the mouse pointer, a status window opens up with more information about the luminaire.

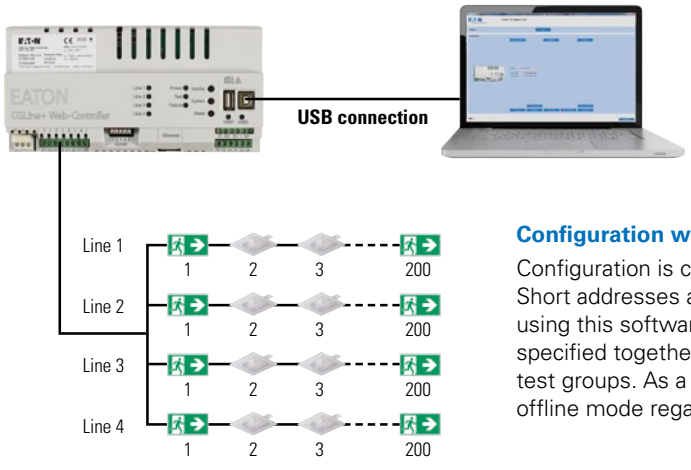
The overview helps provide better orientation in the building. The situation can be judged more effectively and repairs better prioritised.

Compatibility with the CGLine 400 System

The comprehensive functionality of the CGLine+ controller can only be used in conjunction with CGLine+ luminaires. But of course CGLine+ luminaires and CGLine 400 luminaires can be connected to the CGLine+ controller in a straightforward manner in a mixed setup . In this set-up the controller operates in CGLine 400 mode only. The extended CGLine+ functions can be used only when only unmixed CGLine+ luminaires are installed. The new CGLine+ luminaires can also be used together with the proven CG controller CGLine 400 in CGLine 400 mode.

	CGLine+ luminaires	CGLine 400 luminaires
CGLine+ Controller	CGLine+ mode	CGLine 400 mode
CGLine 400 Controller	CGLine 400 mode	CGLine 400 mode

Comprehensive CGLine+ functions using CGLine+ luminaires connected to a CGLine+ controller



Configuration with PC software

Configuration is carried out using the CGLine+ PC software. Short addresses and unique names of luminaires can be assigned using this software; the time and interval of automatic tests are specified together with the zone assignment and the definition of test groups. As a result, the entire system can be configured in offline mode regardless of whether the IT network is available.

CGLine+ self-contained luminaire system

CGLine+ Web-Controller

CGLine+ Bus

The communication of all data and commands takes place using the CGLine+ bus installed in a free topology using a two-wire unshielded cable. Should there be a possible break in the bus cable, the additional integrated test function of each CGLine+ luminaire ensures that the tests required are performed automatically, and this is displayed on site at the luminaire. The required cross-section of the bus cable depends on the length of the wire.

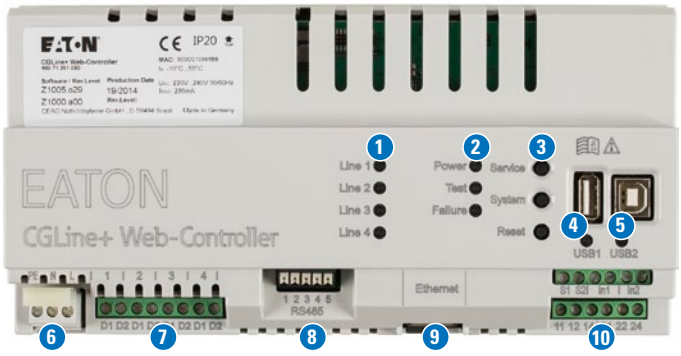
Cable length of a line

Cross-section	Length	For 4 lines in total
0.5 mm²	330 m	1,320 m
1.0 mm²	660 m	2,640 m
1.5 mm²	1,000 m	4,000 m

Electrical data per line/bus

Supply voltage Bus	Max. allowable voltage drop	Bus current
25 V DC	14 V	400 mA

Set-up of the CGLine+ Web-Controller



1 LEDs for line 1 to line 4:
It signals the sending or receiving of data between the CGLine+ Web-Controller and the CGLine+ self-contained luminaires.

- Green LED = Receiving of data by the Web-Controller
- Yellow blinking LED = Sending data to the luminaires

2 Power LED:
The green light is lit as soon as the controller is connected to the 230V/AC supply voltage.

Test LED:

- Rapid green blinking if at least 1 luminaire is undergoing a function test
- Rapid green blinking if at least 1 luminaire is undergoing an duration test

LED failure:
Showing a sum failure. Red LED light is lit if at least 1 luminaire is faulty, for example the battery has failed

3 Button:

- Service = Starts a function test for example
- System = Starts a USB connection using the USB2 port
- Reset = Hardware reset of the device

4 USB1 port (Host) for connecting a regular USB memory stick

5 USB2 port (Device), for connecting to a PC

6 PE/N/L 230V 50/60Hz

7 Connections for the CGLine+ bus, line 1 to line 4

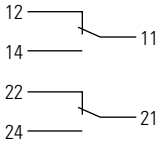
8 RS485

9 LAN (RJ45) with LED display

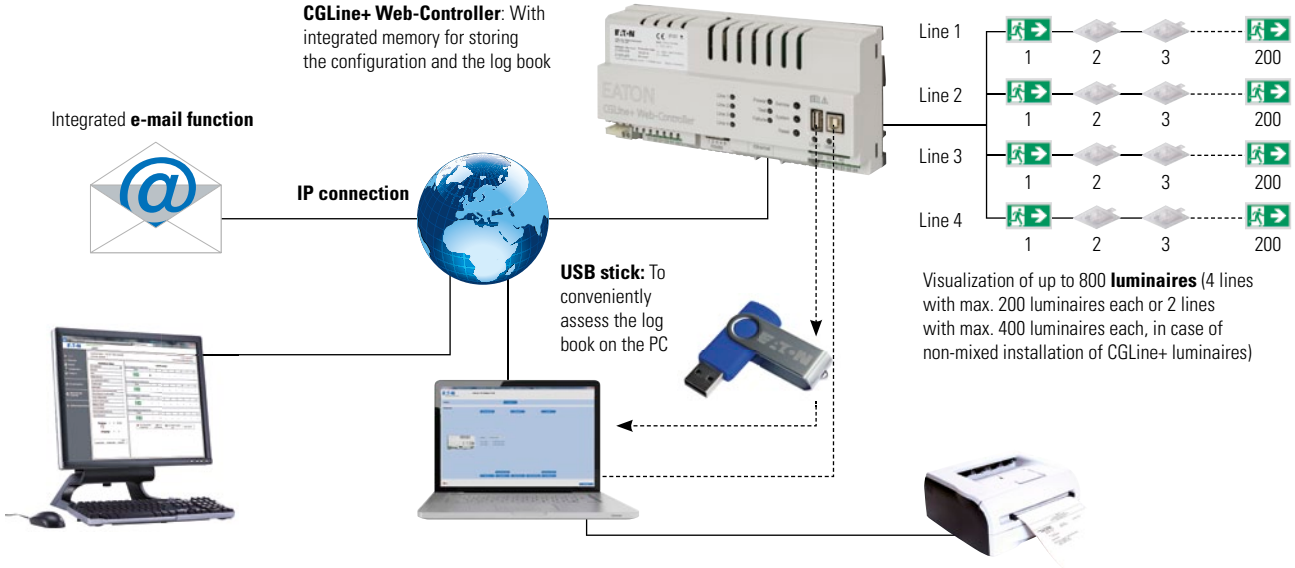
- yellow = connected (link)
- green = data transfer (traffic)

10 Digital inputs and outputs:

- S1/S2 = Blocking input
- In1, In2 = 2 x digital inputs
- 11, 12, 14 / 21, 22, 24 = 2 x relay outputs



CGLine+ in operation



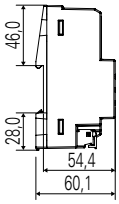
PC connected to the network or an optional CGLine+ Wireless Monitoring Set: Access using the integrated web interface

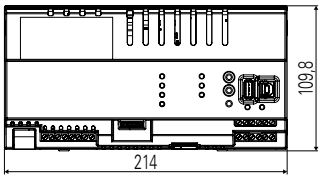
CGLine+ PC software for configuration

Printer: Printing out the log book

CGLine+ Web-Controller with integrated web server

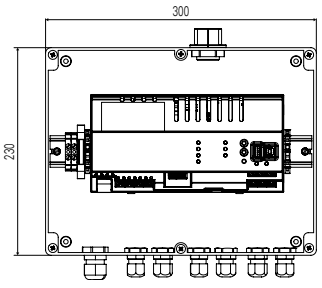
Dimensional drawings, data in mm

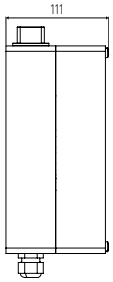




CGLine+ Web-Controller connection box

Dimensional drawings, data in mm





CGLine+ Web-Controller

- For connecting up to 800 luminaires in max. 4 lines
- The integrated web server enables there to be convenient visualization, control and monitoring
- Unique ID per luminaires assigned by the manufacturer
- Automatic luminaire search function requiring no manual addressing
- Simple sorting using unrestricted short address assignment
- Unrestricted entry of target location names for the luminaires with up to 20 characters
- Clearly-shown allocation of luminaires to up to 8 zones per line
- Automatic function test and duration test, with completely
- Up to 8 test groups per luminaire can be defined for the function test (FT) and duration test (DT)
- Electronic log book storage for a period of minimum 4 years
- E-mail service for sending automatic e-mail in case of malfunctions to up to 10 e-mail addresses, assignable to 2 escalation groups
- Blocking the emergency lighting function during non-operational periods (all / per bus line/ per zone / per luminaire)
- Luminaires in maintained mode switchable (all / per bus line / per zone / per luminaire)
- Password protected access as an administrator or user
- Visualization of luminaires in up to 30 different building layouts
- Efficient and convenient analysis of the log book using the CGLine+ PC software

Dimensions	214 x 109.8 x 60.1 mm
Housing type	For DIN rail 12 TE
Power supply	230V AC, 50/60 Hz
Power consumption	< 4W in standby, < 21W at full load
Connection terminals	max. 2.5 mm²
Permissible ambient temperature	0 °C … 35 °C
Storage temperature	-20 °C … 70 °C
Degree of protection	IP20

Ordering details

Type	Scope of supply	Order No.
CGLine+ Web-Controller	Module in installation housing for DIN rails	40071361055

Accessories

Type	Scope of supply	Order No.
CGLine+ PC software	on CD-ROM	40071361178
CGLine+ Web-Controller connection box	CGLine+ Web-Controller in wall-mounted housing	40071361184

CGLine+ Wireless Monitoring Set

The CGLine+ Wireless Monitoring Set enables wireless visualization of CGLine+ Web-Controllers on a tablet via an integrated web browser. Access by other WiFi devices including notebooks and smartphones can be done with ease. This practical solution has the advantage of accessing the status and detailed information of every luminaire, easily and at any time using the CGLine+ Intranet, regardless of its installed location. This way, a wired network connection close to the luminaire is no longer required.

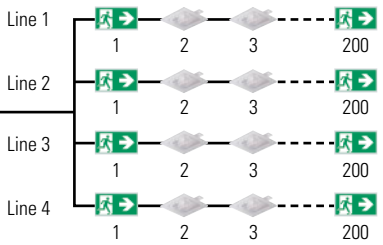
This clearly makes maintenance work easier. After repairing a luminaire, a function test for the relevant luminaire can be started on site to directly check that the luminaire is operative. Because the result is recorded directly in the electronic log book, paper-based protocols can be dropped.

Installation example

Current status indicator of all CGLine+ luminaires at all times in the web browser of a tablet or smartphone

WiFi (wireless network connection)

CGLine+ web interface and preconfigured WiFi access point incl. 24V/DC mains adapter



CGLine+ WiFi connection box + iPad* Air

+

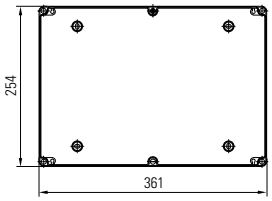
CGLine+ Wireless Monitoring Set

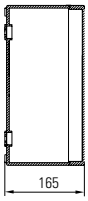
- Wireless visualization of up to 800 CGLine+ self-contained luminaires – no wired network connection close to the luminaire required
- Accessing detailed information of every luminaire – regardless of its installed location
- Function test can be started on site to directly check that the luminaire is operative
- Location-independent access to the electronic workbook
- Integrated WiFi access point
- Convenient operation via a web browser and touchscreen
- Apple iPad Air, 32 GB, WiFi, grey included in the monitoring set

CGLine+ WiFi connection box

Dimensions in mm (H x W x D)	360 x 255 x 165
Housing type	Plastic wall-mounted housing
Power supply	230 V AC, 50/60 Hz
Power consumption	< 8.5 Watts standby < 25.5 Watts full load
Connection terminals	max. 2.5 mm²
Permissible Ambient temperature	0 °C … 35 °C
Storage temperature	-20 °C … 70 °C
Degree of protection	IP54

Dimensional drawing connection box, data in mm





Ordering details

Type	Scope of supply	Order No.
CGLine+ WiFi connection box	CGLine+ Web-Controller + WiFi access point in a wall-mounted housing	40071361275
CGLine+ Wireless Monitoring Set	CGLine+ WiFi connection box + iPad* Air, 32 GB, WiFi, grey	40071361274

* iPad is a registered trademark of Apple Inc., registered in the USA and other countries.

CGVision in the CGLine+ Web-Controller

The Web-Controller can be connected to CGVision, the powerful visualization software, to create the largest configuration level of the CGLine+ system. In this set-up, up to 32 CGLine+ Web-Controllers can be visualised at once.

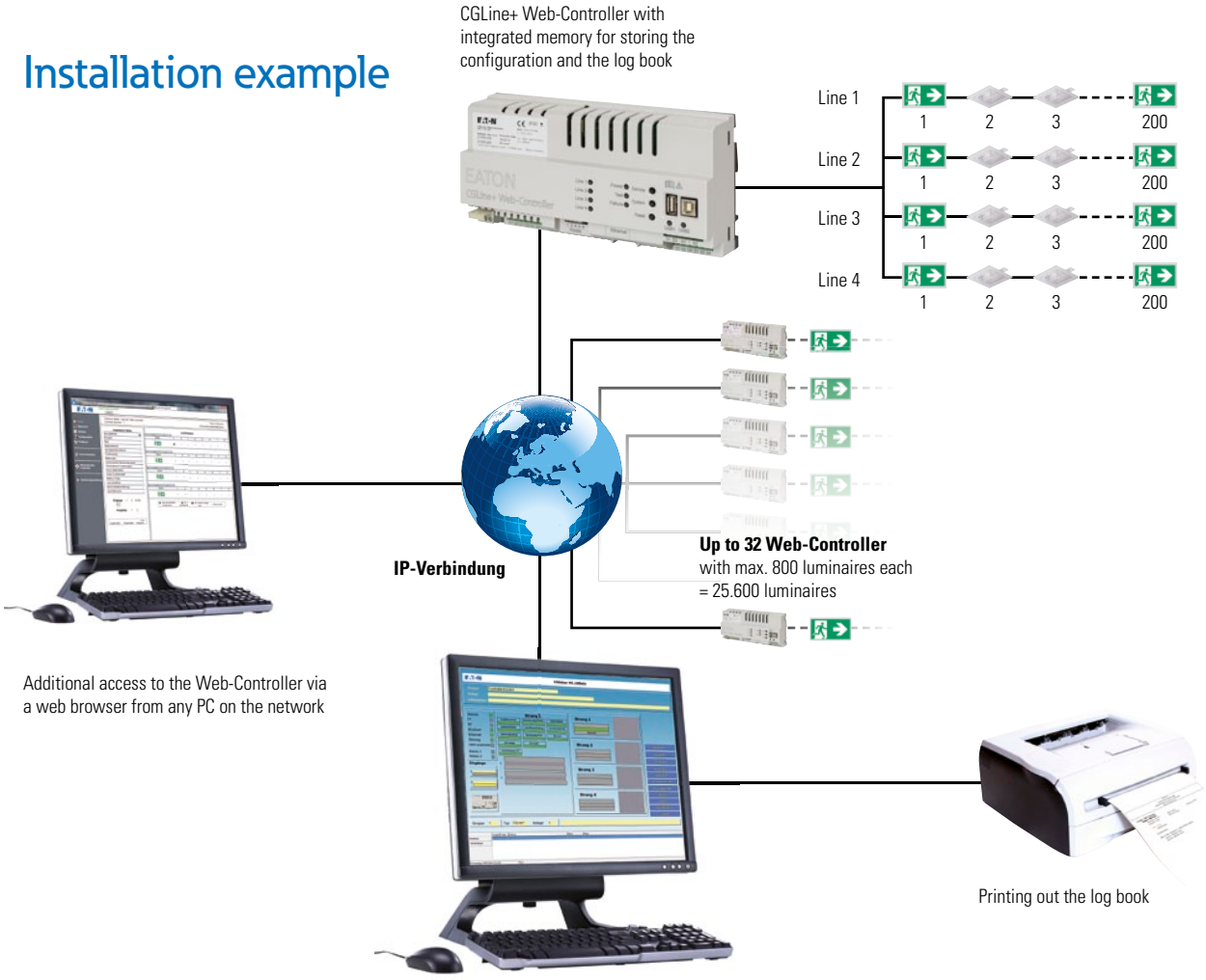
Using CGVision both CGLine+ luminaire systems and other emergency lighting systems (for example ZB-S, LP-STAR, AT-S+) can be monitored with a single software. There is no difficulty in extending an existing system.

CGVision takes over all the control and test functions, and it generates a comprehensive electronic log book for all connected systems- and does so completely automatically.

In order to keep an eye on a large amount of equipment, for example at a large plant or an airport, the state of the individual emergency lighting systems can be presented on an aerial photo or a site plan. The building layout helps visualise individual luminaires.

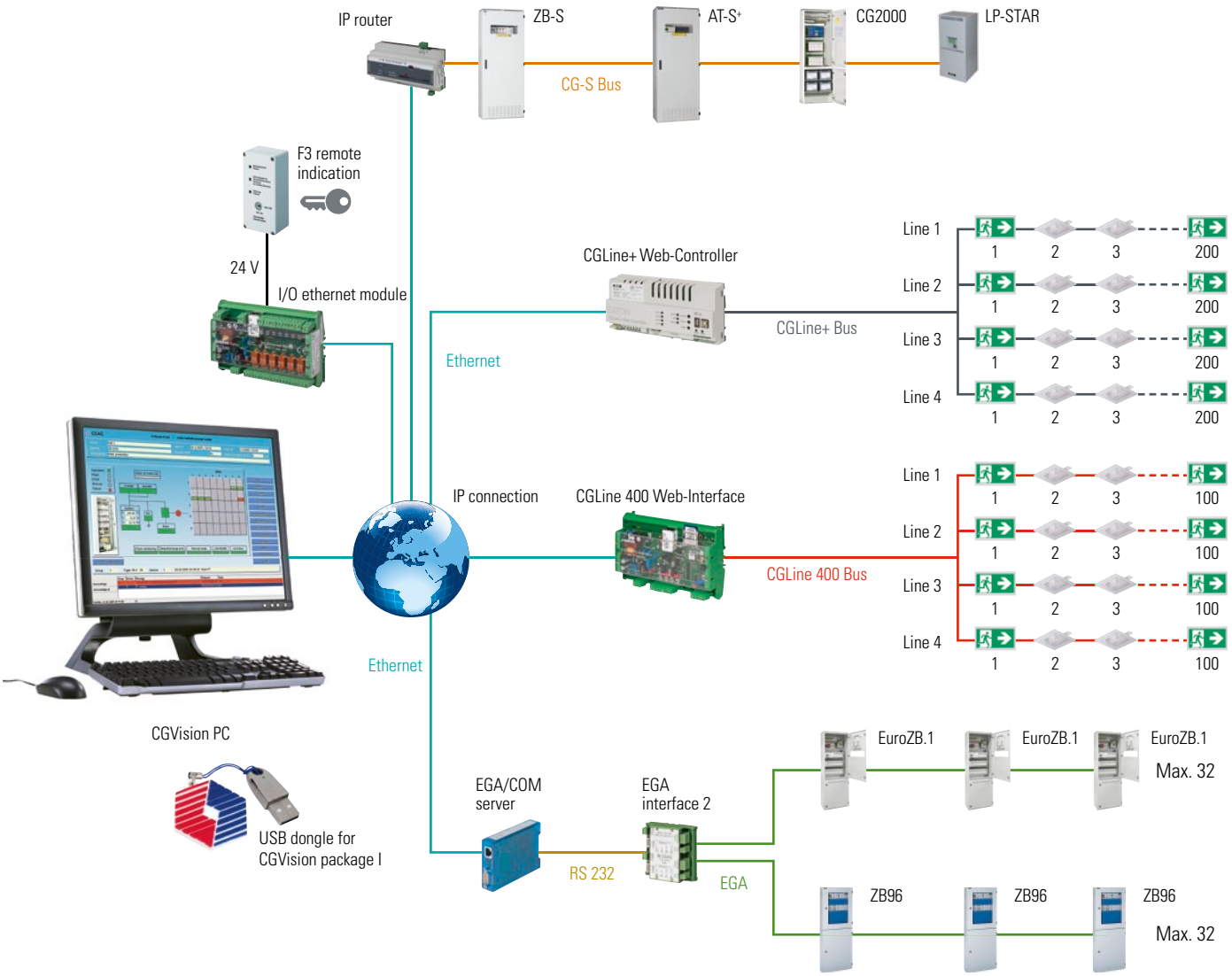
Access of any PC via the web server of the CGLine+ Web-Controller can also be carried out if it is connected to CGVision. Thus for example, large, multi-building facilities can be configured and monitored centrally using CGVision. Additionally service technicians can have an overview of areas of interest to them using the Web-Controller.

