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Erklärung der Icons für Produkteigenschaften

	Viewig distance, here: 20 m
	Light output, here: single-sided
	LED light source
	Compact fluorescent lamp, here: 10 W/TC-DEL
	Fluorescent lamp, here: 8 W/T16
	Protection class 1

	Protection class 2
	According to DIN 4844
	According to EN 1838
	For use in food processing industry
	Explosion protected
	ENEC certified

	Suitable for outdoor use
	Degree of protection, here: IP20
	Degree of mechanical impact resistance, here: IK10
	Luminaire with limited surface temperature
	With Lithium-ion battery
	With STAR technology

	With STAR+ technology
	With CGLine technology
	With CGLine+ technology



System luminaires, monitoring modules, electronic ballasts and LED supply modules



Safety luminaires and escape sign luminaires

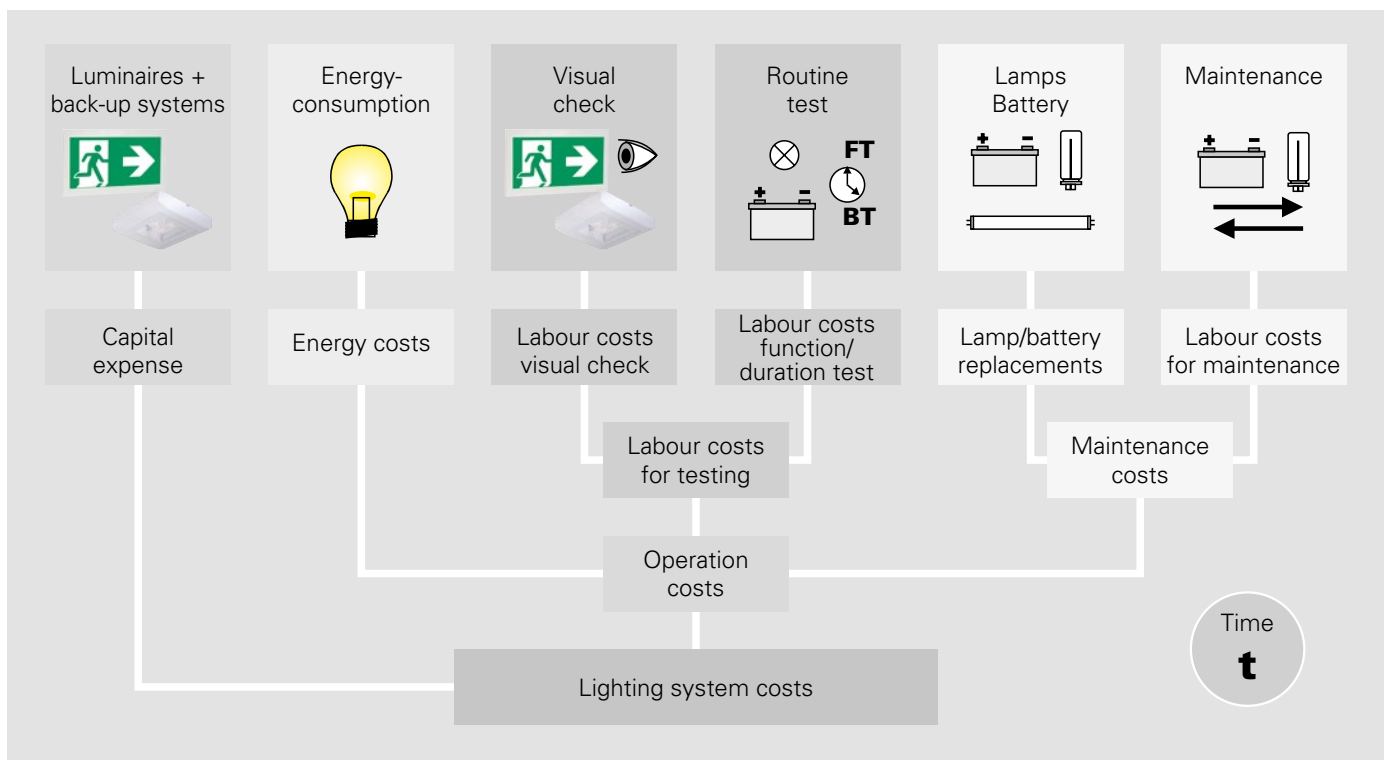
Emergency lighting costs

Having the right light in emergencies or during power failures – in this respect there exist many national and international regulations that specify technical demands for emergency lighting systems.

But there also exist concrete requirements for inspection and maintenance to ensure that these demands are safely fulfilled over the course of time.

With careful planning of an emergency lighting system, not only the investment in the system should therefore be considered but also the costs of work resulting from inspection and maintenance, as well as the power consumption of luminaires that are in some cases in operation 24 hours a day and 356 days a year. Otherwise, an initially low-cost solution can work out to be expensive later.

1



CEAG safety and escape sign luminaires with their CEWA GUARD and STAR technology available as standard offer the basis for minimised inspection and maintenance costs. Innovative lighting technology combined with highly efficient LEDs ensure up to 70% less power consumption and significantly lower maintenance costs with a service life of 50,000 hours. Lighting distribution characteristics matched to the emergency lighting additionally minimise the number of luminaires.



References

Main station, Berlin

The projects listed below are only a selection of the locations and applications where CEAG emergency lighting solutions are installed. A more detailed reference list is available on our website at www.ceag.de.

Hotels

- Radisson blu Hotel, Germany
- Ritz-Carlton Hotel, Germany
- Atlantic Sail City Hotel, Germany
- Ramada Resort Hotel, Hungary
- Atlantis the Palm Hotel, Dubai

Airports

- Frankfurt, Germany
- Cologne, Germany
- Schiphol, Netherlands
- Bangkok, Thailand
- Dubai, United Arab Emirates

High-rise buildings

- Tower 115, Slovakia
- Etisalat Tower, Abu Dhabi
- Capital Gate Tower, Abu Dhabi
- Burj Khalifa Tower, Dubai
- Burj Al Arab, Dubai

Industry

- Dr. Oetker, Germany
- EADS Airbus, Germany
- Bayer, Germany
- BP, Norway
- Dubai Cable Company, Abu Dhabi

Schools and universities

- Technical University Berlin, Germany
- RWTH Aachen, Germany
- University Hamburg, Germany
- University Zürich, Switzerland
- American University Sharjah, Sharjah

Sport venues

- Fritz-Walter-Stadium, Germany
- Stadium Borussia-Park, Germany
- Rhein-Neckar-Arena, Germany
- Karaiskakis Stadium, Greece
- National Aquatics Center, China

Commercial centres / malls

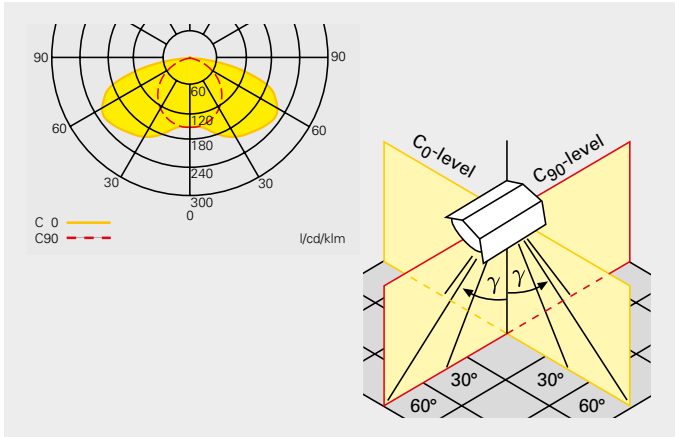
- CentrO, Germany
- Limbecker Platz, Germany
- Potsdamer Platz Arkaden, Germany
- Montedoro Freetime, Italy
- Dubai Mall, Dubai

Assembly halls / rooms

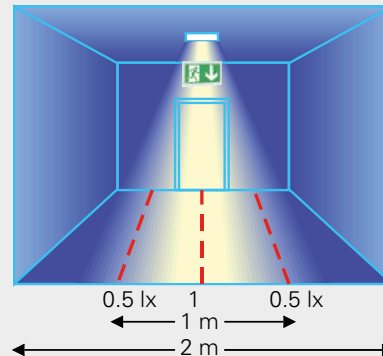
- German Bundestag, Germany
- Museums Island, Germany
- National Library Leipzig, Germany
- Town Hall Sydney, Australia
- National Convention Centre, Qatar

Lighting design of escape routes and anti-panic lighting

DIN EN 1838 supplies detailed information about the planning and calculation of safety lighting systems:



Safety lighting for escape routes



Escape routes to 2 m width must be illuminated with 1 lx on the central axes and to 50% of the width to 0.5 lx.

Measurement height max. 2 m.

Wider escape routes can be considered as several 2 m strips or can be equipped with anti-panic lighting.

With the calculation of illuminance, no reflections are to be considered on the peripheral room surfaces. The illuminance can therefore be calculated with the point lighting formula.

$$E = \frac{I_{(\gamma)} \times \Phi_E}{h^2} \cos^3(\gamma)$$

The formula for the point to point method of calculation is as follows:

$I(\gamma)$ = Light intensity at the given distribution angle taken from the light distribution curve in cd/klm

Φ_E = Luminous flux of the lamp in lm at the end of the rated duration

γ = Angle of distribution to the downward point of measurement

h = Mounting height of the luminaire above the measurement level in meters

H = Mounting height of the luminaire in meters above floor level

E = Illuminance in Lux

a = Distance in meters between the point of measurement and the foot of the luminaire

P = Point of measurement

The EN 1838 standard requires a minimum value for illuminance of 0.5 lx or 1 lx. Because a lighting installation grows old over the course of time and the light emitted becomes less as a result, the initial value must be greater, meaning that a maintenance factor must be applied for planning. A common value is MF = 0.8. This means that the lighting system is dimensioned so that the new value for illuminance is 1.25 times the nominal value.

Other maintenance factors can also be considered according to light source, probability of soiling of room and luminaires and the planned maintenance intervals. The assumptions must be documented by the planner.

Lighting design of escape routes and anti-panic lighting

Anti-panic lighting

German LBO stipulates 1 lux

The horizontal illuminance must not fall below 0.5 lx on the free floor surfaces.

Safety lighting for escape routes

40 lx 1 lx 40 lx 1 lx 40 lx

Due to the inertia of the eye, recognition of obstacles or the escape route path is impaired with excessive differences in brightness/darkness.

Uniformity < 40:1 ($E_{max.} / E_{min.}$)

Example:
Calculation of the number of luminaires required using the point to point method.

Given data

- The minimum illuminance is 1.0 lx (Planning basis maintenance factor MF = 0.8)
- Escape route length = 38 m
- Mounting height of the luminaire above floor level = 3 m
- Luminous flux Φ_E at the end of the rated duration = 337 lm (450 lm x 75%)
- The measure level is 0.02 m above floor level
- Light distribution curve of the luminaires
- Position of luminaires is across the width of the escape route

Method:

- Calculation of illuminance at various points and calculation of the distances for $E = 0.625$ lx and $E = 1.25$ lx.

E directly underneath the luminaire:
 light intensity I from the light distribution curve at $0^\circ = 145$ cd/klm.

$$E_{(0m)} = \frac{I_{(0^\circ)} \times \Phi_E}{h^2} \cos^3(0^\circ)$$

$$E_{(0m)} = \frac{145 \text{ cd/klm} \times 0.337 \text{ klm}}{(2.98 \text{ m})^2} \times 1$$

$$\underline{E_{(0m)} = 5.4 \text{ lx}}$$

E for example at 5.2 m distance

$$\tan \gamma = \frac{5.2 \text{ m}}{2.98 \text{ m}} = 1.73; \arctan(1.73) = 60^\circ$$

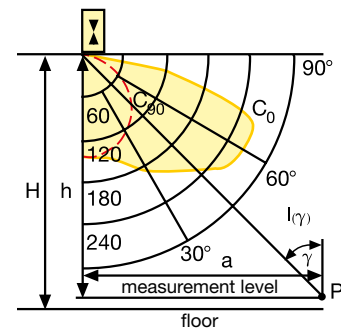
$$E_{(5.2m)} = \frac{270 \text{ cd/klm} \times 0.337 \text{ klm}}{(2.98 \text{ m})^2} \times \cos^3(60^\circ)$$

$$\underline{E_{(5.2m)} = 1.26 \text{ lx}}$$

E for example at 6.9 m distance

$$\tan \gamma = \frac{6.9 \text{ m}}{3 \text{ m}} = 2.3; \arctan(2.3) = 66.5^\circ$$

$$E_{(6.9m)} = \frac{270 \text{ cd/klm} \times 0.337 \text{ klm}}{(2.98 \text{ m})^2} \times \cos^3(66.5^\circ)$$

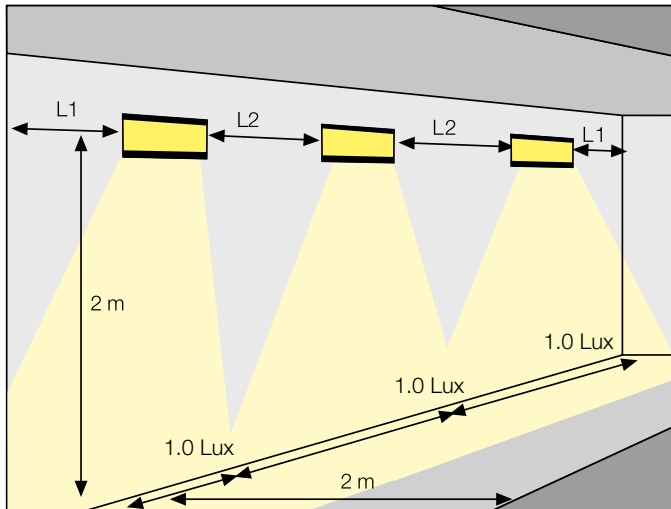
$$\underline{E_{(6.9m)} = 0.64 \text{ lx}}$$


Results:

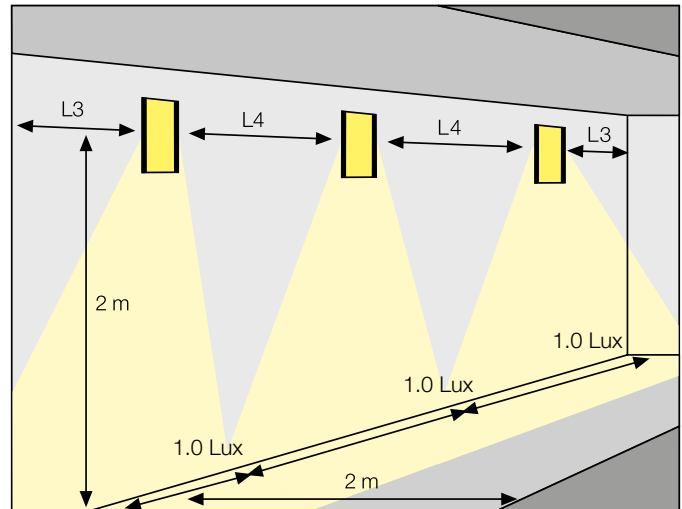
The maximum permissible spacing between luminaires is 13.8 m. This is twice the calculated 6.9 m, as the minimum illuminance of 1.25 Lux is achieved from two luminaires at 0.69 Lux. It is to be noted that the luminaires at the beginning or end of the escape route must be spaced at 5.4 m. The required number of luminaires for the 38 m long escape route is 3. The uniformity ratio is approx. 1:5.

Planning example

Type of mounting: wall mounting



Luminaire arranged horizontally



Luminaires arranged vertically

Because calculation with the point lighting formula for everyday planning is complex, planning aids were drawn up in collaboration with the German Institute for Applied Lighting Technology (DIAL) in accordance with the conditions of DIN EN 1838 and LBO (national building directives) enabling simple, rapid planning.

A maintenance factor of $MF = 0.8$ (or planning factor $P = 1.25$) is already integrated so that the luminaire distances to be planned can be read directly for the desired initial value of 1.25 lx or 0.625 lx (in brackets).

The ratio of reflective light was not considered in accordance with DIN EN 1838.

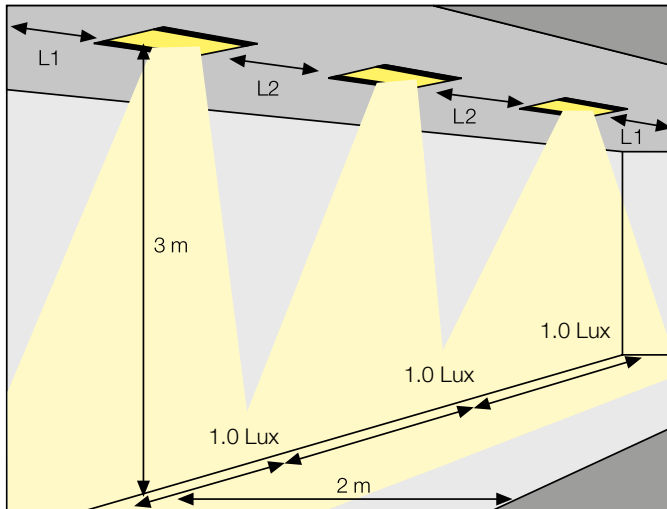
The tables differentiate between three applications:

- Illumination of an escape route acc. to DIN EN 1838 | ceiling mounting, escape route centre
Calculation basis:
1 lx for escape route centre, 0.5 lx on both sides, at distance of 0.5 m

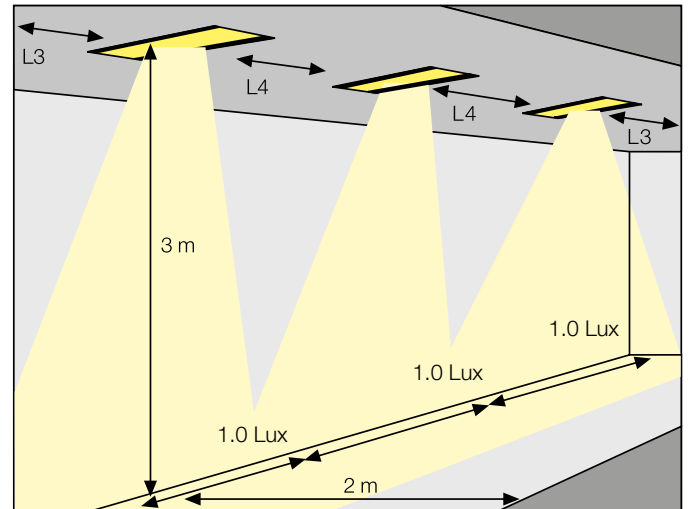
- Illumination of an escape route acc. to DIN EN 1838 | wall mounting
Calculation basis:
1 lx for escape route centre, 0.5 lx on both sides, at distance of 0.5 m, distance of wall to escape route centre 1 m
- Calculation for anti-panic lighting | Room illumination
Calculation basis:
1 lx (0.5 lx) minimum value on the complete surface, with consideration of a peripheral area of 0.5 m

In addition the arrangement of the luminaires must be considered: Are these aligned longitudinally or laterally to the escape route or surface? Does it concern the first or last luminaire or a luminaire within a luminaire arrangement? And lastly, the distances of the first luminaire to the wall are always somewhat less, as this must achieve the illuminance level of 1 lx by itself, while luminaires within the luminaire arrangement are supported by the adjacent luminaire.

Type of mounting: ceiling mounting



Luminaires arranged lengthwise



Luminaires arranged crosswise

Example calculation No. 1 – escape route illumination with LED safety luminaire:

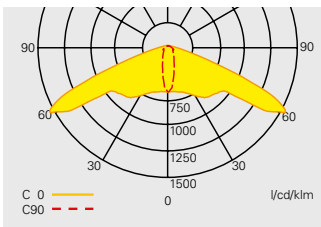
Specification data:

Length of escape route 30 m, luminaires mounted directly above escape route, illumination according to DIN EN 1838 with 1 lx on central axis, luminaires lateral to longitudinal axis, maintenance factor = 0.8, luminaire mounting height = 3.0 m

Selected luminaire type: GuideLed SL 13012.1 CG-S with asymmetric LED optic, 1 x 2 W LED

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)	Types of mounting	Types 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 centre	2.3 (3.2)	6.4 (9.2)	7.3 (8.1)	16.1 (17.8)
3.5		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)

Result:

The planning aid shows that the first luminaire must be mounted at a distance of 7.4 m (L3) from the corridor end and the distance between the luminaires must be a maximum of (L4) 16.1 m in order to maintain the required illuminance of 1 lx.

$$2 \times L3 + 1 \times L4 = 2 \times 7.3 \text{ m} + 1 \times 16.1 \text{ m} = 30.7 \text{ m} \checkmark$$

Therefore for this area only 2 GuideLed SL 13012.1 CG-S are required.

Planning example

Example calculation No. 2 – escape route illumination with wall luminaires

Specification data:

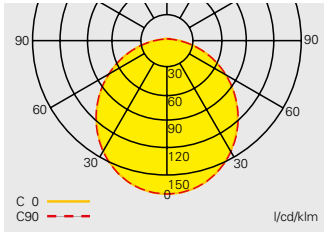
Length of escape route 30 m, luminaires mounted to the wall, illumination according to DIN EN 1838 with 1 lx on central axis, maintenance factor = 0.8, luminaire mounting height = 2.5 m

Selected luminaire type: 83022 CG-S, with TC-FEL 18W lamp

1

Planning assistance for SL 83022 CG-S for E = 1.0 lx (0.5 lx)

Measuring height: 0.02 m, maintenance factor MF = 80 %, battery operation



Mounting height (m)	Types of mounting	Types of mounting			
		L1	L2	L3	L4
2.5	Ceiling mounting	4.1 (5.1)	10.1 (12.4)	4.1 (5.1)	10.2 (12.4)
3.0	Escape route centre	4.4 (5.5)	10.9 (13.4)	4.4 (5.5)	10.9 (13.4)
4.0		4.7 (6.1)	12.0 (15.0)	4.7 (6.1)	12.1 (15.1)
5.0		4.8 (6.4)	12.8 (16.3)	4.8 (6.5)	12.8 (16.4)
6.0		4.7 (6.7)	13.2 (17.3)	4.7 (6.7)	13.3 (17.4)
7.0		4.5 (6.8)	13.4 (18.0)	4.5 (6.8)	13.4 (18.1)
2.0	Wall mounting	3.1 (3.6)	8.0 (8.8)	3.1 (3.6)	8.0 (8.8)
2.5		3.1 (3.5)	8.1 (8.9)	3.1 (3.5)	8.1 (8.9)
3.0		2.9 (3.4)	8.1 (8.9)	2.9 (3.4)	8.1 (8.9)

Result:

The planning aid shows that the first luminaire must be mounted at a distance of 3.1 m (L1 or L3) from the corridor end and the distance between the luminaires must be a maximum of (L2 or L4) 8.1 m in order to achieve the required 1 lx. The luminaire has a very symmetric light distribution.

This is why the values L1 and L3 or L2 and L4 are identical or differ only slightly.

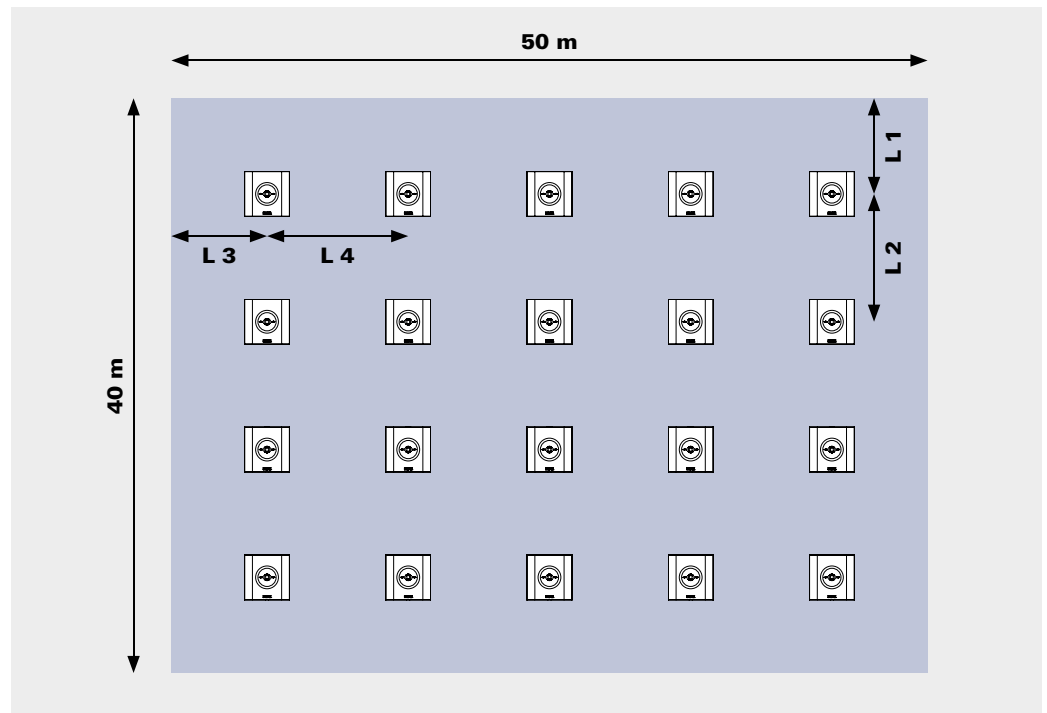
$$2 \times L1 + 3 \times L2 = 2 \times 3.1 \text{ m} + 3 \times 8.1 \text{ m} = 30.5 \text{ m} \checkmark$$

Therefore this area requires a total of four SL 83022 CG-S luminaires.

Example calculation No. 3 – wide area illumination

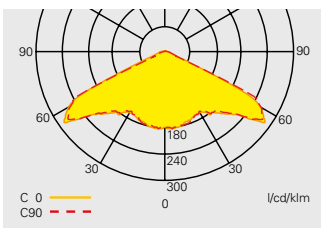
Specification data:

A sales area with 2000 m² surface area (50 m x 40 m), luminaires mounted to the ceiling, luminaires lateral to longitudinal axis, illumination according to DIN EN 1838 with 1 lx on complete surface, maintenance factor = 0.8, luminaire mounting height = 4.0 m
 Selected luminaire type: GuideLed SL 13022.1 CG-S, symmetric LED optic, 1 x 2 W LED



Planning help 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)	Types of mounting	L1	L2	L3	L4
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)

Result:

The planning aid shows that the first luminaire in the x-direction must be mounted at a distance of 2.9 m (L3) from the corridor end, and the distance between the luminaires must be a maximum of (L4) 12.4 m in order to achieve the required 1 lx.

$$2 \times L3 + 4 \times L4 = 2 \times 2.9 \text{ m} + 4 \times 12.4 \text{ m} = 55.4 \text{ m} \quad \checkmark$$

Therefore 5 luminaires in the x-direction are required.