Installation example



CGVision: Configuration und complete visualization of all luminaires

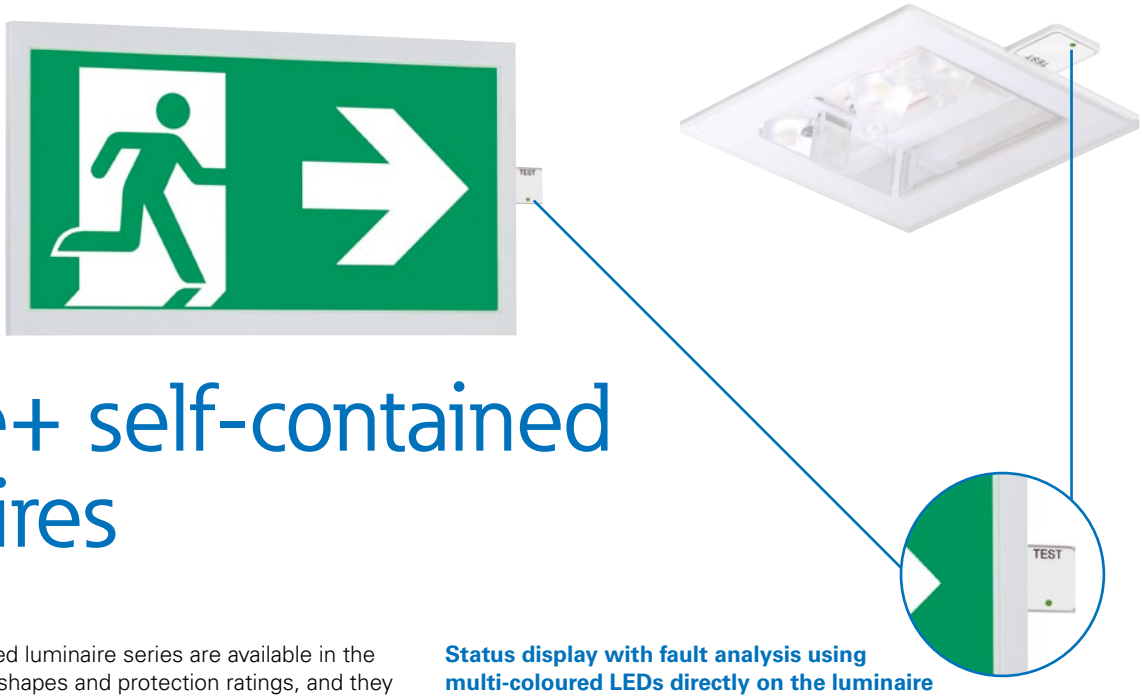
Example for use of CGVision Package I



CGVision ordering details

Scope of supply	Order No.
CGVision Basic Package I (with CG-S/IP interface)	40071361020
CGVision Basic Package II (EGA components to be ordered separately)	40071361022
CGVision Basic Package III (with CG-S/USB interface, EGA components to be ordered separately)	40071361024
CGVision Pro Package I (including CG-S/IP interface and visualization in a building layout)	40071361021
CGVision Pro Package II (including visualization in a building layout, EGA components to be ordered separately)	40071361023
CGVision Pro Package III (including CG-S/IP-Interface and visualization in a building layout, EGA components to be ordered separately)	40071361025
PC-Anywhere remote maintenance software, 2nd licence 1 x host, 1 x remote	40071347151

For a detailed description and ordering information, see section CGVision in the emergency lighting main catalogue.



CGLine+ self-contained luminaires

The CGLine+ self-contained luminaire series are available in the widest variety of housing shapes and protection ratings, and they offer a wide range of application options.

What all luminaires have in common is the CGLine+ functionality: In autonomous operation mode (without bus connection), the electronics fully automate the necessary function tests and duration tests. Test results are shown directly at the luminaire. CGLine+ luminaires are generally suitable for maintained and non-maintained mode.

The full potential of CGLine+ electronics is only utilised if the luminaires are connected to the controlling CGLine+ Web-Controller using the standard bus interface.

Amongst other things, this ensures decentralised monitoring of luminaires and allows the blocking of the device, for example during non-operational periods, and reduces expenditure linked with keeping the required log book by storing all results. Even a larger-scale project comprising a great number of self-contained luminaires can be operated cost-efficiently, and safety is monitored in compliance with the regulations.

In addition, optimised lighting technology ensure an economical emergency lighting system. Variations with highly-efficient LEDs bring even greater improvements. Particularly low installed loads and an LED lifetime of 50,000 hours minimise energy and maintenance costs.

Characteristics of CGLine+ self-contained luminaires:

- Automatic function test and duration test
- All luminaires are suitable for maintained and non-maintained mode
- High-efficiency LEDs for low energy and maintenance costs
- Pictogram illumination compliant with standards
- Complies with the requirements of DIN EN 60598-2-22

Status display with fault analysis using multi-coloured LEDs directly on the luminaire

Operation mode	LED	
No failure	●	green light on
Emergency mode	❍	LED is off
Delay on mains return	✹/✹	blinks green/yellow alternately at 0.5 Hz
Function test active / Duration test active	✹	blinks green at 1 Hz
Luminaire blocked	✹/✹	blinks green/yellow alternately at 1 Hz

Error messages	LED	
Charge fault / Function test failed / Duration test failed	✹	yellow light blinks slowly at 0.5 Hz
Luminaire fault	★	yellow light blinks rapidly at 2 Hz

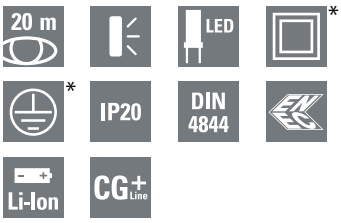
Definitions of product feature icons

Icon	Definition
20 m	Viewig distance, here: 20 m
	Light output, here: single-sided
LED	LED light source
	Protection class 1
	Protection class 2
IP20	Degree of protection, here: IP20
IK10	Degree of mechanical impact resistance, here: IK10
	Luminaire with limited surface temperature

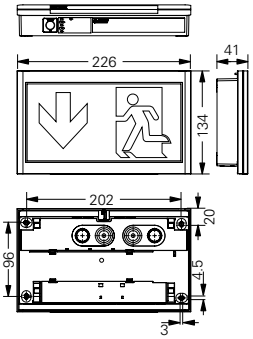
Icon	Definition
	Suitable for outdoor use
DIN 4844	According to DIN 4844
EN 1838	According to EN 1838
IFS	Suitable for use in food processing industry acc. IFS
	ENEC certified
Li-Ion	With Lithium-ion battery
CG+ Line	With CGLine+ technology

GuideLed 10811, 10812 CGLine+

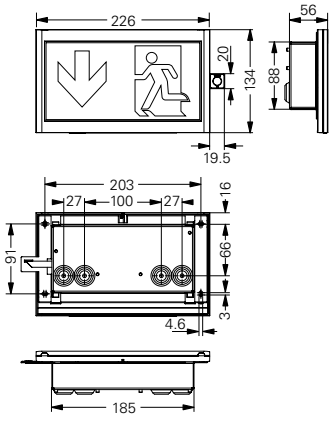
Exit sign luminaire, wall mounting



10811 CGLine+ with LED pictogram PR



10812 CGLine+ with LED pictogram PR



Please ensure clearance of 10 mm above the luminaire.

GuideLed 10811, 10812 CGLine+

- LED self contained luminaire with automatic test for reduced inspection effort
- Universal use for maintained and non-maintained operation and for 1 h, 3 h or 8 h operation
- For autonomous installation or connection to the CGLine+ monitoring system
- Environmentally-friendly due to modern lithium ion technology
- Low operating costs via low connected load
- Minimum maintenance effort and increased safety via use of LEDs with high service life (50,000 hours)
- Optimal recognition via high luminance of white contrast colour > 500 cd/m² according to DIN 4844-1 / ISO 3864-1 (for bright surroundings), and high uniformity L_{min}/L_{max} > 0.8
- Dimmable in three steps for use in dark ambient conditions
- Simple fault analysis and status display via bicolor LED and testing button
- 1 minute switch-back delay after mains return
- Blocking function prevents unintended discharge during idle operating times (only with CGLine+ WEB-Controller)

Viewing distance	20 m
Luminous flux Φ_E/Φ_N at end of rated operating time	100 % at 1 h; 80 % at 3 h; 25 % at 8 h
Housing material	Polycarbonate, PMMA, sheet steel (semi-recessed wall housing)
Housing colour	Light grey RAL 7035
Weight	0.64 kg (10811 CGLine+) 0.84 kg (10812 CGLine+)
Type of mounting	Wall surface-mounting, insulation class II (protective earth required) Semi-recessed wall mounting; insulation class I
Terminals	Through-wiring from mains (L, L', N, PE) to 2.5 mm² CGLine+ bus through-wiring to 1.5 mm²
Connection voltage	220 - 240 V AC, 50/60 Hz
Power consumption mains operation (apparent power / effective power)	4.8 VA / 4.1 W
Permissible ambient temperature	Maintained mode -5 °C to +30 °C Non-maintained mode 0 °C to +35 °C
Battery	Lithium ion 3.7 V/2000 mAh with multiple protective circuit
Light source	LED strip

Ordering details – mounting set

Scope of delivery	Order No.
Wall mounting set for GuideLed 10811 1-8 h/D CGLine+ and 11811 1-8 h/D CGLine+, surface mounted, incl. LED supply and CGLine+ technology, 20 m and 30 m	40071353260
Wall mounting set for GuideLed 10812 1-8h/D CGLine+, recessed mounting of LED supply and CGLine+ technology, 20 m	40071353261

Ordering details – LED pictograms (fastening set required)

Scope of delivery		Order No.
LED pictogram PL for GuideLed 10x11/10x12, ISO 7010, 20 m		40071354500
LED pictogram PR for GuideLed 10x11/10x12, ISO 7010, 20 m		40071354501
LED pictogram PU for GuideLed 10x11/10x12, ISO 7010, 20 m		40071354502

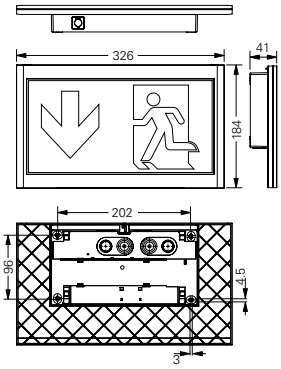
*10811: Protection class 2
10812: Protection class 1

30 m | * | LED | * | IP20 | DIN 4844 | Li-Ion | CG+ Line

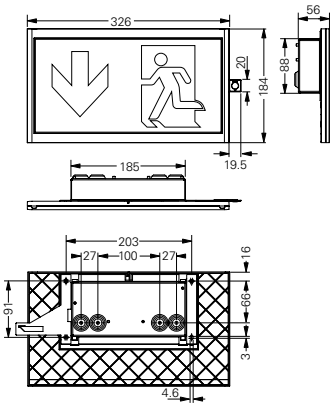
GuideLed 11811, 11812 CGLine+

- LED self contained luminaire with automatic test for reduced inspection effort
- Universal use for maintained and non-maintained operation and for 1 h, 3 h or 8 h operation
- For autonomous installation or connection to the CGLine+ monitoring system
- Environmentally-friendly due to modern lithium ion technology
- Low operating costs via low connected load
- Minimum maintenance effort and increased safety via use of LEDs with high service life (50,000 hours)
- Optimal recognition via high luminance of white contrast colour > 500 cd/m² according to DIN 4844-1 / ISO 3864-1 (for bright surroundings), and high uniformity L_{min}/L_{max} > 0.8
- Dimmable in three steps for use in dark ambient conditions
- Simple fault analysis and status display via bicolor LED and testing button
- 1 minute switch-back delay after mains return
- Blocking function prevents unintended discharge during idle operating times (only with CGLine+ WEB-Controller)

11811 CGLine+ with LED pictogram PR



11812 CGLine+ with LED pictogram PR



Please ensure clearance of 10 mm above the luminaire.

Viewing distance	30 m
Luminous flux Φ_E/Φ_N at end of rated operating time	100 % at 1 h; 50 % at 3 h; 15 % at 8 h
Housing material	Polycarbonate, PMMA, sheet steel (semi-recessed wall housing)
Housing colour	Light grey RAL 7035
Weight	0.77 kg (11811 CGLine+) 0.97 kg (11812 CGLine+)
Type of mounting	Wall surface-mounting, insulation class II (protective earth required) Semi-recessed wall mounting; insulation class I
Terminals	Through-wiring from mains (L, L', N, PE) to 2.5 mm² CGLine+ bus through-wiring to 1.5 mm²
Connection voltage	220 - 240 V AC, 50/60 Hz
Power consumption mains operation (apparent power / effective power)	5.3 VA / 4.7 W
Permissible ambient temperature	Maintained mode -5 °C to +30 °C Non-maintained mode 0 °C to +35 °C
Battery	Lithium ion 3.7 V/2000 mAh with multiple protective circuit
Light source	LED strip

Ordering details – mounting set

Scope of delivery	Order No.
Wall mounting set for GuideLed 10811 1-8 h/D CGLine+ and 11811 1-8 h/D CGLine+, surface mounted, incl. LED supply and CGLine+ technology, 20 m and 30 m	40071353260
Wall mounting set for GuideLed 11812 1-8h/D CGLine+, recessed mounting of LED supply and CGLine+ technology, 30 m	40071353262

Ordering details – LED pictograms (fastening set required)

Scope of delivery		Order No.
LED pictogram PL for GuideLed 11x11/11x12, ISO 7010, 30 m		40071354530
LED pictogram PR for GuideLed 11x11/11x12, ISO 7010, 30 m		40071354531
LED pictogram PU for GuideLed 11x11/11x12, ISO 7010, 30 m		40071354532

*11811: Protection class 2
11812: Protection class 1

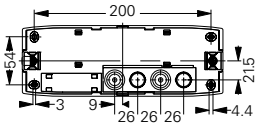
GuideLed 10821, 10822, 10823, 10824 CGLine+

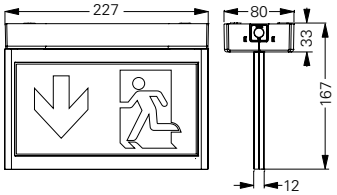
Exit sign luminaire, ceiling mounting

GuideLed 10821, 10822, 10823, 10824 CGLine+

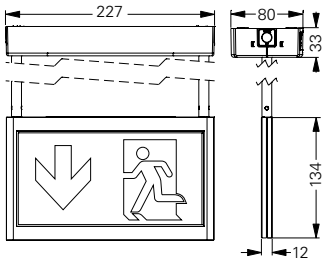
- LED self contained luminaire with automatic test for reduced inspection effort
- Universal use for maintained and non-maintained operation and for 1 h, 3 h or 8 h operation
- For autonomous installation or connection to the CGLine+ monitoring system
- Environmentally-friendly due to modern lithium ion technology
- Low operating costs via low connected load
- Minimum maintenance effort and increased safety via use of LEDs with high service life (50,000 hours)
- Optimal recognition via high luminance of white contrast colour > 500 cd/m² according to DIN 4844-1 / ISO 3864-1 (for bright surroundings), and high uniformity L_{min}/L_{max} > 0.8
- Dimmable in three steps for use in dark ambient conditions
- Simple fault analysis and status display via bicolor LED and testing button
- 1 minute switch-back delay after mains return
- Blocking function prevents unintended discharge during idle operating times (only with CGLine+ WEB-Controller)

10821 CGLine+ with LED pictogram PL/PR





10822 CGLine+ with LED pictogram PL/PR



Viewing distance		20 m
Luminous flux Φ_E/Φ_N at end of rated operating time	one sided	100 % at 1 h; 80 % at 3 h; 25 % at 8 h
	double sided	100 % at 1 h; 50 % at 3 h; 15 % at 8 h
Housing material		Polycarbonate, PMMA, sheet steel (recessed housing)
Housing colour		Light grey RAL 7035
Weight		0.70 kg (10821 CGLine+) 0.80 kg (10822 CGLine+) 0.85 kg (10823 CGLine+) 1.06 kg (10824 CGLine+)
Type of mounting		Ceiling, suspended mounting; insulation class II (protective earth required) recessed ceiling mounting; insulation class I
Terminals		Through-wiring from mains (L, L', N, PE) to 2.5 mm² CGLine+ bus through-wiring to 1.5 mm²
Connection voltage		220 - 240 V AC, 50/60 Hz
Power consumption mains operation (apparent power / effective power)	one sided	4.8 VA / 4.1 W
	double sided	5.6 VA / 5.1 W
Permissible ambient temperature		Maintained mode -5 °C to +30 °C Non-maintained mode 0 °C to +35 °C
Battery		Lithium ion 3.7 V/2000 mAh with multiple protective circuit
Light source		LED strip

Ordering details – mounting set

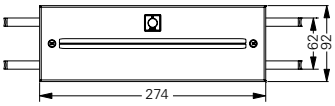
Scope of delivery	Order No.
Ceiling mounting set 10821 1-8 h/D CGLine+ with canopy, incl. LED supply and CGLine+ technology, 20 m	40071353264
Ceiling mounting set 10822 1-8 h/D CGLine+ with canopy and 0.5 m pendant tube, incl. LED supply and CGLine+ technology, 20 m	40071353265
Ceiling mounting set 10823 1-8 h/D CGLine+ with canopy and 1.5 m pendant tube, incl. LED supply and CGLine+ technology, 20 m	40071353266
Ceiling mounting set 10824 1-8 h/D CGLine+ incl. ceiling recessing housing (sheet steel) for ceiling thicknesses 1 to 25 mm and ceiling plate, incl. LED supply and CGLine+ technology, 20 m	40071353267

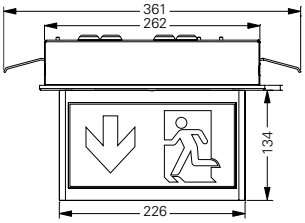
Accessories

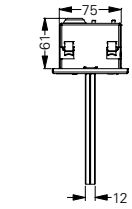
Scope of delivery	Order No.
Add-on housing for GuideLed ceiling surface-mounted 1082x, for expanded accommodation for wiring and cable entry, incl. through-wiring terminal and wiring to luminaire	40071353639
Chain suspension for GuideLed 10821/11821 1-8 h/D CGLine+	40071353624
Recessing housing for concrete for GuideLed 10824 1-8 h/D CGLine+	40071353520

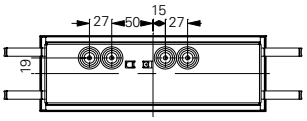
*10821, -22, -23: Protection class 2
10824: Protection class 1

10824 CGLine+ with LED pictogram PL/PR

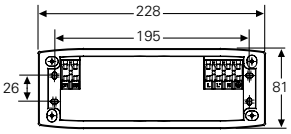








Add-on housing for expanded accommodation for wiring and cable entry



Ordering details – LED pictograms (fastening set required)

Scope of delivery	Order No.
LED pictogram PL/PR, for GuideLed 10x21/10x22/10x23/10x24, ISO 7010, 20 m	40071354503
LED pictogram PU/PU, for GuideLed 10x21/10x22/10x23/10x24, ISO 7010, 20 m	40071354504
LED pictogram PL/BL, for GuideLed 10x21/10x22/10x23/10x24, ISO 7010, 20 m	40071354505
LED pictogram PR/BL, for GuideLed 10x21/10x22/10x23/10x24, ISO 7010, 20 m	40071354506
LED pictogram PU/BL, for GuideLed 10x21/10x22/10x23/10x24, ISO 7010, 20 m	40071354507
LED pictogram PL/PR-R*, for GuideLed 10x21/10x22/10x23/10x24, ISO 7010, 20 m	40071354508
LED pictogram PL/PR-W*, for GuideLed 10x21/10x22/10x23/10x24, ISO 7010, 20 m	40071354509

* R = arrow direction room
W = arrow direction wall

GuideLed 11821, 11822, 11823, 11824 CGLine+

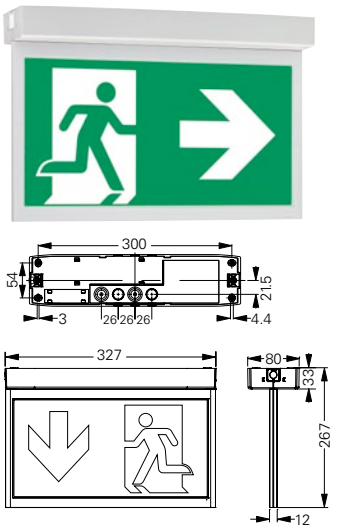
Exit sign luminaire, ceiling mounting

30 m | LED | * | * | IP40 | DIN 4844 | Li-Ion | CG+ Line

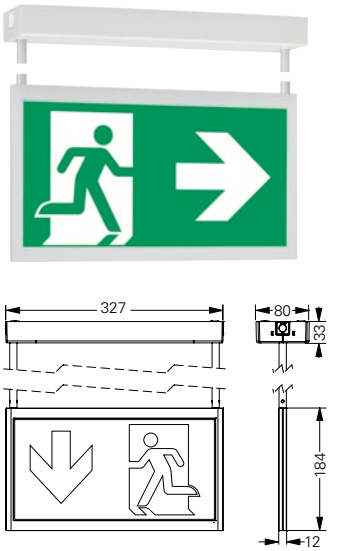
GuideLed 11821, 11822, 11823, 11824 CGLine+

- LED self contained luminaire with automatic test for reduced inspection effort
- Universal use for maintained and non-maintained operation and for 1 h, 3 h or 8 h operation
- For autonomous installation or connection to the CGLine+ monitoring system
- Environmentally-friendly due to modern lithium ion technology
- Low operating costs via low connected load
- Minimum maintenance effort and increased safety via use of LEDs with high service life (50,000 hours)
- Optimal recognition via high luminance of white contrast colour > 500 cd/m² according to DIN 4844-1 / ISO 3864-1 (for bright surroundings), and high uniformity L_{min}/L_{max} > 0.8
- Dimmable in three steps for use in dark ambient conditions
- Simple fault analysis and status display via bicolor LED and testing button
- 1 minute switch-back delay after mains return
- Blocking function prevents unintended discharge during idle operating times (only with CGLine+ WEB-Controller)

11821 CGLine+ with LED pictogram PL/PR



11822 CGLine+ with LED pictogram PL/PR



Viewing distance		30 m
Luminous flux Φ_E/Φ_N at end of rated operating time	one sided	100 % at 1 h; 50 % at 3 h; 15 % at 8 h
	double sided	85 % at 1 h; 25 % at 3 h; 8 % at 8 h
Housing material		Polycarbonate, PMMA, sheet steel (recessed housing)
Housing colour		Light grey RAL 7035
Weight		1.04 kg (11821 CGLine+) 1.14 kg (11822 CGLine+) 1.19 kg (11823 CGLine+) 1.65 kg (11824 CGLine+)
Type of mounting		Ceiling, suspended mounting; insulation class II (protective earth required) recessed ceiling mounting; insulation class I
Terminals		Through-wiring from mains (L, L', N, PE) to 2.5 mm² CGLine+ bus through-wiring to 1.5 mm²
Connection voltage		220 - 240 V AC, 50/60 Hz
Power consumption mains operation (apparent power / effective power)	one sided	5.3 VA / 4.7 W
	double sided	6.6 VA / 6.3 W
Permissible ambient temperature		Maintained mode -5 °C to +30 °C Non-maintained mode 0 °C to +35 °C
Battery		Lithium ion 3.7 V/2000 mAh with multiple protective circuit
Light source		LED strip

Ordering details – mounting set

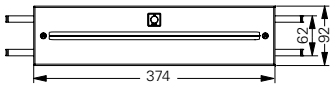
Scope of delivery	Order No.
Ceiling mounting set 11821 1-8 h/D CGLine+ with canopy, incl. LED supply and CGLine+ technology, 30 m	40071353269
Ceiling mounting set 11822 1-8 h/D CGLine+ with canopy and 0.5 m pendant tube, incl. LED supply and CGLine+ technology, 30 m	40071353270
Ceiling mounting set 11823 1-8 h/D CGLine+ with canopy and 1.5 m pendant tube, incl. LED supply and CGLine+ technology, 30 m	40071353271
Ceiling mounting set 11824 1-8 h/D CGLine+ incl. ceiling recessing housing for ceiling thicknesses 1 to 25 mm and ceiling plate, incl. LED supply and CGLine+ technology, 20 m	40071353272

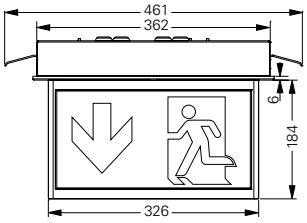
Accessories

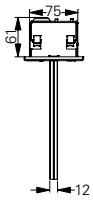
Scope of delivery	Order No.
Chain suspension for GuideLed 10821/11821 1-8 h/D CGLine+	40071353624
Recessing housing for concrete GuideLed 11824 1-8 h/D CGLine+	40071353530

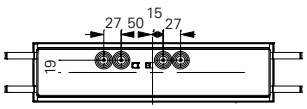
*11821, -22, -23: Protection class 2
11824: Protection class 1

11824 CGLine+ with LED pictogram PL/PR









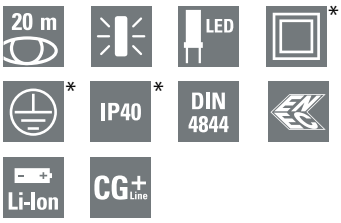
Ordering details – LED pictograms (fastening set required)

Scope of delivery	Order No.
LED pictogram PL/PR, for GuideLed 11x21/11x22/11x23/11x24, ISO 7010, 30 m	40071354533
LED pictogram PU/PU, for GuideLed 11x21/11x22/11x23/11x24, ISO 7010, 30 m	40071354534
LED pictogram PL/BL, for GuideLed 11x21/11x22/11x23/11x24, ISO 7010, 30 m	40071354535
LED pictogram PR/BL, for GuideLed 11x21/11x22/11x23/11x24, ISO 7010, 30 m	40071354536
LED pictogram PU/BL, for GuideLed 11x21/11x22/11x23/11x24, ISO 7010, 30 m	40071354537
LED pictogram PL/PR-R*, for GuideLed 11x21/11x22/11x23/11x24, ISO 7010, 30 m	40071354538
LED pictogram PL/PR-W*, for GuideLed 11x21/11x22/11x23/11x24, ISO 7010, 30 m	40071354539

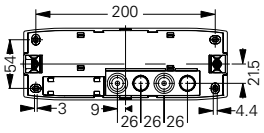
* R = arrow direction room
W = arrow direction wall

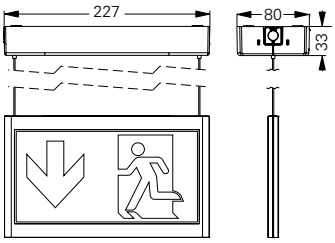
GuideLed 10825, 10826 CGLine+

Exit sign luminaire, ceiling mounting with cable



10825 CGLine+ with LED pictogram PL/PR





GuideLed 10825, 10826 CGLine+

- LED self contained luminaire with automatic test for reduced inspection effort
- Universal use for maintained and non-maintained operation and for 1 h, 3 h or 8 h operation
- For autonomous installation or connection to the CGLine+ monitoring system
- Environmentally-friendly due to modern lithium ion technology
- Low operating costs via low connected load
- Minimum maintenance effort and increased safety via use of LEDs with high service life (50,000 hours)
- Optimal recognition via high luminance of white contrast colour > 500 cd/m² according to DIN 4844-1 / ISO 3864-1 (for bright surroundings), and high uniformity L_{min}/L_{max} > 0.8
- Dimmable in three steps for use in dark ambient conditions
- Simple fault analysis and status display via bicolor LED and testing button
- 1 minute switch-back delay after mains return
- Blocking function prevents unintended discharge during idle operating times (only with CGLine+ WEB-Controller)

Viewing distance		20 m
Luminous flux Φ_E/Φ_N at end of rated operating time	one sided double sided	100 % at 1 h; 80 % at 3 h; 25 % at 8 h 100 % at 1 h; 50 % at 3 h; 15 % at 8 h
Housing material		Polycarbonate, PMMA, sheet steel (10826)
Housing colour		Light grey RAL 7035
Weight		0.71 kg (10825 CGLine+) 1.24 kg (10826 CGLine+)
Type of mounting	10825 10826	Cable suspension (drop height max. 1.5 m); insulation class II (protective earth required) Cable suspension (drop height max. 1.5 m); insulation class I
Terminals		Through-wiring from mains (L, L', N, PE) to 2.5 mm² CGLine+ bus through-wiring to 1.5 mm²
Connection voltage		220 - 240 V AC, 50/60 Hz
Power consumption mains operation (apparent power / effective power)	one sided double sided	4.8 VA / 4.1 W 5.6 VA / 5.1 W
Permissible ambient temperature		Maintained mode -5 °C to +30 °C Non-maintained mode 0 °C to +35 °C
Battery		Lithium ion 3.7 V/2000 mAh with multiple protective circuit
Light source		LED strip

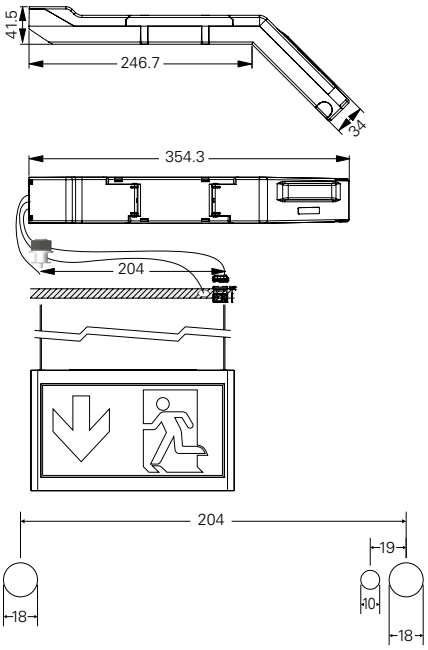
Ordering details – mounting set

Scope of delivery	Order No.
Cable installation set 10825 1-8h/D CGLine+ with LED supply integrated in canopy and CGLine+ technology, 20 m	40071353268
Cable installation set 10826/11826 1-8h/D CGLine+ with ceiling cable holders, LED supply and CGLine+ technology for mounting in cavity ceiling, 20 m and 30 m	40071353263

* 10825: Protection class 2
10826: Protection class 1

Degree of protection of the luminaire
10826: IP40
Degree of protection of the housing: IP20

10826 CGLine+ with LED pictogram PL/PR



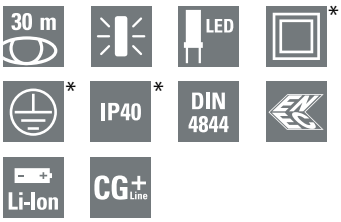
Hole pattern ceiling 10826 CGLine+

Ordering details – LED pictograms (fastening set required)

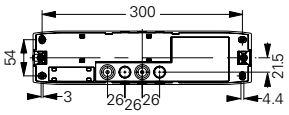
Scope of delivery	Order No.
LED pictogram PL/PR, for GuideLed 10x25/10x26 (cable installation), ISO 7010, 20 m	40071354510
LED pictogram PU/PU, for GuideLed 10x25/10x26 (cable installation), ISO 7010, 20 m	40071354511
LED pictogram PL/BL, for GuideLed 10x25/10x26 (cable installation), ISO 7010, 20 m	40071354512
LED pictogram PR/BL, for GuideLed 10x25/10x26 (cable installation), ISO 7010, 20 m	40071354513
LED pictogram PU/BL, for GuideLed 10x25/10x26 (cable installation), ISO 7010, 20 m	40071354514

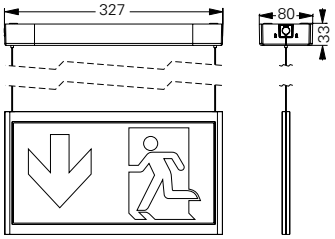
GuideLed 11825, 11826 CGLine+

Exit sign luminaire, ceiling mounting with cable



11825 CGLine+ with LED pictogram PL/PR





GuideLed 11825, 11826 CGLine+

- LED self contained luminaire with automatic test for reduced inspection effort
- Universal use for maintained and non-maintained operation and for 1 h, 3 h or 8 h operation
- For autonomous installation or connection to the CGLine+ monitoring system
- Environmentally-friendly due to modern lithium ion technology
- Low operating costs via low connected load
- Minimum maintenance effort and increased safety via use of LEDs with high service life (50,000 hours)
- Optimal recognition via high luminance of white contrast colour > 500 cd/m² according to DIN 4844-1 / ISO 3864-1 (for bright surroundings), and high uniformity L_{min}/L_{max} > 0.8
- Dimmable in three steps for use in dark ambient conditions
- Simple fault analysis and status display via bicolor LED and testing button
- 1 minute switch-back delay after mains return
- Blocking function prevents unintended discharge during idle operating times (only with CGLine+ WEB-Controller)

Viewing distance		30 m
Luminous flux Φ_E/Φ_N at end of rated operating time	one sided double sided	100 % at 1 h; 50 % at 3 h; 15 % at 8 h 85 % at 1 h; 25 % at 3 h; 8 % at 8 h
Housing material		Polycarbonate, PMMA, sheet steel (11826)
Housing colour		Light grey RAL 7035
Weight		1.06 kg (11825 CGLine+) 1.57 kg (11826 CGLine+)
Type of mounting	10825 10826	Cable suspension (drop height max. 1.5 m); insulation class II (protective earth required) Cable suspension (drop height max. 1.5 m); insulation class I
Terminals		Through-wiring from mains (L, L', N, PE) to 2.5 mm² CGLine+ bus through-wiring to 1.5 mm²
Connection voltage		220 - 240 V AC, 50/60 Hz
Power consumption mains operation (apparent power / effective power)	one sided double sided	5.3 VA / 4.7 W 6.6 VA / 6.3 W
Permissible ambient temperature		Maintained mode -5 °C to +30 °C Non-maintained mode 0 °C to +35 °C
Battery		Lithium ion 3.7 V/2000 mAh with multiple protective circuit
Light source		LED strip

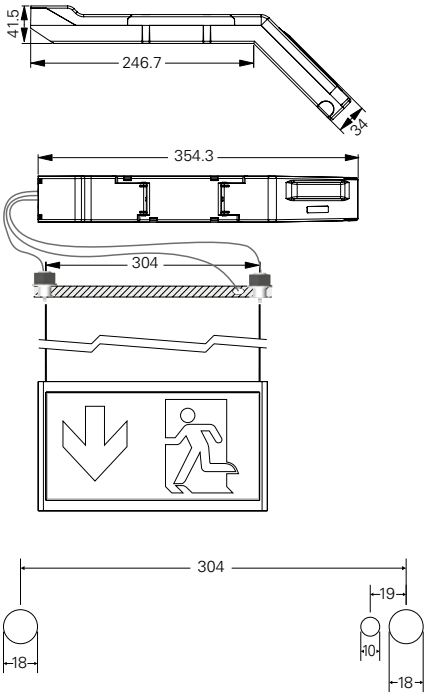
Ordering details – mounting set

Scope of delivery	Order No.
Cable installation set 11825 1-8h/D CGLine+ with LED supply integrated in canopy and CGLine+ technology, 30 m	40071353273
Cable installation set 10826/11826 1-8h/D CGLine+ with ceiling cable holders, LED supply and CGLine+ technology for mounting in cavity ceiling, 20 m and 30 m	40071353263

* 11825: Protection class 2
11826: Protection class 1

Degree of protection of the luminaire
11826: IP40
Degree of protection of the housing: IP20

11826 CGLine+ with LED pictogram PL/PR



Hole pattern ceiling 11826 CGLine+

Ordering details – LED pictograms (fastening set required)

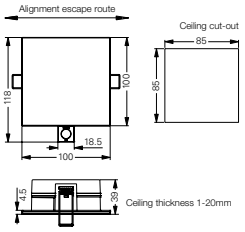
Scope of delivery	Order No.
LED pictogram PL/PR, for GuideLed 11x25/11x26 (cable installation), ISO 7010, 30 m	40071354540
LED pictogram PU/PU, for GuideLed 11x25/11x26 (cable installation), ISO 7010, 30 m	40071354541
LED pictogram PL/BL, for GuideLed 11x25/11x26 (cable installation), ISO 7010, 30 m	40071354542
LED pictogram PR/BL, for GuideLed 11x25/11x26 (cable installation), ISO 7010, 30 m	40071354543
LED pictogram PU/BL, for GuideLed 11x25/11x26 (cable installation), ISO 7010, 30 m	40071354544

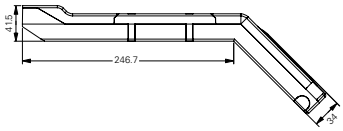
GuideLed SL 13811, 13821 CGLine+

Safety luminaire, ceiling recessed mounting

13811 CGLine+ with asymmetric optics

13821 CGLine+ with symmetric optics





Required height in cavity ceiling for recessing through ceiling cut-out: 150 mm

GuideLed SL 13811, 13821 CGLine+

- LED self contained luminaire with automatic test for reduced inspection effort
- Universal use for maintained and non-maintained operation and for 1 h, 3 h or 8 h operation
- For autonomous installation or connection to the CGLine+ monitoring system
- Environmentally-friendly due to modern lithium ion technology
- Low operating costs via low connected load
- Minimum maintenance effort via high LED service life (50,000 hours)
- Available with special optics for escape route illumination or open-area illumination
- High spacing via double optics technology and highly efficient High Power LEDs
- Simple fault analysis and status display via bicolor LED and testing button
- 1 minute switch-back delay after mains return
- Blocking function prevents unintended discharge during idle operating times (only with CGLine+ WEB-Controller)

Luminous flux (mains operation)	asymmetric optics symmetric optics	210 lm 204 lm
Luminous flux Φ_E/Φ_N at end of rated operating time		100 % at 1 h; 65 % at 3 h; 25 % at 8 h
Housing material	luminaire module housing	Polycarbonate, aluminium (heat sink) Polycarbonate
Housing colour		White, similar to RAL 9010
Weight		0.96 kg
Type of mounting		Ceiling recessing
Terminals		Through-wiring from mains (L, L', N, PE) to 2.5 mm² CGLine+ bus through-wiring to 1.5 mm²
Connection voltage		220 - 240 V AC, 50/60 Hz
Power consumption mains operation (apparent power / effective power)		6.9 VA / 6.7 W
Permissible ambient temperature		Maintained mode -5 °C to +30 °C Non-maintained mode 0 °C to +35 °C
Battery		Lithium ion 3.7 V/4000 mAh with multiple protective circuit
Light source		HighPower LEDs 2 x 1.6 W

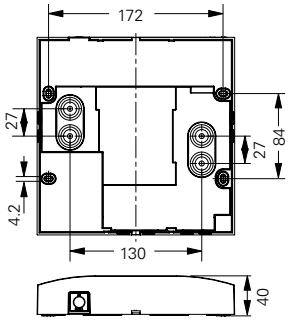
Ordering details

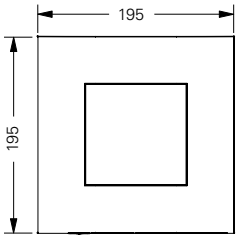
Scope of delivery	Order No.
GuideLed SL ceiling recessed 13811 1-8 h/D CGLine+ with asymmetric optics for escape route illumination, clamping range for ceiling thickness 0 - 20 mm, white RAL 9010, supply electronics in housing with cable strain-relief	40071353275
GuideLed SL ceiling recessed 13821 1-8h/D CGLine+ with symmetric optics for anti-panic/open-area illumination, clamping range for ceiling thickness 0 - 20 mm, white RAL 9010, supply electronics in housing with cable strain-relief	40071353274

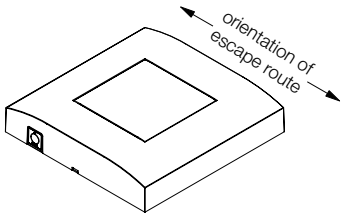
*Degree of protection of the luminaire: IP41
Degree of protection of the housing: IP20

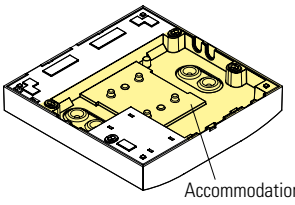
13812 CGLine+ with asymmetric optics

13822 CGLine+ with symmetric optics









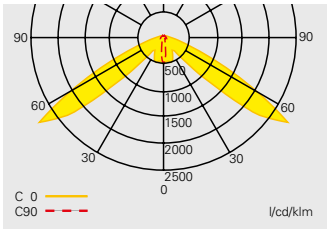
GuideLed SL 13812, 13822 CGLine+

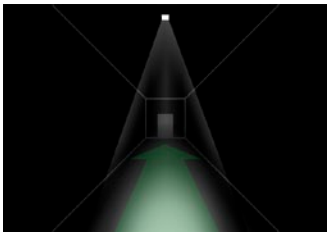
- LED self contained luminaire with automatic test for reduced inspection effort
- Universal use for maintained and non-maintained operation and for 1 h, 3 h or 8 h operation
- For autonomous installation or connection to the CGLine+ monitoring system
- Environmentally-friendly due to modern lithium ion technology
- Low operating costs via low connected load
- Minimum maintenance effort via high LED service life (50,000 hours)
- Available with special optics for escape route illumination or open-area illumination
- High spacing via double optics technology and highly efficient High Power LEDs
- Simple fault analysis and status display via bicolor LED and testing button
- 1 minute switch-back delay after mains return
- Blocking function prevents unintended discharge during idle operating times (only with CGLine+ WEB-Controller)

Luminous flux (mains operation)	asymmetric optics symmetric optics	210 lm 204 lm
Luminous flux Φ_E/Φ_N at end of rated operating time		100 % at 1 h; 65 % at 3 h; 25 % at 8 h
Housing material		Polycarbonate, aluminium
Housing colour		White, similar to RAL 9010
Weight		0.86 kg
Type of mounting		Ceiling surface-mounting
Terminals		Through-wiring from mains (L, L', N, PE) to 2.5 mm² CGLine+ bus through-wiring to 1.5 mm²
Connection voltage		220 - 240 V AC, 50/60 Hz
Power consumption mains operation (apparent power / effective power)		6.9 VA / 6.7 W
Permissible ambient temperature		Maintained mode -5 °C to +30 °C Non-maintained mode 0 °C to +35 °C
Battery		Lithium ion 3.7 V/4000 mAh with multiple protective circuit
Light source		HighPower LEDs 2 x 1.6 W