In the y-direction the first luminaire can be mounted up to 2.9 m from the wall.

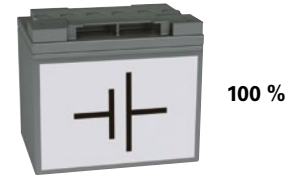
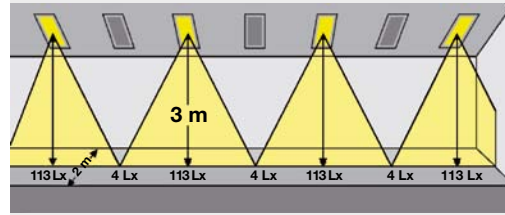
The distance between the luminaires must be a maximum of 12.1 m.

$$2 \times L1 + 3 \times L2 = 2 \times 2.9 \text{ m} + 3 \times 12.1 \text{ m} = 42.1 \text{ m} \quad \checkmark$$

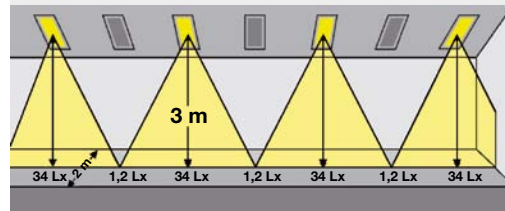
Therefore 4 luminaires in the y-direction are required.

Lighting engineering instead of battery volume

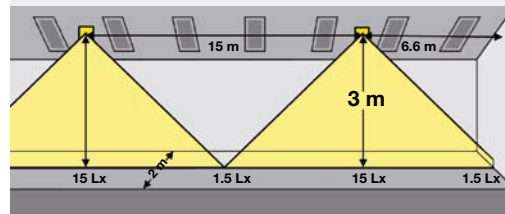
Standard EVG 58 W/100 % Luminous flux



N-EVG 58 W/30 % Luminous flux



N-EVG 58 W/30 % Luminous flux



Planning an emergency lighting system should set out with the lighting engineering and not with the battery in order to ensure the efficient and most economical layout of the luminaires. A cost benefit combined with a high safety standard can only be achieved by safety luminaires featuring excellent lighting properties and the respective planning of the lighting.

Luminaires for general lighting are designed for illuminance values of e.g. 100 to 1000 lx. In addition, other requirements are valid here for uniformity and glare limitation. The light distributions and levels of luminous flux required for this are therefore not highly suitable for the demands of emergency lighting. The illuminance below the luminaires is many times greater than 1 lx. In order to fulfill the uniformity requirement of 1:40, the distance to the next luminaire cannot be too large despite the high light level. This would mean the minimum demand would in total be exceeded many times, leading in high energy demands for emergency lighting. This though can be reduced by up to 50% with the use of CEAG N ECGs, as these enable the reduction of luminous flux with battery operation.

CEAG safety luminaires have optics matched to lighting planning according to DIN EN 1838. Light distribution and luminous flux are dimensioned so that the spacing is optimised while the values of current standards are adhered to. This means that energy consumption in emergency operation compared to use of general lighting is reduced by up to 94%, as shown by the case study below:

Exemplary calculation: Corridor with length 30 m, ceiling height 3 m

General lighting:

Illuminance according to DIN EN 12464: 100 lx. Uniformity $g_1 = 0.7$, standard reflection factors for ceiling/walls/floor: 70 %/50 %/20 %
Lighting with recessed linear louvre luminaire with white louvre, 1 x 58 W. Required number of luminaires: 5

Emergency lighting:

Illuminance according to DIN EN 1838: at least 1 lx, uniformity $g_2 > 1:40$
Reflection factors for ceiling/walls/floor: 0%/0%/0%

Version	Luminaire	Ballast	Emergency operation			E_{min} [lx]	E_{max} [lx]	$g_2 = E_{min}/E_{max}$	Battery current input per luminaire in A	Total battery current input in A	Energy requirement
			Number of luminaires mains operation	Number of luminaires emergency operation	Dimming level						
No. 1	Louvre luminaire, white, 1 x 58 W	EVG + CEAG V-CG-S	5	3	100 %	4	113	1:28	0.250	0.750	100 %
No. 2	Louvre luminaire, white, 1 x 58 W	CEAG N-EVG	5	3	30 %	1.2	34	1:28	0.110	0.330	44.0 %
No. 3	CEAG GuideLed SL with asymmetric optics	CEAG V-CG-SLS701	0	2	100 %	1.5	15	01:11	0.020	0.040	5.3 %

In dangerous situations, CEAG escape sign luminaires reliably show the right way

The background in terms of standards for the optical requirements of escape sign luminaires is specified in Europe with EN 1838. For emergency operation, this standard defines the minimal requirement for brightness of 2 cd/m^2 in the green area of the symbol and specific uniformity and contrast within and between the luminous surfaces.

For mains operation the DIN 4844-1 standard applies. Here a luminance of 500 cd/m^2 for the white surface is stipulated.

The many times higher level of luminance is intended to enable good visibility of the emergency exits even with bright surroundings (with daylight, general lighting) and with the existence of other luminous signs for advertising or information, for example for routing systems in buildings.

After all, not all emergencies are connected with a power failure, for example in cases of evacuation of a building resulting from accidents or bomb threats.

Photometric requirements on the exit signs

DIN 4844-1 (2012-06):

$L_m \geq 500 \text{ cd/m}^2$ (white surface)

for use in light surroundings.

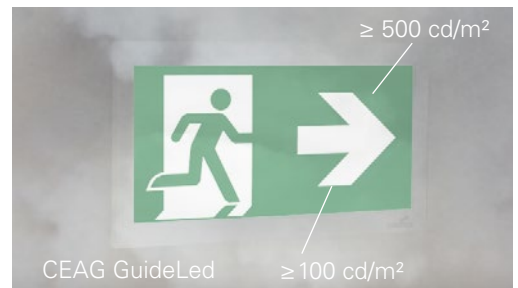
ISO 30061 (2007):

$L_{\min} = 10 \text{ cd/m}^2$ (green surface)

in case of smoke development. The luminaires should be suspended by at least 0.5 m.



badly illuminated escape sign luminaire



CEAG GuideLed

$\geq 100 \text{ cd/m}^2$



Safety luminaire and escape sign luminaire GuideLed





Linear design combined with high economy

The GuideLed LED luminaire family is a prime example of how the adherence to standards, diverse possibilities for mounting and a high level of economy is not at all contrary to outstanding design. With GuideLed, an escape sign luminaire was developed that completely fulfills the stipulations of ISO 3864-1 and DIN 4844-1, including the requirement for 500 cd/m² within the white surface.

The basis for these values is the highly developed Lightguide technology that transforms the high point-sourced luminance of an LED into an illuminated surface with absolutely homogeneous brightness. The LEDs used in this process ensure a high level of operational safety, and with a service life of 50,000 hours significantly reduce maintenance costs. And all of this with a power consumption that is up to 70 % below a comparable luminaire with fluorescent lamp.

The wide-ranging product portfolio makes GuideLed a real allrounder: escape sign luminaires with viewing distances of 20 m or 30 m, as single-sided or double-sided versions and with a total of six different mounting types make them the optimal solution for all room situations. All GuideLed escape sign luminaires impress with clear functionality, an especially flat construction design and without visible screw connections. Despite a compact construction and low connected loads, the new LED GuideLed safety luminaires definitely prove a match for the more watt-intensive fluorescent lamp luminaires when it comes to achievable spacing distances for standardised illumination in accordance with EN 1838. Optics especially developed for emergency lighting requirements guide the light either longitudinally along the escape route or else homogeneously over a very large area.

Features:

- Lightguide technology for perfect illumination in line with standards and for a special slender design
- High efficiency LEDs for a higher operational safety and especially low power consumption
- Up to 70% lower power costs compared to luminaires with fluorescent lamps
- Minimum service requirement due to high service life of the LEDs (50,000 h)
- Two viewing distances (20 m and 30 m) with versatile types of installation in a continuous design without visible screw fastenings
- The GuideLed safety luminaires guide the light of the LEDs with two special optics either longitudinally along the escape route or uniformly over a large area
- Available as recessed or surface mounting
- Safety luminaires with especially narrow beam optics and efficient highpower LEDs are suitable for mounting heights up to 30 m

LEDs for increased safety.

Longevity, immediate start, high efficiency and small shapes- on account of these properties LEDs are especially suited for use in emergency and safety lighting systems. However, it is only the precise harmonisation of low temperature and low operating current that guarantees a high light efficiency at maximum service life.

Lightguide technology for perfect illumination

The highly developed Lightguide technology converts the concentrated light density of the LED into an absolutely uniformly and bright surface with over 500 cd/m² luminance in the white area. In this way the exit sign always stays well visible even in case of bad visibility or light surroundings.

Despite the very good photometric values, the new Lightguide technology with its especially efficient LEDs uses up to 70 per cent



less energy compared to the previous escape sign luminaires using fluorescent lamps.

Photometric requirements on the exit signs

DIN 4844-1 (2005-05) und ISO 3864-1 (2002):

$L_m \geq 500 \text{ cd/m}^2$ (white surface)

for use in light surroundings.

ISO 30061 (2007):

$L_{\min} = 10 \text{ cd/m}^2$ (green surface)

in case of smoke development. The luminaires should be suspended by at least 0.5 m.

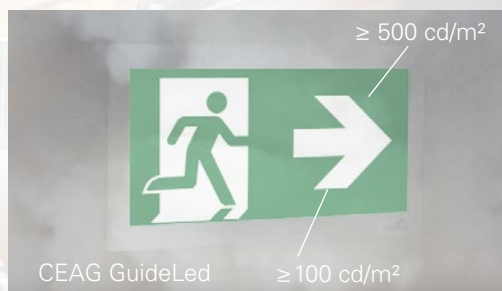
EN 1838 (1999):

$L_{\min} = 2 \text{ cd/m}^2$ (green surface)

Emergency operation



badly illuminated escape sign luminaire



CEAG GuideLed

$\geq 100 \text{ cd/m}^2$



The versatile types of installation turn the GuideLed into an all-rounder.

With its extensive range of products and a large choice of pictograms, GuideLed offers the perfect solution for every room situation. GuideLed is supplied in an unobtrusive light-grey colour as a standard.

Upon request other colours as well as individual special pictograms can be supplied harmonised to the respective architecture.

All variants are available in two viewing distances



20 m 30 m



Wall mounting with recessed installation of the LED supply



Wall surface mounting



Ceiling mounting



Exemplary design based on revolutionary technology.

Exit signs have to be well visible in order to provide orientation in case of an emergency. And, they have to be unobtrusively enough to match the architecture.

Irrespective of whether the luminaire is installed to the wall or is suspended freely, both GuideLed variants stand out for their clear functionality without visible screw connections and their unsurpassed flat design.



The wall mounting appears especially unobtrusive with a mounting height of only 14 mm.



Cable suspension



Pendant mounting



Recessed mounting

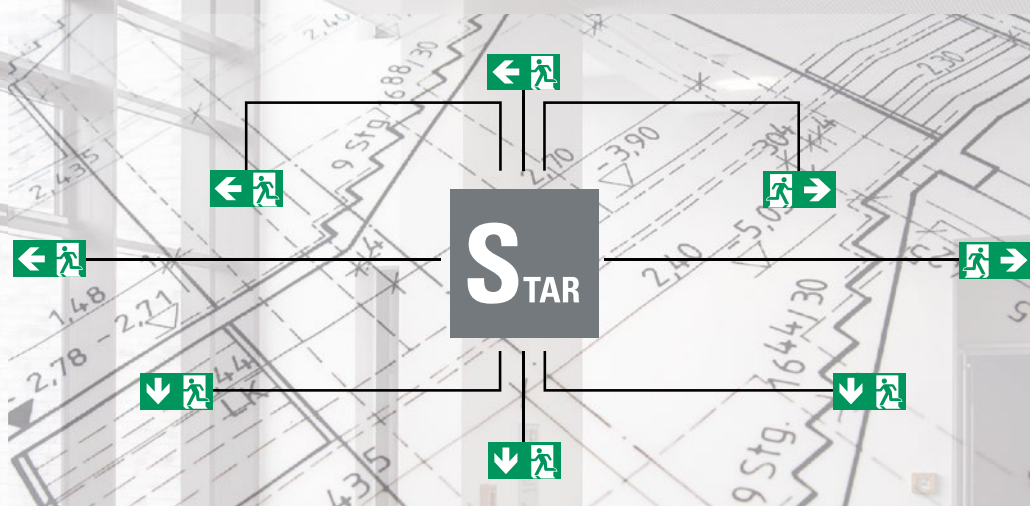
1



Standard STAR technology

CEAG STAR technology permits freely programmable mixed operation of the switching modes (maintained light, switched maintained light and non-maintained light) in one electricity circuit without additional data lines. This ensures shorter cable lengths, reduces the installation costs and decreases potential fire load.

Of course, allocation of all modes of operation is also possible subsequently- without intervention in the luminaire installation- which thus permits easy planning without having to define the modes of operation. The automatic CEWA GUARD function monitoring system for up to twenty luminaires for each electricity circuit reduces the inspection outlay.



Modular design and simple installation

The modular construction and snap-on connections reduce the installation work considerably. A work process in two steps has proved expedient :

First install the mounting set, connect the mains cable and set the address. When the building dust has settled down, connect the pictogram with the clamp terminals and simply snap on the mounting set- that's all.



Not only our pictograms are green.

The power consumption for a GuideLed escape sign luminaire is about 70 per cent below the consumption of previous luminaires with fluorescent lamps. Thus the consumption of the exit signs in operation is only about as high as the consumption of many electronic devices in stand-by operation.

This is our contribution to environmental protection and economical use of valuable resources.



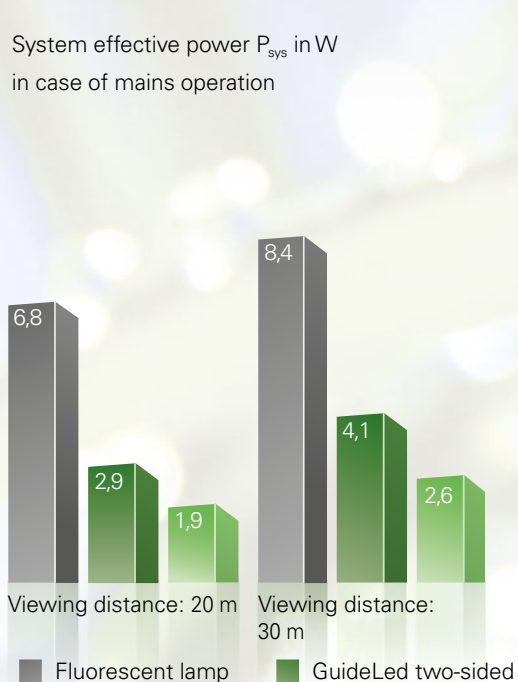
Servicing costs definitely saved

Fluorescent lamps used for safety lighting have typical service lives which results in the lamp having to be changed at least once a year depending on the operating times.

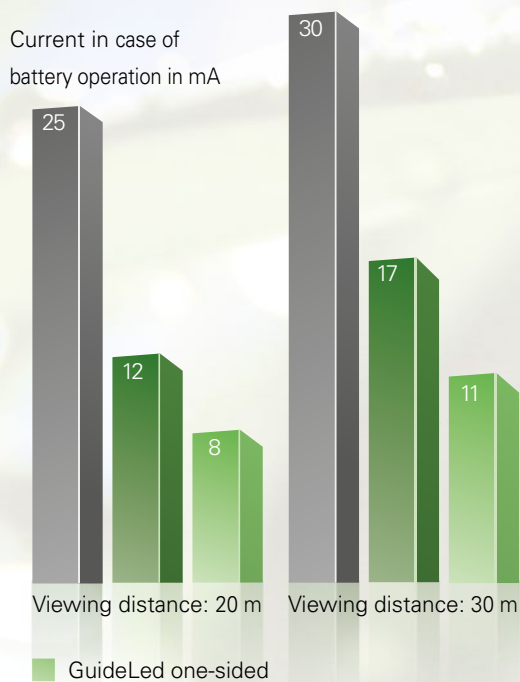
The service requirement is reduced considerably due to high service life of the LEDs (up to 50,000 hours).

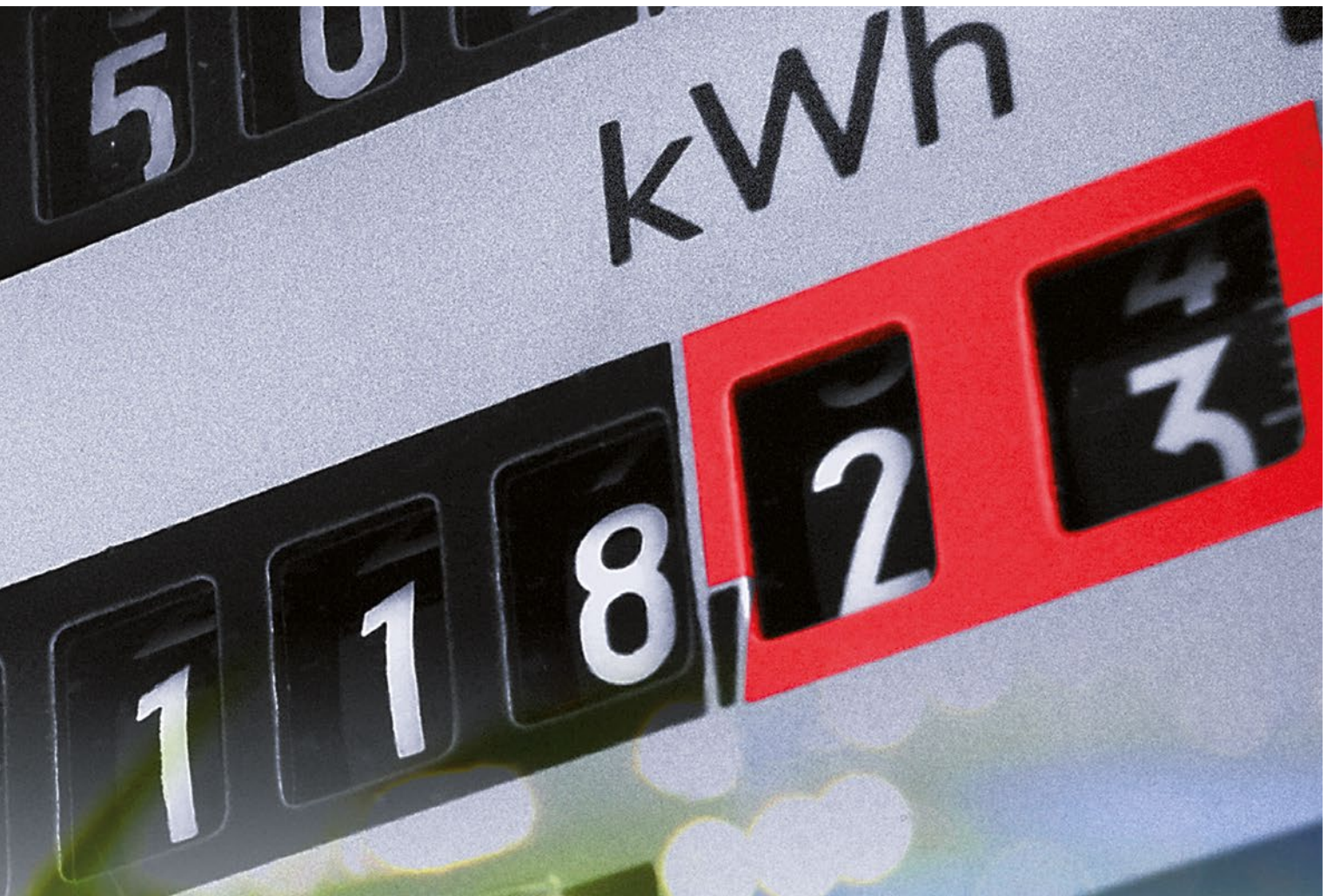


System effective power P_{sys} in W
in case of mains operation



Current in case of
battery operation in mA





Exemplary calculation – power consumption cost savings

Daily operating time	8W lamp $P_{sys} = 8.4W$	GuideLed 30m one-sided $P_{sys} = 2.6W$	GuideLed 30m two-sided $P_{sys} = 4.1W$
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Annual consumption and costs* per luminaire

16 h	49 kWh 7.36 €	15 kWh 2.28 €	24 kWh 3.59 €
24 h	74 kWh 11.04 €	28 kWh 3.42 €	36 kWh 5.39 €

Annual costs* of an example project

	120 luminaires	84 GuideLeds**	36 GuideLeds**
16 h	883 €	191 €	129 €
24 h	1.325 €	287 €	194 €

Annual Savings average saving per GuideLed

562 €	4.69 €
844 €	7.03 €

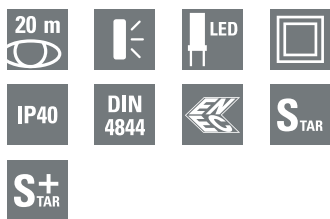
* in case of an electricity 0.15 €/kWh

** Assumption: Project with 120 escape sign luminaires, thereof 70 per cent one-sided and 30 per cent two-sided.

+ the lamp replacement costs (material, working hours, travelling time) saved

GuideLed 10011, 10012, 10013 CG-S

Wall mounting



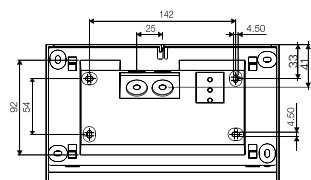
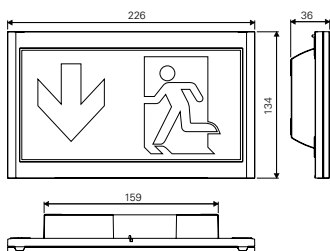
GuideLed 10011, 10012, 10013 CG-S

- Escape sign luminaire in LED technology for wall mounting
- Slender design with mounting heights of 14 mm or 36 mm only
- 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 $L_{\text{min}}/L_{\text{max}} > 0.8$
- Reduced battery costs on account of especially low power consumption
- Low operating costs on account of low effective power of 1.9 W only
- Minimum service requirement due to high service life of the LEDs (up to 50,000 hours)
- Installation of the LED pictogram without tools on the mounting set

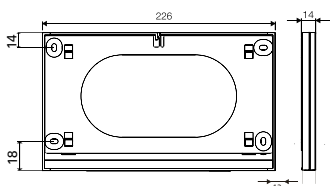
GuideLed 10011 CG-S



Dimensions in mm



10011 CG-S



10012/10013 CG-S

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	0.47 kg (10011 LED CG-S) 0.41 kg (10012, 10013 LED CG-S)
Type of mounting	Wall mounting
Connection terminal	Clamp terminal 2.5 mm ² reverse-polarity protected
Connection voltage	220 - 240 V AC, 50/60 Hz 176 V - 275 V DC
Current consumption - battery operation (220 V)	8 mA
Power consumption mains operation (apparent power / effective power)	4.0 VA / 1.9 W
Permissible ambient temperature	-20 °C to +40 °C
Light source	LED batten




Ordering details - fastening set

LED pictograms must ordered sepearate

	Order No.
Wall mounting set for GuideLed 10011 CG-S and 11011 CG-S, surface-mounted installation incl. LED supply and CG-S technology (20 addresses), without LED pictograms	40071353641
Wall mounting set for GuideLed 10012 CG-S and 11012 CG-S, flush-mounted installation of the V-CG-SLS28* (angular) and CG-S technology (20 addresses)	40071353642
Wall mounting set for GuideLed 10013 CG-S and 11013 CG-S, flush-mounted installation of the V-CG-SLR28* (round) and CG-S technology (20 addresses)	40071353644

Ordering details - LED pictograms (fastening set required)

Scope of supply

Scope of supply	Order No.
LED pictogram PL for GuideLed 10011/10012/10013 CG-S, ISO 7010, 20 m 	40071354500
LED pictogram PR for GuideLed 10011/10012/10013 CG-S, ISO 7010, 20 m 	40071354501
LED pictogram PU for GuideLed 10011/10012/10013 CG-S, ISO 7010, 20 m 	40071354502

Ordering details - accessories

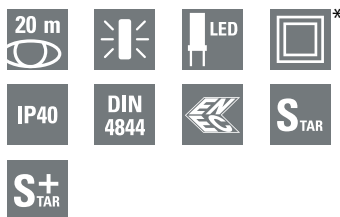
Scope of supply

Scope of supply	Order No.
Feed-through wiring set for GuideLed 10011/11011 CG-S	40071353643

* Installation of the LED supply in a not included device, for further information about the LED supply see page 1.163 (SLS28) und 1.169 (SLR28).

GuideLed 10021, 10022, 10023, 10024 CG-S

Ceiling mounting



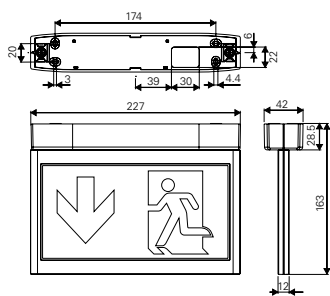
GuideLed 10021, 10022, 10023, 10024 CG-S

- Escape sign panel luminaire in LED technology for ceiling installation
- Slender design with pictogram width of only 12 mm
- 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 $L_{min}/L_{max} > 0.8$
- Reduced battery costs on account of especially low power consumption
- Low operating costs on account of low effective power of 2.9 W only (1.9 W one-sided)
- Minimum service requirement due to high service life of the LEDs (up to 50,000 hours)

GuideLed 10021 CG-S



Dimensions in mm

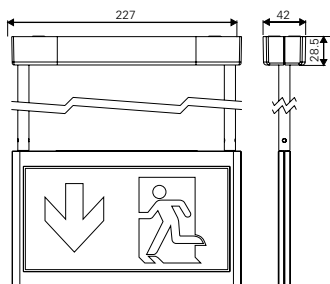


Viewing distance	20 m
Luminous flux Φ_E/Φ_N at the end of rated operating time	100 %
Housing material	PC, PMMA
Housing colour	Light grey RAL 7035
Weight	0.39 kg (10021 LED CG-S) 0.49 kg (10022 LED CG-S) 0.54 kg (10023 LED CG-S) 0.70 kg (10024 LED CG-S)
Type of mounting	Ceiling, suspended, recessed installation
Connection terminal	Clamp terminal 2.5 mm ² reverse-polarity protected
Connection voltage	220 - 240 V AC, 50/60 Hz 176 V - 275 V DC
Current consumption - battery operation (220 V)	one-sided 8 mA – two-sided 12 mA
Power consumption mains operation (apparent power / effective power)	one-sided 4.0 VA / 1.9 W two-sided 5.5 VA / 2.9 W
Permissible ambient temperature	-20 °C to +40 °C
Light source	LED batten

GuideLed 10022 CG-S



Dimensions in mm



Ordering details - fastening set

LED pictograms must ordered separate

	Order No.
Ceiling installation set for GuideLed 10021 CG-S with canopy incl. LED supply and CG-S technology (20 addresses)	40071353610
Ceiling installation set for GuideLed 10022 CG-S with canopy and tube suspension 0.5 m incl. LED supply and CG-S technology (20 addresses)	40071353611
Ceiling installation set for GuideLed 10023 CG-S with canopy and tube suspension 1.5 m incl. LED supply and CG-S technology (20 addresses)	40071353612
Ceiling installation set for GuideLed 10024 CG-S incl. recessed installation housing incl. LED supply and CG-S technology (20 addresses)*	40071353613

Ordering details - accessories

Scope of supply

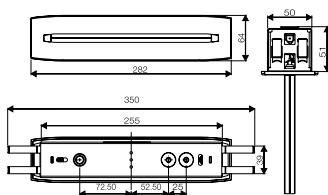
	Order No.
Chain fastening for 10021 CG-S	40071353645
Concrete installation GuideLed 10024 CG-S, 20 m*	40071352892

* Ceiling mounting set for GuideLed 10024 and concrete installation box corresponding to protection class I

GuideLed 10024 CG-S



Dimensions in mm



Ordering details - LED pictograms*

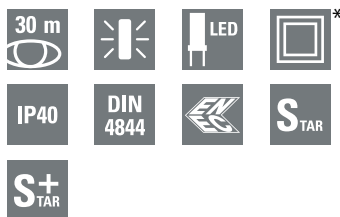
Scope of supply

Scope of supply	Order No.
LED pictogram PL/PR, for GuideLed 10021/10022/10023/10024 CG-S, ISO 7010, 20 m	40071354503
LED pictogram PU/PU, for GuideLed 10021/10022/10023/10024 CG-S, ISO 7010, 20 m	40071354504
LED pictogram PL/BL, for GuideLed 10021/10022/10023/10024 CG-S, ISO 7010, 20 m	40071354505
LED pictogram PR/BL, for GuideLed 10021/10022/10023/10024 CG-S, ISO 7010, 20 m	40071354506
LED pictogram PU/BL, for GuideLed 10021/10022/10023/10024 CG-S, ISO 7010, 20 m	40071354507
LED pictogram PL/PR-R**, for GuideLed 10021/10022/10023/10024 CG-S, ISO 7010, 20 m	40071354508
LED pictogram PL/PR-W**, for GuideLed 10021/10022/10023/10024 CG-S, ISO 7010, 20 m	40071354509

** R = Arrow from mounting wall
W = Arrow to mounting wall

GuideLed 11021, 11022, 11023, 11024 CG-S

Ceiling mounting



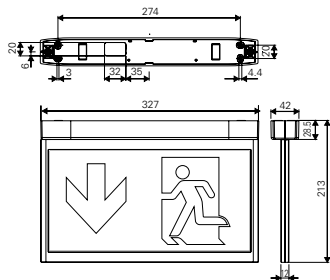
GuideLed 11021, 11022, 11023, 11024 CG-S

- Escape sign panel luminaire in LED technology for ceiling installation
- Slender design with pictogram width of only 12 mm
- 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 $L_{\min}/L_{\max} > 0.8$
- Reduced battery costs on account of especially low power consumption
- Low operating costs on account of low effective power of 4.1 W only (2.6 W one-sided, radiating)
- Minimum service requirement due to high service life of the LEDs (up to 50,000 hours)

GuideLed 11021 CG-S



Dimensions in mm

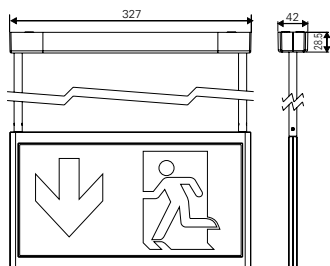


Viewing distance	30 m
Luminous flux Φ_E/Φ_N at the end of rated operating time	100 %
Housing material	PC, PMMA
Housing colour	Light grey RAL 7035
Weight	0.79 kg (11021 LED CG-S) 0.94 kg (11022 LED CG-S) 0.99 kg (11023 LED CG-S) 1.22 kg (11024 LED CG-S)
Type of mounting	Ceiling, suspended, recessed installation
Connection terminal	Clamp terminal 2.5 mm ² reverse-polarity protected
Connection voltage	220 - 240 V AC, 50/60 Hz 176 V - 275 V DC
Current consumption - battery operation (220 V)	one-sided 11 mA – two-sided 17 mA
Power consumption mains operation (apparent power / effective power)	one-sided 5.0 VA / 2.6 W two-sided 7.1 VA / 4.1 W
Permissible ambient temperature	-20 °C to +40 °C
Light source	LED batten

GuideLed 11022 / 11023 CG-S



Dimensions in mm



Ordering details - fastening set

LED pictograms must ordered separate

	Order No.
Ceiling installation set for GuideLed 11021 CG-S with canopy incl. LED supply and CG-S technology (20 addresses)	40071353620
Ceiling installation set for GuideLed 11022 CG-S with canopy and tube suspension 0.5 m, incl. LED supply and CG-S technology (20 addresses)	40071353621
Ceiling installation set for GuideLed 11023 CG-S with canopy and tube suspension 1.5 m, incl. LED supply and CG-S technology (20 addresses)	40071353622
Ceiling installation set for GuideLed 11024 CG-S incl. recessed installation housing incl. LED supply and CG-S technology (20 addresses)*	40071353623

Ordering details - accessories

Scope of supply

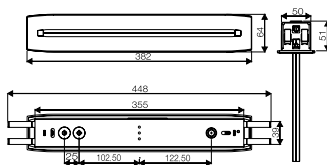
	Order No.
Chain fastening for 11021 CG-S	40071353646
Concrete installation box for GuideLed 11024 CG-S, 30 m*	40071352893

* Ceiling mounting set for GuideLed 11024 and concrete installation box corresponding to class of protection I

GuideLed 11024 CG-S



Dimensions in mm



Ordering details - LED pictograms*

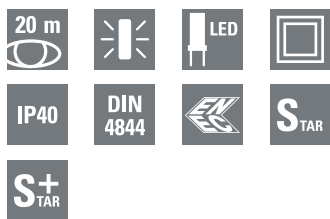
Scope of supply

		Order No.
LED pictogram PL/PR, for GuideLed 11021/11022/11023/11024 CG-S, ISO 7010, 30 m		40071354533
LED pictogram PU/PU, for GuideLed 11021/11022/11023/11024 CG-S, ISO 7010, 30 m		40071354534
LED pictogram PL/BL, for GuideLed 11021/11022/11023/11024 CG-S, ISO 7010, 30 m		40071354535
LED pictogram PR/BL, for GuideLed 11021/11022/11023/11024 CG-S, ISO 7010, 30 m		40071354536
LED pictogram PU/BL, for GuideLed 11021/11022/11023/11024 CG-S, ISO 7010, 30 m		40071354537
LED pictogram PL/PR-R**, for GuideLed 11021/11022/11023/11024 CG-S, ISO 7010, 30 m		40071354538
LED pictogram PL/PR-W**, for GuideLed 11021/11022/11023/11024 CG-S, ISO 7010, 30 m		40071354539

** R = Arrow from mounting wall
W = Arrow to mounting wall

GuideLed 10025, 10026 CG-S

Ceiling mounting with cable



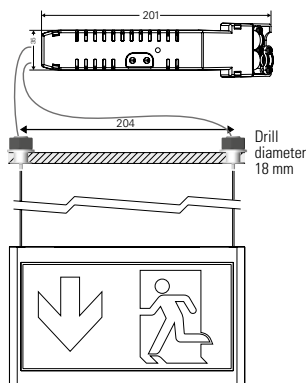
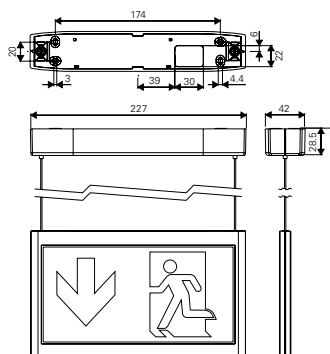
GuideLed 10025, 10026 CG-S

- Escape sign panel luminaire in LED technology for ceiling installation
- Slender design with pictogram width of only 12 mm
- 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 $L_{\min}/L_{\max} > 0.8$
- Reduced battery costs on account of especially low power consumption
- Low operating costs on account of low effective power of 2.9 W only (1.9 W one-sided)
- Minimum service requirement due to high service life of the LEDs (up to 50,000 hours)

GuideLed 10025 CG-S



Dimensions in mm



GuideLed 10026 CG-S

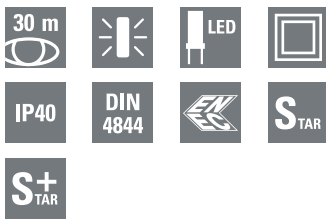
Viewing distance	20 m
Luminous flux Φ_E/Φ_N at the end of rated operating time	100 %
Housing material	PC, PMMA
Housing colour	Light grey RAL 7035
Weight	0.40 kg (10025 LED CG-S) 0.52 kg (10026 LED CG-S)
Type of mounting	Suspended installation (max. 1.5 m)
Connection terminal	Clamp terminal 2.5 mm ²
Connection voltage	220 - 240 V AC, 50/60 Hz 176 V - 275 V DC
Current consumption - battery operation (220 V)	one-sided 8 mA – two-sided 12 mA
Power consumption mains operation (apparent power / effective power)	one-sided 4.0 VA / 1.9 W two-sided 5.5 VA / 2.9 W
Permissible ambient temperature	-20 °C to +40 °C
Light source	LED batten

Ordering details - fastening set

LED pictograms must ordered separate	Order No.
Cable installation set for GuideLed 10025 CG-S with LED supply and CG-S technology (20 addresses) integrated in the canopy	40071353609
Cable installation set for GuideLed 10026/11026 CG-S with ceiling cable holder LED supply and CG-S technology (20 addresses) integrated in a housing with strain relief	40071353640

Ordering details - LED pictograms (fastening set required)

Scope of supply	Order No.
LED pictogram PL/PR for GuideLed 10025/10026 CG-S (cable installation), ISO 7010, 20 m	40071354510
LED pictogram PU/PU for GuideLed 10025/10026 CG-S (cable installation), ISO 7010, 20 m	40071354511
LED pictogram PL/BL for GuideLed 10025/10026 CG-S (cable installation), ISO 7010, 20 m	40071354512
LED pictogram PR/BL for GuideLed 10025/10026 CG-S (cable installation), ISO 7010, 20 m	40071354513
LED pictogram PU/BL for GuideLed 10025/10026 CG-S (cable installation), ISO 7010, 20 m	40071354514



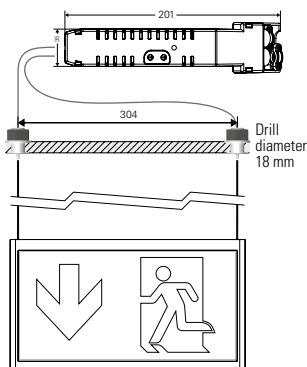
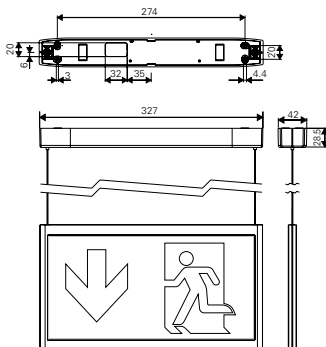
GuideLed 11025, 11026 CG-S

- Escape sign panel luminaire in LED technology for ceiling installation
- Slender design with pictogram width of only 12 mm
- 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 $L_{min}/L_{max} > 0.8$
- Reduced battery costs on account of especially low power consumption
- Low operating costs on account of low effective power of 2.9W only (1.9W one-sided, radiating)
- Minimum service requirement due to high service life of the LEDs (up to 50,000 hours)

GuideLed 11025 CG-S



Dimensions in mm



GuideLed 11026 CG-S

Viewing distance	30 m
Luminous flux Φ_p/Φ_N at the end of rated operating time	100 %
Housing material	PC, PMMA
Housing colour	Light grey RAL 7035
Weight	0.81 kg (11025 LED CG-S) 0.93 kg (11026 LED CG-S)
Type of mounting	Suspended installation (max. 1.5 m)
Connection terminal	Clamp terminal 2.5 mm ²
Connection voltage	220 - 240 V AC, 50/60 Hz 176 V - 275 V DC
Current consumption - battery operation (220 V)	one-sided 11 mA – two-sided 17 mA
Power consumption mains operation (apparent power / effective power)	one-sided 5.0 VA / 2.6 W two-sided 7.1 VA / 4.1 W
Permissible ambient temperature	-20 °C to +40 °C
Light source	LED batten

Ordering details - fastening set

LED pictograms must ordered separate	Order No.
Cable installation set for 11025 CG-S with LED supply and CG-S technology (20 addresses) integrated in the canopy	40071353619
Cable installation set for GuideLed 10026/11026 CG-S with ceiling cable holder, LED supply and CG-S technology (20 addresses) integrated in a housing with strain relief	40071353640

Ordering details - LED pictograms

Scope of supply	Order No.
LED pictogram PL/PR for GuideLed 11025/11026 CG-S (cable installation), ISO 7010, 30 m	40071354540
LED pictogram PU/PU for GuideLed 11025/11026 CG-S (cable installation), ISO 7010, 30 m	40071354541
LED pictogram PL/BL for GuideLed 11025/11026 CG-S (cable installation), ISO 7010, 30 m	40071354542
LED pictogram PR/BL for GuideLed 11025/11026 CG-S (cable installation), ISO 7010, 30 m	40071354543
LED pictogram PU/BL for GuideLed 11025/11026 CG-S (cable installation), ISO 7010, 30 m	40071354544

1



Three design variants

There are three safety luminaires suitable for the design concept of the GuideLed exit luminaires:

With its 1.5 mm high frame, the GuideLed built-in variant is almost flush with the ceiling.

On account to the radii oriented to the main direction, the surface mounted variant GuideLed SL is inconspicuous with its 32 mm in height.

Both the recessed and the surface mounted version are available with especially narrow beam optics. They allow mounting heights of up to 30 m.

The extremely flat GuideLed FSL stands out for its lightguide technology, highly precise micro-prism optics and an especially uniform anti-glare shielded light exit surface.

Special refractive optics

GuideLed SL comes in two light distributions harmonised precisely to the requirements of safety illumination. The refractive optics guide the light either longitudinally along the escape route or uniformly across the surface.

High optical power

Despite their small structural shapes, the CEAG LED safety luminaires are on one level with the fluorescent lamps with a much higher wattage. At a mounting height of 3 m, luminaire spacings of up to 16 m and/or maximum mounting heights up to 10 m can be realised.



GuideLed SL 13021.1 CG-S



GuideLed SL 13031 CG-S



GuideLed SL 13012.1 CG-S

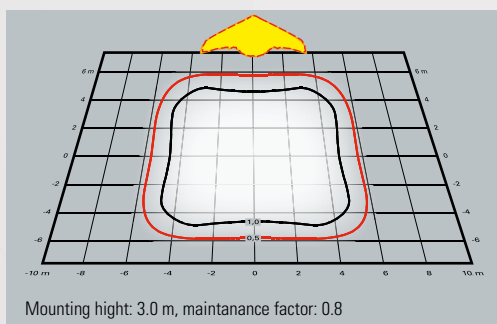


GuideLed SL 13032 CG-S

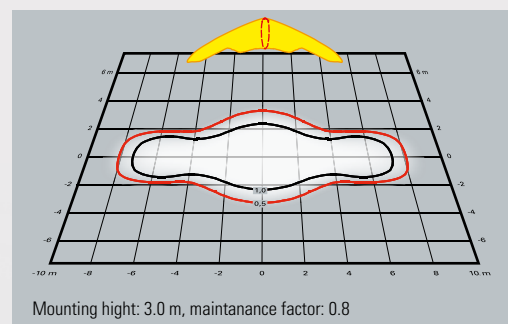


GuideLed FSL CG-S

Light distribution for open area illumination



Light distribution for escape route illumination



GuideLed SL 13011.1, 13021.1 CG-S

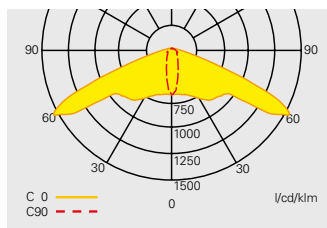
Recessed mounting



GuideLed SL 13011.1, 13021.1 CG-S

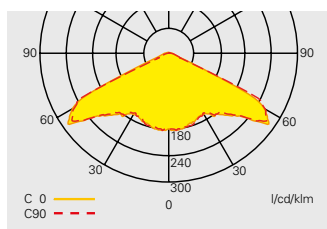
- Safety luminaire with LED technology for recessed mounting
- Unobtrusive, discrete appearance with round design and low installation depth of only 40 mm
- Conversion to square design with optional bezel to fit to the ceiling plan if necessary
- Special LED optics ensure especially efficient escape 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 (up to 50,000 hours)

1 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

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

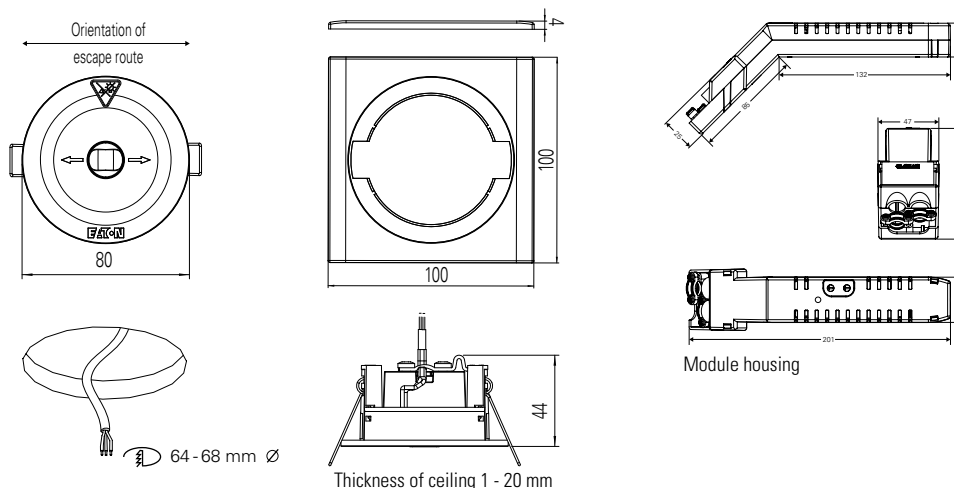


Luminous flux Φ_N	Asymmetric optics 250 lm Symmetric optics 250 lm
Luminous flux Φ_E/Φ_N at end of rated operating timer	100%
Housing material	PC, aluminium
Housing colour	White RAL 9016
Weight	0.25 kg
Type of mounting	Recessed mounting
Terminals	Clamp terminal 2 x 3 x 2.5 mm ²
Connection voltage	220- 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
Square 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

Dimensions in mm



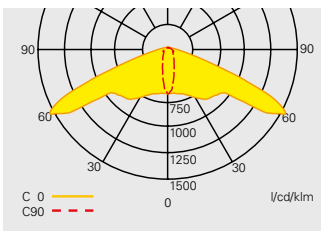
* Degree of protection of the luminaire: IP41
Degree of protection of module enclosure: IP20



GuideLed SL 13012.1, 13022.1 CG-S

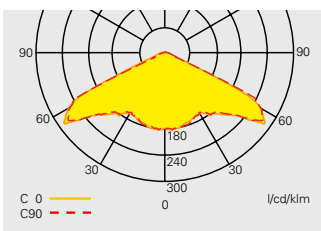
- Safety luminaire with LED technology for surface mounting
- Slender, discrete design with low height of 32 mm
- Special LED optics ensure especially efficient escape route illumination or uniform anti-panic illumination
- High spacing by exact light direction and highly-efficient HighPowerLEDs
- Up 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 (up to 50,000 hours)

GuideLed SL 13012.1 CG-S



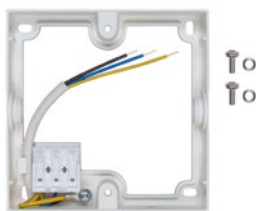
Light distribution curve
GuideLed SL 13012.1 CG-S surface
with asymmetric optics

GuideLed SL 13022.1 CG-S



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

Additional enclosure

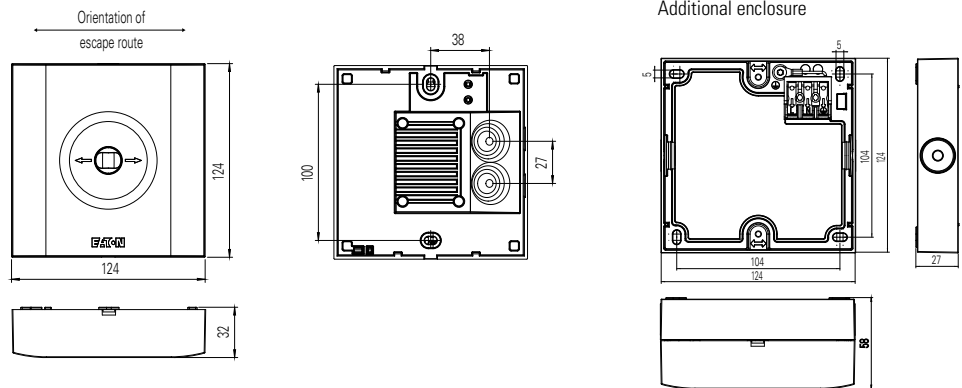


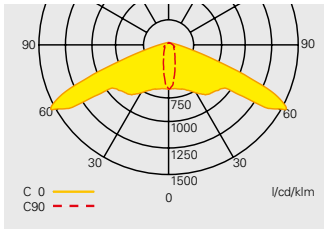
Luminous flux Φ_N	Asymmetric optics 250 lm Symmetric optics 250 lm
Luminous flux Φ_E/Φ_N at end of rated operating time	100%
Housing material	PC, Aluminium
Housing colour	White RAL 9016
Weight	0.33 kg
Type of mounting	Surface mounting
Terminals	2 x 3 x 2,5 mm ²
Connection voltage	220- 240 V AC, 50/60 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

Dimensions in mm

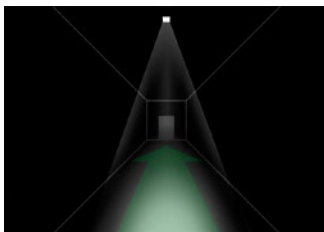




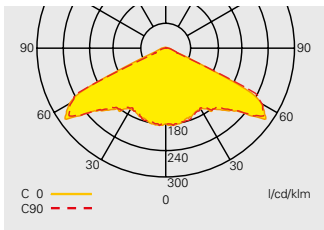
Planning assistance for GuideLed SL CG-S with asymmetric optics for E = 1.0 lx (0.5 lx)

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 asymmetric optics



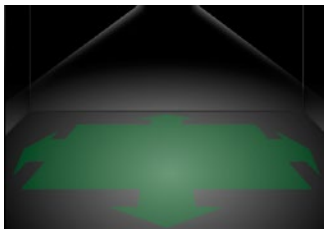
Planning assistance for GuideLed SL CG-S with symmetric optics for E = 1.0 lx (0.5 lx)

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)



Escape route illumination with symmetric optics



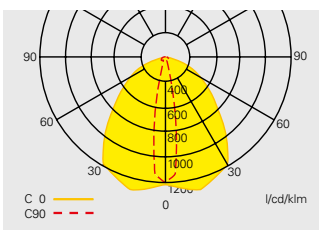
Room illumination with symmetric optics



GuideLed SL 13091.1 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 of 1lx for mounting heights of up to 15 m or for applications with increased illuminance requirements e.g. according to NFPA 101 with 10.8 lx
- Suitable for illumination of 5 lx vertically for 'points of emphasis' acc. EN 1838
- Minimum service requirement due to high service life of the LEDs (50,000 hours)

GuideLed SL 13091.1 CG-S



Light distribution curve
GuideLed SL 13091.1 CG-S

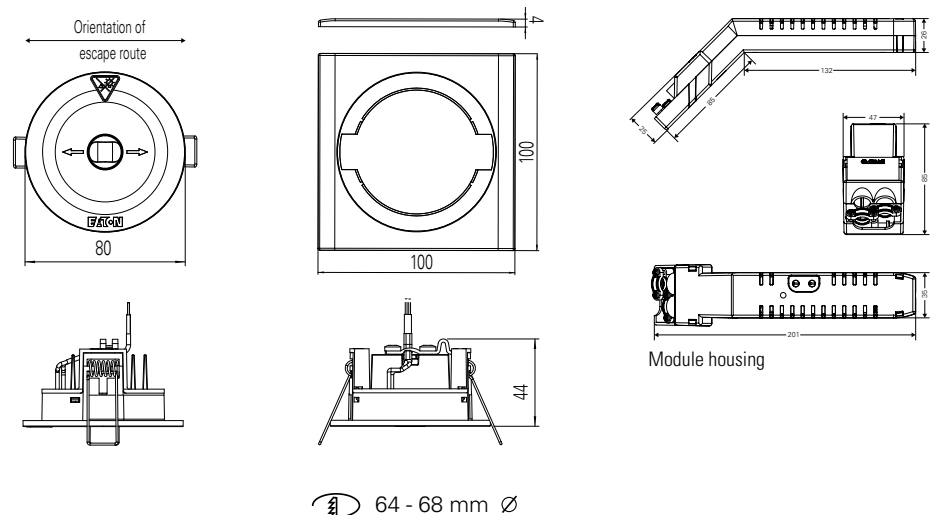
Luminous flux Φ_N	250 lm
Luminous flux Φ_E/Φ_N at end of rated operating time	100%
Housing material	PC, Aluminium
Housing colour	White RAL 9016
Weight	0.25 kg
Type of mounting	Recessed mounting
Terminals	2 x 3 x 2.5 mm ²
Connection voltage	220- 240 V AC, 50/60 Hz 176- 275 V DC
Current consumption- battery 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