Ordering details

Scope of delivery	Order No.
GuideLed SL ceiling surface-mounted 13812 1-8h/D CGLine+ with asymmetric optics for escape route illumination, white RAL 9010	40071353279
GuideLed SL ceiling surface-mounted 13822 1-8h/D CGLine+ with symmetric optics for anti-panic/open-area illumination, white RAL 9010	40071353278

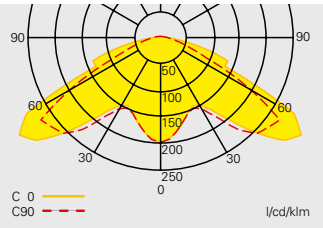


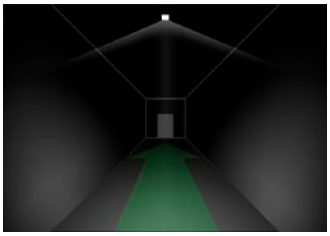


Escape route illumination
with asymmetric optics

Planning help for GuideLed SL CGLine+ with asymmetric optics for E = 1.0 lx (0.5 lx)
Measurement plane 0.02 m, maintenance factor MF = 80 %, battery operation, distances in m

Emergency light operating duration	Mounting height in metres	Mounting types	L1	L2	L3	L4
	2.5	Ceiling mounting	1.6 (2.9)	5.8 (7.4)	5.9 (6.6)	13.2 (14.7)
	3.0	Escape route. central	1.3 (3.0)	5.8 (7.9)	6.6 (7.5)	15.0 (16.6)
	3.5		1.1 (2.2)	4.5 (8.2)	7.3 (8.3)	16.6 (18.5)
	4.0		1.1 (1.9)	3.9 (8.4)	8.1 (9.0)	18.0 (20.3)
	4.5		1.1 (1.7)	3.4 (7.3)	8.7 (9.7)	19.3 (22.0)
	5.0		1.1 (1.6)	3.2 (6.3)	9.4 (10.4)	20.9 (23.6)
1 h	5.5		1.0 (1.5)	3.0 (5.7)	10.0 (11.2)	22.4 (25.0)
	6.0		1.0 (1.5)	3.0 (5.1)	10.5 (11.9)	23.8 (26.4)
	6.5		1.0 (1.5)	3.1 (4.7)	3.6 (12.6)	20.6 (27.8)
	7.0		1.0 (1.5)	3.0 (4.6)	3.5 (13.2)	19.0 (29.3)
	7.5		0.9 (1.5)	3.0 (4.3)	3.4 (13.8)	19.2 (30.8)
	8.0		0.9 (1.4)	2.9 (4.2)	3.3 (14.4)	19.6 (32.3)
	8.5		0.8 (1.4)	2.9 (4.3)	3.1 (14.9)	20.0 (33.7)
	2.5	Ceiling mounting	1.0 (2.3)	4.5 (6.4)	5.4 (6.2)	12.3 (13.7)
	3.0	Escape route. central	0.9 (1.7)	3.4 (6.7)	6.2 (6.9)	13.9 (15.6)
	3.5		0.9 (1.4)	2.9 (6.5)	6.9 (7.6)	15.3 (17.3)
	4.0		0.9 (1.3)	2.6 (5.1)	7.5 (8.4)	16.7 (18.9)
	4.5		0.8 (1.2)	2.4 (4.5)	8.1 (9.1)	18.2 (20.4)
3 h	5.0		0.8 (1.2)	2.5 (4.0)	8.7 (9.8)	19.6 (21.7)
	5.5		0.8 (1.2)	2.5 (3.7)	2.8 (10.4)	15.6 (23.2)
	6.0		0.8 (1.2)	2.4 (3.5)	2.7 (11.1)	15.5 (24.7)
	6.5		0.7 (1.1)	2.3 (3.4)	2.6 (11.6)	15.8 (26.2)
	7.0		0.5 (1.1)	2.3 (3.5)	2.4 (12.2)	16.3 (27.5)
	7.5		0.2 (1.1)	2.3 (3.5)	0.7 (4.0)	8.1 (23.0)
	2.5	Ceiling mounting	0.5 (0.8)	1.6 (3.2)	4.7 (5.2)	10.4 (11.8)
	3.0	Escape route. central	0.5 (0.8)	1.5 (2.6)	5.3 (5.9)	11.9 (13.2)
8 h	3.5		0.5 (0.8)	1.5 (2.3)	1.7 (6.6)	9.5 (14.6)
	4.0		0.4 (0.7)	1.4 (2.1)	1.6 (7.2)	9.8 (16.1)
	4.5		0.2 (0.7)	1.4 (2.2)	1.3 (2.5)	5.1 (15.7)

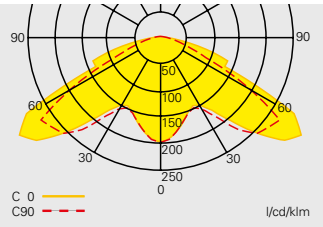


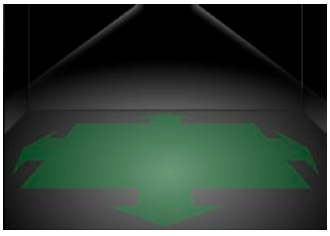


Escape route illumination
with symmetric optics

Planning help for GuideLed SL CGLine+ with symmetric optics for E = 1.0 lx (0.5 lx)
Measurement plane 0.02 m, maintenance factor MF = 80 %, battery operation, distances in m

Emergency light operating duration	Mounting height in metres	Mounting types	L1	L2	L3	L4
1 h	2.5	Ceiling mounting	3.8 (4.5)	9.0 (10.2)	4.2 (4.9)	9.7 (11.4)
	3.0	Escape route, central	4.1 (5.0)	10.0 (11.5)	4.4 (5.4)	10.9 (12.4)
	3.5		4.0 (5.4)	10.8 (12.7)	4.4 (5.9)	11.8 (13.7)
	4.0		3.4 (5.8)	11.5 (13.7)	2.4 (6.2)	12.3 (14.9)
	4.5		1.7 (5.8)	11.6 (14.6)	1.7 (6.4)	10.9 (15.9)
	5.0		1.3 (5.6)	11.0 (15.4)	1.3 (6.2)	10.3 (16.7)
	5.5		0.6 (5.1)	10.2 (16.1)	0.6 (5.4)	9.2 (17.3)
3 h	2.5	Ceiling mounting	3.3 (4.1)	8.2 (9.5)	3.6 (4.5)	8.9 (10.2)
	3.0	Escape route, central	3.1 (4.5)	9.0 (10.6)	3.4 (4.9)	9.7 (11.5)
	3.5		1.5 (4.7)	9.4 (11.5)	1.5 (5.1)	9.0 (12.6)
	4.0		1.0 (4.6)	8.9 (12.4)	1.1 (5.0)	8.3 (13.5)
	4.5		0.4 (4.0)	8.0 (13.1)	0.4 (3.0)	6.1 (14.0)
8 h	2.5	Ceiling mounting Escape route, central	0.6 (2.8)	5.5 (7.7)	0.7 (3.1)	5.2 (8.4)





Escape route illumination
with symmetric optics

Planning help for GuideLed SL CGLine+ with symmetric optics for E = 1.0 lx (0.5 lx)
Measurement plane 0.02 m, maintenance factor MF = 80 %, battery operation, distances in m

Emergency light operating duration	Mounting height in metres	Mounting types	L1	L2	L3	L4
1 h	2.5	Ceiling mounting	3.4 (4.3)	8.8 (10.2)	3.2 (3.9)	8.1 (9.0)
	3.0	Room illumination	3.4 (4.5)	9.4 (11.3)	3.5 (4.2)	9.4 (10.3)
	3.5		3.4 (4.4)	10.3 (12.5)	3.5 (4.2)	10.2 (11.3)
	4.0		3.4 (4.4)	11.0 (13.5)	3.4 (4.2)	10.9 (12.3)
	4.5		0.7 (4.9)	11.3 (13.9)	1.6 (4.7)	11.5 (13.7)
	5.0		0.6 (5.0)	10.5 (14.7)	1.1 (4.7)	11.4 (14.5)
	5.5		0.5 (4.4)	10.1 (15.5)	0.5 (4.5)	11.3 (15.1)
	6.0		0.7 (2.4)	10.8 (15.9)	0.5 (2.5)	10.0 (15.9)
	6.5		0.5 (0.7)	9.9 (15.6)	0.5 (1.9)	10.3 (16.2)
	7.0		0.5 (0.7)	9.1 (14.9)	0.5 (1.6)	9.9 (16.1)
3 h	2.5	Ceiling mounting	2.9 (3.4)	7.7 (9.5)	2.9 (3.3)	7.7 (8.3)
	3.0	Room illumination	3.0 (4.0)	8.5 (10.4)	2.9 (3.5)	8.5 (9.5)
	3.5		1.4 (4.0)	9.2 (11.0)	2.0 (3.8)	9.1 (10.8)
	4.0		0.5 (4.1)	8.5 (11.7)	1.1 (4.0)	9.2 (11.7)
	4.5		0.7 (4.0)	8.2 (12.4)	0.5 (3.4)	8.9 (12.4)
	5.0		0.7 (1.4)	8.3 (13.0)	0.5 (1.9)	8.3 (13.0)
8 h	2.5	Ceiling mounting	0.6 (2.4)	5.2 (7.2)	0.9 (2.7)	5.7 (7.3)
	3.0	Room illumination	0.7 (1.4)	5.4 (8.0)	0.5 (2.1)	5.0 (7.9)
	3.5		0.5 (0.7)	4.6 (7.5)	0.5 (0.9)	4.9 (8.0)
	4.0		0.6 (0.5)	4.0 (7.0)	0.5 (0.5)	3.9 (8.0)
	4.5		0.7 (0.6)	2.4 (7.2)	0.5 (0.5)	2.5 (7.2)
	5.0		0.5 (0.5)	1.4 (6.4)	0.5 (0.5)	1.4 (6.9)

Requirements of EN 1838: illuminance of 5 lx for safety equipment

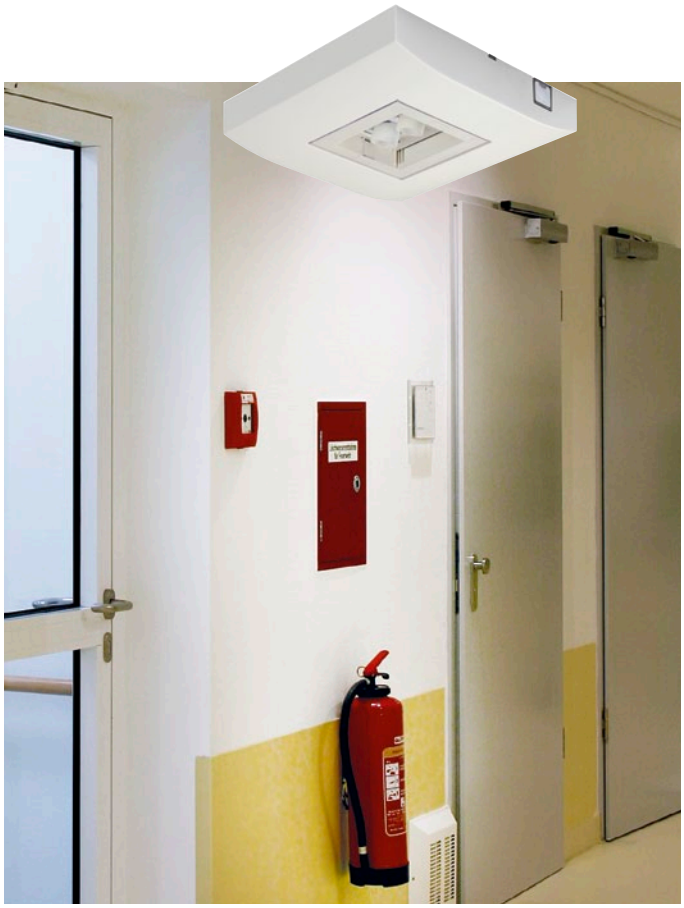
The aim of emergency lighting is to enable people to exit a room or building safely. It must also ensure that fire fighting and safety equipment can be easily found and operated when needed. This equipment includes (but not exclusively):

- First aid stations
- All fire fighting equipment and all alarm devices

Lighting is required near each first aid kit, near each alarm and piece of fire fighting equipment, as well as each sign indicating a fire alarm system. In accordance with EN 1838, „near" generally means a distance of no greater than 2 metres, measured horizontally (this corresponds with Distance a in the diagram below).

The required level of illuminance on the equipment is 5 lx measured vertically- i.e. perpendicular to the usual horizontal illuminance measurements on one level.

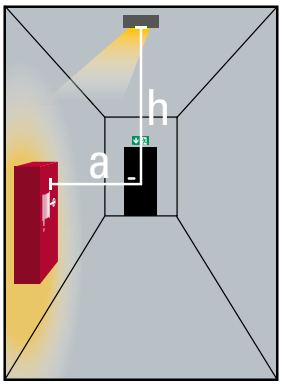
In comparison to the escape route requirement for 1 lx horizontally, different requirements apply in this situation for the light distribution from the safety luminaires, due to the flatter light angle of incidence.

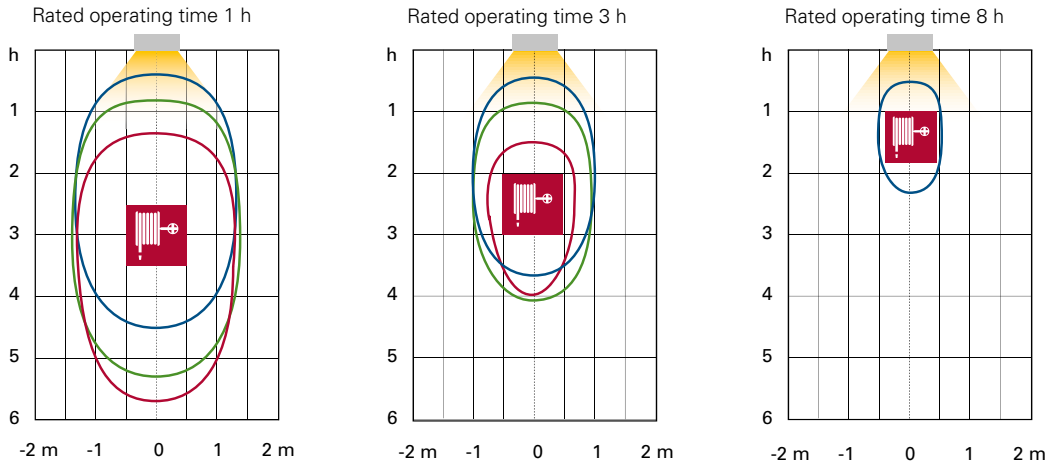


GuideLed SL 13851 and 13852 CGLine+ meet the specific requirements of EN 1838

In order to meet the requirements of EN 1838, the new GuideLed SL 13851 and 13852 CGLine+ have special optics to guarantee the required illuminance of 5 lx vertically over a wide area. Hence mounting at heights of up to 5.6 m, and a breadth of illumination of up to 2.8 metres, are possible.

Engineering help, GuideLed SL 13851 and 13852 CGLine+





Area in which a minimum illuminance of 5 lx (maintenance factor 0.8) is achieved, depending on distance a and the rated operating time:

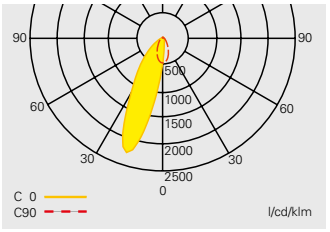
a = 1,0 m | a = 1,5 m | a = 2,0 m

LED * * IP41 *

EN 1838 Li-Ion CG+ Line

GuideLed SL 13851 CGLine+

GuideLed SL 13852 CGLine+



Light distribution curve
GuideLed SL 13851, 13852 CGLine+

GuideLed SL 13851, 13852 CGLine+

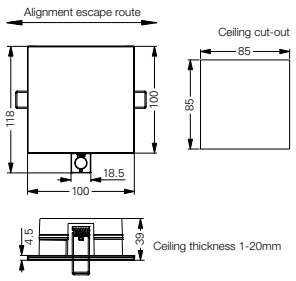
- LED self-contained safety luminaire with automatic test for reduced inspection effort
- Universal use for maintained and non-maintained operation and for 1 h, 3 h or 8 h operation
- For autonomous installation or connection to the CGLine+ monitoring system
- Environmentally-friendly due to modern lithium ion technology
- Low operating costs via low connected load
- Minimum maintenance effort via high LED service life (50,000 hours)
- Special asymmetric optics for illumination of 5 lx vertically for first aid stations, fire fighting equipment and safety equipment acc. to EN 1838
- Simple fault analysis and status display via bicolor LED and testing button
- 1 minute switch-back delay after mains return
- Blocking function prevents unintended discharge during idle operating times (only with CGLine+ WEB-Controller)

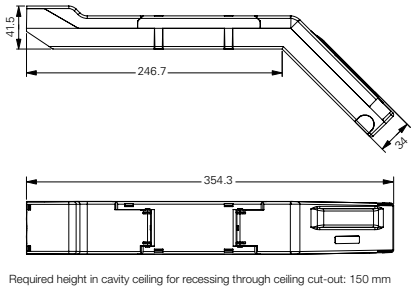
Luminous flux Φ_N (mains operation)	310 lm
Luminous flux Φ_E/Φ_N at end of rated operating time	100 % at 1 h; 65 % at 3 h; 25 % at 8 h
Housing material	Polycarbonate, aluminium
Housing colour	White, similar to RAL 9010
Weight	0.62 kg (13851 CGLine) 0.86 kg (13852 CGLine)
Type of mounting	Ceiling recessing, ceiling surface-mounting
Terminals	Through-wiring from mains (L, L`, N, PE) to 2.5 mm² CGLine Bus through wiring to 1.5 mm²
Connection voltage	220- 240 V AC, 50 Hz
Power consumption mains operation (apparent power/effective power)	6.9 VA / 6.7 W
Permissible ambient temperature	Maintained mode -5 °C bis +30 °C Non-maintained mode 0 °C bis +35 °C
Battery	Lithium-Ion 3.7 V/4000 mAh with multiple protective circuit
Light source	HighPower LEDs 2 x 1.6 W

Ordering details

Scope of supply	Order No.
GuideLed SL 13851 1-8h/D CGLine+, ceiling recessed with asymmetric optics for illuminance of 5 lx vertically, clamping range for ceiling thickness 0-20 mm	40071353280
GuideLed SL 13852 1-8h/D CGLine+, ceiling surface-mounted with asymmetric optics for illuminance of 5 lx vertically	40071353282

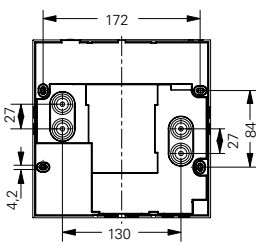
GuideLed SL 13851 CGLine+

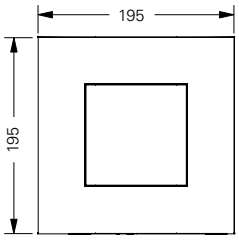


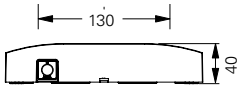


Required height in cavity ceiling for recessing through ceiling cut-out: 150 mm

GuideLed SL 13852 CGLine+







*13851: Protection class 2
13852: Protection class 1

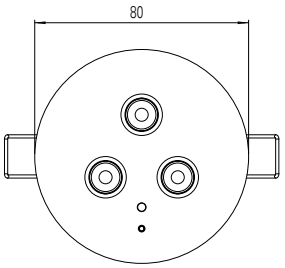
Degree of protection of the luminaire
13851: IP41
Degree of protection of the housing: IP20

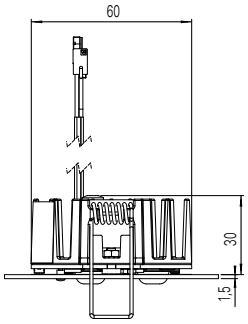
3583 LED CGLine+

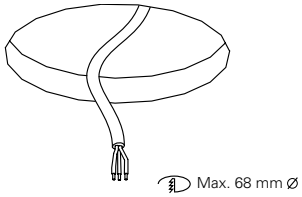
Safety luminaire, ceiling recessed mounting

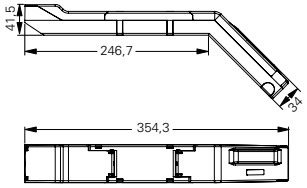
3583 1-8 h / D LED CGLine+

Dimensions in mm









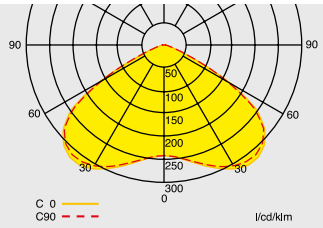
3583 1-8 h/D LED CGLine+

- Self-contained safety luminaire with LED technology for recessed mounting with round bezel with automatic test for reduced inspection effort
- Universal use for maintained and non-maintained operation and for 1 h, 3 h or 8 h operation
- For autonomous installation or connection to the CGLine+ monitoring system
- Environmentally-friendly due to modern lithium ion technology
- Low operating costs via low connected load
- Minimum maintenance effort via high LED service life (50,000 hours)
- Simple fault analysis and status display via bicolor LED and testing button
- 1 minute switch-back delay after mains return
- Blocking function prevents unintended discharge during idle operating times (only with CGLine+ WEB-Controller)
- Common ceiling cut-out diameter of 68 mm