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



Ordering details

Scope of supply	Order No.
GuideLed SL 13091.1 CG-S, recessed mounting with asymmetric optics for escape route illumination of 1 lx for mounting heights up to 15 m and increased illuminance requirements e.g. acc. to NFPA 101 with 10.8 lx. Incl. LED supply and CG-S technology (20 addresses) in housing* with strain relief	40071354484
Square 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



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

GuideLed SL 13092.1 CG-S

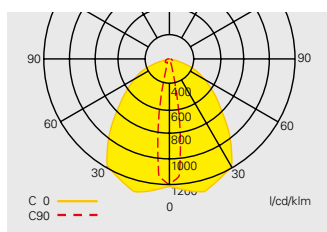
Surface mounting



GuideLed SL 13092.1 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 of 1 lx for mounting heights of up to 15 m or for applications with increased illuminance requirements e.g. acc. NFPA 101 with 10.8 lx
- Suitable for illumination of 5 lx vertically for 'points of emphasis' acc. EN 1838
- Minimum service requirement due to high service life of the LEDs (50,000 hours)

1 GuideLed SL 13092.1 CG-S

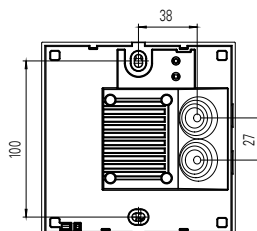
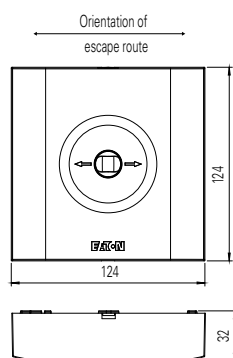


Light distribution curve
GuideLed SL GuideLed SL 13092.1

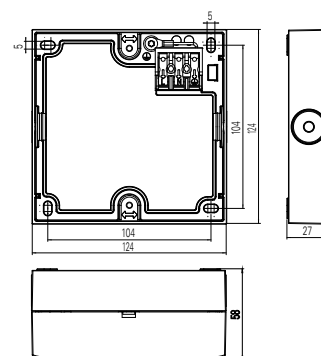
Luminous flux Φ_N	250 lm
Luminous flux Φ_E/Φ_N at end of rated operating time	100%
Housing material	PC, Aluminium
Housing colour	White RAL 9016
Weight	0.33 kg
Type of mounting	Surface mounting
Terminals	2 x 3 x 2,5 mm ²
Connection voltage	220- 240 V AC, 50/60 Hz 176- 275 V DC
Current consumption- battery 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

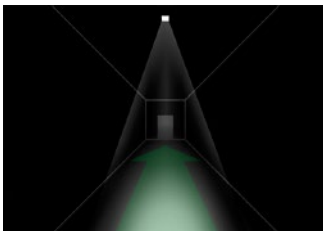
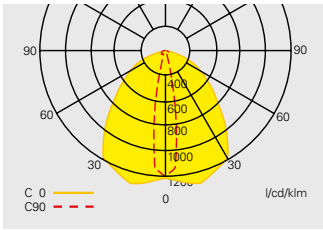
Ordering details

Scope of supply	Order-No.
GuideLed SL 13092.1 CG-S, surface mounting with asymmetric optics for escape route illumination of 1 lx for mounting heights up to 15 m and increased illuminance requirements e.g. acc. to NFPA 101 with 10.8 lx , incl. LED supply and CG-S technology (20 addresses) in housing* with strain relief	40071354485
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





Escape route illumination with asymmetric optics

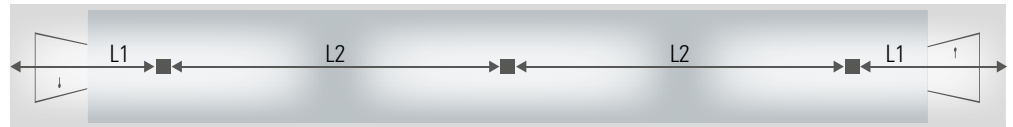
Planning assistance for GuideLed SL 13091.1, 13092.1 CG-S für $E_{min} = 1.0 \text{ lx}$ (0.5 lx)
 Measuring height 0.02 m, maintenance factor MF = 80 %, battery operation

Mounting height [m]	Type of mounting	L1	L2	L3	L4
3.0	Ceiling mounting	1.1 (2.7)	5.4 (8.1)	5.3 (6.4)	12.9 (15.2)
4.0	Escape route centre	1.3 (1.6)	3.2 (7.9)	5.9 (7.3)	14.6 (17.7)
5.0		1.4 (1.7)	3.4 (6.5)	6.4 (8.0)	15.9 (19.6)
6.0		1.6 (1.9)	3.8 (4.3)	6.8 (8.5)	17.1 (21.1)
7.0		1.7 (2.0)	4.1 (4.8)	7.0 (9.0)	18.1 (22.5)
8.0		1.8 (2.1)	4.2 (5.2)	7.3 (9.4)	18.9 (23.6)
9.0		1.9 (2.3)	4.6 (5.5)	7.4 (9.7)	19.5 (24.7)
10.0		1.9 (2.4)	4.9 (5.7)	7.5 (10.0)	19.9 (25.7)
11.0		1.8 (2.5)	5.1 (5.9)	7.4 (10.2)	20.5 (26.5)
12.0		1.8 (2.6)	5.2 (6.2)	7.2 (10.4)	20.8 (27.1)
13.0		1.7 (2.6)	5.3 (6.6)	6.7 (10.5)	21.0 (27.7)
14.0		1.5 (2.6)	5.3 (6.8)	5.7 (10.5)	21.1 (28.1)
15.0		1.2 (2.6)	5.2 (7.1)	4.6 (10.5)	21.0 (28.7)

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Planning assistance for GuideLed SL 13091.1, 13092.1 CG-S für $E_m = 10.8 \text{ lx}$

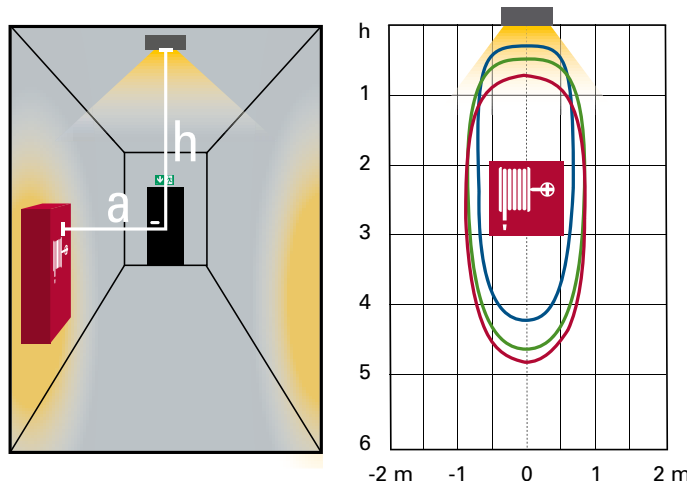
Measuring height 0.02 m, maintenance factor MF = 80 %, battery operation
 Escape route width 2 m, reflectance ceiling/wall/floor: 70 % / 50 % / 20 %, ceiling height = mounting height



Mounting height [m]	Type of mounting	L1	L2	E_m	E_{min}	E_{max}
3.0	Ceiling mounting	3.2	8.2	11.0	2.9	30
4.0		2.7	7.2	11.0	4.9	18
5.0		1	6.1	10.9	5.5	13

Planning assistance for GuideLed SL 13091.1, 13092.1 CG-S for vertical illuminance $E_{min} = 5 \text{ lx}$

Maintenance factor MF = 80 %, battery operation



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

1 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).

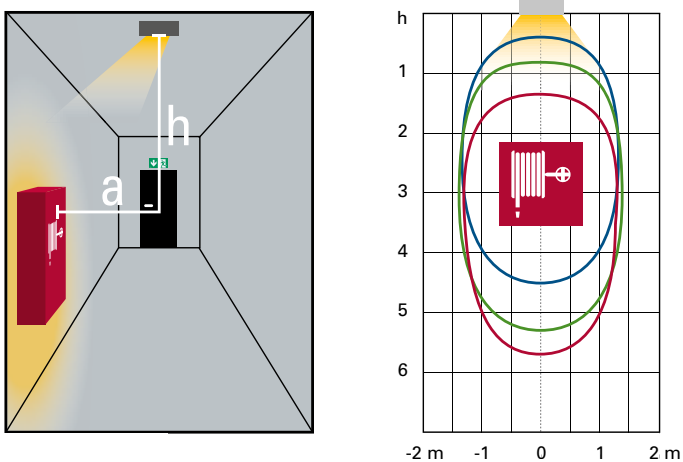
The required level of illuminance on the equipment is 5 lx measured vertically – i.e. perpendicular to the usual horizontal illuminance measurements on one level.

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 13051 und 13052 CG-S meet the specific requirements of EN 1838

In order to meet the requirements of EN 1838, the new GuideLed SL 13051 and 13052 CG-S 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



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



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 (up to 50,000 hours)

GuideLed SL 13051 CG-S



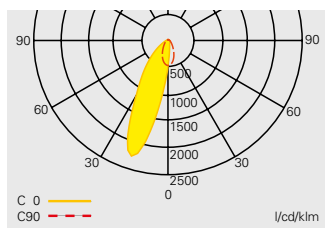
GuideLed SL 13052 CG-S



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 mm ²
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 to +40 °C
Light source	HighPower LEDs 2 x 1.6 W

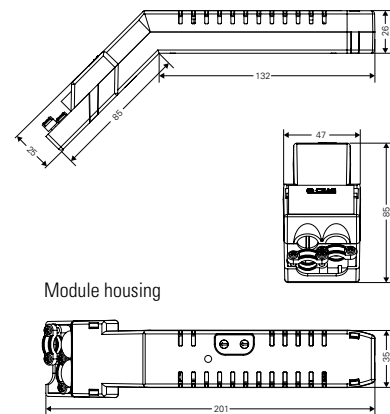
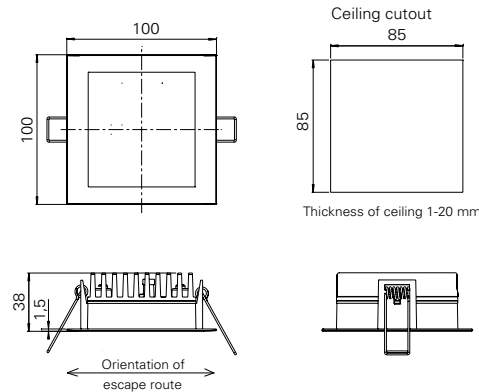
Ordering details

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

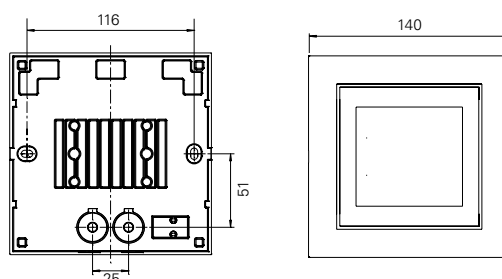


Light distribution curve
GuideLed SL 13051, 13052 CG-S

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 housing: IP20

GuideLed FSL 10011, 10012, 10013 CG-S

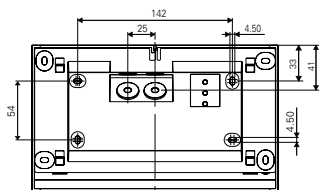
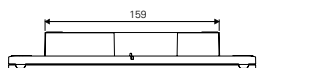
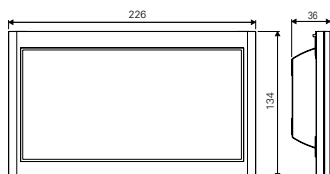
Surface mounting or semi-recessed mounting



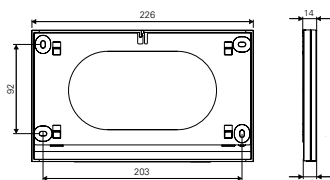
1 GuideLed FSL CG-S



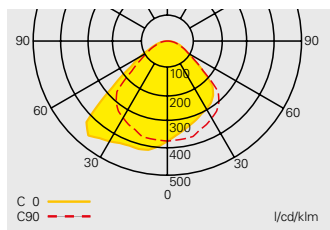
Dimensions in mm



FSL 10011 CG-S



FSL 10012/10013 CG-S



Light distribution curve
GuideLed FSL CG-S

GuideLed FSL 10011, 10012, 10013 CG-S

- Safety luminaire in LED technology for surface mounting or semi-recessed mounting
- Low height of only 36 mm or 14 mm
- Anti-glare illumination ensured by precise micro-prism optics
- Reduced battery costs on account of especially low power consumption
- Low operating costs on account of low effective power of 4 W only
- Suitable for mounting height of up to 5.5 m
- Minimum service requirement due to high service life of the LEDs (up to 50,000 hours)
- Installation of safety luminaire without the use of tools at the mounting set

Luminous flux Φ_N	125 lm
Luminous flux Φ_E/Φ_N at the end of rated operating time	100%
Housing material	PC, PMMA
Housing colour	Light grey RAL 7035
Weight	0.49 kg (10011 FSL CG-S) 0.45 kg (10012, 10013 FSL CG-S)
Type of mounting	Ceiling installation / semi-recessed installation
Connection terminal	Clamp terminal 2.5 mm ²
Voltage ranges	220 - 240 V AC, 50/60 Hz 176 - 275 V DC
Current consumption - battery operation (220 V)	18 mA
Power consumption mains operation (apparent power / effective power)	7.2 VA / 4.0 W
Permissible ambient temperature	-20 °C to +40 °C
Light source	LED batten

Ordering details fastening set and safety luminaire module

Scope of supply	Order No.
Mounting set for GuideLed FSL 10011 CG-S, surface installation, incl. LED supply and CG-S technology (20 addresses)	40071353641
Mounting set for GuideLed FSL 10012 CG-S, recessed installation of the V-CG-SLS28 supply provided and CG-S technology (20 addresses) *	40071353642
Mounting set for GuideLed FSL 10013 CG-S, recessed installation of the V-CG-SLR28 supply provided and CG-S technology (20 addresses) *	40071353644
LED safety luminaire GuideLed FSL 10011 / 10012 CG-S with special micro-prism optics (without mounting set)	40071353590

Planning assistance for GuideLed FSL

Measuring height 0.02 m, maintenance factor MF = 80%, battery operation

Mounting height [m]	Types of mounting	Types of mounting			
		L1	L2	L3	L4
2.50	Ceiling mounting	2.70 (3.20)	6.40 (7.60)	2.80 (3.40)	6.60 (8.00)
3.00	Escape route centre	2.90 (3.50)	6.90 (8.30)	3.10 (3.70)	7.40 (8.70)
3.50		3.00 (3.80)	7.60 (9.00)	3.30 (4.00)	8.00 (9.40)
4.00		2.90 (4.10)	8.10 (9.60)	3.20 (4.30)	8.60 (10.10)
5.00		2.30 (4.20)	8.30 (10.80)	2.40 (4.70)	9.30 (11.40)
2.50	Ceiling mounting	2.30 (3.30)	5.40 (6.40)	2.40 (3.40)	5.40 (6.60)
3.00	Room illumination	2.30 (3.30)	6.00 (7.00)	3.40 (3.40)	5.80 (7.20)
3.50		2.30 (3.30)	6.40 (7.80)	3.40 (3.40)	6.40 (7.60)
4.00		2.30 (3.40)	6.80 (8.20)	3.40 (3.30)	6.80 (8.20)
5.00		1.30 (3.30)	7.80 (9.20)	3.40 (4.40)	7.60 (9.20)

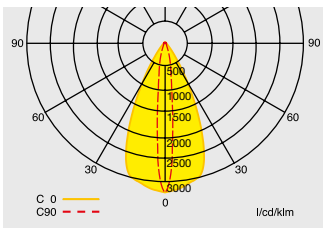
* Installation of the LED supply in a not included device, for further information about the LED supply please visit www.ceag.de.



GuideLed SL 13031, 13041 CG-S

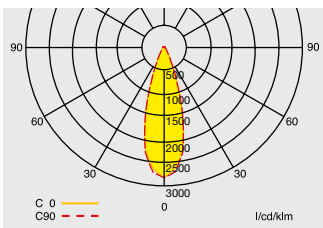
- Safety luminaire in LED technology for recessed mounting
- Low installation depth of only 38 mm
- Almost flush appearance on the ceiling ensured by optics integrated in the luminaire
- Suitable for mounting heights up to 28 m by narrow beam optics and exceptionally efficient HighPower LEDs
- Spacing up to 24 m from luminaire to luminaire with optics for escape route illumination
- Up to 14 m from luminaire to luminaire with optics for open area illumination
- Minimum service requirement due to high service life of the LEDs (up to 50,000 hours)

GuideLed SL 13031 CG-S



Light distribution curve
GuideLed SL 13031 CG-S surface
mounting with asymmetric optics

GuideLed SL 13041 CG-S



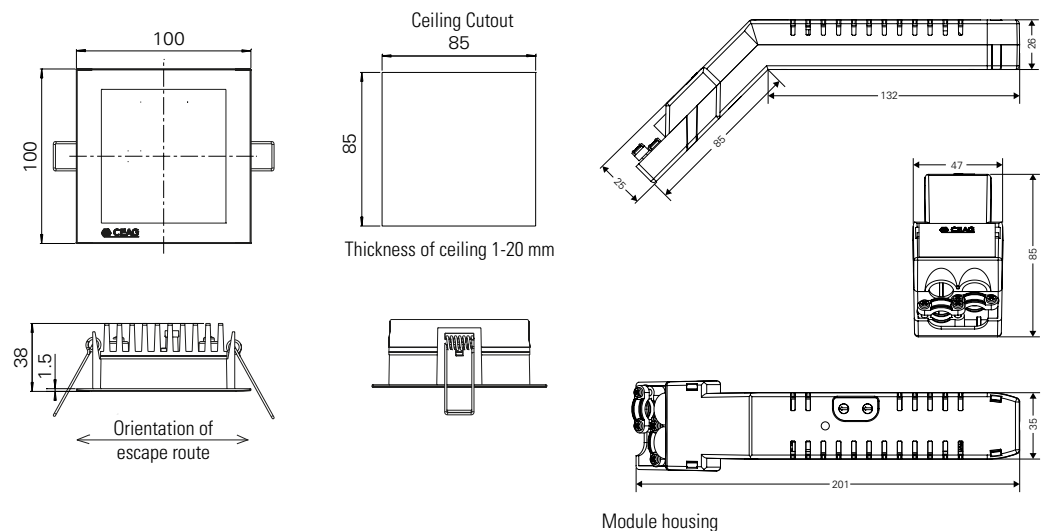
Light distribution curve
GuideLed SL 13041 CG-S surface
mounting with symmetric optics

Luminous flux Φ_N	335 lm
Luminous flux Φ_E/Φ_N at the end of rated operating time	100%
Housing material	PC, aluminium
Housing colour	White RAL 9010
Weight	0.44 kg
Type of mounting	Recessed mounting
Connection terminal	Clamp terminal 2.5 mm ²
Voltage ranges	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 to +40 °C
Light source	HighPower LEDs 2 x 1.5 W

Ordering details

Scope of supply	Order No.
GuideLed SL 13031 CG-S recessed mounting with asymmetric narrow beam optics for escape route illumination, LED supply and CG-S technology (20 addresses) in housing* with strain relief	40071353481
GuideLed SL 13041 CG-S recessed mounting with symmetric narrow beam optics for anti-panic / open area illumination, LED supply and CG-S technology (20 addresses) in housing* with strain relief	40071353480

Dimensions in mm



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

GuideLed SL 13032, 13042 CG-S

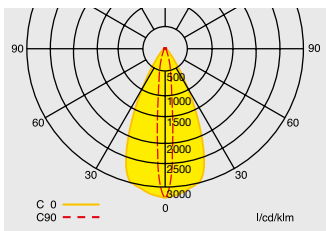
Surface mounting with narrow beam optics



GuideLed SL 13032, 13042 CG-S

- Safety luminaire in LED technology for surface mounting
- Low profile of only 30 mm
- Unobtrusive appearance ensured by optics integrated in the luminaire
- Suitable for mounting heights up to 30 m by narrow beam optics and exceptionally efficient HighPower LEDs
- Spacing up to 24 m from luminaire to luminaire with optics for escape route illumination
- Up to 14 m from luminaire to luminaire with optics for open area illumination
- Minimum service requirement due to high service life of the LEDs (up to 50,000 hours)

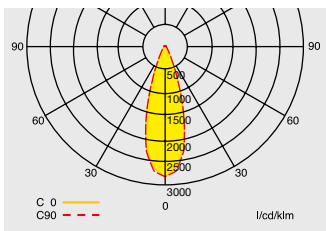
GuideLed SL 13032 CG-S



Light distribution curve
GuideLed SL 13032 CG-S surface
mounting with asymmetric optics

Luminous flux Φ_N	335 lm
Luminous flux Φ_E/Φ_N at the end of rated operating time	100%
Housing material	PC, aluminium
Housing colour	White RAL 9010
Weight	0.43 kg
Type of mounting	Surface mounting
Connection terminal	2 x 3 x 2.5 mm ²
Voltage ranges	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 to +40 °C
Light source	HighPower LEDs 2 x 1.5 W

GuideLed SL 13042 CG-S

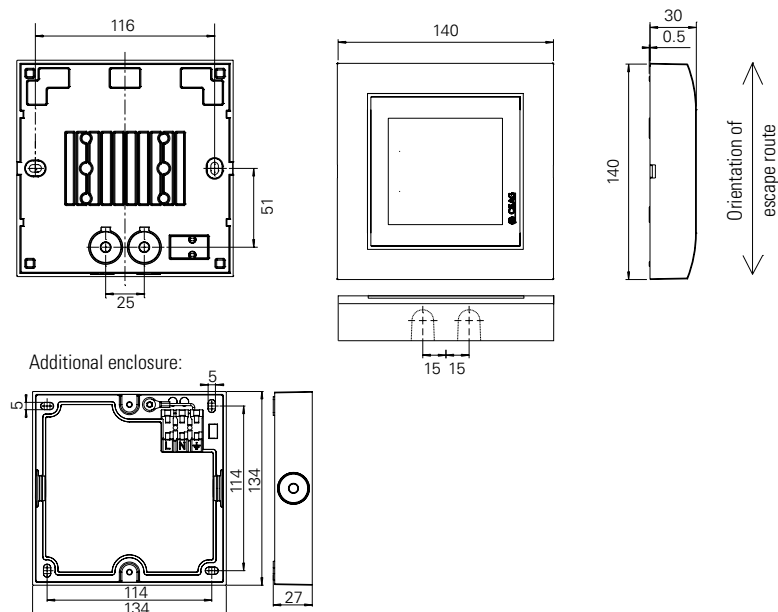


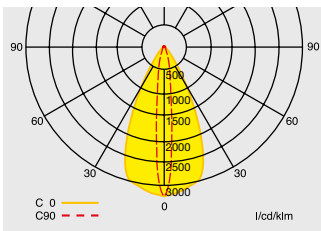
Light distribution curve
GuideLed SL 13042 CG-S surface
mounting with symmetric optics

Ordering details

Scope of supply	Order No.
GuideLed SL 13032 CG-S surface mounting with asymmetric narrow beam optics for escape route illumination incl. LED supply and CG-S technology (20 addresses)	40071353483
GuideLed SL 13042 CG-S surface mounting with symmetric narrow beam optics for anti-panic / open area illumination incl. LED supply and CG-S technology (20 addresses)	40071353482
Additional enclosure for more space for wiring and cable entry, very large opening from above, two-sided cable entry for surface-mounted wiring incl. through-wiring terminal and connection cable to luminaire, degree of protection: IP31	40071353585

Dimensions in mm

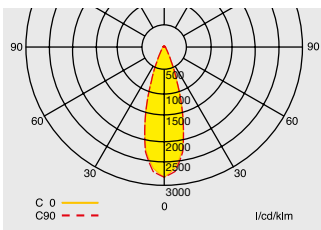




Planning assistance for GuideLed SL CG-S with asymmetric optics for E = 1.0 lx (0.5 lx)

Measuring height 0.02 m, maintenance factor MF = 80%, battery operation

Mounting height [m]	Types of mounting	L1	L2	L3	L4
8	Ceiling mounting	2.6 (3.2)	6.7 (9.1)	5.7 (6.5)	13.2 (15.0)
10	Escape route centre	2.8 (3.4)	7.2 (9.4)	6.6 (7.4)	15.1 (17.2)
12		2.7 (3.7)	7.8 (9.4)	7.2 (8.2)	16.8 (19.2)
14		2.5 (3.8)	8.0 (9.9)	7.7 (9.1)	18.5 (21.1)
16		2.4 (3.7)	8.0 (10.6)	8.2 (9.7)	19.9 (22.7)
18		2.3 (3.6)	7.8 (11.1)	8.5 (10.3)	21.2 (24.6)
20		2.1 (3.4)	7.4 (11.1)	8.7 (10.9)	22.2 (26.2)
22		1.9 (3.2)	7.1 (11.1)	8.7 (11.2)	23.1 (27.5)
24		1.7 (3.1)	6.8 (11.0)	8.5 (11.6)	23.8 (28.8)
26		1.4 (2.9)	6.6 (10.6)	8.0 (11.8)	24.4 (29.9)
28		0.9 (2.7)	6.3 (10.2)	6.0 (11.9)	24.7 (30.9)
30		0.3 (2.5)	6.0 (9.9)	2.4 (12.0)	24.9 (31.9)



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]	Types of mounting	L1	L2	L3	L4
8	Ceiling mounting	3.8 (4.8)	9.5 (11.5)	3.8 (4.6)	9.2 (11.1)
10	Escape route centre	4.2 (5.2)	10.4 (12.6)	4.3 (5.2)	10.3 (12.2)
12		4.6 (5.6)	11.1 (13.7)	4.7 (5.7)	11.3 (13.4)
14		4.9 (6.0)	11.9 (14.7)	5.0 (6.1)	12.2 (14.4)
16		5.1 (6.4)	12.7 (15.3)	5.2 (6.5)	12.9 (15.4)
18		5.1 (6.7)	13.4 (16.1)	5.2 (6.8)	13.6 (16.4)
20		5.0 (7.0)	14.0 (16.9)	5.1 (7.1)	14.1 (17.3)
22		4.6 (7.2)	14.3 (17.7)	4.8 (7.2)	14.4 (18.1)
24		4.1 (7.3)	14.5 (18.5)	4.0 (7.3)	14.6 (18.8)
26		2.9 (7.2)	14.4 (19.1)	2.6 (7.3)	14.6 (19.4)
28		- (7.1)	14.2 (19.7)	- (7.2)	14.4 (19.9)
30		- (6.8)	13.6 (20.1)	- (6.9)	13.8 (20.2)
8	Ceiling mounting	3.5 (4.5)	7.8 (9.6)	3.4 (3.4)	7.8 (9.8)
10	Room illumination	3.5 (5.5)	8.6 (10.6)	3.4 (3.4)	8.4 (10.4)
12		4.5 (4.5)	10.2 (11.2)	3.4 (4.4)	8.4 (11.4)
14		4.5 (5.5)	10.2 (12.0)	3.4 (4.4)	9.6 (12.0)
16		5.5 (5.5)	11.4 (12.6)	3.4 (4.4)	9.8 (12.8)
18		5.5 (5.5)	12.2 (13.6)	3.4 (5.4)	10.2 (13.2)
19		5.5 (5.5)	12.4 (14.6)	3.4 (5.4)	10.6 (13.0)
20		3.9 (5.5)	13.0 (14.8)	4.0 (5.4)	10.6 (13.4)
22		4.5 (5.5)	13.4 (16.0)	3.4 (5.4)	11.2 (13.6)
24		3.5 (5.4)	13.8 (16.4)	3.4 (5.5)	11.8 (14.4)
26		3.5 (5.4)	14.2 (17.2)	2.4 (5.5)	12.2 (14.8)
28		0.7 (5.5)	13.6 (18.0)	0.7 (5.4)	13.4 (15.2)
30		0.7 (5.5)	14.4 (19.0)	0.7 (5.4)	13.2 (15.2)



Escape route lighting
and safety sign
luminaires Style



Diverse applications thanks to flexible mounting system

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.