Luminous flux Φ_N	385 lm
Luminous flux Φ_E/Φ_N at the end of rated operating time	100 % at 1 h; 70 % at 3 h; 25 % at 8 h
Housing material	Bezel: sheet steel Module: Polycarbonate
Housing colour	white sim. RAL 9010
Weight	Luminaire: 0.16 kg Module: 0.35 kg
Type of mounting	Recessed ceiling mounting
Connection terminals	Through-wiring from mains (L, L´, N, PE) to 2.5 mm² CGLine+ bus through-wiring to 1.5 mm²
Connection voltage	220 - 240 V AC, 50/60 Hz
Power consumption mains opteration (apparent power / effective power)	7 VA / 6.6 W
Permissable temperature range	Maintained mode -5 °C to +30 °C Non-maintained mode 0 °C to +35 °C
Battery	Lithium-Ionen 3.7 V / 4000 mAh with multiple protective circuit
Light source	HighPower LEDs 3 x 1 W

Ordering details

Scope of delivery	Order No.
3583 1-8 h/D LED CGLine+ recessed ceiling-mounted with 3 LEDs for excape route illumination, clamping range for ceiling thickness 0- 20 mm, white RAL 9010, supply electronics in housing with cable strain-relief	40071353365



Light distribution curve
3583 1-8 h/D LED CGLine+

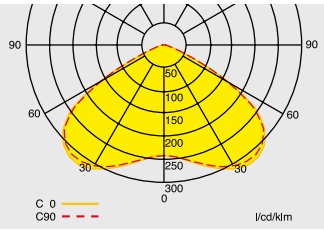
Escape route centre

Planning help for 3583 1-8 h/D LED CGLine+ for E = 1.0 lx (0.5 lx)
Measuring level 0.02 m, maintenance factor MF = 80 %, battery operation, distances in m

Duration of emergency operation	Mounting height [m]	Types of mounting	L1	L2	L3	L4
1 h	2.5	Ceiling mounting	4.3 (5.0)	10.0 (11.4)	4.3 (5.0)	10.0 (11.4)
	3.0	Escape route centre	4.7 (5.6)	11.2 (12.8)	4.8 (5.6)	11.2 (12.8)
	3.5		5.1 (6.1)	12.2 (14.1)	5.1 (6.1)	12.2 (14.1)
	4.0		5.3 (6.5)	13.0 (15.3)	5.3 (6.5)	13.1 (15.3)
	4.5		5.5 (6.9)	13.8 (16.4)	5.5 (6.9)	13.8 (16.4)
	5.0		5.6 (7.2)	14.4 (17.4)	5.6 (7.2)	14.5 (17.4)
	5.5		5.6 (7.4)	14.9 (18.2)	5.6 (7.5)	15.0 (18.2)
	6.0		5.6 (7.6)	15.3 (19.0)	5.6 (7.7)	15.3 (19.0)
	6.5		5.5 (7.8)	15.6 (19.7)	5.5 (7.8)	15.6 (19.7)
	7.0		5.3 (7.9)	15.7 (20.3)	5.3 (7.9)	15.8 (20.4)
	7.5		5.0 (7.9)	15.8 (20.8)	5.0 (7.9)	15.9 (20.9)
	8.0		4.6 (7.9)	15.8 (21.2)	4.6 (7.9)	15.9 (21.3)
	8.5		3.8 (7.9)	15.7 (21.6)	3.8 (7.9)	15.7 (21.7)
	9.0		2.2 (7.8)	15.6 (21.9)	2.2 (7.8)	15.6 (22.0)
3 h	2.5	Ceiling mounting	3.9 (4.6)	9.2 (10.5)	3.9 (4.6)	9.2 (10.5)
	3.0	Escape route centre	4.2 (5.1)	10.1 (11.8)	4.2 (5.1)	10.2 (11.8)
	3.5		4.4 (5.5)	10.9 (12.9)	4.4 (5.5)	11.0 (12.9)
	4.0		4.5 (5.8)	11.6 (13.9)	4.5 (5.8)	11.6 (14.0)
	4.5		4.5 (6.0)	12.1 (14.8)	4.5 (6.1)	12.1 (14.8)
	5.0		4.5 (6.2)	12.4 (15.5)	4.5 (6.2)	12.5 (15.6)
	5.5		4.3 (6.3)	12.6 (16.2)	4.3 (6.4)	12.7 (16.2)
	6.0		4.0 (6.4)	12.7 (16.7)	4.1 (6.4)	12.8 (16.8)
	6.5		3.6 (6.4)	12.8 (17.2)	3.6 (6.4)	12.8 (17.2)
	7.0		2.7 (6.3)	12.6 (17.5)	2.8 (6.3)	12.6 (17.6)
8 h	2.5	Ceiling mounting	2.8 (3.6)	7.2 (8.7)	2.8 (3.6)	7.2 (8.7)
	3.0	Escape route centre	2.8 (3.8)	7.6 (9.5)	2.8 (3.8)	7.7 (9.5)
	3.5		2.6 (3.9)	7.9 (10.1)	2.6 (3.9)	7.9 (10.2)
	4.0		2.3 (4.0)	7.9 (10.6)	2.3 (4.0)	7.9 (10.7)
	4.5		1.1 (3.9)	7.8 (10.9)	1.2 (3.9)	7.8 (11.0)

3583 LED CGLine+

Safety luminaire, ceiling recessed mounting



Light distribution curve
3583 1-8 h/D LED CGLine+

Room illumination

Planning help for 3583 1-8 h/D LED CGLine+ for E = 1.0 lx (0.5 lx)
Measuring level 0.02 m, maintenance factor MF = 80 %, battery operation, distances in m

Duration of emergency operation	Mounting height [m]	Types of mounting	L1	L2	L3	L4
1 h	2.5	Ceiling mounting	3.4 (3.9)	8.1 (9.1)	3.4 (3.9)	8.0 (9.1)
	3.0	Room illumination	3.4 (4.3)	9.0 (10.3)	3.8 (4.3)	9.0 (10.3)
	3.5		4.1 (4.4)	10.0 (11.4)	4.0 (4.6)	9.9 (11.3)
	4.0		4.2 (5.0)	10.8 (12.4)	4.2 (5.0)	10.8 (12.3)
	4.5		4.3 (5.4)	11.6 (13.3)	4.2 (5.3)	11.6 (13.2)
	5.0		4.3 (5.4)	12.3 (14.2)	4.3 (5.5)	12.3 (14.2)
	5.5		4.4 (5.4)	12.9 (15.0)	4.3 (5.7)	12.9 (15.1)
	6.0		4.3 (5.8)	13.5 (15.9)	4.2 (5.7)	13.4 (15.8)
	6.5		4.1 (5.9)	14.0 (16.6)	4.0 (5.8)	14.0 (16.6)
	7.0		4.0 (6.0)	14.5 (17.3)	3.8 (5.9)	14.4 (17.3)
	7.5		3.7 (6.0)	14.9 (18.0)	3.5 (5.9)	14.8 (17.9)
	8.0		3.4 (6.0)	15.2 (18.6)	3.2 (5.8)	15.1 (18.5)
	8.5		2.9 (5.8)	15.5 (19.1)	2.7 (5.7)	15.4 (19.1)
	9.0		2.4 (5.7)	15.7 (19.6)	2.3 (5.6)	15.6 (19.6)
3 h	2.5	Ceiling mounting	3.2 (3.4)	7.4 (8.5)	3.2 (3.6)	7.4 (8.4)
	3.0	Room illumination	3.4 (4.0)	8.4 (9.5)	3.3 (4.0)	8.3 (9.5)
	3.5		3.4 (4.3)	9.2 (10.5)	3.4 (4.2)	9.1 (10.4)
	4.0		3.4 (4.4)	9.9 (11.4)	3.5 (4.5)	9.8 (11.4)
	4.5		3.4 (4.4)	10.5 (12.3)	3.5 (4.6)	10.5 (12.2)
	5.0		3.4 (4.4)	11.0 (13.0)	3.5 (4.8)	11.0 (13.0)
	5.5		3.4 (4.4)	11.5 (13.8)	3.3 (4.8)	11.5 (13.7)
	6.0		3.1 (4.9)	11.9 (14.4)	3.0 (4.9)	11.9 (14.4)
	6.5		2.8 (4.9)	12.3 (15.0)	2.6 (4.8)	12.2 (15.0)
	7.0		2.3 (4.4)	12.5 (15.6)	2.2 (4.6)	12.5 (15.5)
8 h	2.5	Ceiling mounting	2.4 (3.0)	6.1 (7.1)	2.4 (3.0)	6.1 (7.0)
	3.0	Room illumination	2.4 (3.1)	6.7 (7.9)	2.3 (3.1)	6.7 (7.9)
	3.5		2.2 (3.2)	7.2 (8.7)	2.2 (3.1)	7.2 (8.6)
	4.0		2.0 (3.2)	7.6 (9.3)	1.8 (3.1)	7.5 (9.2)
	4.5		1.4 (3.1)	7.8 (9.8)	1.3 (3.0)	7.8 (9.8)

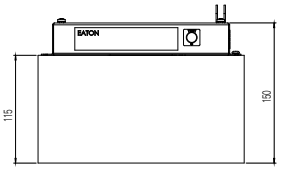
20 m | LED | IP40 | IK07 | DIN 4844 | Li-Ion | CG+ Line

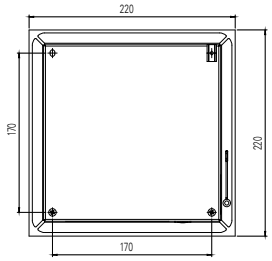
Exit Cube 33822 LED CGLine+

- Exit sign cube with LED Technology for large, wide areas, e.g. warehouses or retail areas
- LED self-contained luminaire with automatic test for reduced inspection effort
- Universal use for maintained and non-maintained operation and for 1 h, 3 h or 8 h operation
- For autonomous installation or connection to the CGLine+ monitoring system
- Robust design with impact-resistance of IK07
- Environmentally-friendly due to modern lithium ion technology
- Low operating costs via low connected load
- Minimum maintenance effort via use of LEDs with high service life (50.000 hours)
- Modular design of the polycarbonate cube enables simple and safe mounting by just sliding cube onto installed luminaire
- Easy and flexible mounting options with space to land cables- Ceiling, wall, cable and chain.
- Optimal perceptibility due to high luminance of the white contrasting colour (>500 cd/m²) acc. DIN 4844-1 / ISO 3864-1 (for bright environments) and high uniformity Lmin/Lmax > 0,4 (in mains operation)
- Simple fault analysis and status display via bicolor LED and testing button
- 1 minute switch-back delay after mains return
- Blocking function prevents unintended discharge during idle operating times (only with CGLine+ WEB-Controller)

Exit Cube 33822 1-8h/D LED CGLine+

Dimensions in mm





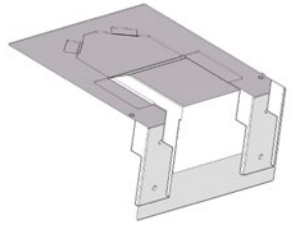
Viewing Distance	20 m
Luminous flux Φ_E/Φ_N at the end of rated operating time	87 % at 1 h; 45 % at 3 h, 15 % at 8 h
Housing material	Cube: Polycarbonate; Enclosure: Stainless steel
Housing colour	White RAL 9010
Weight	enclosure 1.1 kg cube: 0.6 kg
Type of mounting	Ceiling, Wall mounting
Connection terminals	Durchgangsverdrahtung Netz (L, L´, N, PE) bis 2,5 mm² Durchgangsverdrahtung CGLine+ Bus bis 1,5 mm²
Power input	220 - 240 V AC, 50/60 Hz
Power consumption mains opteration (apparent power / effective power)	8.8 VA / 8.3 W
Permissable temperature range	Maintained mode-5 °C bis +30 °C Non-maintained mode 0 °C bis +35 °C
Battery	Lithium-Ionen 3.7 V / 4000 mAh with multiple protecgtive circuit
Light source	HighPower LEDs 4 x 1 W

Replacement escape sign cube

Ordering details

Scope of delivery	Order No
Exit Cube 33822 1-8h/D LED CGLine+: Enclosure and exit sign cube, for 20 m viewing distance with LED Supply and CGLine+ Technology silkscreened pictogram set (arrow left, right, down) acc. to ISO 7010	40071353420

Wall bracket



Ordering details accessories

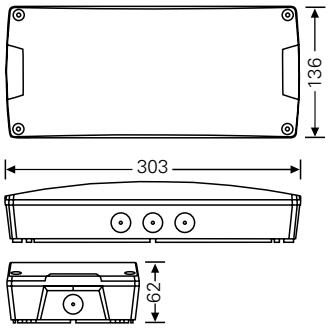
Scope of delivery	Order No
Wall bracket incl. attachments	40071353444
Chain mounting kit with 4 eyelets (chain not included)	40071353457
Cable mounting kit with 4 fasteners and cables, adjustable hanging height (max 1.5 m)	40071353443
Replacement escape sign cube (20 m viewing distance) silkscreened pictogram set (arrow left, right, down) acc. to ISO 7010	40071354450

Atlantic LED CGLine+

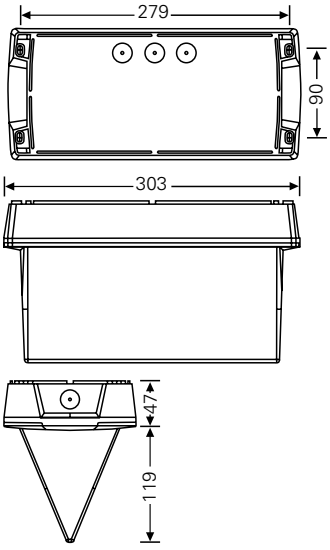
Exit sign luminaire, wall or ceiling mounting

24 m | LED | IP65 | IK10 | DIN 4844 | IFS | Li-Ion | CG+ Line

Atlantic LED S CGLine+



Atlantic LED D CGLine+



Atlantic LED CGLine+

- LED self-contained luminaire with high protection class (IP65) for indoor and outdoor use
- With automatic test for reduced inspection effort
- Universal use for maintained and non-maintained operation and for 1 h, 3 h or 8 h operation
- For autonomous installation or connection to the CGLine+ monitoring system
- Robust construction from aluminium diecast and high impact resistant cover made of polycarbonate
- Suitable for use in food processing industry acc. IFS
- Suitable for operational areas with fire hazard (D mark)
- Environmentally-friendly due to modern lithium ion technology
- Optional with self-regulating battery heater for use at low temperature up to-20°C
- Low operating costs via low connected load
- Minimum maintenance effort via use of LEDs with high service life (50.000 hours)
- Simple fault analysis and status display via bicolor LED and testing button
- 1 minute switch-back delay after mains return
- Blocking function prevents unintended discharge during idle operating times (only with CGLine+ WEB-Controller)

Viewing distance	24 m
Luminous flux Φ_E/Φ_N at end of rated operating time	100 % at 1 h; 65% at 3 h; 25% at 8 h
Housing material	Polycarbonate, Aluminium
Housing colour	grey
Weight	Atlantic LED S 1.54 kg Atlantic LED D 1.74 kg
Type of mounting	Wall and ceiling mounting
Connection terminals	Through-wiring from mains (L, L´, N, PE) to 2.5 mm² CGLine+ bus through-wiring to 1.5 mm²
Connection voltage	220 - 240 V AC, 50/60 Hz
Power consumption mains operation (max.) (apparent power / effective power)	without heater: 7.2 VA / 7.0 W with heater: 9.4 VA / 9.3 W
Permissible ambient temperature	without heater / with heater
Maintained mode	- 5 °C to +30 °C / - 20 °C to +30 °C
Non-maintained mode	0 °C to +35 °C / - 20 °C to +35 °C
Battery	Lithium ion 3.7 V / 4000 mAh with multiple protective circuit
Light source	HighPower LEDs 2 x 1.6 W

Ordering details

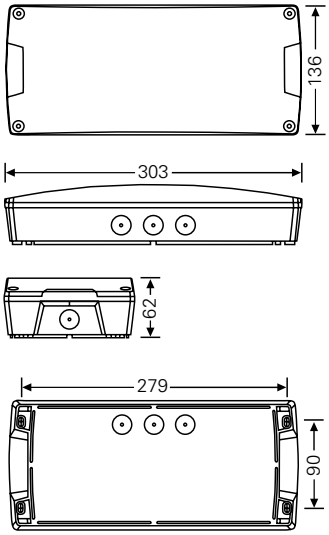
Scope of delivery	Order No.
Escape sign luminaire Atlantic LED S 1-8h/D CGLine+, single sided, Including two cable glands, without pictogram	40071354870
Escape sign luminaire Atlantic LED D 1-8h/D CGLine+, double sided, Including two cable glands, without pictogram	40071354871
Escape sign luminaire Atlantic LED S 1-8h/D CGLine+ **H**, single sided, Including two cable glands, without pictogram, with battery heater for low ambient temperature up to -20°C	40071354875
Escape sign luminaire Atlantic LED D 1-8h/D CGLine+ **H**, double sided, Including two cable glands, without pictogram, with battery heater for low ambient temperature up to -20°C	40071354876

Accessories

Scope of delivery	Order No.	Scope of delivery	Order No.
Pictograms for Atlantic S			
PR ISO	155-000-011	PU ISO	155-000-013
PL ISO	155-000-012		
Pictograms for Atlantic D (2 x required)			
PR ISO	155-000-211	PU ISO	155-000-213
PL ISO	155-000-212	BL	155-000-209

Atlantic LED R CGLine+

Atlantic LED O CGLine+



Atlantic LED / Outdoor Wall CGLine+

- LED self-contained luminaire with high protection class (IP65) for indoor and outdoor use
- With automatic test for reduced inspection effort
- Universal use for maintained and non-maintained operation and for 1 h, 3 h or 8 h operation
- For autonomous installation or connection to the CGLine+ monitoring system
- Robust construction from aluminium diecast and high impact resistant cover made of polycarbonate
- Suitable for use in food processing industry acc. IFS (Atlantic LED R and Atlantic LED O)
- Suitable for operational areas with fire hazard (D mark)
- Environmentally-friendly due to modern lithium ion technology
- Optional with self-regulating battery heater for use at low temperature up to-20°C
- Low operating costs via low connected load
- Minimum maintenance effort via use of LEDs with high service life (50,000 hours))
- Available with special optics for escape route illumination or wide area illumination
- High spacing by double optics technology and highly efficient HighPower LEDs
- Simple fault analysis and status display via bicolor LED and testing button
- 1 minute switch-back delay after mains return
- Blocking function prevents unintended discharge during idle operating times (only with CGLine+ WEB-Controller)

Luminous flux	Asymmetric optics 225 lm Symmetric optics 220 lm
Luminous flux Φ_E/Φ_N at end of rated operating time	100 % at 1h; 65% at 3 h; 25% at 8 h
Housing material	Polycarbonate, Aluminium
Housing colour	grey
Weight	Atlantic LED 1.54 kg Outdoor Wall 3.00 kg
Type of mounting	Wall and ceiling mounting
Connection terminals	Through-wiring from mains (L, L´, N, PE) to 2.5 mm² CGLine+ bus through-wiring to 1.5 mm²
Connection voltage	220 - 240 V AC, 50/60 Hz
Battery	Lithium ion 3.7 V/4000 mAh with multiple protective circuit
Power consumption mains operation (max.) (apparent power / effective power)	without heater 7.2 VA / 7.0 W with heater 9.2 VA / 9.3 W
Permissible ambient temperature	without heater / with heater
Maintained mode	- 5 °C bis +30 °C / - 20 °C bis +30 °C
Non-maintained mode	0 °C bis +35 °C / - 20 °C bis +35 °C
Light source	HighPower LEDs 2 x 1.6 W

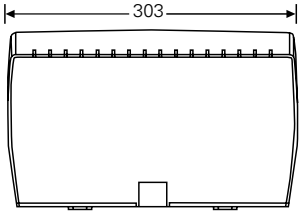
Ordering details

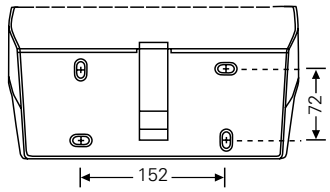
Scope of delivery	Order No.
Safety luminaire Atlantic LED R 1-8h/D CGLine+, with asymmetric optics for escape route Illumination, including two cable glands	40071354872
Safety luminaire Atlantic LED O 1-8h/D CGLine+, with symmetric optics for anti-panic / open area illumination, including two cable glands	40071354873
Safety luminaire Outdoor Wall 1-8h/D CGLine+, with asymmetric optics for escape route Illumination	40071354874
Safety luminaire Atlantic LED R 1-8h/D CGLine+ **H**, with asymmetric optics for escape route Illumination, including two cable glands, with battery heater for low ambient temperature up to-20°C	40071354877
Safety luminaire Atlantic LED O 1-8h/D CGLine+ **H**, with symmetric optics for anti-panic / open area illumination, including two cable glands, with battery heater for low ambient temperature up to-20°C	40071354878
Safety luminaire Outdoor Wall 1-8h/D CGLine+ **H**, with asymmetric optics for escape route Illumination, with battery heater for low ambient temperature up to -20°C	40071354879