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. Only the selected enclosures need to be snapped to the base, ready for use.

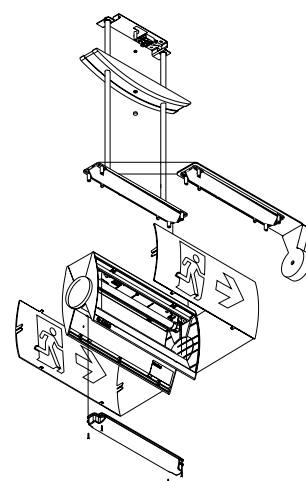
Mounting of the pictogram covers is also quick and easy thanks to snap mounting.

The STYLE escape sign luminaires with LED technology minimise energy consumption considerably. In addition, maintenance effort for the LEDs is reduced to a minimum thanks to their high service life.

CEAG's proven electronic ballasts with new 20 digit address switch together with CEWA GUARD monitoring system and connecting option to all CEAG emergency lighting systems. 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.

Features:

- Versatile types of application via matched modular elements
- IP54 optionally available
- Luminaires with quick-mounting sets facilitate and fasten the installation
- Highly efficient LED technology with especially low current consumption and low maintenance effort with a long service life
- Shortened inspection effort due to CEWA GUARD technology
- Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation expenditures thanks to STAR technology
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

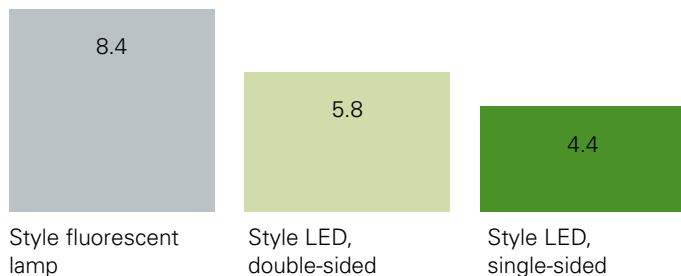




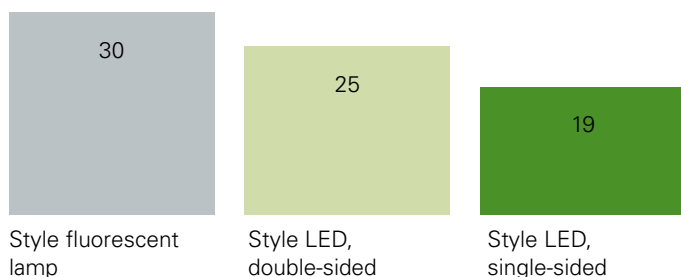
Up to 48% energy savings with efficient LED technology

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



Current in case of battery operation in mA



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.

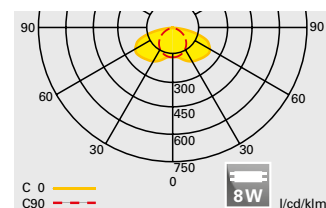
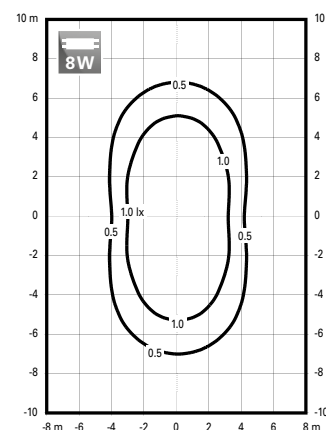
In terms of light distribution, the new Style LED escape luminaires are just as impressive as their fluorescent predecessors. The optical components are designed so that the same values as the previous fluorescent luminaires are achieved with existing light point distances. This guarantees standard-compliant 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 international standard ISO 7010, so that sign in accordance with DIN 4844-2 is no longer valid.

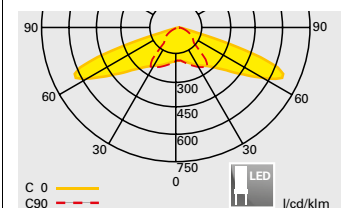
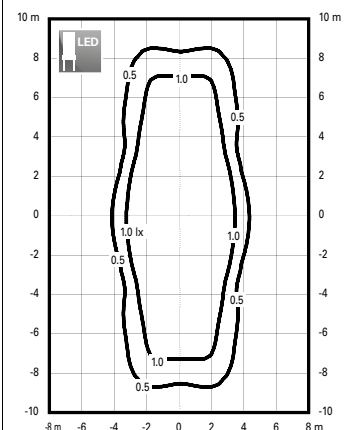


22011 CG-S (transparent cover)

Luminaire mounting height: 3 m, emergency light operation



22011 LED SL CG-S (transparent cover)



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

1

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.



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-S-technology

Style LED Upgrade Kit 1 CG-S



Style LED Upgrade Kit 2 CG-S



Style LED Upgrade Kit SL CG-S



Luminous flux Φ_E/Φ_N at the 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
Connection terminal	2 x 3 x 2.5 mm ²
Voltage ranges	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 temperature range	-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

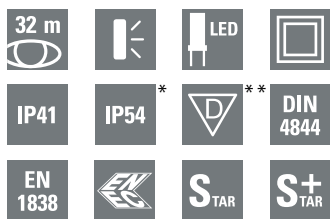
Ordering details

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 (silicone), optimized for LED, incl. replacement gasket with foamed, sulphur-free sealing for quick mounting set, required for upgrading existing style luminaires with IP54 set	40071350598

*) IP54 for electronic and lamp. For increased tightness requirements indoors or in canopied outdoor areas.

Style 22011 LED CG-S

Safety luminaire and escape sign luminaire



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 permits combination with various fixing modules
- Large selection of screenprinted pictogram covers with simple snap mounting
- 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 6 m, maximum distance from luminaire to luminaire: > 16 m from 3 m mounting height and > 20 m from 4.5 m mounting height
- Minimum service requirement due to high service life of the LEDs (up to 50,000 hours)
- Simple mounting via quick mounting set (can be pre-assembled) 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 for indoor rooms or for canopied outdoor areas
- Shortened inspection effort due to CEWA GUARD technology
- Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation expenditures by STAR technology
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

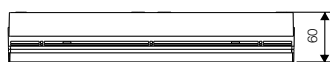
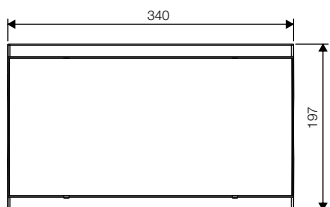
22011 LED SL CG-S with transparent cover



22011 LED CG-S with cover PR






Dimensions in mm



Viewing distance	32 m
Luminous flux Φ_N 22011 LED SL CG-S	320 lm
Luminous flux Φ_E/Φ_N at the end of rated operating time	100 %
Housing material	Polycarbonate
Housing colour	Light grey RAL 7035
Weight	0.79 kg
Type of mounting	Wall or ceiling mounting
Connection terminals	2 x 3 x 2.5 mm ²
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 temperature range	- 20 °C to + 40 °C
Current consumption - battery operation (220 V)	19 mA
Light source	3 x 1 W LED

Ordering details

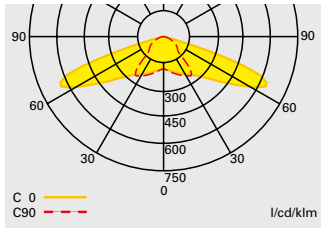
Type	Scope of supply	Order No.
Style 22011 LED SL CG-S	Luminaire housing IP41, including LED-supply with CG-S technology and LED-circuit board 3 x 1 W, for escape route lighting, without cover, without quick mounting set	40071350160
Style 22011 LED CG-S	Luminaire housing IP41, including LED-supply with 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 tightness requirements indoors or in canopied outdoor areas.

**) In combination with IP54 set: limited surface temperature acc. to DIN EN 60598-2-24

Planning help for 22011 LED SL CG-S with transparent cover for E = 1.0 lx (0.5 lx)

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

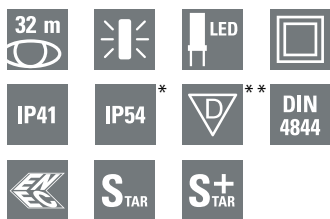


Light distribution curve 22011 LED CG-S with transparent cover

Mounting height [m]	Types of mounting	Mounting types			
		L1	L2	L3	L4
2.5	Ceiling mounting	3.1 (3.9)	7.9 (9.6)	6.5 (7.3)	14.6 (15.9)
3.0	Escape route centre	3.2 (4.2)	8.4 (10.4)	7.1 (8.3)	16.6 (18.4)
3.5		3.3 (4.4)	8.8 (11.1)	7.5 (9.1)	18.3 (20.6)
4.0		3.6 (4.5)	9.0 (11.7)	7.5 (9.9)	19.7 (22.6)
4.5		3.9 (4.6)	9.1 (12.1)	7.1 (10.3)	20.6 (24.5)
5.0		4.2 (4.8)	9.5 (12.4)	6.3 (10.6)	21.2 (26.0)
5.5		4.4 (5.1)	10.1 (12.6)	5.3 (10.7)	21.3 (27.4)
6.0		4.4 (5.4)	10.7 (12.8)	4.3 (10.4)	20.8 (28.5)
6.5		3.7 (5.7)	11.3 (13.0)	3.4 (9.8)	19.6 (29.4)
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	2.7 (3.5)	5.9 (7.1)	6.7 (6.3)	14.6 (14.5)
3.0	Room illumination	2.7 (3.5)	6.6 (7.7)	3.7 (8.0)	16.7 (17.7)
3.5		2.4 (3.6)	7.1 (8.4)	6.5 (4.6)	18.4 (20.4)
4.0		1.8 (3.8)	7.4 (9.0)	5.4 (9.7)	19.9 (22.7)
4.5		1.2 (3.6)	7.5 (9.7)	5.8 (5.2)	21.0 (24.4)
5.0		2.2 (3.1)	9.0 (10.1)	3.7 (9.0)	19.7 (26.2)
5.5		1.5 (2.5)	9.6 (10.4)	3.4 (7.4)	20.3 (27.7)
6.0		0.8 (1.7)	9.1 (10.5)	4.7 (7.9)	21.3 (29.1)
6.5		0.6 (3.4)	8.6 (11.8)	4.7 (6.1)	21.6 (27.3)
7.0		0.7 (3.1)	9.4 (12.7)	3.9 (5.0)	19.1 (27.6)

Style 22021 LED CG-S

Escape sign luminaire



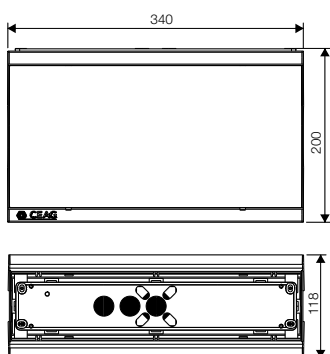
Style 22021 LED CG-S

- Double-sided escape sign luminaire from high quality, UV-resistant, halogen-free plastic with LED-technology
- Modular constructed luminaire series permits combination with various fixing modules
- Large selection of screenprinted pictogram covers with simple snap mounting
- Exit signs with high luminance of > 500 cd/m² (white area) and good uniformity, in accordance with standards (silk-screened pictograms)
- Minimum service requirement due to high service life of the LEDs (up to 50,000 hours)
- Simple mounting via quick mounting set (can be pre-assembled) 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 for indoor rooms or for canopied outdoor areas
- Shortened inspection effort due to CEWA GUARD technology
- Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation expenditures by 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 the end of rated operating time	100 %
Housing material	Polycarbonate
Housing colour	Light grey RAL 7035
Weight	1.14 kg
Type of mounting	Wall or ceiling mounting
Connection terminals	2 x 3 x 2.5 mm ²
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 temperature range	-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 tightness requirements indoors or in canopied outdoor areas.

***) In combination with IP54 set: limited surface temperature acc. to DIN EN 60598-2-24



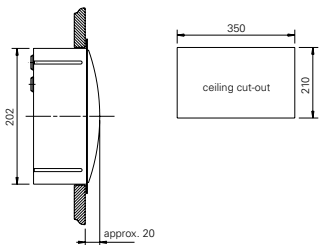
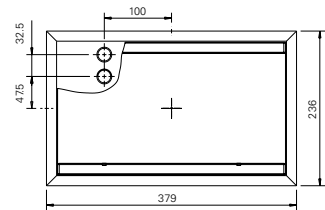
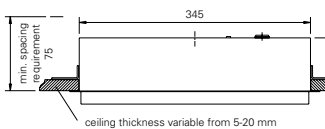
Style 23011 LED CG-S

- Safety luminaire for recessed ceiling mounting
- Spezielle LED-Optikanordnung für besonders effiziente Fluchtwegeausleuchtung, Lichtpunkthöhen bis 6 m, maximaler Abstand Leuchte zu Leuchte: > 16 m ab 3 m Lichtpunkthöhe und > 20 m ab 4,5 m
- Minimum service requirement due to high service life of the LEDs (up to 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
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

23011 LED SL CG-S with transparent cover



Dimensions in mm



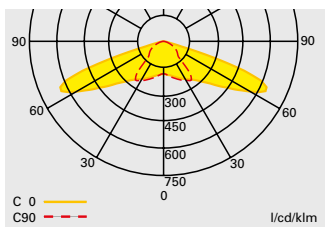
Luminous flux Φ_N	320 lm
Luminous flux Φ_E/Φ_N at the end of rated operating time	100 %
Housing material	Polycarbonate
Housing colour	Light grey RAL 7035
Weight	1.99 kg
Type of mounting	Ceiling mounting
Connection terminals	2 x 3 x 2.5 mm ²
Connection voltage	220 - 240 V AC, 50/60 Hz 176 - 275 V DC
Power consumption mains operation (apparent power / effective power)	7.6 VA / 4.4 W
Permissible temperature range	-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 with transparent cover for E = 1.0 lx (0.5 lx)

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

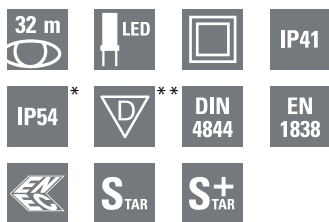


Light distribution curve 23011 LED CG-S

Mounting height [m]	Types of mounting	Types of mounting			
		L1	L2	L3	L4
2.5	Ceiling mounting	3.1 (3.9)	7.9 (9.6)	6.5 (7.3)	14.6 (15.9)
3.0	Escape route centre	3.2 (4.2)	8.4 (10.4)	7.1 (8.3)	16.6 (18.4)
4.0		3.6 (4.5)	9.0 (11.7)	7.5 (9.9)	19.7 (22.6)
5.0		4.2 (4.8)	9.5 (12.4)	6.3 (10.6)	21.2 (26.0)
6.0		4.4 (5.4)	10.7 (12.8)	4.3 (10.4)	20.8 (28.5)
6.5		3.7 (5.7)	11.3 (13.0)	3.4 (9.8)	19.6 (29.4)
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	2.7 (3.5)	5.9 (7.1)	6.7 (6.3)	14.6 (14.5)
3.0	Room illumination	2.7 (3.5)	6.6 (7.7)	3.7 (8.0)	16.7 (17.7)
4.0		1.8 (3.8)	7.4 (9.0)	5.4 (9.7)	19.9 (22.7)
5.0		2.2 (3.1)	9.0 (10.1)	3.7 (9.0)	19.7 (26.2)
6.0		0.8 (1.7)	9.1 (10.5)	4.7 (7.9)	21.3 (29.1)
7.0		0.7 (3.1)	9.4 (12.7)	3.9 (5.0)	19.1 (27.6)

Style 22011, 22021 LED CG-S, set luminaires

Safety or exit sign luminaire



Style 22011, 22021 LED CG-S, set luminaires

- Escape sign luminaire from high quality, UV-resistant, halogen-free plastic with LED-technology
- Modular constructed luminaire series allowing combination with various fixing modules
- 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
- 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

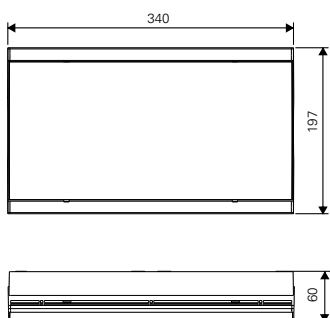
22011 LED SL CG-S with transparent cover



22011 LED CG-S with cover PR



Dimensions in mm

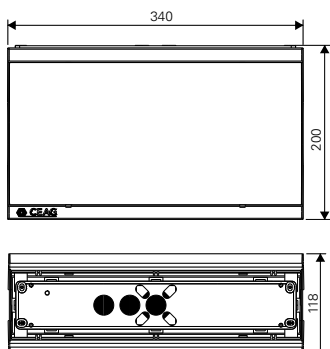


Viewing distance	32 m
Luminous flux Φ_N	320 lm
Luminous flux Φ_E/Φ_N at end of rated operating time	100 %
Housing material	Polycarbonate
Housing colour	Light grey RAL 7035
Weight	0.79 kg
Type of mounting	Wall and ceiling mounting
Terminals	2 x 3 x 2.5 mm ²
Connection voltage	220 - 240 V, 50/60 Hz 176 - 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

22021 LED CG-S with cover PR



Dimensions in mm

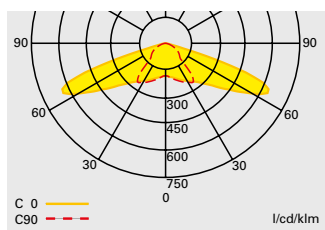


Ordering details

Type	Scope of supply	Order No.
Style 22011 LED SL CG-S Set	Luminaire housing, including LED-supply with CG-S technology and LED-circuit board 3 x 1 W, for escape route lighting, with quick mounting set, with transparent cover	40071350652
Style 22011 LED CG-S Set acc. to ISO 7010	Luminaire housing, including LED-supply with CG-S technology and LED-circuit board 3 x 1 W, for exit signage, with quick mounting set, with opaque cap and pictogram set (arrow left, right, down)	40071350653
Style 22021 LED CG-S Set acc. to ISO 7010	Luminaire housing, including LED-supply with CG-S technology and LED-circuit board 4 x 1 W, for exit signage, with opaque cap and pictogram set (arrow left, right, down), with quick mounting set	40071350654
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.

***) In combination with IP54 set: limited surface temperature acc. to DIN EN 60598-2-24



Light distribution curve 22011 LED CG-S with transparent cover

Planning help for 22011 LED SL CG-S with transparent cover for E = 1.0 lx (0.5 lx)
 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 (7.3)	14.6 (15.9)
3.0	Escape route centre	3.2 (4.2)	8.4 (10.4)	7.1 (8.3)	16.6 (18.4)
3.5		3.3 (4.4)	8.8 (11.1)	7.5 (9.1)	18.3 (20.6)
4.0		3.6 (4.5)	9.0 (11.7)	7.5 (9.9)	19.7 (22.6)
4.5		3.9 (4.6)	9.1 (12.1)	7.1 (10.3)	20.6 (24.5)
5.0		4.2 (4.8)	9.5 (12.4)	6.3 (10.6)	21.2 (26.0)
5.5		4.4 (5.1)	10.1 (12.6)	5.3 (10.7)	21.3 (27.4)
6.0		4.4 (5.4)	10.7 (12.8)	4.3 (10.4)	20.8 (28.5)
6.5		3.7 (5.7)	11.3 (13.0)	3.4 (9.8)	19.6 (29.4)
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	2.7 (3.5)	5.9 (7.1)	6.7 (6.3)	14.6 (14.5)
3.0	Room illumination	2.7 (3.5)	6.6 (7.7)	3.7 (8.0)	16.7 (17.7)
3.5		2.4 (3.6)	7.1 (8.4)	6.5 (4.6)	18.4 (20.4)
4.0		1.8 (3.8)	7.4 (9.0)	5.4 (9.7)	19.9 (22.7)
4.5		1.2 (3.6)	7.5 (9.7)	5.8 (5.2)	21.0 (24.4)
5.0		2.2 (3.1)	9.0 (10.1)	3.7 (9.0)	19.7 (26.2)
5.5		1.5 (2.5)	9.6 (10.4)	3.4 (7.4)	20.3 (27.7)
6.0		0.8 (1.7)	9.1 (10.5)	4.7 (7.9)	21.3 (29.1)
6.5		0.6 (3.4)	8.6 (11.8)	4.7 (6.1)	21.6 (27.3)
7.0		0.7 (3.1)	9.4 (12.7)	3.9 (5.0)	19.1 (27.6)

1

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

Style 21011 LED CG-S

Safety luminaire



Style 21011 LED CG-S

- Compact safety luminaire from high quality, UV-resistant, halogen-free plastic with LED-technology
- Modular constructed luminaire series permits combination with various fixing modules
- Available in two different optical variants:
 - Asymmetric light distribution for escape route illumination up to 6 m mounting height
 - Symmetrical light distribution for mounting heights up to 9 m
- Minimum service requirement due to high service life of the LEDs (up to 50,000 hours)
- Simple mounting via quick mounting set (can be pre-assembled) 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 expenditures by STAR technology
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

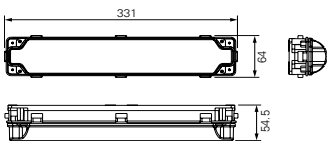
Style 21011 LED SL R CG-S



Style 21011 LED SL O CG-S



Dimensions in mm



Luminous flux Φ_N	21011 SL R: 305 lm 21011 SL O: 410 lm
Luminous flux Φ_E/Φ_N at the end of rated operating time	100 %
Housing material	Polycarbonate
Housing colour	Light grey RAL 7035
Weight	0.39 kg
Type of mounting	Wall or ceiling mounting
Connection terminals	2 x 3 x 2.5 mm ²
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 temperature range	-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 1 W LED

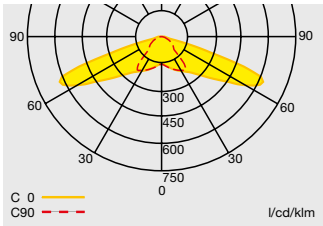
Ordering details

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





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

Planning help for 21011 LED SL R CG-S 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

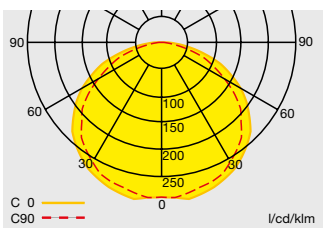


Light distribution curve 21011 LED SL R CG-S





Mounting height [m]	Types of mounting	L1 	L2 	L3 	L4 
2.5	Ceiling mounting	2.9 (3.7)	7.4 (9.1)	6.5 (7.3)	14.6 (16.1)
3.0	Escape route centre	3.0 (3.9)	7.9 (9.8)	7.1 (8.3)	16.7 (18.3)
3.5		3.2 (4.1)	8.2 (10.5)	7.4 (9.2)	18.3 (20.6)
4.0		3.6 (4.2)	8.3 (11.0)	7.3 (9.9)	19.7 (22.6)
4.5		3.8 (4.3)	8.6 (11.3)	6.6 (10.3)	20.5 (24.5)
5.0		4.0 (4.6)	9.3 (11.6)	5.8 (10.5)	20.9 (26.1)
5.5		4.0 (4.9)	9.9 (11.7)	4.6 (10.4)	20.7 (27.5)
6.0		3.4 (5.2)	10.5 (11.9)	3.6 (10.0)	19.9 (28.5)
6.5		- (5.5)	10.9 (12.4)	- (9.2)	18.3 (29.2)
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 (3.3)	5.8 (7.0)	3.3 (3.9)	14.7 (14.9)
3.0	Room illumination	2.8 (3.3)	6.5 (7.5)	3.7 (8.2)	16.7 (18.0)
3.5		2.3 (3.5)	7.0 (8.2)	6.6 (4.5)	18.5 (20.6)
4.0		1.5 (3.8)	7.3 (8.8)	5.3 (10.4)	19.9 (22.7)
4.5		1.0 (3.6)	7.5 (9.5)	5.4 (5.6)	20.9 (24.7)
5.0		2.1 (3.1)	8.9 (10.0)	3.5 (6.3)	19.5 (26.3)
5.5		1.3 (2.2)	9.4 (10.3)	3.2 (7.0)	20.1 (27.8)
6.0		0.7 (1.3)	8.8 (10.4)	4.7 (7.6)	21.0 (29.1)
6.5		0.5 (1.9)	8.4 (11.0)	4.0 (6.9)	21.0 (28.9)
7.0		0.9 (2.9)	9.6 (12.5)	3.1 (4.8)	17.6 (27.5)
7.5		0.6 (2.3)	9.9 (13.4)	1.2 (3.3)	16.4 (27.6)

Planning help for 21011 LED SL O CG-S 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

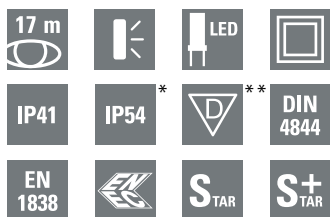


Light distribution curve
21011 LED SL O CG-S

Mounting height [m]	Types of mounting	L1 	L2 	L3 	L4 
2.5	Ceiling mounting	4.2 (5.1)	10.3 (12.5)	4.5 (5.6)	11.1 (13.7)
3.0	Escape route centre	4.5 (5.6)	11.1 (13.5)	4.8 (6.0)	12.0 (14.8)
3.5		4.7 (5.9)	11.8 (14.5)	5.0 (6.3)	12.7 (15.7)
4.0		4.9 (6.2)	12.4 (15.3)	5.1 (6.6)	13.3 (16.6)
5.0		5.0 (6.7)	13.4 (16.8)	5.2 (7.1)	14.1 (18.0)
6.0		4.9 (7.0)	13.9 (17.9)	5.1 (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)	4.2 (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	3.1 (4)	8.9 (10.9)	3.6 (4.2)	10.1 (12)
3.0	Room illumination	3.6 (4.3)	10.1 (12)	3.5 (4.4)	10.5 (12.9)
3.5		3.4 (3.8)	10.5 (12.2)	3.9 (5.2)	11.6 (14.6)
4.0		4 (4.8)	11.7 (13.8)	3.5 (4.8)	11.6 (14.6)
5.0		4 (4.8)	12.8 (15.1)	3.5 (5.2)	12.7 (16.3)
6.0		3.9 (4.6)	13.6 (16.1)	3.3 (5.6)	13.5 (17.8)
7.0		3.6 (5.1)	14.2 (17.7)	2.8 (5.2)	14.1 (18.3)
8.0		3.1 (5.3)	14.5 (18.9)	2.5 (4.5)	14.5 (18.8)
9.0		1.5 (5.2)	14.2 (19.5)	2.7 (4.3)	15.3 (19.5)

Style 51011 LED CG-S

Safety luminaire and escape sign luminaire



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 permits combination with various fixing modules
- Includes transparent cap 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 service requirement due to high service life of the LEDs (up to 50,000 hours)
- Simple mounting via quick mounting set (can be pre-assembled) 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 expenditures by STAR technology
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

51011 LED CG-S



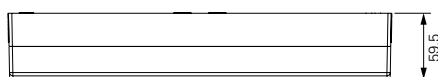
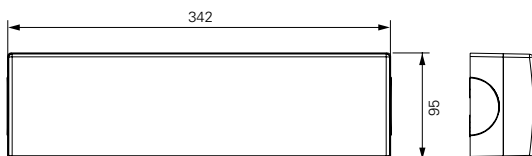
51011 LED CG-S with pictogram foil PR



Luminous flux Φ_N	390 lm (without pictogram foil)
Viewing distance	17 m
Luminous flux Φ_E/Φ_N at the end of rated operating time	100 %
Housing material	Polycarbonate
Housing colour	Light grey RAL 7035
Weight	0.58 kg
Type of mounting	Wall or ceiling mounting
Connection terminals	2 x 3 x 2.5 mm ²
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 temperature range	-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

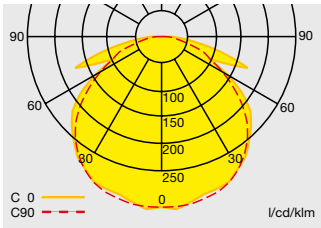


Dimensions in mm

*) IP54 for electronic and lamp. For increased tightness requirements indoors or in canopied outdoor areas.

***) In combination with IP54 set: limited surface temperature acc. to DIN EN 60598-2-24

Planning help for 51011 LED CG-S 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

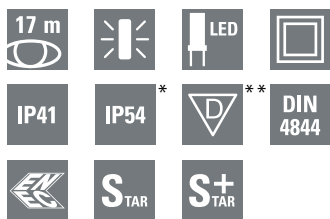


Light distribution curve 51011 LED CG-S with transparent cover

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	1.2 (0.8)	7.9 (8.8)	3.7 (4.7)	10.1 (15.4)
3.0	Room illumination	3.4 (1.2)	9.3 (10.2)	3.5 (4.8)	9.5 (15.1)
3.5		3.7 (1.2)	10.1 (11.2)	3.6 (5.0)	10.0 (14.3)
4.0		3.8 (4.4)	10.7 (12.8)	3.7 (4.7)	10.7 (13.1)
4.5		3.9 (4.9)	11.3 (13.7)	3.8 (4.8)	11.3 (13.6)
5.0		3.9 (5.0)	11.8 (14.4)	3.8 (4.9)	11.8 (14.3)
5.5		3.9 (5.1)	12.3 (15.0)	3.7 (5.0)	12.2 (15.0)
6.0		3.9 (5.2)	12.7 (15.6)	3.7 (5.1)	12.6 (15.6)
6.5		3.7 (5.3)	13.0 (16.2)	3.6 (5.1)	13.0 (16.1)
7.0		3.6 (5.4)	13.3 (16.7)	3.4 (5.1)	13.3 (16.6)
7.5		3.3 (5.3)	13.5 (17.1)	3.2 (5.1)	13.6 (17.1)
8.0		3.2 (5.1)	13.8 (17.3)	2.7 (5.3)	13.7 (17.8)
8.5		2.9 (5.3)	13.9 (17.9)	2.5 (5.1)	13.9 (17.9)
9.0		2.7 (4.8)	14.0 (18.0)	2.2 (5.2)	14.0 (18.6)
9.5		2.2 (4.9)	14.1 (18.5)	1.8 (4.9)	14.1 (18.7)
10.0		1.8 (4.9)	14.2 (18.9)	1.4 (4.6)	14.1 (18.8)

Style 51021 LED CG-S

Escape sign luminaire



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 permits combination with various fixing modules
- Includes opaque cap 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 service requirement due to high service life of the LEDs (up to 50,000 hours)
- Simple mounting via quick mounting set (can be pre-assembled) 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 expenditures by STAR technology
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

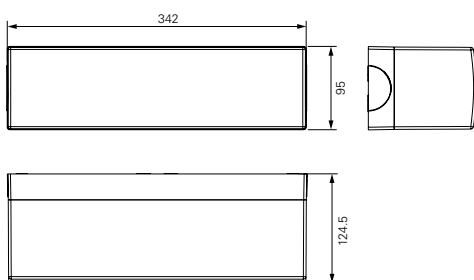
51021 LED CG-S with pictogram foil PR



Viewing distance	17 m
Luminous flux Φ_E/Φ_N at the end of rated operating time	100 %
Housing material	Polycarbonate
Housing colour	Light grey RAL 7035
Weight	0.75 kg
Type of mounting	Wall or ceiling mounting
Connection terminals	2 x 3 x 2.5 mm ²
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 temperature range	-20 °C to +40 °C
Current consumption - battery operation (220 V)	25 mA
Light source	4 x 1 W LED

Ordering details

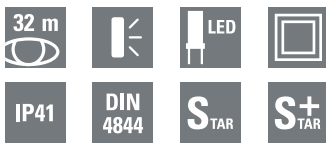
Type	Scope of supply	Order No.
Style 51021 LED CG-S	Luminaire housing, including LED-supply with CG-S technology and LED-circuit board 4 x 1 W, with opaque cap and pictogram set (arrow left, right, down), without quick mounting set 	40071350172
Quick-mounting set	With terminals and optional distance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



Dimensions in mm

*) IP54 for electronic and lamp. For increased tightness requirements indoors or in canopied outdoor areas.

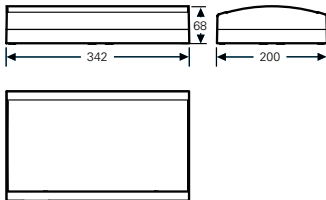
***) In combination with IP54 set: limited surface temperature acc. to DIN EN 60598-2-24



Style Variant 29011 LED CG-S




- Single-sided LED escape sign luminaire of high quality, UV-resistant, halogen-free plastic
- Large selection of screenprinted pictogram covers with simple snap mounting
- Minimum service requirement due to high service life of the LEDs (up to 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
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

29011 LED with cover PR



Viewing distance	32 m
Luminous flux Φ_E/Φ_N at the end of rated operating time	100 %
Housing material	Polycarbonate (850 °C glow wire resistant)
Weight incl. cover	1.1 kg
Housing colour	Grey
Type of mounting	Wall mounting
Connection terminals	Clamp terminal 2.5 mm ²
Connection voltage	220 - 240 V, 50/60 Hz, 176 - 275 V DC
Current consumption - battery operation (220 V)	19 mA
Power consumption mains operation (apparent power / effective power)	7.6 VA / 4.4 W
Permissible temperature range	-10 °C ... +40 °C
Light source	HighPower LEDs 3 x 1.1 W

Ordering details

Type	Scope of supply	Order No.
29011 LED CG-S	Luminaire housing without cover, with CEWA GUARD monitoring and 20-digit address switch	40071350551
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

Accessories

Scope of supply	Order No.
Wire guard	40071348370

Style Variant 29021 LED CG-S

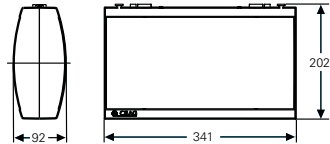
Escape sign luminaire



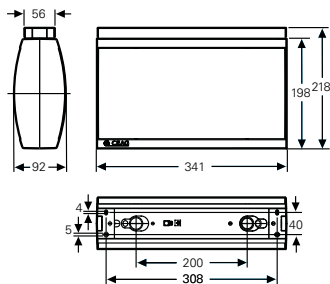
Style Variant 29021 LED CG-S

- Double-sided LED escape sign luminaire of high quality, UV-resistant, halogen-free plastic
- Large selection of screenprinted pictogram covers with simple snap mounting
- Minimum service requirement due to high service life of the LEDs (up to 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
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

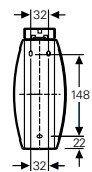
29021 LED with cover PR



29021



29021 with ceiling mounting



29021 with wall bracket



Ceiling mounting



Chain fastening



Wall bracket

Viewing distance	32 m
Luminous flux Φ_E/Φ_N at the end of rated operating time	100 %
Housing material	Polycarbonate (850 °C glow wire resistant)
Weight incl. cover	1.2 kg
Housing colour	Grey
Type of mounting	Ceiling mounting
Connection terminals	Clamp terminal 2.5 mm ²
Connection voltage	220 - 240 V, 50/60 Hz, 176 - 275 V DC
Current consumption - battery operation (220 V)	25 mA
Power consumption mains operation (apparent power / effective power)	9.5 VA / 5.8 W
Permissible temperature range	-10 °C ... +40 °C
Light source	HighPower LEDs 4 x 1.1 W

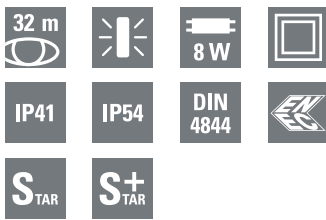
Ordering details

Type	Scope of supply	Order No.
29021 LED CG-S	Luminaire housing without covers, with CEWA GUARD monitoring and 20-digit address switch	40071350550
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
Blind cover	Blind cover	40071345987

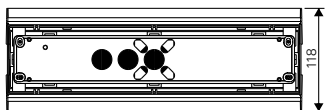
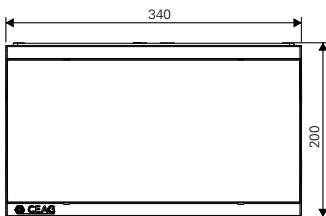
Accessories

Type	Scope of supply	Order No.
Ceiling mounting	for ceiling mounting and chain fastening with chain link diameter < 5 mm	40071350432
Suspension set 0.5 m	with canopy, curved	40071350394
Chain fastening ¹⁾	ring-eyelet	40071351158
Wall bracket		40071350418

¹⁾ for chain link diameter from 5 to 12 mm ceiling mounting 40071350432 required



22021 CG-S with pictogram foil PR





Style 22021 CG-S

- Double-sided escape sign luminaire of high quality, UV-resistant, halogen-free plastic
- Modular constructed luminaire series permits combination with various fixing modules
- Includes transparent cover with simple snap mounting and pictogram foil set
- Simple mounting via quick mounting set (can be pre-assembled) with integrated terminal block for through-wiring
- Optionally available IP54 set (for electronic and light source) for increased sealing requirements for indoor rooms or for canopied outdoor areas
- Shortened inspection effort due to CEWA GUARD technology
- Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation expenditures by STAR technology
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

Viewing distance	32 m
Luminous flux Φ_E/Φ_N at the end of rated operating time	75 %
Housing material	Polycarbonate (850 °C glow wire resistant)
Weight incl. cover	1.10 kg
Housing colour	Grey
Type of mounting	Ceiling mounting
Connection terminals	Loop terminals 3 x 2.5 mm ²
Connection voltage	220 - 240 V, 50/60 Hz 176 - 275 V DC
Current consumption - battery operation (220 V)	30 mA
Power consumption mains operation	16 VA
Permissible temperature range	-10 °C to +40 °C
Light source	8 W/T16, 450 lm

Ordering details

Type	Scope of supply	Order No.
22021 CG-S set acc. to ISO 7010	Luminaire housing with quick-mounting set and cover, with CEWA GUARD monitoring and 20-digit address switch incl. 4 pictogram foils PL, PR, PU and BL 	40071354560
22021 CG-S IP54 set acc. to ISO 7010	Luminaire housing with quick-mounting set, IP54 set and cover, with CEWA GUARD monitoring and 20-digit address switch incl. 4 pictogram foils PL, PR, PU and BL 	40071354561

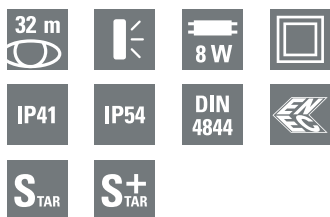
Accessories

Optionally available silkscreened pictograms: see page 1.75

For accessories see page 1.74

Style 22011 CG-S

Safety luminaire and escape sign luminaire



Style 22011 CG-S

- Single-sided escape sign luminaire or safety luminaire of high quality, UV-resistant, halogen-free plastic
- Modular constructed luminaire series permits combination with various fixing modules
- Includes transparent cover with simple snap mounting and pictogram foil set
- Simple mounting via quick mounting set (can be pre-assembled) with integrated terminal block for through-wiring
- Optionally available IP54 set (for electronic and light source) for increased sealing requirements for indoor rooms or for canopied outdoor areas
- Shortened inspection effort due to CEWA GUARD technology
- Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation expenditures by STAR technology
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

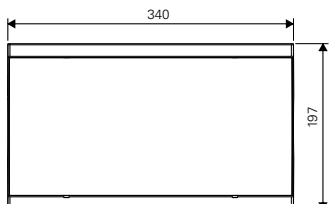
22011 CG-S with transparent cover



22011 CG-S with pictogram foil PR



Dimensions in mm



Viewing distance	32 m
Luminous flux Φ_E/Φ_N at the end of rated operating time	75 %
Housing material	Polycarbonate (850 °C glow wire resistant)
Weight incl. cover	0.80 kg
Housing colour	Grey
Type of mounting	Wall mounting (RZ and SL), ceiling mounting (SL)
Connection terminals	Loop terminals 3 x 2.5 mm ²
Connection voltage	220 - 2400 V, 50/60 Hz, 176 - 275 V DC
Current consumption - battery operation (220 V)	30 mA
Power consumption mains operation	16 VA
Permissible temperature range	-10 °C ... +40 °C
Light source	8W/T16, 450 lm

Ordering details

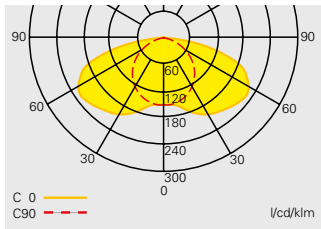
Type	Scope of supply	Order No.
22011 CG-S set acc. to ISO 7010	Luminaire housing with quick-mounting set and cover, with CEWA GUARD monitoring and 20-digit address switch incl. 3 pictogram foils PL, PR and PU	40071354550
22011 CG-S IP54 set acc. to ISO 7010	Luminaire housing with quick-mounting set, IP54 set and cover, with CEWA GUARD monitoring and 20-digit address switch incl. 3 pictogram foils PL, PR and PU	40071354551

Accessories

For accessories see page 1.74

Planning help for 22011 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

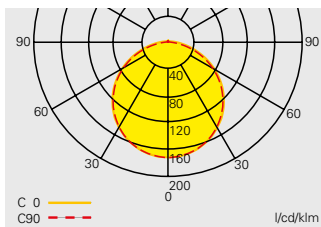


Light distribution curve 22011 CG-S with transparent cover

Mounting height [m]	Types of mounting	L1	L2	L3	L4
2.5	Ceiling mounting	3.0 (3.8)	7.6 (9.3)	4.7 (6.0)	11.9 (14.8)
3.0	Escape route centre	3.1 (4.0)	8.1 (10.1)	4.9 (6.3)	12.7 (16.0)
3.5		3.1 (4.2)	8.4 (10.7)	4.9 (6.6)	13.2 (16.8)
4.0		3.0 (4.3)	8.7 (11.2)	4.9 (6.8)	13.6 (17.6)
4.5		2.9 (4.4)	8.8 (11.6)	4.7 (6.9)	13.8 (18.2)
5.0		2.7 (4.4)	8.8 (11.9)	4.4 (7.0)	13.9 (18.7)
5.5		2.3 (4.3)	8.7 (12.2)	4.0 (6.9)	13.8 (19.1)
6.0		1.7 (4.2)	8.5 (12.3)	3.4 (6.8)	13.5 (19.4)
2.0	Wall mounting	2.8 (3.3)	6.6 (7.6)	3.3 (4.0)	8.0 (9.6)
2.5		2.8 (3.4)	6.8 (8.0)	3.1 (4.0)	8.0 (9.8)
3.0		2.7 (3.4)	6.8 (8.2)	0.1 (3.8)	7.6 (9.6)
2.5	Ceiling mounting	2.2 (2.7)	7.7 (9.4)	3.9 (5.0)	11.4 (14.0)
3.0	Room illumination	2.1 (2.9)	8.2 (10.2)	3.9 (5.2)	12.3 (15.1)
3.5		2.0 (2.9)	8.7 (10.9)	3.7 (5.3)	13.0 (16.1)
4.0		1.5 (2.8)	8.8 (11.4)	4.0 (5.3)	13.9 (17.0)
4.5		1.3 (2.7)	9.1 (11.9)	3.7 (5.3)	14.3 (17.8)
5.0		0.9 (2.6)	9.2 (12.3)	3.6 (5.2)	14.8 (18.5)
5.5		0.5 (2.3)	9.2 (12.6)	1.5 (5.1)	15.2 (19.2)
6.0		0.6 (2.0)	9.1 (12.8)	1.4 (5.0)	15.2 (19.8)
6.5		0.5 (1.7)	9.0 (13.0)	0.9 (4.8)	15.2 (20.3)
7.0		0.6 (0.9)	8.7 (13.0)	0.9 (4.9)	15.1 (21.0)

Planning help for 22011 CG-S for E = 1.0 lx (0.5 lx) with opaque cover

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



Light distribution curve 22011 CG-S with opaque cover

Mounting height [m]	Types of mounting	L1	L2	L3	L4
2.5	Ceiling mounting	3.1 (4.0)	8.0 (9.9)	3.1 (4.0)	8.0 (9.9)
3.0	Escape route centre	3.2 (4.2)	8.4 (10.6)	3.2 (4.3)	8.5 (10.7)
3.5		3.2 (4.4)	8.8 (11.2)	3.2 (4.4)	8.8 (11.3)
4.0		3.2 (4.5)	9.0 (11.7)	3.2 (4.5)	9.1 (11.8)
4.5		3.0 (4.6)	9.1 (12.1)	3.0 (4.6)	9.2 (12.2)
5.0		2.8 (4.6)	9.1 (12.4)	2.8 (4.6)	9.2 (12.5)
5.5		2.4 (4.5)	9.0 (12.7)	2.5 (4.5)	9.1 (12.7)
6.0		1.9 (4.4)	8.8 (12.8)	1.9 (4.4)	8.8 (12.9)
6.5		0.8 (4.2)	8.4 (12.9)	0.9 (4.3)	8.5 (13.0)
2.0	Wall mounting	2.0 (2.6)	5.2 (6.4)	2.0 (2.7)	5.4 (6.8)
2.5		1.7 (2.5)	5.0 (6.4)	1.7 (2.5)	5.0 (6.8)
3.0		1.2 (2.3)	4.4 (6.2)	0.9 (2.2)	4.2 (6.4)
2.5	Ceiling mounting	2.6 (3.1)	7.0 (8.5)	2.5 (3.1)	6.9 (8.5)
3.0	Room illumination	2.6 (3.3)	7.5 (9.2)	2.5 (3.2)	7.5 (9.2)
3.5		2.6 (3.4)	8.0 (9.9)	2.5 (3.3)	7.9 (9.8)
4.0		2.5 (3.4)	8.3 (10.4)	2.5 (3.4)	8.3 (10.4)
4.5		2.5 (3.5)	8.6 (10.9)	2.4 (3.4)	8.5 (10.8)
5.0		2.3 (3.5)	8.8 (11.3)	2.2 (3.4)	8.8 (11.2)
5.5		2.1 (3.4)	9.0 (11.7)	2.0 (3.3)	8.9 (11.6)
6.0		1.9 (3.3)	9.1 (12.0)	1.7 (3.2)	9.0 (11.9)
6.5		1.5 (3.2)	9.1 (12.2)	1.4 (3.1)	9.1 (12.2)
7.0		1.1 (3.1)	9.1 (12.4)	1.0 (3.0)	9.1 (12.4)

Style 23011 CG-S

Safety luminaire for recessed ceiling or wall mounting



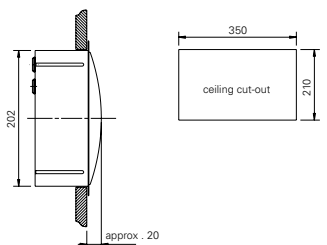
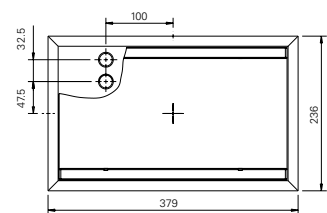
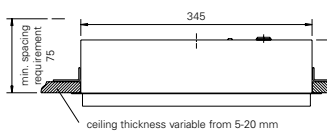
STYLE 23011 CG-S

- Safety luminaire for recessed ceiling or wall mounting
- Optimised light distribution for maximum distances from luminaire to luminaire up to 14 m
- Shortened inspection effort due to CEWA GUARD technology
- Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation expenditures by STAR technology
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

23011 CG-S with transparent cover



Dimensions in mm



Luminous flux Φ_E/Φ_N at the end of rated operating time	75 %
Housing material	Polycarbonate (850 °C glow wire resistant)
Weight incl. cover	2.5 kg
Housing colour	Grey
Type of mounting	Recessed ceiling or wall mounting
Connection terminals	Loop terminals 3 x 2.5 mm ²
Connection voltage	220 - 240 V, 50/60 Hz 176 - 275 V DC
Current consumption - battery operation (220 V)	30 mA
Power consumption mains operation	16 VA
Permissible temperature range	-10 °C to +40 °C
Light source	8W/T16, 450 lm

Ordering details

Type	Scope of supply	Order No.
23011 CG-S	Recessed enclosure with luminaire, without cover, with CEWA GUARD monitoring and 20-digit address switch	40071345952
Cover SL	Transparent cover	40071345985

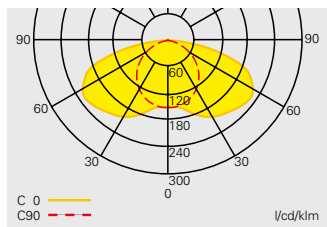
For further covers see page 1.75

Zubehör

Type	Scope of supply	Order No.
Concrete mounting box	Steel metal box with cable infeeds	40071345970

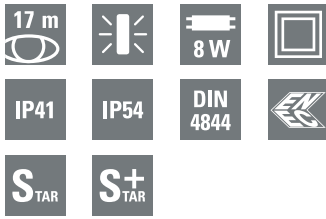
Planning help for 23011 CG-S for E = 1.0 lx (0.5 lx) with transparent cover

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



Light distribution curve 23011 CG-S with transparent cover

Mounting height [m]	Types of mounting	Types of mounting			
		L1	L2	L3	L4
2.5	Ceiling mounting	3.0 (3.8)	7.6 (9.3)	4.7 (6.0)	11.9 (14.8)
3.0	Escape route centre	3.1 (4.0)	8.1 (10.1)	4.9 (6.3)	12.7 (16.0)
3.5		3.1 (4.2)	8.4 (10.7)	4.9 (6.6)	13.2 (16.8)
4.0		3.0 (4.3)	8.7 (11.2)	4.9 (6.8)	13.6 (17.6)
5.0		2.7 (4.4)	8.8 (11.9)	4.4 (7.0)	13.9 (18.7)
6.0		1.7 (4.2)	8.5 (12.3)	3.4 (6.8)	13.5 (19.4)
2.0	Wall mounting	2.8 (3.3)	6.6 (7.6)	3.3 (4.0)	8.0 (9.6)
2.5		2.8 (3.4)	6.8 (8.0)	3.1 (4.0)	8.0 (9.8)
3.0		2.7 (3.4)	6.8 (8.2)	0.1 (3.8)	7.6 (9.6)
2.5	Ceiling mounting	2.2 (2.7)	7.7 (9.4)	3.9 (5.0)	11.4 (14.0)
3.0	Room illumination	2.1 (2.9)	8.2 (10.2)	3.9 (5.2)	12.3 (15.1)
3.5		2.0 (2.9)	8.7 (10.9)	3.7 (5.3)	13.0 (16.1)
4.0		1.5 (2.8)	8.8 (11.4)	4.0 (5.3)	13.9 (17.0)
5.0		0.9 (2.6)	9.2 (12.3)	3.6 (5.2)	14.8 (18.5)
6.0		0.6 (2.0)	9.1 (12.8)	1.4 (5.0)	15.2 (19.8)