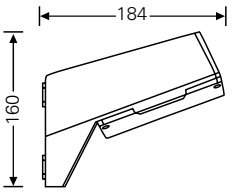
Atlantic LED / Outdoor Wall CGLine+

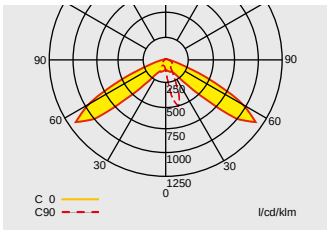
Safety luminaire, wall or ceiling mounting

Outdoor Wall CGLine+



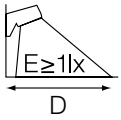






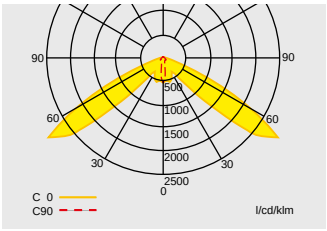
Outdoor Wall CGLine+
with asymmetric optics

Planning help for Outdoor Wall – asymmetric optics for E = 1.0 lx (0.5 lx)
Measurement plane: 0.02 m, maintenance factor MF = 80 %, battery operation



Duration of emergency operation	Mounting high (m)	Types of mounting	L1	L2	D
	2.0	Wall mounting	4.5	11.4	0 - 2.0
	2.5		5.3	12.2	0 - 2.1
	3.0		5.8	13.8	0 - 2.1
	3.5		6.6	15.3	0 - 2.2
1 h	4.0		7.0	16.7	0 - 2.3
	4.5		7.6	18.1	0 - 2.2
	5.0		8.3	19.2	0 - 2.1
	5.5		8.6	18.9	0.7 - 2.0
	6.0		3.0	16.9	1.0 - 1.9
	2.0	Wall mounting	4.2	9.5	0 - 1.6
	2.5		4.8	11.0	0 - 1.7
	3.0		5.4	12.4	0 - 1.7
3 h	3.5		5.8	13.3	0 - 1.7
	4.0		6.2	14.0	0.4 - 1.6
	4.5		2.1	12.5	0.7 - 1.5
	2.0	Wall mounting	3.5	8.0	0.2 - 1.2
8 h	2.5		3.9	8.6	0.3 - 1.0
	2.8		1.4	8.3	0.5 - 1.0

Atlantic LED R CGLine+



Atlantic R CGLine+
with asymmetric optics

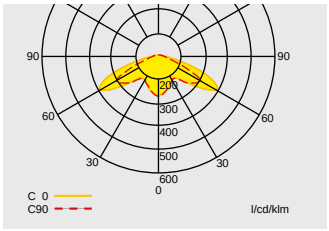
Planning help for Atlantic LED R – asymmetric optics for E = 1.0 lx (0.5 lx)
Measurement plane: 0.02 m, maintenance factor MF = 80 %, battery operation

Duration of emergency operation	Mounting high (m)	Types of mounting	L1	L2	L3	L4
1 h	2.5	Ceiling mounting	6.0 (6.5)	13.0 (14.2)	2.0 (3.0)	6.1 (7.3)
	3.0	Escape route, central	6.8 (7.5)	15.0 (16.2)	1.7 (3.2)	6.1 (8.0)
	3.5		7.5 (8.4)	16.8 (18.3)	1.4 (2.8)	5.6 (8.5)
	4.0		8.3 (9.2)	18.5 (20.3)	1.2 (2.5)	5.0 (8.7)
	4.5		9.0 (10.0)	20.0 (22.2)	1.1 (2.2)	4.4 (8.6)
	5.0		9.6 (10.7)	21.5 (24.0)	1.1 (1.9)	3.9 (7.9)
	5.5		10.3 (11.5)	23.0 (25.7)	1.1 (1.8)	3.6 (7.2)
	6.0		10.8 (12.2)	24.4 (27.2)	1.0 (1.6)	3.3 (6.6)
	6.5		3.6 (12.9)	24.2 (28.8)	1.0 (1.6)	3.3 (6.0)
	7.0		3.5 (13.6)	21.9 (30.2)	1.0 (1.6)	3.3 (5.5)
	7.5		3.4 (14.2)	21.8 (31.7)	1.0 (1.6)	3.2 (5.2)
	8.0		3.3 (14.8)	22.0 (33.2)	0.9 (1.5)	3.1 (4.9)
	8.5		3.1 (15.3)	22.5 (34.6)	0.8 (1.5)	3.0 (4.6)
3 h	2.5	Ceiling mounting	5.6 (6.2)	12.4 (13.4)	1.3 (2.6)	4.9 (6.5)
	3.0	Escape route, central	6.3 (7.1)	14.2 (15.5)	1.0 (2.1)	4.2 (7.0)
	3.5		7.1 (7.9)	15.8 (17.4)	0.9 (1.8)	3.7 (7.0)
	4.0		7.7 (8.6)	17.2 (19.2)	0.9 (1.6)	3.2 (6.4)
	4.5		8.3 (9.4)	18.7 (20.9)	0.9 (1.4)	2.8 (5.7)
	5.0		8.9 (10.1)	20.1 (22.5)	0.8 (1.3)	2.6 (5.1)
	5.5		2.9 (10.7)	17.7 (23.9)	0.8 (1.3)	2.6 (4.6)
	6.0		2.7 (11.4)	17.6 (25.4)	0.8 (1.3)	2.6 (4.2)
	6.5		2.6 (12.0)	17.8 (26.9)	0.7 (1.2)	2.5 (3.9)
	7.0		2.4 (12.5)	18.3 (28.3)	0.6 (1.2)	2.4 (3.7)
8 h	2.5	Ceiling mounting	4.8 (5.4)	10.7 (12.0)	0.6 (1.0)	1.9 (4.0)
	3.0	Escape route, central	5.4 (6.1)	12.2 (13.6)	0.5 (0.8)	1.6 (3.3)
	3.5		1.8 (6.8)	11.0 (15.1)	0.5 (0.8)	1.6 (2.8)
	4.0		1.6 (7.4)	10.0 (16.6)	0.5 (0.8)	1.6 (2.5)
	4.5		1.3 (2.6)	5.1 (18.0)	0.3 (0.7)	1.5 (2.3)

Atlantic O CGLine+

Safety luminaire, wall or ceiling mounting

Atlantic LED O CGLine+



Atlantic O CGLine+
with symmetric optics

Planning help for Atlantic LED O – symmetric optics for E = 1.0 lx (0.5 lx)
Measurement plane: 0.02 m, maintenance factor MF = 80 %, battery operation

Duration of emergency operation	Mounting high (m)	Types of mounting	L1	L2	L3	L4
1 h	2.5	Ceiling mounting	4.5 (5.4)	10.7 (12.4)	3.8 (4.5)	8.9 (10.0)
	3.0	Escape route, central	4.7 (5.9)	11.7 (13.8)	4.1 (5.0)	9.9 (11.4)
	3.5		4.9 (6.3)	12.5 (15.1)	4.1 (5.4)	10.8 (12.5)
	4.0		4.3 (6.6)	13.2 (16.1)	4.1 (5.8)	11.4 (13.6)
	4.5		2.3 (6.8)	13.6 (17.0)	2.1 (5.8)	11.2 (14.5)
	5.0		1.9 (6.8)	13.1 (17.8)	1.9 (5.8)	10.4 (15.3)
	5.5		1.6 (6.5)	12.5 (18.5)	1.5 (5.8)	9.6 (16.0)
	6.0		1.1 (3.5)	7.0 (18.9)	1.1 (3.7)	7.3 (16.3)
	6.5		0.7 (3.1)	6.1 (19.3)	0.7 (2.9)	5.8 (15.5)
3 h	2.5	Ceiling mounting	3.8 (4.8)	9.6 (11.4)	3.3 (4.1)	8.1 (9.3)
	3.0	Escape route, central	3.8 (5.2)	10.4 (12.5)	3.3 (4.5)	8.9 (10.5)
	3.5		1.9 (5.4)	10.8 (13.5)	1.9 (4.7)	9.4 (11.4)
	4.0		1.6 (5.5)	10.6 (14.3)	1.5 (4.7)	8.4 (12.3)
	4.5		1.2 (5.1)	10.0 (15.0)	1.2 (4.7)	7.6 (12.9)
	5.0		0.8 (2.7)	5.4 (15.4)	0.8 (2.6)	5.2 (13.1)
8 h	2.5	Ceiling mounting	1.0 (3.4)	6.6 (8.9)	0.9 (2.9)	5.2 (7.6)
	3.0	Escape route, central	0.6 (1.8)	3.6 (9.5)	0.6 (1.9)	3.7 (8.2)

Planning help for Atlantic LED O – symmetric optics for E = 1.0 lx (0.5 lx)
Measurement plane: 0.02 m, maintenance factor MF = 80 %, battery operation

Duration of emergency operation	Mounting high (m)	Types of mounting	L1	L2	L3	L4
1 h	2.5	Ceiling mounting	3.9 (4.3)	9.6 (10.6)	2.9 (3.6)	7.2 (8.5)
	3.0	Room illumination	3.4 (4.6)	10.6 (11.6)	3.1 (4.1)	8.1 (9.8)
	3.5		3.4 (4.4)	11.6 (13.2)	3.1 (4.2)	8.8 (10.4)
	4.0		3.4 (5.4)	12.5 (14.6)	2.8 (4.1)	9.4 (11.0)
	4.5		2.4 (5.4)	13.0 (15.6)	1.8 (4.1)	10.2 (11.8)
	5.0		1.9 (5.4)	12.1 (16.8)	0.8 (3.8)	11.1 (12.3)
	5.5		1.0 (5.4)	11.6 (17.6)	0.8 (3.7)	11.0 (13.0)
	6.0		1.2 (3.4)	11.8 (18.4)	0.5 (3.1)	10.5 (13.6)
	6.5		1.0 (2.4)	11.9 (18.2)	0.5 (0.8)	9.5 (14.9)
	7.0		0.6 (2.4)	11.3 (17.1)	0.5 (1.0)	8.9 (15.8)
3 h	2.5	Ceiling mounting	3.4 (3.4)	8.9 (9.6)	2.4 (3.4)	6.5 (8.0)
	3.0	Room illumination	3.4 (4.3)	9.7 (11.0)	2.5 (3.6)	7.3 (8.7)
	3.5		2.0 (4.4)	10.5 (12.2)	2.0 (3.5)	7.9 (9.4)
	4.0		1.4 (4.4)	9.7 (13.3)	0.9 (3.4)	9.0 (10.0)
	4.5		1.0 (4.4)	9.4 (14.1)	0.6 (3.3)	8.8 (10.7)
	5.0		1.0 (2.4)	9.2 (14.5)	0.5 (3.3)	8.5 (11.6)
	5.5		0.6 (2.1)	9.3 (13.9)	0.5 (0.9)	7.3 (12.9)
	6.0		0.5 (1.5)	8.7 (13.6)	0.5 (0.5)	6.8 (12.5)
8 h	2.5	Ceiling mounting	1.2 (2.9)	6.0 (8.3)	0.8 (2.2)	5.6 (6.2)
	3.0	Room illumination	0.8 (1.9)	5.8 (8.9)	0.6 (1.9)	5.3 (7.0)
	3.5		0.5 (1.4)	5.7 (8.6)	0.5 (0.6)	4.4 (7.9)
	4.0		0.7 (0.8)	4.7 (8.2)	0.5 (0.7)	4.3 (7.7)
	4.5		0.7 (0.9)	3.3 (8.0)	0.7 (0.5)	3.4 (7.3)
	5.0		0.7 (0.5)	2.8 (8.0)	0.5 (0.5)	2.4 (6.2)

CEAG contact person

You can find further information at www.ceag.de

We are also available for you personally.

Our technical sales representatives are available on-site for creating interesting and economic escape lighting concepts according to specific requirements and complying with valid regulations.

Eaton is dedicated to ensuring that reliable, efficient and safe power is available when it's needed most. With unparalleled knowledge of electrical power management across industries, experts at Eaton deliver customized, integrated solutions to solve our customers' most critical challenges.

Our focus is on delivering the right solution for the application. But, decision makers demand more than just innovative products. They turn to Eaton for an unwavering commitment to personal support that makes customer success a top priority. For more information, visit **www.eaton.com/electrical.**

To find your contact person, visit **www.ceag.de**.

Eaton Industries Manufacturing GmbH
Electrical Sector EMEA
Route de la Longeraie 7
1110 Morges, Switzerland
www.eaton.eu

CEAG Notlichtsysteme GmbH
Senator-Schwartz-Ring 26
59494 Soest, Germany
Phone: +49 (0) 2921 69-870
Fax: +49 (0) 2921 69-617
E-Mail: info-n@eaton.com
Web: www.ceag.de

Printed in Germany
Publication No. CA451002EN
Order No. 40071860269
1.0/03.15/DD

Powering Business Worldwide

Style LED CG-S

CEAG

Style luminaires for the next generation

Greater efficiency and less maintenance than ever before: LED technology for upgrading

EATON

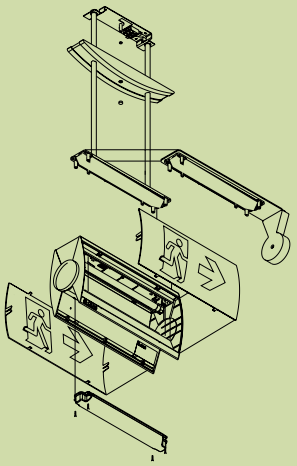
Powering Business Worldwide

The Style series: a reliable concept

Precisely matched modular elements form the basis of our Style system luminaire series. Diverse combinations made possible with various accessory parts, for a wide variety of applications. By using the optional IP54 module, the luminaires may also be operated under challenging environmental conditions.

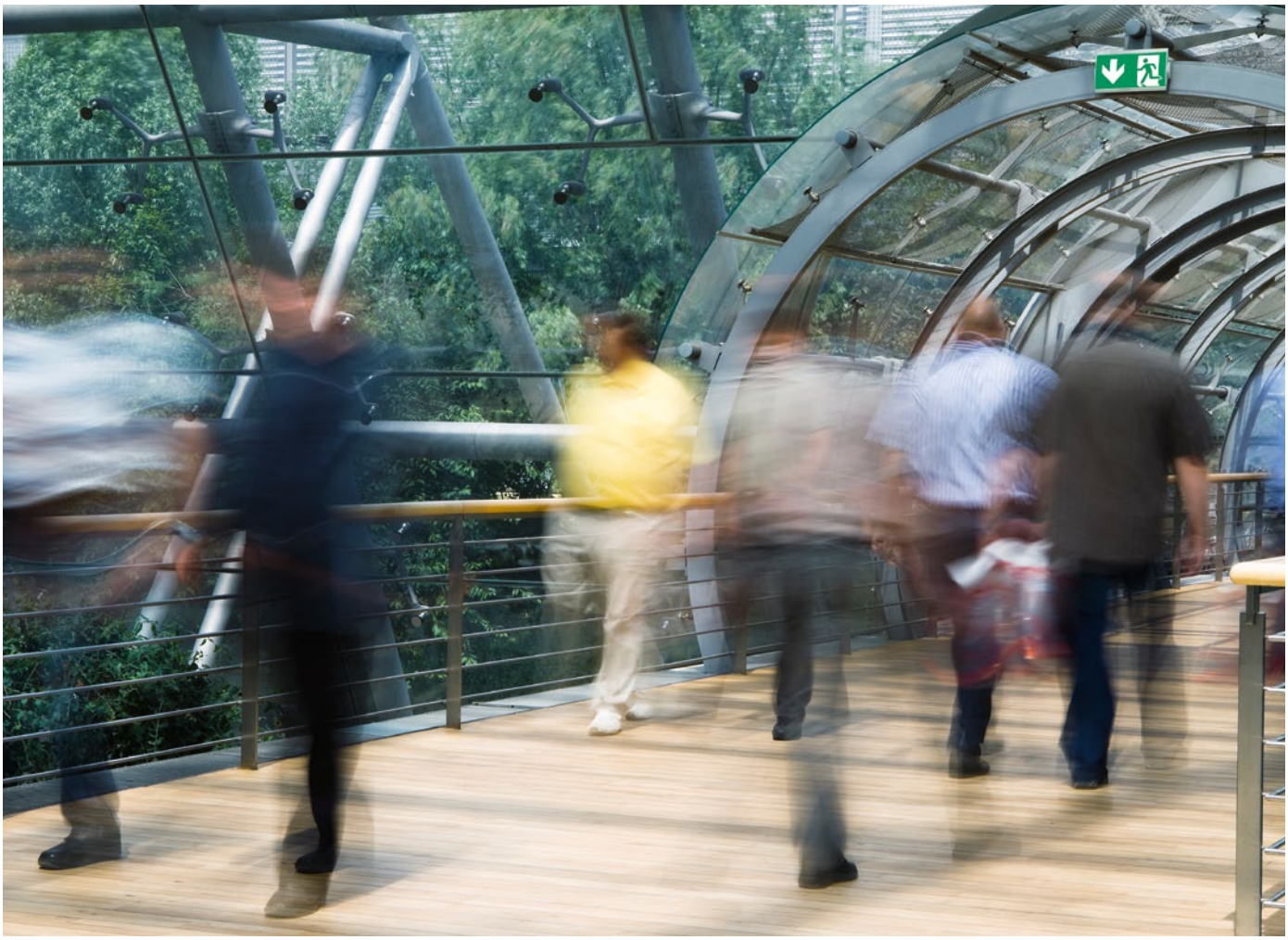
Furthermore, the quick-mounting set facilitates the installation of most types of luminaires, containing the required fixing elements and mains terminals. The unit can be mounted prior to completion of construction work. The selected enclosures just need to be snapped to the base, ready for use. Mounting of the pictogram cover is also quick and easy, thanks to snap mounting.

CEAG's proven electronic ballasts with new 20 digit address works together with CEWA GUARD monitoring system and connection to all CEAG emergency lighting systems is also possible. Connecting the luminaires to a suitable emergency lighting system makes it possible to select individual switching modes (non-maintained, maintained or switched maintained) for each luminaire within one final circuit.



Variable mounting

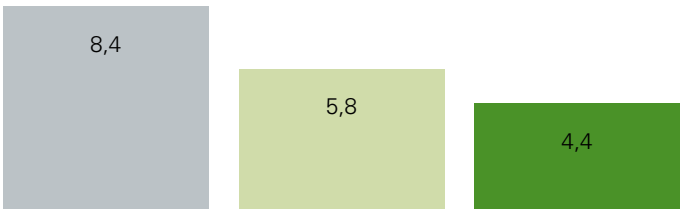
Modular constructed luminaires and fixing elements offer the possibility of individual mounting. Nearly all accessories can be combined. This means a maximum of flexibility because all luminaires have a standard, identical quick-mounting set.



Up to 48% energy savings with efficient LED technology

With the introduction of new LED components, the proven and reliable Style CG-S series, not only becomes more durable but is also more efficient. Power consumption and thus energy costs with a double-sided luminaire for example are cut by 31% compared to fluorescent tube luminaires, and the consumption for single-sided luminaires is reduced by 48% – a positive factor for your next electricity bill.

System effective power P_{sys} in W in case of mains operation



Style fluorescent lamp | Style LED, double-sided | Style LED, single-sided

Current in case of battery operation in mA

Style fluorescent lamp | Style LED, double-sided | Style LED, single-sided

A direct comparison of both luminaire types: Above the Style 22011 CG-S with fluorescent tube, and below with efficient LED technology. Energy savings using the LED luminaire as compared to the fluorescent tube model: 48%.

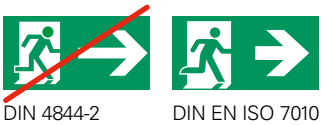
LED upgrading guarantees safe operation and perfect illumination

Three LED upgrade kits have been developed to replace the existing fluorescent tube as light source, thus already installed Style fluorescent luminaires can benefit from efficient LED technology (includes ballast). The result is that fluorescent luminaires are transformed into complete LED luminaires with matched components, ensuring safe and reliable operation.

The modular design of the Style luminaires is once again a distinct advantage, as the quick mounting set with mains connection remains attached to the ceiling or wall. This in turn means no additional effort is needed for electrical installation or decorating. Assembly and disassembly of the single-sided luminaires is achieved almost completely with snap fasteners so that replacement requires only a few twists of the wrist.

In terms of light distribution, the new Style LED escape luminaires are just as impressive as their fluorescent predecessors. The optical components are designed so that the same values as the previous fluorescent luminaires are achieved with existing light point distances. This guarantees standard-compliant illumination for the future as well, and replanning is not required.