51021 CG-S with pictogram foil PR



Style 51021 CG-S

- Compact escape sign or safety luminaire with three-sided light emission, of high quality, UV-resistant, halogen-free plastic
- Modular constructed luminaire series permits combination with various fixing modules
- Includes opaque cap with simple snap mounting and pictogram foil set
- Simple mounting via quick mounting set (can be pre-assembled) with integrated terminal block for through-wiring
- Optionally available IP54 set (for electronic and light source) for increased sealing requirements for indoor rooms or for canopied outdoor areas
- Shortened inspection effort due to CEWA GUARD technology
- Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation expenditures by 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 the end of rated operating time	75 %
Housing material	Polycarbonate (850 °C glow wire resistant)
Weight incl. cover	0.6 kg
Housing colour	Grey
Type of mounting	Ceiling mounting
Connection terminals	Loop terminals 3 x 2.5 mm ²
Connection voltage	220 - 240 V, 50/60 Hz 176 - 275 V DC
Current consumption - battery operation (220 V)	30 mA
Power consumption mains operation	16 VA
Permissible temperature range	-10 °C to +40 °C
Light source	8W/T16, 450 lm

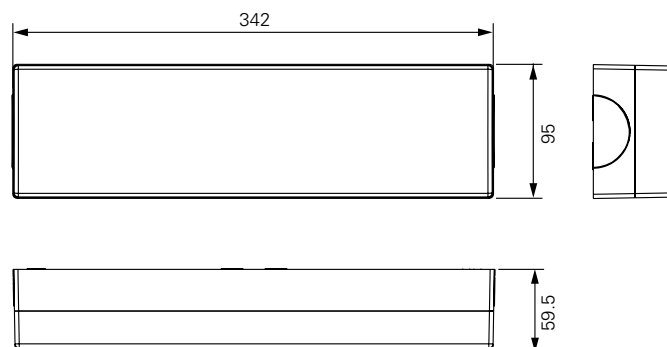
Ordering details

Type	Scope of supply	Order No.
51021 CG-S set acc. to ISO 7010	Luminaire housing with high cover, quick-mounting set and 3 pictogram foils PL/PR/PU, with CEWA GUARD monitoring and 20-digit address switch	40071354580

Accessories

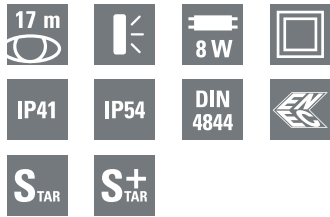
For accessories see page 1.74

Dimensions in mm



Style 51011 CG-S

Safety luminaire and escape sign luminaire



Style 51011 CG-S

- Compact escape sign or safety luminaire with three-sided light emission, of high quality, UV-resistant, halogen-free plastic
- Modular constructed luminaire series permits combination with various fixing modules
- Includes transparent cap with simple snap mounting and pictogram foil set
- Simple mounting via quick mounting set (can be pre-assembled) with integrated terminal block for through-wiring
- Optionally available IP54 set (for electronic and light source) for increased sealing requirements for indoor rooms or for canopied outdoor areas
- Shortened inspection effort due to CEWA GUARD technology
- Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation expenditures by STAR technology
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

51011 CG-S with pictogram foil PR




51011 CG-S with transparent cover



Viewing distance	17 m
Luminous flux Φ_E/Φ_N at the end of rated operating time	75 %
Housing material	Polycarbonate (850 °C glow wire resistant)
Weight incl. cover	0.6 kg
Housing colour	Grey
Type of mounting	Wall or ceiling mounting
Connection terminals	Loop terminals 3 x 2.5 mm ²
Connection voltage	220 - 240 V, 50/60 Hz 176 - 275 V DC
Current consumption - battery operation (220 V)	30 mA
Power consumption mains operation	16 VA
Permissible temperature range	-10 °C to +40 °C
Light source	8 W/T16, 450 lm

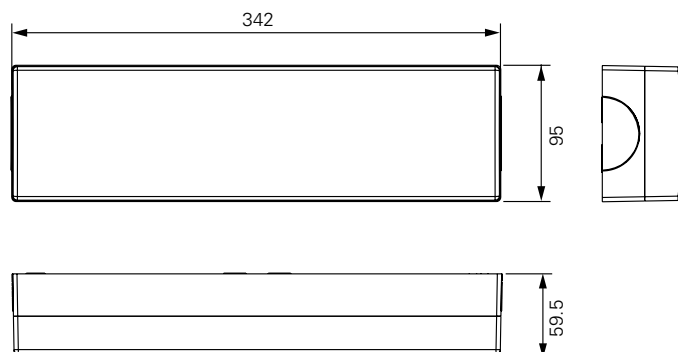
Ordering details

Type	Scope of supply	Order No.
51011 CG-S set acc. to ISO 7010	Luminaire housing with cover, quick-mounting set and 3 pictogram foils PL/PR/PU, with CEWA GUARD monitoring and 20-digit address switch 	40071354570

Accessories

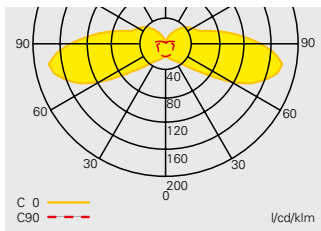
For accessories see page 1.74

Dimensions in mm



Planning help for 51011 CG-S for E = 1.0 lx (0.5 lx) with pictogram foil

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



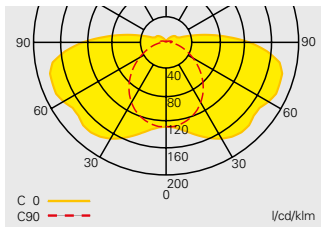
Light distribution curve
51011 CG-S with pictogram cover

Mounting height [m]	Types of mounting	L1	L2	L3	L4
2.0	Wall mounting	2.5	3.2		
2.5	with pictogram	2.8	3.6		
3.0		3.0	4.0		

1

Planning help for 51011 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

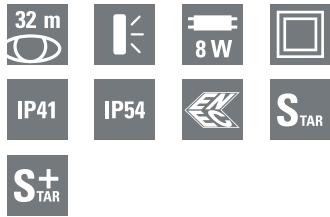


Light distribution curve 51011 CG-S
with transparent cover

Mounting height [m]	Types of mounting	L1	L2	L3	L4
2.5	Ceiling mounting	2.7 (3.5)	7.0 (8.7)	4.3 (5.8)	11.5 (15.0)
3.0	Escape route centre	2.7 (3.7)	7.4 (9.3)	4.3 (6.0)	11.9 (15.7)
3.5		2.7 (3.8)	7.6 (9.8)	4.2 (6.1)	12.1 (16.3)
4.0		2.6 (3.9)	7.8 (10.2)	4.2 (6.1)	12.1 (16.7)
4.5		2.4 (3.9)	7.8 (10.6)	4.0 (6.0)	12.0 (17.0)
5.0		2.0 (3.8)	7.7 (10.8)	3.7 (6.0)	11.9 (17.1)
5.5		1.5 (3.7)	7.5 (10.9)	3.1 (5.9)	11.8 (17.1)
2.0	Wall mounting	2.8 (3.5)	7.0 (8.6)	3.8 (5.1)	10.0 (13.0)
2.5		3.0 (3.8)	7.6 (9.4)	3.8 (5.3)	10.6 (13.8)
3.0		3.2 (4.1)	8.2 (10.2)	- (5.4)	10.6 (14.2)
2.5	Ceiling mounting	1.2 (1.2)	7.2 (8.9)	3.3 (5.2)	11.9 (15.6)
3.0	Room illumination	1.6 (1.5)	7.7 (9.6)	3.1 (4.8)	12.1 (16.2)
3.5		1.4 (1.7)	7.9 (10.2)	3.3 (4.5)	12.5 (16.7)
4.0		1.7 (2.0)	8.3 (10.7)	2.8 (4.2)	12.3 (17.0)
4.5		1.3 (1.8)	8.3 (11.0)	3.1 (4.3)	12.6 (17.4)
5.0		1.2 (2.1)	8.4 (11.4)	2.7 (4.0)	12.7 (17.4)
5.5		0.7 (1.8)	8.3 (11.5)	2.5 (4.3)	13.0 (17.7)
6.0		0.5 (1.8)	8.2 (11.7)	1.0 (4.2)	13.1 (17.7)

Style 55011 CG-S

Safety luminaire and escape sign luminaire



Style 55011 CG-S

- Single-sided escape sign luminaire or safety luminaire of high quality, UV-resistant, halogen-free plastic
- Modular constructed luminaire series permits combination with various fixing modules
- Large selection of screenprinted pictogram covers with simple snap mounting
- Simple mounting via quick mounting set (can be pre-assembled) with integrated terminal block for through-wiring
- Optionally available IP54 set (for electronic and light source) for increased sealing requirements for indoor rooms or for canopied outdoor areas
- Shortened inspection effort due to CEWA GUARD technology
- Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation expenditures by STAR technology
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

55011 CG-S with transparent cover



55011 CG-S with cover PR



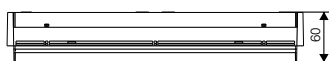
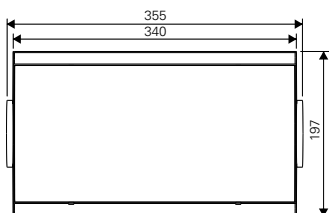
55011 CG-S with structured cover



55011 CG-S with opaque cover



Dimensions in mm



Viewing distance	32 m
Luminous flux Φ_E/Φ_N at the end of rated operating time	75 %
Housing material	Polycarbonate (850 °C glow wire resistant)
Weight incl. cover	0.85 kg
Housing colour	Grey
Type of mounting	Wall mounting (RZ and SL), ceiling mounting (SL)
Connection terminals	Loop terminals 3 x 2.5 mm ²
Connection voltage	220 - 240 V, 50/60 Hz 176 - 275 V DC
Current consumption - battery operation (220 V)	30 mA
Power consumption mains operation	16 VA
Permissible temperature range	-10 °C to +40 °C
Light source	8 W/T16, 450 lm

Ordering details

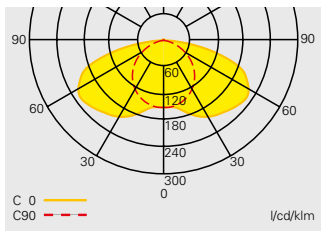
Type	Scope of supply	Order No.
55011 CG-S	Luminaire housing without cover, without quick-mounting set, with CEWA GUARD monitoring and 20-digit address switch	40071345953
Cover SL	Transparent cover	40071345985
Opaque cover	Opaque cover	40071345986
Structured cover	Cover with silkscreening	40071348223
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
Quick-mounting set	Quick-mounting set with terminals and distance plates	40071345980

Accessories

For accessories see page 1.74

Planning help for 55011 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

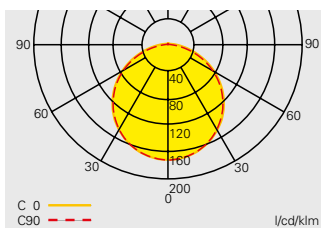


Light distribution curve 55011 CG-S with transparent cover

Mounting height [m]	Types of mounting	L1	L2	L3	L4
2.5	Ceiling mounting	3.0 (3.8)	7.6 (9.3)	4.7 (6.0)	11.9 (14.8)
3.0	Escape route centre	3.1 (4.0)	8.1 (10.1)	4.9 (6.3)	12.7 (16.0)
3.5		3.1 (4.2)	8.4 (10.7)	4.9 (6.6)	13.2 (16.8)
4.0		3.0 (4.3)	8.7 (11.2)	4.9 (6.8)	13.6 (17.6)
4.5		2.9 (4.4)	8.8 (11.6)	4.7 (6.9)	13.8 (18.2)
5.0		2.7 (4.4)	8.8 (11.9)	4.4 (7.0)	13.9 (18.7)
5.5		2.3 (4.3)	8.7 (12.2)	4.0 (6.9)	13.8 (19.1)
6.0		1.7 (4.2)	8.5 (12.3)	3.4 (6.8)	13.5 (19.4)
2.0	Wall mounting	2.8 (3.3)	6.6 (7.6)	3.3 (4.0)	8.0 (9.6)
2.5		2.8 (3.4)	6.8 (8.0)	3.1 (4.0)	8.0 (9.8)
3.0		2.7 (3.4)	6.8 (8.2)	0.1 (3.8)	7.6 (9.6)
2.5	Ceiling mounting	2.2 (2.7)	7.7 (9.4)	3.9 (5.0)	11.4 (14.0)
3.0	Room illumination	2.1 (2.9)	8.2 (10.2)	3.9 (5.2)	12.3 (15.1)
3.5		2.0 (2.9)	8.7 (10.9)	3.7 (5.3)	13.0 (16.1)
4.0		1.5 (2.8)	8.8 (11.4)	4.0 (5.3)	13.9 (17.0)
4.5		1.3 (2.7)	9.1 (11.9)	3.7 (5.3)	14.3 (17.8)
5.0		0.9 (2.6)	9.2 (12.3)	3.6 (5.2)	14.8 (18.5)
5.5		0.5 (2.3)	9.2 (12.6)	1.5 (5.1)	15.2 (19.2)
6.0		0.6 (2.0)	9.1 (12.8)	1.4 (5.0)	15.2 (19.8)
6.5		0.5 (1.7)	9.0 (13.0)	0.9 (4.8)	15.2 (20.3)
7.0		0.6 (0.9)	8.7 (13.0)	0.9 (4.9)	15.1 (21.0)

Planning help for 55011 CG-S for E = 1.0 lx (0.5 lx) with opaque cover

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

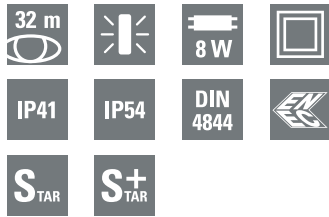


Light distribution curve 55011 CG-S with opaque cover

Mounting height [m]	Types of mounting	L1	L2	L3	L4
2.5	Ceiling mounting	3.1 (4.0)	8.0 (9.9)	3.1 (4.0)	8.0 (9.9)
3.0	Escape route centre	3.2 (4.2)	8.4 (10.6)	3.2 (4.3)	8.5 (10.7)
3.5		3.2 (4.4)	8.8 (11.2)	3.2 (4.4)	8.8 (11.3)
4.0		3.2 (4.5)	9.0 (11.7)	3.2 (4.5)	9.1 (11.8)
4.5		3.0 (4.6)	9.1 (12.1)	3.0 (4.6)	9.2 (12.2)
5.0		2.8 (4.6)	9.1 (12.4)	2.8 (4.6)	9.2 (12.5)
5.5		2.4 (4.5)	9.0 (12.7)	2.5 (4.5)	9.1 (12.7)
6.0		1.9 (4.4)	8.8 (12.8)	1.9 (4.4)	8.8 (12.9)
6.5		0.8 (4.2)	8.4 (12.9)	0.9 (4.3)	8.5 (13.0)
2.0	Wall mounting	2.0 (2.6)	5.2 (6.4)	2.0 (2.7)	5.4 (6.8)
2.5		1.7 (2.5)	5.0 (6.4)	1.7 (2.5)	5.0 (6.8)
3.0		1.2 (2.3)	4.4 (6.2)	0.9 (2.2)	4.2 (6.4)
2.5	Ceiling mounting	2.6 (3.1)	7.0 (8.5)	2.5 (3.1)	6.9 (8.5)
3.0	Room illumination	2.6 (3.3)	7.5 (9.2)	2.5 (3.2)	7.5 (9.2)
3.5		2.6 (3.4)	8.0 (9.9)	2.5 (3.3)	7.9 (9.8)
4.0		2.5 (3.4)	8.3 (10.4)	2.5 (3.4)	8.3 (10.4)
4.5		2.5 (3.5)	8.6 (10.9)	2.4 (3.4)	8.5 (10.8)
5.0		2.3 (3.5)	8.8 (11.3)	2.2 (3.4)	8.8 (11.2)
5.5		2.1 (3.4)	9.0 (11.7)	2.0 (3.3)	8.9 (11.6)
6.0		1.9 (3.3)	9.1 (12.0)	1.7 (3.2)	9.0 (11.9)
6.5		1.5 (3.2)	9.1 (12.2)	1.4 (3.1)	9.1 (12.2)
7.0		1.1 (3.1)	9.1 (12.4)	1.0 (3.0)	9.1 (12.4)

Style 55021 CG-S

Escape sign luminaire



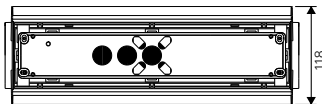
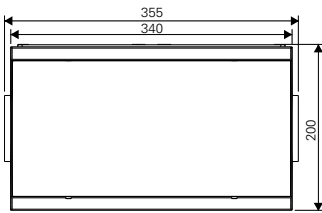
Style 55021 CG-S

- Double-sided distribution escape sign or safety luminaire of high quality, UV-resistant, halogen-free plastic
- Modular constructed luminaire series permits combination with various fixing modules
- Large selection of screenprinted pictogram covers with simple snap mounting
- Simple mounting via quick mounting set (can be pre-assembled) with integrated terminal block for through-wiring
- Optionally available IP54 set (for electronic and light source) for increased sealing requirements for indoor rooms or for canopied outdoor areas
- Shortened inspection effort due to CEWA GUARD technology
- Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation expenditures by STAR technology
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

55021 CG-S with cover PR und Pendelsatz






Dimensions in mm



Viewing distance	32 m
Luminous flux Φ_E/Φ_N at the end of rated operating time	75 %
Housing material	Polycarbonate (850 °C glow wire resistant)
Weight incl. cover	1.15 kg
Housing colour	Grey
Type of mounting	Ceiling mounting
Connection terminals	Loop terminals 3 x 2.5 mm ²
Connection voltage	220 - 240 V, 50/60 Hz 176 - 275 V DC
Current consumption - battery operation (220 V)	30 mA
Power consumption mains operation	16 VA
Permissible temperature range	-10 °C to +40 °C
Light source	8 W/T16, 450 lm

Ordering details

Type	Scope of supply	Order No.
55021 CG-S	Luminaire housing without covers, without quick-mounting set, with CEWA GUARD monitoring and 20-digit address switch	40071345954
Cover SL	Transparent cover	40071345985
Opaque cover	Opaque cover	40071345986
Blind cover	Blind cover	40071345987
Structured cover	Cover with silkscreening	40071348223
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
Quick-mounting set	Quick-mounting set with terminals and distance plates	40071345980

Accessories

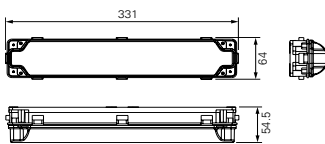
For accessories see page 1.74



21011 CG-S with transparent IP54 cover



Dimensions in mm



Style 21011 CG-S

- Compact safety luminaire for wall or ceiling mounting
- With IP54 cover as standard for increased sealing requirements for indoor rooms or canopied outdoor areas
- Shortened inspection effort due to CEWA GUARD technology
- Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation expenditures by STAR technology
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

Luminous flux Φ_E/Φ_N at the end of rated operating time	75 %
Housing material	Polycarbonate (850 °C glow wire resistant)
Weight incl. cover	0.6 kg
Housing colour	Grey
Type of mounting	Wall or ceiling mounting
Connection terminals	Loop terminals 3 x 2.5 mm ²
Connection voltage	220 - 240 V, 50/60 Hz 176 - 275 V DC
Current consumption - battery operation (220 V)	30 mA
Power consumption mains operation	16 VA
Permissible temperature range	-10 °C to +40 °C
Light source	8W/T16, 450 lm

Ordering details

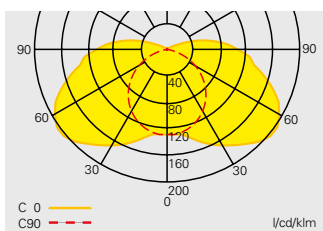
Type	Scope of supply	Order No.
21011 CG-S	Luminaire housing with IP54 cover, with quick-mounting set, with CEWA GUARD monitoring and 20-digit address switch	40071348160

Zubehör

For accessories see page 1.74

Planning help for 21011 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



Light distribution curve 21011 CG-S with transparent cover IP54

Mounting height [m]	Types of mounting	Types of mounting			
		L1	L2	L3	L4
2.5	Ceiling mounting	2.8 (3.6)	7.1 (8.8)	4.4 (5.7)	11.5 (14.5)
3.0	Escape route centre	2.8 (3.8)	7.5 (9.5)	4.6 (6.1)	12.1 (15.4)
3.5		2.8 (3.9)	7.8 (10.1)	4.6 (6.3)	12.5 (16.2)
4.0		2.7 (4.0)	8.0 (10.5)	4.5 (6.4)	12.8 (16.9)
4.5		2.5 (4.0)	8.0 (10.8)	4.3 (6.5)	13.1 (17.4)
5.0		2.1 (3.9)	7.9 (11.1)	3.8 (6.5)	13.1 (17.8)
5.5		1.5 (3.8)	7.7 (11.2)	3.1 (6.5)	12.9 (18.1)
2.0	Wall mounting	2.4 (3.0)	6.0 (7.0)	2.7 (3.4)	6.8 (8.2)
2.5		2.4 (3.0)	6.0 (7.2)	2.4 (3.3)	6.6 (8.2)
3.0		2.2 (2.9)	5.8 (7.4)	0.1 (3.0)	6.0 (8.0)
2.5	Ceiling mounting	1.4 (1.6)	7.3 (9.0)	4.2 (5.4)	11.7 (14.7)
3.0	Room illumination	1.4 (1.8)	7.8 (9.7)	4.3 (5.6)	12.4 (15.6)
3.5		1.0 (1.7)	8.1 (10.3)	4.2 (5.8)	13.1 (16.5)
4.0		0.9 (1.8)	8.3 (10.8)	4.0 (5.9)	13.6 (17.2)
4.5		0.6 (1.6)	8.4 (11.2)	3.6 (5.9)	14.1 (17.9)
5.0		0.6 (1.4)	8.4 (11.5)	1.3 (5.7)	14.4 (18.5)
5.5		0.5 (1.1)	8.3 (11.7)	0.9 (5.6)	14.6 (19.1)
6.0		0.6 (0.7)	8.1 (11.8)	0.7 (5.3)	14.7 (19.7)
6.5		0.6 (0.5)	7.8 (11.9)	0.5 (1.9)	14.7 (20.1)
7.0		0.5 (0.5)	7.3 (11.9)	0.5 (1.5)	14.7 (20.4)

Accessories Style 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 supplement	40071345944
Suspension set 1.5 m incl. quick-mounting set	40071348210
Suspension set 1.5 m IP54 incl. quick-mounting set and IP54 supplement	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

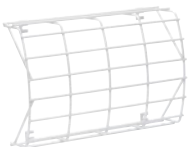
Luminaire with IP54 cover



Type	Order No.
IP54 supplement* incl. IP54 cover and quick mounting set with foamed, sulphur-free sealing each and mounting accessories, suitable for LED and fluorescent lamps	40071345975

*) IP54 for electronic and lamp. For increased tightness requirements indoors or in canopied outdoor areas

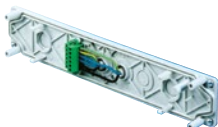
Wire guard



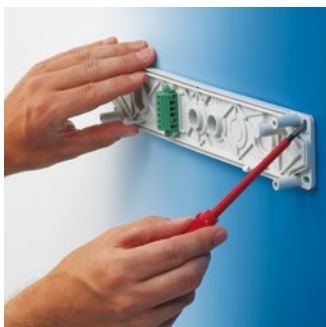
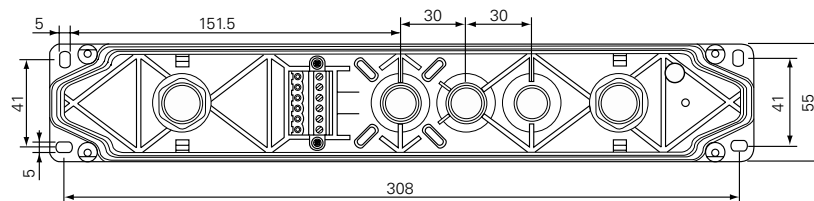
Type	Order No.
Wire guard incl. mounting clamps	40071348370

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 51021 LED CG-S



Wire guard with Style 22011 LED CG-S

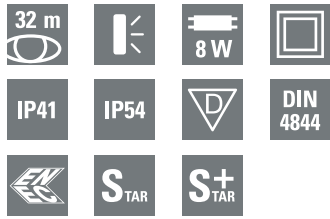


Ordering details special pictograms

Type	Piktogramm	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

Style Industry 40011 CG-S

Safety luminaire and escape sign luminaire



Style Industry 40011 CG-S

- Single-sided distribution escape sign or safety luminaire with robust diecast aluminium housing
- Large selection of screenprinted pictogram covers with simple snap mounting
- Maximum distance of 14 m from luminaire to luminaire with transparent cover
- Optional IP54 set for increased sealing requirements for indoor rooms or for canopied outdoor areas
- Shortened inspection effort due to CEWA GUARD technology
- Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation expenditures by STAR technology
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

40011 CG-S with transparent cover



Viewing distance	32 m
Luminous flux Φ_E/Φ_N at the end of rated operating time	75 %
Housing material	Coated aluminium
Weight incl. cover	2.3 kg
Housing colour	Grey RAL 7035
Type of mounting	Wall mounting (RZ and SL), ceiling mounting (SL)
Connection terminals	Loop terminals 3 x 2.5 mm ²
Connection voltage	220 - 240 V, 50/60 Hz 176 - 275 V DC
Current consumption - battery operation (220 V)	30 mA
Power consumption mains operation	16 VA
Permissible temperature range	-10 °C to +40 °C
Light source	8W/T16, 450 lm