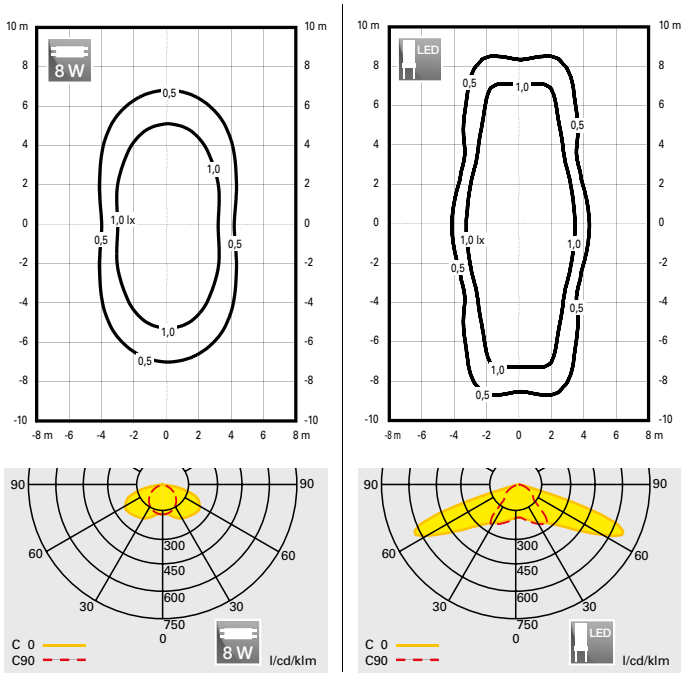
Pictogram covers can continue to be used according to their condition and age, however the time is ideal to upgrade pictograms in accordance with the new German workplace regulations. The new edition of the A1.3 workplace regulation was published in March 2013, and this specifies exit signs according to the DIN EN ISO 7010 international standard, so that display in accordance with DIN 4844-2 is no longer valid.



DIN 4844-2 DIN EN ISO 7010

22011 CG-S (transparent cover) | **22011 LED SL CG-S (transparent cover)**

Luminaire mounting height: 3 m, emergency light operation



A comparison of light distribution patterns makes it clear: the LED optics (right), here with the Style 22011, achieve improved illumination compared to the same luminaire with a fluorescent tube (left). New planning when upgrading to LED is thus not required for continued standard-compliant illumination.

An economical long-runner

Costs for an emergency light system consist of investment and operation costs. In addition to overheads for electricity and manual tests with non-automated systems, maintenance costs are a major part of the operating costs.

With the use of LED technology, the regular re-lamping of fluorescent tubes is no longer necessary as the service life and operating duration of Style LED surpass 50,000 hours. This significantly cuts maintenance costs and therefore operating costs as well.

It is now no longer necessary to replace the lamps up to once yearly. This of course is especially advantageous with luminaires that are difficult to get to, or even when production has to be halted in an industrial environment to access escape luminaires on the hall ceiling. This means that upgrading to efficient LED technology becomes profitable immediately.

Another benefit is that exit sign and escape luminaires contribute to emergency lighting systems being operated even more safely and reliably, because of their longer service life.

Overview of suitable upgrade kits according to existing luminaire model

Luminaire	Application	Style LED Upgrade Kit SL CG-S Order No. 40071350150	Style LED Upgrade Kit 1 CG-S Order No. 40071350151	Style LED Upgrade Kit 2 CG-S Order No. 40071350152
55011, 57011 CG-S	Escape luminaire	X		
	Exit sign luminaire		X	
55021, 57021 CG-S	Exit sign luminaire			X
22011 CG-S	Escape luminaire	X		
	Exit sign luminaire *)		X	
22021 CG-S	Exit sign luminaire *)			X
23011 CG-S	Escape luminaire	X		
21011 CG-S	Escape luminaire	X		optional for symmetric illumination
51011 CG-S	Escape luminaire			X
	Exit sign luminaire			X
51021 CG-S	Exit sign luminaire			new 40071350172 luminaire recommended
40011 CG-S	Escape luminaire	X		
	Exit sign luminaire		X	

For luminaires with IP54 assembly set and for 21011 CG-S luminaires, a new IP54 assembly set for LEDs is mandatory. Only in this way is improved illumination (with exit sign luminaires) and long LED service life achieved.

*) Screenprinted pictograms must be used for illumination in accordance with DIN EN 4844-1.

LED Upgrade Kits

For Style luminaires with T5-Lamps

Style LED Upgrade Kit 1 CG-S

Style LED Upgrade Kit 2 CG-S

Style LED Upgrade Kit SL CG-S

Style Upgrade Kits

- Upgrade Kit for converting CEAG Style CG-S Luminaires from T5-Lamps to LED technology
- Suitable for all luminaires with Style quick-mounting sets
- Minimum maintenance required due to high service life of the LEDs (over 50,000 hours)
- Up to 48% energy savings, reducing operating cost
- Available in three variants:
  - Upgrade Kit 1: For single sided exit signs
  - Upgrade Kit 2: For double sided exit signs and luminaires 51011/51021
  - Upgrade SL: For escape route lighting with specialized LED-optics
- Exit signs with high luminance of > 500 cd/m² (white area) and good uniformity, in accordance with standards (silk-screened pictograms)
- Dismounting and mounting via snaps (single sided luminaire and 51011/21), double sided luminaires with screw connections
- Includes specialized LED-converter with V-CG-technology

Luminous flux Φ_E/Φ_N at end of rated operating time	100 %
Housing material	Polycarbonate
Housing colour	Light grey RAL 7035
Weight	0.21 kg
Type of mounting	for refitting of Style CG-S luminaires
Terminals	2 x 3 x 2.5 mm²
Connection voltage	220- 240 V AC, 50/60 Hz, 176 V- 275 V DC
Power consumption mains operation (apparent power/effective power)	Upgrade Kit 1 + Kit SL: 7.6 VA / 4.4 W Upgrade Kit 2: 9.5 VA / 5.8 W
Permissible ambient temperature	-20 °C to +40 °C
Current consumption - battery operation (220 V)	Upgrade Kit1 + Kit SL: 19 mA Upgrade Kit 2: 25 mA
Light source	Upgrade Kit1 + Kit SL: 3 x 1 W LED Upgrade Kit 2: 4 x 1 W LED

Ordering details

Type	Scope of supply	Order No.
Style LED Upgrade Kit 1 CG-S	Style LED Upgrade Kit 1 CG-S, including LED-supply with CG-S technology and LED-circuit board 3 x 1 W, for replacing single-sided exit sign luminaires	40071350151
Style LED Upgrade Kit 2 CG-S	Style LED Upgrade Kit 2 CG-S, including LED-supply with CG-S technology and LED-circuit board 4 x 1 W, for replacing double-sided exit sign luminaires and Style 51011 or 51021	40071350152
Style LED Upgrade Kit SL CG-S	Style LED Upgrade Kit SL CG-S, including LED-supply with CG-S technology and LED-circuit board 3 x 1 W, for replacing safety luminaires for escape route lighting	40071350150
IP54* LED Upgrade	Style IP54 cover, optimized for LED, incl. replacement gasket for quick mounting set to refit existing Style IP54 luminaires.	40071350598

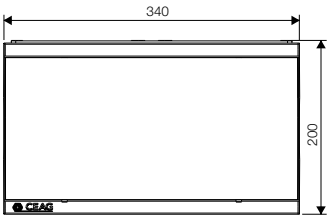
*) IP54 for electronic and lamp. For increased ingress protection requirements indoors or in protected outdoor areas.

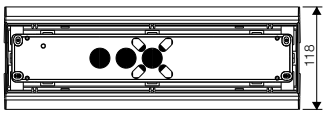
Style 22021 LED CG-S

- Double-sided escape sign luminaire from high quality, UV-resistant, halogen-free plastic with LED-technology
- Modular constructed luminaire series allowing combination with various fixing modules
- Available with a wide selection of simple snap-mounted screen-printed pictogram
- Exit signs with high luminance of > 500 cd/m² (white area) and good uniformity, in accordance with standards (silk-screened pictograms)
- Minimum maintenance required due to high service life of the LEDs (over 50,000 hours)
- Simple mounting via quick mounting set (pre-assembly possible) with integrated terminal block for through-wiring
- Also suitable for use refitting existing installations with Style quick mounting set
- Optionally available IP54 set (for electronic and light source) for increased sealing requirements both indoor and in protected outdoor areas
- Shortened inspection effort due to CEWA GUARD technology
- Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation costs with STAR technology
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

22021 LED CG-S with cover PR

Dimensions in mm





Viewing distance	32 m
Luminous flux Φ_E/Φ_N at end of rated operating time	100 %
Housing material	Polycarbonate
Housing colour	Light grey RAL 7035
Weight	1.14 kg
Type of mounting	Wall and ceiling mounting
Terminals	2 x 3 x 2.5 mm²
Connection voltage	220 - 240 V AC, 50/60 Hz 176 - 275 V DC
Power consumption mains operation (apparent power/effective power)	9.5 VA / 5.8 W
Permissible ambient temperature	-20 °C to +40 °C
Current consumption - battery operation (220 V)	25 mA
Light source	4 x 1 W LED

Ordering details

Type	Scope of supply	Order No.
Style 22021 LED CG-S	Luminaire housing IP41, including LED-supply with CG-S technology and LED-circuit board 4 x 1 W, for exit signage, without cover, without quick mounting set	40071350162
Cover PL acc. to ISO 7010	Cover with silkscreened pictogram	40071354130
Cover PR acc. to ISO 7010	Cover with silkscreened pictogram	40071354131
Cover PU acc. to ISO 7010	Cover with silkscreened pictogram	40071354132
Cover SL	Transparent cover	40071345985
Quick mounting set	With terminals and optional distance plates	40071345980
IP54 set*	Incl. quick mounting set and mounting accessories	40071345975

*) IP54 for electronic and lamp. For increased ingress protection requirements indoors or in protected outdoor areas.

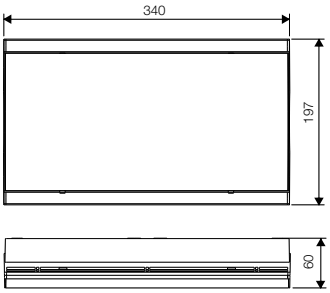
Style 22011 LED CG-S

Safety or exit sign luminaire

22011 LED SL CG-S with transparent cover

22011 LED CG-S with cover PR

Dimensions in mm



Style 22011 LED CG-S

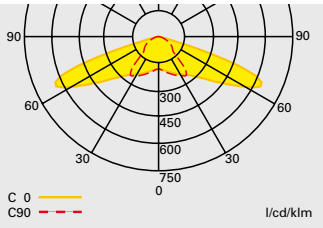
- Single-sided escape sign luminaire from high quality, UV-resistant, halogen-free plastic with LED-technology
- Modular constructed luminaire series allowing combination with various fixing modules
- Available with a wide selection of simple snap-mounted screen-printed pictogram
- Exit signs with high luminance of > 500 cd/m² (white area) and good uniformity, in accordance with standards (silk-screened pictograms)
- Special LED optical arrangement for efficient illumination of escape routes, suitable for mounting heights up to 7m, maximum distance from luminaire to luminaire: > 16m from 3m mounting height and > 20 m from 4.5 m mounting height
- Minimum maintenance required due to high service life of the LEDs (over 50,000 hours)
- Simple mounting via quick mounting set (pre-assembly possible) with integrated terminal block for through-wiring
- Also suitable for use refitting existing installations with Style quick mounting set
- Optionally available IP54 set (for electronic and light source) for increased sealing requirements both indoor and in protected outdoor areas
- Shortened inspection effort due to CEWA GUARD technology
- Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation costs with STAR technology
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

Viewing distance	32 m
Luminous flux Φ_N	320 lm
Luminous flux Φ_E/Φ_N at end of rated operating time	100 %
Housing material	Polycarbonate
Housing colour	Light grey RAL 7035
Weight	0.79 kg
Type of mounting	Wall and ceiling mounting
Terminals	2 x 3 x 2.5 mm²
Connection voltage	220 - 240 V, 50/60 Hz 176 - 275 V DC
Power consumption mains operation (apparent power/effective power)	7.6 VA / 4.4 W
Permissible ambient temperature	- 20 °C to + 40 °C
Current consumption - battery operation (220 V)	19 mA
Light source	3 x 1 W LED

Ordering details

Type	Scope of supply	Order No.
Style 22011 LED SL CG-S	Luminaire housing IP41, including LED-supply with CG-S technology and LED-circuit board 3 x 1 W, for escape route lighting, without cover, without quick mounting set	40071350160
Style 22011 LED CG-S	Luminaire housing IP41, including LED-supply with CG-S technology and LED-circuit board 3 x 1 W, for exit signage, without cover, without quick mounting set	40071350161
Cover PL acc. to ISO 7010	Cover with silkscreened pictogram	40071354130
Cover PR acc. to ISO 7010	Cover with silkscreened pictogram	40071354131
Cover PU acc. to ISO 7010	Cover with silkscreened pictogram	40071354132
Cover SL	Transparent cover	40071345985
Quick mounting set	With terminals and optional distance plates	40071345980
IP54 set*	Incl. quick mounting set and mounting accessories	40071345975

*) IP54 for electronic and lamp. For increased ingress protection requirements indoors or in protected outdoor areas.



Light distribution curve 22011 LED CG-S with transparent cover

Planning help for 22011 LED SL CG-S for E = 1.0 lx (0.5 lx) with transparent cover
Measuring level 0.02 m, maintenance factor MF = 80 %, battery operation, distances in m

Mounting height (m)	Types of mounting	L1	L2	L3	L4
2,5	Ceiling mounting	3,1 (3,9)	7,9 (9,6)	6,5 (7,4)	14,7 (16,0)
3,0	Escape route centre	3,2 (4,2)	8,5 (10,5)	7,2 (8,4)	16,7 (18,4)
3,5		3,3 (4,4)	8,8 (11,2)	7,5 (9,2)	18,3 (20,6)
4,0		3,6 (4,5)	9,0 (11,7)	7,6 (9,9)	19,8 (22,7)
4,5		3,9 (4,6)	9,2 (12,2)	7,1 (10,4)	20,7 (24,6)
5,0		4,2 (4,8)	9,6 (12,5)	6,4 (10,7)	21,3 (26,1)
5,5		4,4 (5,1)	10,2 (12,7)	5,3 (10,7)	21,4 (27,5)
6,0		4,4 (5,4)	10,8 (12,8)	4,3 (10,5)	20,9 (28,6)
6,5		3,8 (5,7)	11,4 (13,0)	3,4 (9,9)	19,7 (29,5)
7,0		0,9 (6,0)	11,9 (13,4)	0,9 (9,1)	18,1 (30,0)
2,0	Wall mounting	1,6 (2,2)	4,4 (5,7)	1,5 (2,2)	4,4 (5,7)
2,5		1,3 (1,9)	3,8 (5,2)	- (1,8)	3,7 (5,2)
3,0		- (1,6)	3,2 (4,6)	- (-)	- (4,6)
2,5	Ceiling mounting	2,4 (2,9)	6,6 (7,4)	7,5 (7,6)	13,6 (14,2)
3,0	Room illumination	2,4 (3,6)	7,6 (8,4)	8,5 (8,0)	15,4 (16,6)
3,5		2,4 (3,6)	8,2 (9,4)	6,5 (9,1)	17,8 (19,0)
4,0		2,4 (3,4)	8,8 (10,2)	6,5 (10,5)	19,6 (21,2)
4,5		2,4 (3,4)	9,0 (10,8)	6,5 (9,5)	20,8 (23,8)
5,0		3,4 (3,4)	9,4 (11,6)	4,5 (8,5)	21,6 (25,6)
5,5		3,4 (3,4)	9,4 (12,2)	4,5 (8,5)	22,0 (27,6)
6,0		3,4 (3,4)	9,2 (12,8)	4,5 (8,5)	22,2 (28,4)
6,5		3,4 (4,4)	8,6 (13,0)	3,5 (6,5)	22,2 (29,6)
7,0		0,7 (4,4)	9,4 (13,2)	0,7 (6,5)	19,2 (30,4)

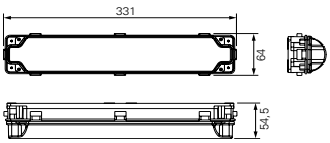
Style 21011 LED CG-S

Safety luminaire

Style 21011 LED SL R CG-S

Style 21011 LED SL O CG-S

Dimensions in mm



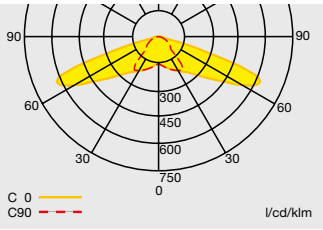
Style 21011 LED CG-S

- Compact safety luminaire from high quality, UV-resistant, halogen-free plastic with LED-technology
- Modular constructed luminaire series allowing combination with various fixing modules
- Available in two different optical variants:
  - Asymmetric light distribution for escape route illumination up to 9 m mounting height
  - Symmetrical light distribution for mounting heights up to 10 m.
- Minimum maintenance required due to high service life of the LEDs (over 50,000 hours)
- Simple mounting via quick mounting set (pre-assembly possible) with integrated terminal block for through-wiring
- Also suitable for use refitting existing installations with Style quick mounting set
- Ingress protection IP54 for increased sealing requirements both indoor and in protected outdoor areas
- Shortened inspection effort due to CEWA GUARD technology
- Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation costs with STAR technology
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

Luminous flux Φ_N	21011 SL R: 305 lm 21011 SL O: 410 lm
Luminous flux Φ_E/Φ_N at end of rated operating time	100 %
Housing material	Polycarbonate
Housing colour	Light grey RAL 7035
Weight	0.39 kg
Type of mounting	Wall and ceiling mounting
Terminals	2 x 3 x 2.5 mm²
Connection voltage	220 - 240 V AC, 50/60 Hz 176 - 275 V DC
Power consumption mains operation (apparent power/effective power)	21011 SL R: 7.6 VA / 4.4 W 21011 SL O: 9.5 VA / 5.8 W
Permissible ambient temperature	-20 °C to +40 °C
Current consumption - battery operation (220 V)	21011 SL R: 19 mA 21011 SL O: 25 mA
Light source	21011 SL R: 3 x 1 W LED 21011 SL O: 4 x 1W LED

Ordering details

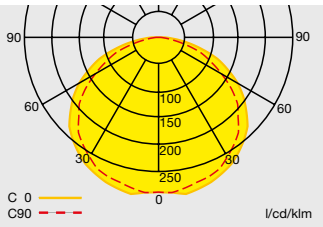
Type	Scope of supply	Order No.
Style 21011 LED SL R CG-S	Luminaire housing IP41, including LED-supply with CG-S technology and LED-circuit board 3 x 1 W, with asymmetric light distribution and quick mounting set	40071350155
Style 21011 LED SL O CG-S	Luminaire housing IP41, including LED-supply with CG-S technology and LED-circuit board 3 x 1 W, with symmetric light distribution and quick mounting set	40071350156



Light distribution curve 21011 LED SL R CG-S

Planning help for 21011 LED SL R CG-S for E = 1.0 lx (0.5 lx) with transparent cover
Measuring level 0.02 m, maintenance factor MF = 80 %, battery operation, distances in m

Mounting height (m)	Types of mounting	L1	L2	L3	L4
2,5	Ceiling mounting	2,9 (3,7)	7,5 (9,2)	6,6 (7,4)	14,7 (16,2)
3,0	Escape route centre	3,0 (4,0)	8,0 (9,9)	7,2 (8,4)	16,7 (18,4)
3,5		3,2 (4,1)	8,2 (10,5)	7,4 (9,2)	18,4 (20,6)
4,0		3,6 (4,2)	8,4 (11,0)	7,4 (9,9)	19,8 (22,7)
4,5		3,8 (4,3)	8,6 (11,4)	6,7 (10,3)	20,6 (24,6)
5,0		4,0 (4,6)	9,3 (11,6)	5,8 (10,5)	21,0 (26,1)
5,5		4,0 (5,0)	9,9 (11,8)	4,6 (10,5)	20,9 (27,6)
6,0		3,5 (5,3)	10,5 (11,9)	3,6 (10,1)	20,2 (28,6)
6,5		- (5,6)	11,1 (12,4)	- (9,2)	18,4 (29,3)
2,0	Wall mounting	1,9 (2,5)	5,0 (6,5)	1,8 (2,8)	5,6 (7,1)
2,5		1,7 (2,4)	4,8 (6,4)	1,2 (2,3)	4,6 (6,7)
3,0		1,6 (2,3)	4,6 (6,1)	- (1,8)	3,7 (6,1)
2,5	Ceiling mounting	2,6 (2,8)	6,6 (7,2)	6,9 (7,6)	13,4 (14,6)
3,0	Room illumination	2,4 (3,6)	7,4 (8,2)	8,5 (8,1)	15,8 (16,8)
3,5		2,4 (3,5)	8,2 (9,2)	6,5 (9,4)	17,8 (19,0)
4,0		2,4 (3,4)	8,2 (10,2)	6,5 (10,5)	19,8 (21,0)
4,5		3,4 (3,4)	8,6 (11,0)	4,5 (8,5)	20,8 (23,2)
5,0		3,4 (3,4)	9,2 (11,6)	4,5 (8,5)	21,4 (25,6)
5,5		3,4 (3,7)	9,4 (11,8)	4,5 (7,0)	21,4 (27,6)
6,0		3,4 (4,4)	9,0 (11,8)	3,5 (6,5)	21,4 (28,8)
6,5		0,7 (4,4)	8,2 (12,2)	0,7 (6,5)	21,8 (29,6)
7,0		0,7 (4,4)	9,4 (13,0)	0,7 (6,5)	18,2 (30,2)
7,5		0,7 (4,6)	9,8 (13,4)	0,7 (5,3)	16,6 (30,4)



Light distribution curve 21011 LED SL O CG-S

Planning help for 21011 LED SL O CG-S for E = 1.0 lx (0.5 lx) with transparent cover
Measuring level 0.02 m, maintenance factor MF = 80 %, battery operation, distances in m

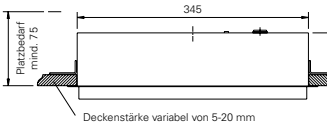
Mounting height (m)	Types of mounting	L1	L2	L3	L4
2,5	Ceiling mounting	4,2 (5,2)	10,3 (12,5)	4,5 (5,6)	11,2 (13,7)
3,0	Escape route centre	4,5 (5,6)	11,1 (13,6)	4,8 (6,0)	12,0 (14,8)
3,5		4,7 (5,9)	11,8 (14,5)	5,0 (6,4)	12,7 (15,7)
4,0		4,9 (6,2)	12,4 (15,3)	5,1 (6,7)	13,3 (16,6)
5,0		5,0 (6,7)	13,4 (16,8)	5,3 (7,1)	14,1 (18,0)
6,0		4,9 (7,0)	13,9 (17,9)	5,2 (7,3)	14,6 (19,1)
7,0		4,5 (7,0)	14,0 (18,8)	4,8 (7,4)	14,8 (19,9)
8,0		3,9 (7,0)	14,0 (19,5)	4,1 (7,4)	14,7 (20,4)
9,0		2,7 (6,8)	13,6 (19,8)	3,1 (7,1)	14,2 (20,8)
2,0	Wall mounting	3,0 (3,8)	7,6 (9,2)	3,1 (4,0)	8,0 (9,8)
2,5		2,9 (3,8)	7,7 (9,5)	3,0 (4,0)	8,0 (10,0)
3,0		2,7 (3,7)	7,5 (9,7)	2,7 (3,8)	7,7 (10,1)
2,5	Ceiling mounting	3,4 (4,4)	8,4 (11,2)	4,5 (4,5)	10,6 (11,6)
3,0	Room illumination	3,4 (4,4)	9,8 (12,2)	4,5 (5,5)	10,8 (12,6)
3,5		3,4 (5,0)	11,0 (13,2)	5,5 (4,9)	11,0 (13,4)
4,0		4,4 (5,4)	11,6 (13,4)	4,5 (5,5)	11,6 (15,0)
5,0		4,4 (5,4)	12,8 (15,6)	4,5 (6,5)	12,6 (15,6)
6,0		4,4 (5,4)	13,4 (16,8)	4,5 (6,5)	13,6 (17,0)
7,0		3,4 (5,4)	14,2 (18,0)	4,5 (6,5)	14,0 (17,8)
8,0		3,4 (5,4)	14,4 (18,8)	3,5 (6,5)	14,6 (18,8)
9,0		2,4 (5,4)	14,4 (19,4)	3,5 (6,5)	15,0 (19,6)

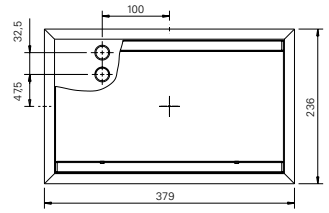
Style 23011 LED CG-S

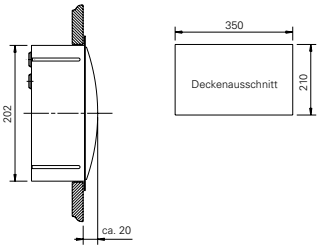
Safety luminaire as recessed ceiling luminaire

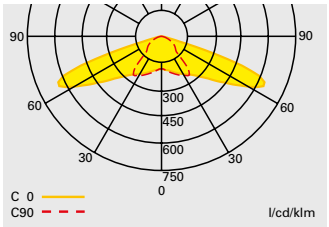
23011 LED SL CG-S with transparent cover

Dimensions in mm









Light distribution curve 23011 LED CG-S

Style 23011 LED CG-S

- Safety luminaire for recessed ceiling mounting
- Special LED optical arrangement for efficient illumination of escape routes, suitable for mounting heights up to 7 m, maximum distance from luminaire to luminaire: > 16 m from 3 m mounting height and > 20 m from 4.5 m mounting height
- Minimum maintenance required due to high service life of the LEDs (over 50,000 hours)
- Shortened inspection effort due to CEWA GUARD technology
- Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation costs with STAR technology
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

Luminous flux Φ_N	320 lm
Luminous flux Φ_E/Φ_N at end of rated operating time	100 %
Housing material	Polycarbonate
Housing colour	Light grey RAL 7035
Weight	1.99 kg
Type of mounting	Ceiling mounting
Terminals	2 x 3 x 2.5 mm²
Connection voltage	220 - 240 V AC, 50/60 Hz 176 - 275 V DC
Power consumption mains operation (apparent power/effective power)	7.6 VA / 4.4 W
Permissible ambient temperature	-20 °C to +40 °C
Current consumption - battery operation (220 V)	19 mA
Light source	3 x 1 W LED

Ordering details

Type	Scope of supply	Order No.
Style 23011 LED SL CG-S	Housing for recessed mounting, including LED-supply with CG-S technology and LED-circuit board 3 x 1 W, for escape route lighting and transparent cover	40071350165

Planning help for 23011 LED SL CG-S for E = 1.0 lx (0.5 lx) with transparent cover

Measuring level 0.02 m, maintenance factor MF = 80 %, battery operation, distances in m

Mounting height (m)	Types of mounting	L1	L2	L3	L4
2,5	Ceiling mounting	3,1 (3,9)	7,9 (9,6)	6,5 (7,4)	14,7 (16,0)
3,0	Escape route centre	3,2 (4,2)	8,5 (10,5)	7,2 (8,4)	16,7 (18,4)
4,0		3,6 (4,5)	9,0 (11,7)	7,6 (9,9)	19,8 (22,7)
5,0		4,2 (4,8)	9,6 (12,5)	6,4 (10,7)	21,3 (26,1)
6,0		4,4 (5,4)	10,8 (12,8)	4,3 (10,5)	20,9 (28,6)
7,0		0,9 (6,0)	11,9 (13,4)	0,9 (9,1)	18,1 (30,0)
2,0	Wall mounting	1,6 (2,2)	4,4 (5,7)	1,5 (2,2)	4,4 (5,7)
2,5		1,3 (1,9)	3,8 (5,2)	- (1,8)	3,7 (5,2)
3,0		- (1,6)	3,2 (4,6)	- (-)	- (4,6)
2,5	Ceiling mounting	2,4 (2,9)	6,6 (7,4)	7,5 (7,6)	13,6 (14,2)
3,0	Room illumination	2,4 (3,6)	7,6 (8,4)	8,5 (8,0)	15,4 (16,6)
4,0		2,4 (3,4)	8,8 (10,2)	6,5 (10,5)	19,6 (21,2)
5,0		3,4 (3,4)	9,4 (11,6)	4,5 (8,5)	21,6 (25,6)
6,0		3,4 (3,4)	9,2 (12,8)	4,5 (8,5)	22,2 (28,4)
7,0		0,7 (4,4)	9,4 (13,2)	0,7 (6,5)	19,2 (30,4)

51021 LED CG-S with pictogram foil PR

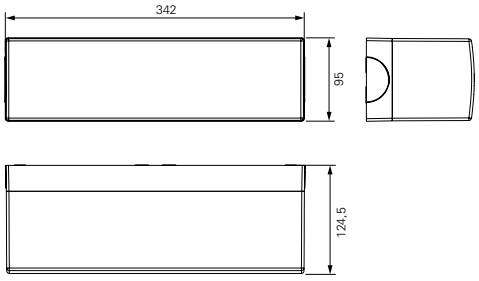
Style 51021 LED CG-S

- Compact exit sign or safety luminaire from high quality, UV-resistant, halogen-free plastic with LED-technology
- Modular constructed luminaire series allowing combination with various fixing modules
- Includes transparent cover with simple snap mounting and pictogram foil set
- Exit signs with high luminance of > 500 cd/m² (white area) and good uniformity, in accordance with standards
- Minimum maintenance required due to high service life of the LEDs (over 50,000 hours)
- Simple mounting via quick mounting set (pre-assembly possible) with integrated terminal block for through-wiring
- Also suitable for use refitting existing installations with Style quick mounting set
- Optionally available IP54 set (for electronic and light source) for increased sealing requirements both indoor and in protected outdoor areas
- Shortened inspection effort due to CEWA GUARD technology
- Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation costs with STAR technology
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

Viewing distance	17 m
Luminous flux Φ_E/Φ_N at end of rated operating time	100 %
Housing material	Polycarbonate
Housing colour	Light grey RAL 7035
Weight	0.75 kg
Type of mounting	Wall and ceiling mounting
Terminals	2 x 3 x 2.5 mm²
Connection voltage	220 - 240 V AC, 50/60 Hz 176 - 275 V DC
Power consumption mains operation (apparent power/effective power)	9.5 VA / 5.8 W
Permissible ambient temperature	-20 °C to +40 °C
Current consumption - battery operation (220 V)	25 mA
Light source	4 x 1 W LED

Ordering details

Type	Scope of supply	Order No.
Style 51021 LED CG-S	Luminaire housing, including LED-supply with CG-S technology and LED-circuit board 4 x 1 W, with opaque cap and pictogram set (arrow left, right, down), without quick mounting set	40071350172
Quick mounting set	With terminals and optional distance plates	40071345980
IP54 set*	Incl. quick mounting set and mounting accessories	40071345975



Dimensions in mm

*) IP54 for electronic and lamp. For increased ingress protection requirements indoors or in protected outdoor areas.

Style 51011 LED CG-S

Safety or exit sign luminaire

51011 LED CG-S

51011 LED CG-S with pictogram foil PR

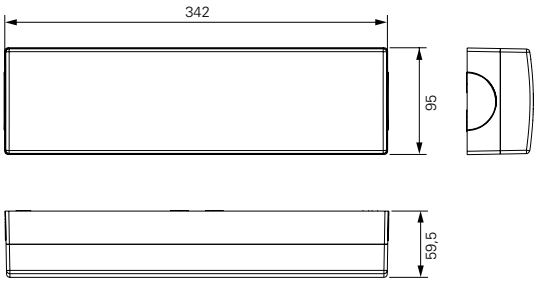
Style 51011 LED CG-S

- Compact exit sign or safety luminaire from high quality, UV-resistant, halogen-free plastic with LED-technology
- Modular constructed luminaire series allowing combination with various fixing modules
- Includes transparent cover with simple snap mounting and pictogram foil set
- Exit signs with high luminance of > 500 cd/m² (white area) and good uniformity, in accordance with standards
- Minimum maintenance required due to high service life of the LEDs (over 50,000 hours)
- Simple mounting via quick mounting set (pre-assembly possible) with integrated terminal block for through-wiring
- Also suitable for use refitting existing installations with Style quick mounting set
- Optionally available IP54 set (for electronic and light source) for increased sealing requirements both indoor and in protected outdoor areas
- Shortened inspection effort due to CEWA GUARD technology
- Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation costs with STAR technology
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

Luminous flux Φ_N	390 lm (without pictrogram foil)
Viewing distance	17 m
Luminous flux Φ_E/Φ_N at end of rated operating time	100 %
Housing material	Polycarbonate
Housing colour	Light grey RAL 7035
Weight	0.58 kg
Type of mounting	Wall and ceiling mounting
Terminals	2 x 3 x 2.5 mm²
Connection voltage	220 - 240 V AC, 50/60 Hz 176 - 275 V DC
Power consumption mains operation (apparent power/effective power)	9.5 VA / 5.8 W
Permissible ambient temperature	-20 °C to +40 °C
Current consumption - battery operation (220 V)	25 mA
Light source	4 x 1 W LED

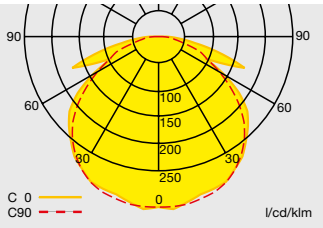
Ordering details

Type	Scope of supply	Order No.
Style 51011 LED CG-S	Luminaire housing, including LED-supply with CG-S technology and LED-circuit board 4 x 1 W, with opaque cap and pictogram set (arrow left, right, down), without quick mounting set	40071350171
Quick mounting set	With terminals and optional distance plates	40071345980
IP54 set*	Incl. quick mounting set and mounting accessories	40071345975



Dimensions in mm

*) IP54 for electronic and lamp. For increased ingress protection requirements indoors or in protected outdoor areas.



Light distribution curve 51011 LED CG-S with transparent cover

Planning help for 51011 LED CG-S for E = 1.0 lx (0.5 lx) with transparent cover
Measuring level 0.02 m, maintenance factor MF = 80 %, battery operation, distances in m

Mounting height (m)	Types of mounting	L1	L2	L3	L4
2,5	Ceiling mounting	4,0 (5,0)	9,9 (12,1)	4,1 (5,0)	9,9 (14,8)
3,0	Escape route centre	4,3 (5,4)	10,7 (13,0)	4,5 (5,5)	10,9 (12,8)
3,5		4,6 (5,7)	11,4 (13,9)	4,8 (5,9)	11,7 (13,9)
4,0		4,8 (6,0)	12,0 (14,8)	5,0 (6,2)	12,4 (14,9)
4,5		4,9 (6,3)	12,6 (15,5)	5,1 (6,5)	13,0 (15,8)
5,0		5,0 (6,5)	13,0 (16,2)	5,1 (6,8)	13,5 (16,6)
5,5		5,0 (6,7)	13,4 (16,8)	5,1 (7,0)	13,9 (17,4)
6,0		4,9 (6,8)	13,6 (17,4)	5,0 (7,1)	14,2 (18,0)
6,5		4,8 (6,9)	13,8 (17,9)	4,9 (7,2)	14,3 (18,6)
7,0		4,6 (7,0)	14,0 (18,3)	4,6 (7,2)	14,3 (19,0)
7,5		4,4 (7,0)	14,0 (18,7)	4,3 (7,1)	14,2 (19,4)
8,0		4,0 (7,0)	13,9 (19,0)	4,0 (7,1)	14,1 (19,7)
8,5		3,6 (6,9)	13,8 (19,3)	3,5 (7,0)	14,0 (20,0)
9,0		2,9 (6,8)	13,6 (19,5)	2,7 (6,9)	13,7 (20,1)
9,5		2,0 (6,7)	13,3 (19,6)	1,8 (6,8)	13,5 (20,2)
10,0		- (6,5)	12,9 (19,8)	- (6,5)	13,0 (20,2)
2,0	Wall mounting	3,1 (3,9)	7,9 (9,6)	3,5 (4,4)	8,8 (10,5)
2,5		3,2 (4,2)	8,4 (10,4)	3,5 (4,5)	9,0 (10,9)
3,0		3,2 (4,2)	8,5 (10,9)	3,3 (4,4)	8,9 (11,2)
2,5	Ceiling mounting	3,4 (4,4)	7,8 (10,6)	3,5 (4,5)	10,2 (13,8)
3,0	Room illumination	3,4 (4,4)	9,4 (10,2)	4,5 (4,5)	9,2 (15,6)
3,5		3,4 (4,4)	10,0 (11,2)	4,5 (5,5)	10,0 (14,2)
4,0		3,4 (4,4)	10,8 (11,0)	4,5 (5,5)	10,6 (15,4)
4,5		4,0 (5,4)	11,4 (13,6)	4,0 (5,5)	11,2 (13,6)
5,0		3,4 (5,4)	11,8 (14,4)	5,5 (5,5)	11,8 (14,2)
5,5		3,4 (5,4)	12,2 (15,0)	5,5 (5,5)	12,2 (14,8)
6,0		4,0 (5,4)	12,6 (15,4)	3,9 (5,5)	12,6 (15,6)
6,5		3,4 (5,5)	12,8 (16,2)	4,5 (5,4)	13,2 (16,0)
7,0		3,4 (5,5)	13,2 (16,6)	4,5 (5,4)	13,2 (16,6)
7,5		3,4 (5,5)	13,4 (17,0)	4,5 (5,4)	13,6 (17,0)
8,0		3,4 (5,5)	13,8 (17,6)	3,5 (5,4)	13,6 (17,4)
8,5		2,7 (5,4)	13,8 (17,8)	3,3 (5,5)	13,8 (18,0)
9,0		2,4 (5,4)	14,0 (18,2)	3,5 (5,5)	14,0 (18,2)
9,5		1,6 (5,4)	14,0 (18,6)	2,2 (5,5)	14,0 (18,4)
10,0		0,7 (5,4)	14,2 (18,8)	0,7 (5,5)	14,0 (18,8)

Accessories Style LED CG-S

Suspension set

Ordering details

Type	Order No.
Suspension set 0.5 m incl. quick-mounting set	40071345972
Suspension set 0.5 m IP54 incl. quick-mounting set and IP54 set	40071345944
Suspension set 1.5 m incl. quick-mounting set	40071348210
Suspension set 1.5 m IP54 incl. quick-mounting set and IP54 set	40071348556
Suspension set 0.5 m incl. quick-mounting set and 90° angle	40071348665

Suspension set with 90° angle

Wall bracket

Type	Order No.
Wall bracket incl. quick-mounting set	40071345974

Chain fastening

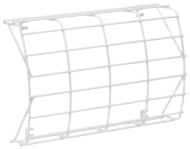
Type	Order No.
Chain fastening bracket incl. quick-mounting set	40071352205

Luminaire with IP54 cover

Type	Order No.
IP54 set* incl. quick-mounting set, IP54 cover and mounting accessories	40071345975

*) IP54 for electronic and lamp. For increased ingress protection requirements indoors or in protected outdoor areas.

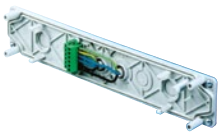
Wire guard



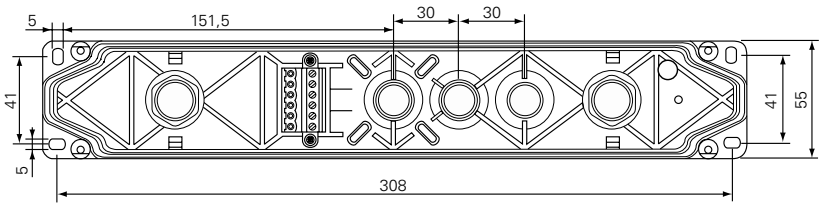
Type	Order No.
Wire guard incl. mounting clamps	40071348370

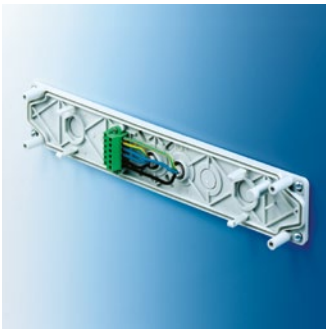
Type	Order No.
Quick-mounting set with terminals and optional distance plates	40071345980

Quick-mounting set



Dimensions in mm (quick-mounting set)





Suspension set with 90° angle and Style 51011 LED CG-S

Suspension set with 90° angle and Style 22011 LED CG-S

Suspension set with Style 51021 LED CG-S

Wire guard with Style 22011 LED CG-S

Ordering details special pictograms

Type	Pictogram	Viewing distance	Order No.
Style series		32 m	40071354138
		32 m	40071354134
		32 m	40071354135
		32 m	40071354136
		32 m	40071354137
		32 m	40071348010
		32 m	40071348017
		32 m	40071348018
		32 m	40071348019
		32 m	40071348029
		32 m	40071348030
		32 m	40071348031
		32 m	40071348021
		32 m	40071349349
		32 m	40071349350
		32 m	40071349351
		32 m	40071349352
		32 m	40071349335
		32 m	40071349342
		32 m	40071349343
		32 m	40071349358
		32 m	40071348674
		32 m	40071349368
		32 m	40071349369
		32 m	40071349370
		32 m	40071352387

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EATON
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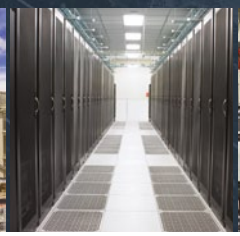
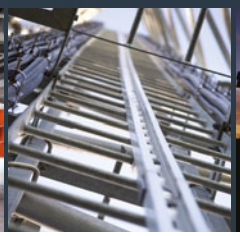
- **Hydraulic and electrical solutions** that enable machines to deliver more productivity without wasting power
- **Aerospace solutions** that make aircraft lighter, safer and less costly to operate, and help airports operate more efficiently
- **Vehicle drivetrain and powertrain solutions** that deliver more power to cars, trucks and buses, while reducing fuel consumption and emissions

We provide integrated solutions that help make energy, in all its forms, more practical and accessible.

With 2012 sales of $16.3 billion, Eaton has approximately 103,000 employees around the world and sells products in more than 175 countries.

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- Backup power protection
- Solutions for harsh and hazardous environments
- Lighting and security
- Structural solutions and wiring devices
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- Engineering services

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We are dedicated to ensuring that reliable, efficient and safe power is available when it's needed most.

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Eaton is dedicated to ensuring that reliable, efficient and safe power is available when it's needed most. With unparalleled knowledge of electrical power management across industries, experts at Eaton deliver customized, integrated solutions to solve our customers' most critical challenges.

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Eaton Industries Manufacturing GmbH
Electrical Sector EMEA
Route de la Longeraie 7
1110 Morges, Switzerland
www.eaton.eu

CEAG Notlichtsysteme GmbH
Senator-Schwartz-Ring 26
59494 Soest, Germany
Phone: +49 (0) 2921 69-870
Fax: +49 (0) 2921 69-617
E-Mail: info-n@ceag.de
Web: www.ceag.de

Printed in Germany
Order No. 40071860233
3.0/01.14/WD

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