40011 CG-S with cover PR



Ordering details

Type	Scope of supply	Order No.
40011 CG-S	Luminaire without cover with CG monitoring and 20-digit address switch	40071348401
Cover SL	Transparent cover	40071345985
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

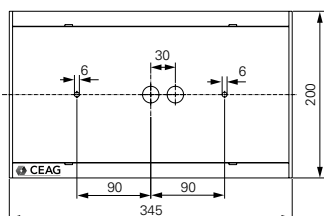
Wire guard



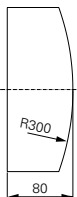
Accessories

Type	Scope of supply	Order No.
IP54 supplement	incl. quick-mounting set and mounting accessories	40071345975
Wire guard		40071348370
Ceiling mounting angle		40071348588
2 x M20 cable glands		40071348422

Dimensions in mm

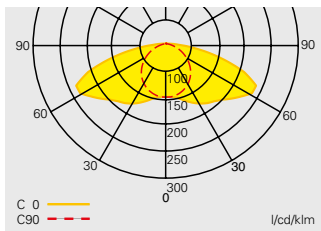


without cover frame



Planning help for 40011 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

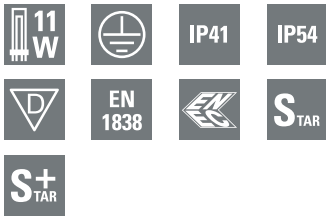


Light distribution curve 40011 CG-S with transparent cover

Mounting height [m]	Types of mounting	Mounting diagrams			
		L1	L2	L3	L4
2.5	Ceiling mounting	2.9 (3.7)	7.4 (9.1)	5.1 (6.4)	12.8 (15.4)
3.0	Escape route centre	3.0 (3.9)	7.9 (9.9)	5.3 (6.9)	13.7 (16.9)
3.5		3.0 (4.1)	8.2 (10.5)	5.2 (7.2)	14.5 (18.0)
4.0		2.9 (4.2)	8.4 (11.0)	5.0 (7.4)	14.8 (19.0)
4.5		2.8 (4.3)	8.5 (11.4)	4.7 (7.4)	14.9 (19.9)
5.0		2.5 (4.3)	8.5 (11.7)	4.3 (7.3)	14.6 (20.5)
5.5		2.1 (4.2)	8.4 (11.9)	3.8 (7.1)	14.2 (20.8)
6.0		1.4 (4.1)	8.1 (12.0)	2.9 (6.8)	13.7 (21.0)
2.0	Wall mounting	2.8 (3.3)	6.6 (7.8)	3.4 (4.1)	8.2 (9.8)
2.5		2.9 (3.5)	7.0 (8.2)	3.2 (4.1)	8.2 (10.0)
3.0		2.9 (3.5)	7.0 (8.4)	– (3.9)	7.8 (10.0)
2.5	Ceiling mounting	1.6 (2.2)	7.5 (9.2)	4.6 (5.9)	12.8 (15.2)
3.0	Room illumination	1.3 (2.2)	8.0 (10.0)	4.5 (6.2)	14.0 (16.7)
3.5		1.4 (2.1)	8.4 (10.6)	4.2 (6.3)	14.8 (18.0)
4.0		0.7 (1.7)	8.6 (11.1)	4.1 (6.3)	15.7 (19.3)
4.5		0.6 (1.6)	8.8 (11.5)	3.8 (6.1)	16.1 (20.3)
5.0		0.5 (1.6)	8.9 (11.9)	3.4 (5.8)	16.3 (21.1)
5.5		0.5 (1.0)	8.9 (12.2)	1.5 (5.4)	16.2 (21.9)
6.0		0.5 (0.7)	8.9 (12.4)	1.1 (5.2)	16.0 (22.5)
6.5		0.5 (0.6)	8.8 (12.5)	0.9 (5.0)	15.7 (22.9)
7.0		0.5 (0.6)	8.7 (12.6)	0.6 (4.6)	15.2 (23.0)

Style Industry 40031 CG-S

Safety luminaire



Style Industry 40031 CG-S

- Safety luminaire with robust diecast aluminium housing
- Especially suitable for high mounting heights up to 15 m due to narrow distribution reflector
- Optional IP54 set for increased sealing requirements for indoor rooms or for canopied outdoor areas
- Shortened inspection effort due to CEWA GUARD technology
- Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation expenditures by STAR technology
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

1

40031 CG-S IP41 with transparent cover



Luminous flux Φ_E/Φ_N at the end of rated operating time	75 %
Housing material	Coated aluminium
Weight incl. cover	1.8 kg
Housing colour	Grey RAL 7035
Type of mounting	Ceiling mounting
Connection terminals	Loop terminals 3 x 2.5 mm ²
Connection voltage	220 - 240 V, 50/60 Hz 176 - 275 V DC

40031 CG-S IP54 with transparent cover

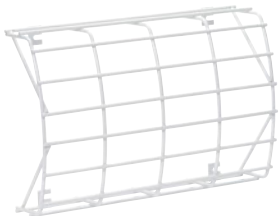


Current consumption - battery operation (220 V)	40 mA
Power consumption mains operation	18 VA
Permissible temperature range	-10 °C to +40 °C
Light source	11 W/TC-SEL, 900 lm

Ordering details

Type	Scope of supply	Order No.
40031 CG-S IP41	Luminaire housing with transparent cover and CG monitoring with 20-digit address switch, without light source	40071348403
40031 CG-S IP54	Luminaire housing with transparent cover and CG monitoring with 20-digit address switch and IP54 cover frame, without light source	40071348405

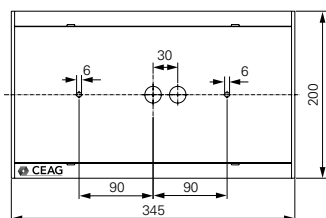
Wire guard



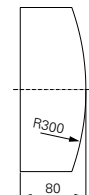
Accessories

Type	Order No.
Wire guard	40071348370
Ceiling mounting angle	40071348588
2 x M20 cable glands	40071348422

Dimensions in mm

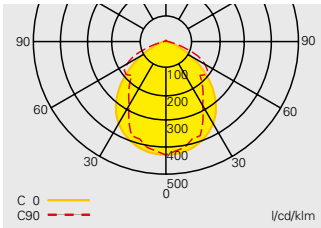


without cover frame



Planning help for 40031 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



Light distribution curve 40031 CG-S with transparent cover

Mounting height [m]	Types of mounting	Mounting types			
		L1	L2	L3	L4
3.0	Ceiling mounting	4.7 (5.5)	10.9 (12.5)	5.3 (6.4)	12.9 (15.0)
4.0	Escape route centre	5.4 (6.4)	12.8 (15.0)	5.8 (7.3)	14.6 (17.7)
5.0		5.9 (7.2)	14.3 (17.0)	5.7 (7.9)	15.7 (19.6)
6.0		6.2 (7.8)	15.6 (18.7)	5.5 (8.2)	16.4 (21.1)
7.0		6.4 (8.3)	16.5 (20.2)	5.5 (8.1)	16.1 (22.2)
8.0		6.4 (8.6)	17.3 (21.5)	5.4 (7.7)	15.4 (23.0)
9.0		6.3 (8.9)	17.8 (22.6)	5.2 (7.8)	15.6 (23.2)
10.0		6.0 (9.1)	18.1 (23.5)	5.1 (7.8)	15.6 (22.7)
11.0		5.5 (9.1)	18.2 (24.2)	4.8 (7.7)	15.5 (21.7)
12.0		4.7 (9.1)	18.1 (24.9)	4.2 (7.6)	15.1 (21.9)
13.0		3.4 (8.9)	17.8 (25.3)	2.7 (7.3)	14.7 (22.1)
3.0	Ceiling mounting	4.0 (4.7)	10.6 (12.6)	2.4 (2.8)	10.8 (12.7)
4.0	Room illumination	3.6 (5.2)	11.5 (14.4)	3.5 (3.5)	13.1 (15.1)
5.0		3.5 (5.4)	12.3 (15.9)	4.1 (3.9)	14.5 (16.9)
6.0		2.8 (4.8)	12.4 (16.5)	4.8 (5.0)	16.0 (19.2)
7.0		2.1 (4.7)	12.7 (17.3)	5.3 (5.6)	16.6 (20.5)
8.0		2.9 (4.0)	14.4 (17.5)	4.9 (6.3)	15.1 (22.1)
9.0		4.0 (3.0)	15.8 (17.4)	4.6 (7.1)	14.6 (23.4)
10.0		4.1 (2.3)	16.7 (17.8)	4.4 (7.4)	14.7 (23.8)
11.0		3.6 (2.0)	17.2 (18.7)	4.3 (7.5)	15.0 (23.1)
12.0		3.1 (4.9)	17.6 (21.4)	4.0 (6.5)	15.2 (20.9)
13.0		3.1 (5.9)	18.4 (23.0)	3.2 (6.0)	14.9 (20.3)
14.0		2.2 (5.8)	18.5 (23.7)	2.8 (5.9)	15.1 (20.6)
15.0		1.7 (4.9)	18.7 (23.7)	1.5 (6.2)	15.1 (21.4)



Escape sign panel
luminaires



1

Frameless panel luminaires for sophisticated surroundings

With the series of edge luminaires, demanding escape route marking can be designed individually, attractively and discretely. The series of edge luminaires is suitable in various types for wall, ceiling and suspended mounting.

Reduced to the essentials, on the recessed ceiling version only the pictogram panel is visible. Efficient lighting technology combined with transparent design facilitates the use of this modern series of luminaires wherever an architecturally demanding environment sets particularly high standards.

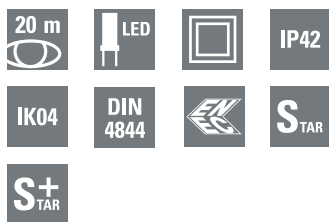
The use of highly efficient LED reduces the connected load by half and additionally saves thanks to the high service life.

Features:

- Uniform illumination and elegant transparent design for optimum integration into the sophisticated interior design
- Variety of mounting accessories for recessed ceiling, parallel wall, pendulum, wall bracket and chain suspension mounting
- LED luminaires with especially low current consumption and low maintenance effort with a long service life

CrystalWay 19021 CG-S

Exit Sign Luminaires



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 1.6W 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

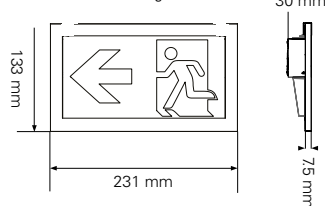
1 Wall-surface mounting



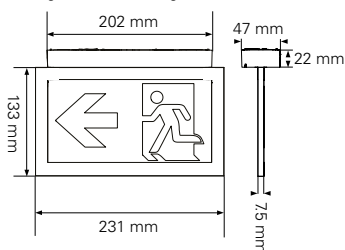
Ceiling-surface mounting



Wall-surface mounting



Ceiling-surface mounting



Wire suspension kit



Recessed base



Add-on housing










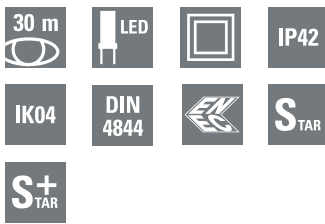
Viewing distance	20 m
Luminous flux Φ_E/Φ_{Nenn} at end of rated operating time	100 %
Housing material	Polycarbonat
Housing colour	RAL 9003
Weight	0.4 kg
Type of mounting	Wall and ceiling mounting
Connection terminals	2 x 3 x 2.5 mm ²
Connection voltage	220 - 240 V AC, 50/60 Hz 176 - 275 V DC
Power consumption 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



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 L_{min}/L_{max} > 0.8
- Reduced battery costs on account of especially low power consumption
- Low operating costs on account of low effective power of 3.7W 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

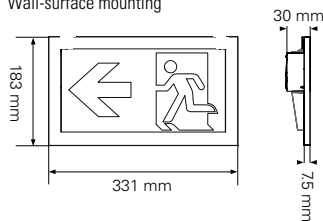
Wall-surface mounting



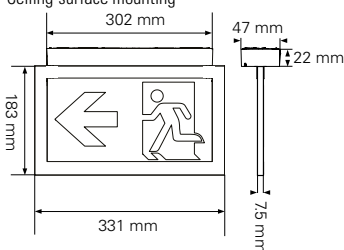
Ceiling-surface mounting



Wall-surface mounting



Ceiling-surface mounting



Wir



Recessed base with cover



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 mm ²
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

SpiritLED 16 CG-S

Escape sign panel luminaire



1 SpiritLED 16 wire suspension with panel PL/PR



SpiritLED 16 ceiling surface mounting with panel PL/PR



SpiritLED 16 CG-S

- Exclusive escape sign panel luminaire with LED technology
- Frameless design with pictogram integrated in acrylic glass
- Very good perceptibility via high luminance of white contrast colour > 500 cd/m² according to DIN 4844-1, and high uniformity $L_{\min}/L_{\max} > 0.5$
- Special LED converter, with integrated monitoring module for single luminaire monitoring
- Minimum service requirement due to high service life of the LEDs (up to 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
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

Viewing distance	16 m
Luminous flux Φ_E/Φ_N at the end of rated operating time	100 %
Housing material	Plastic
Weight	1.0 kg
Housing colour	Silver
Type of mounting	Recessed and surface ceiling mounting (max. 0.7 m)
Connection terminals	Clamp terminal 2.5 mm ² reverse-polarity protected
Connection voltage	220 – 240 V AC, 50/60 Hz 176 – 275 V DC
Current consumption - battery operation (220 V)	7 mA
Power consumption mains operation (apparent power / effective power)	3.8 VA / 1.7 W
Permissible ambient temperature	-10 °C to +40 °C
Light source	LED batten

Ordering details – fastening set

Type	Order No.
Recessed ceiling mounting kit with wire suspension, incl. LED supply	40071352152
Surface mounting kit, incl. LED supply, colour aluminium	40071352072
Surface mounting kit with wire suspension, incl. LED supply, colour aluminium	40071352073

Ordering details - LED pictograms

Scope of supply	Order No.
SpiritLED 16 PL/PR – LED panel with pictogram PL/PR and LED-module (fastening set required) acc. to ISO 7010	40071354600
SpiritLED 16 PU/PU – LED panel with pictogram PU/PU and LED-module (fastening set required) acc. to ISO 7010	40071354601
SpiritLED 16 PU/Blind – LED panel with pictogram PU/Blind and LED-module (fastening set required) acc. to ISO 7010	40071354602
SpiritLED 16 PL/PR-R* 90° – LED panel with pictogram PL/PR and LED-module (fastening set required) acc. to ISO 7010	40071354603
SpiritLED 16 PL/PR-W* 90° – LED panel with pictogram PL/PR and LED-module (mounting kit is required) is required) acc. to ISO 7010	40071354604

* R = Arrow from mounting wall
W = Arrow to mounting wall

** Degree of protection recessed ceiling mounting kit IP20



SpiritLED 28 wire suspension with panel PL/PR



SpiritLED 28 Wall mounting with panel PL/PR-R



SpiritLED 28 CG-S






- Exclusive escape sign panel luminaire with LED technology
- Frameless design with pictogram integrated in acrylic glass
- Very good perceptibility via high luminance of white contrast colour > 500 cd/m² according to DIN 4844-1, and high uniformity $L_{min}/L_{max} > 0.5$
- Special LED converter, with integrated monitoring module for single luminaire monitoring
- Minimum service requirement due to high service life of the LEDs (up to 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
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

Viewing distance	28 m
Luminous flux Φ_E/Φ_N at the end of rated operating time	100 %
Housing material	Plastic
Weight	2.0 kg
Housing colour	Silver
Type of mounting	Recessed and surface ceiling mounting (max. 0.7 m)
Connection terminals	Clamp terminal 2.5 mm ² reverse-polarity protected
Connection voltage	220 – 240 V AC, 50/60 Hz 176 – 275 V DC
Current consumption - battery operation (220 V)	16 mA
Power consumption mains operation (apparent power / effective power)	6.6 VA / 3.7 W
Permissible ambient temperature	-10 °C to +40 °C
Light source	LED batten

Ordering details – fastening set

Type	Order No.
Recessed ceiling mounting kit with wire suspension, incl. LED supply	40071352007
Surface mounting kit, incl. LED supply, colour aluminium	40071352005
Surface mounting kit with wire suspension, incl. LED supply, colour aluminium	40071352006

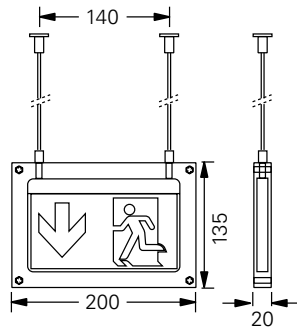
Ordering details - LED pictograms

Scope of supply	Order No.
SpiritLED 28 PL/PR – LED panel with pictogram PL/PR and LED-module (mounting kit is required) acc. to ISO 7010 	40071354610
SpiritLED 28 PU/PU – LED panel with pictogram PU/PU and LED-module (mounting kit is required) acc. to ISO 7010 	40071354611
SpiritLED 28 PU/Blind – LED panel with pictogram PU/Blind and LED-module (mounting kit is required) acc. to ISO 7010 	40071354612
SpiritLED 28 PL/PR-R* 90° – LED panel with pictogram PL/PR and LED-module (mounting kit is required) acc. to ISO 7010 	40071354613
SpiritLED 28 PL/PR-W* 90° – LED panel with pictogram PL/PR and LED-module (mounting kit is required) acc. to ISO 7010 	40071354614

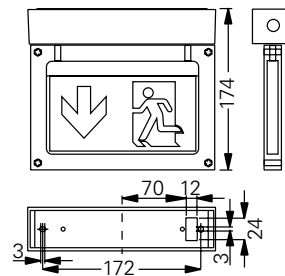
* R = Arrow from mounting wall
W = Arrow to mounting wall

** Degree of protection recessed ceiling mounting kit IP20

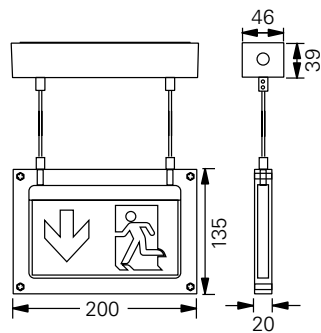
SpiritLED 16



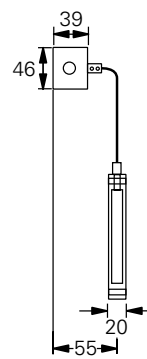
Recessed ceiling mounting
with wire suspension



Surface mounting

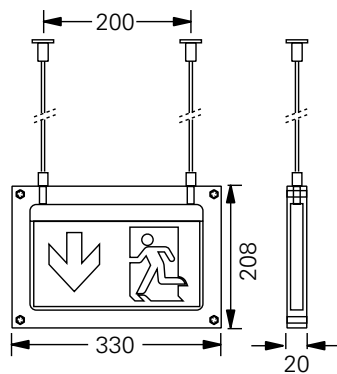


Surface mounting
with wire suspension

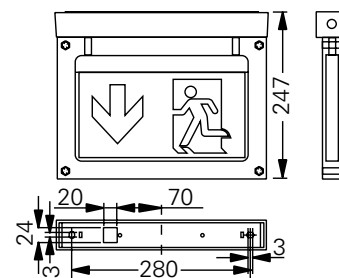


Wall parallel with wire suspension

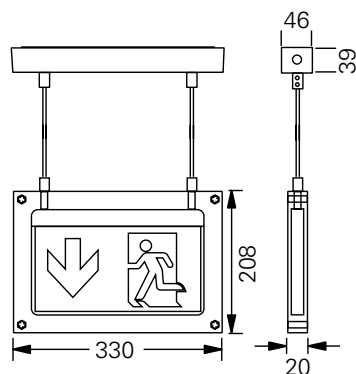
SpiritLED 28



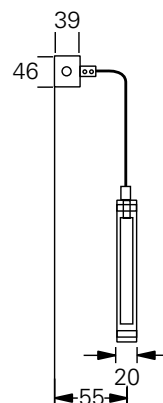
Recessed ceiling mounting
with wire suspension



Surface mounting



Surface mounting
with wire suspension



Wall parallel with wire suspension



Brillant 1503 ... 1803 LED CG-S

- Escape sign panel luminaire in LED technology
- Special LED converter, with integrated monitoring module for single luminaire monitoring
- Minimum service requirement due to high service life of the LEDs (up to 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
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

1503 LED CG-S



1603 LED CG-S



1703 LED CG-S



1803 LED CG-S



Viewing distance	20 m
Luminous flux Φ_E/Φ_N at the end of rated operating time	100 %
Housing material	Aluminium, sheet steel
Weight incl. panel	2.3 kg (1503 LED CG-S) 2.2 kg (1603 LED CG-S) 1.8 kg (1703 LED CG-S) 2.9 kg (1803 LED CG-S)
Housing colour	White
Type of mounting	Wall mounting (1503 LED CG-S, 1603 LED CG-S) Ceiling surface, suspended, chain mounting (1703 LED CG-S) Ceiling recessed mounting (1803 LED CG-S)
Connection terminals	Plug in terminals 2.5 mm ²
Connection voltage	220 – 240 V AC, 50/60 Hz 176 – 275 V DC
Current consumption - battery operation (220 V)	12 mA
Power consumption mains operation (apparent power / effective power)	5.5 VA / 2.9 W
Permissible ambient temperature	-10 °C to +40 °C
Light source	LED batten

Ordering details

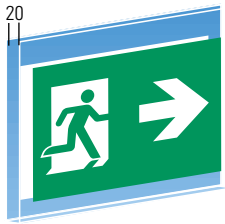
Type	Scope of supply	Order No.
1503 LED CG-S	Panel luminaire with CEWA GUARD monitoring and 20 digit address switches; for parallel wall mounting, without panel; design: white, RAL 9010	40071350900
1603 LED CG-S	Panel luminaire with CEWA GUARD monitoring and 20 digit address switches; with wall bracket, without panel; design: white, RAL 9010	40071350901
1703 LED CG-S	Panel luminaires with CEWA GUARD monitoring and 20 digit address switches; for surface ceiling mounting, suitable for chain and pendant mounting (not included), without panel; design: white, RAL 9010	40071350902
1803 LED CG-S	Panel luminaires with CEWA GUARD monitoring and 20 digit address switches; for recessed ceiling mounting, with plastic shield RAL 9010, without panel	40071352292

Attention: Phase out of the product end of 2016!

Brillant 1503 ... 1803 LED CG-S

Escape sign panel luminaire

Panel PL/PR



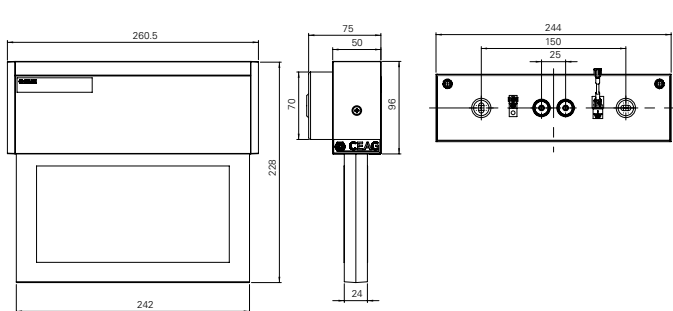
Ordering details

Type	Scope of supply	Order No.
Panel PL/PR acc. to ISO 7010	Two-sided pictogram panel	40071354620
Panel PU/PU acc. to ISO 7010	Two-sided pictogram panel	40071354621
Panel PU/BL acc. to ISO 7010	Two-sided pictogram panel	40071354622

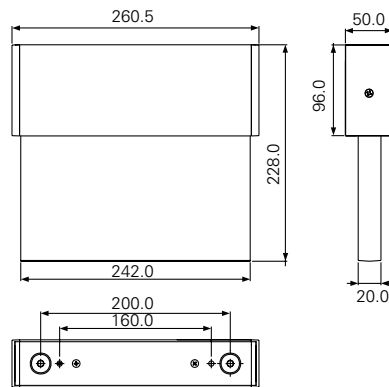
Ordering details

Type	Order No.
Bezel for 1803	metal shield white, RAL 9010
Concrete mounting box for 1803 ...	for installation in concrete ceilings
Mounting kit for 1803 ...	for installation in concrete recessing box
Suspension set 0.5 m	white canopy and aluminium pendulum tube
Suspension set 1.5 m	white canopy and aluminium pendulum tube
Chain suspension metal	Chain fastening for 1703

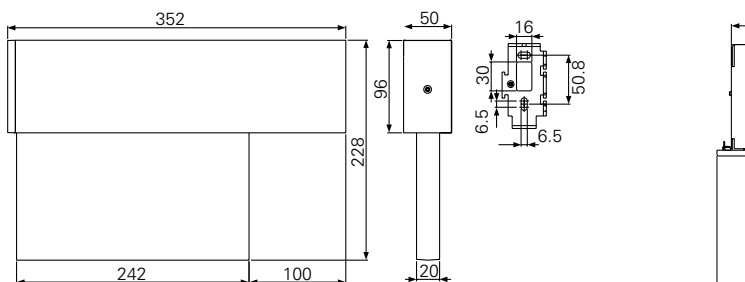
Attention: Phase out of the product end of 2016!



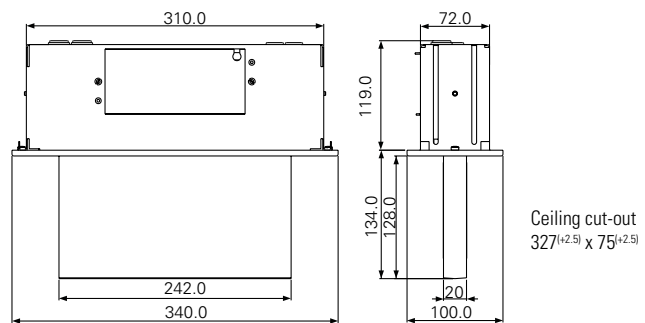
1503 LED CG-S



1703 LED CG-S



1603 LED CG-S



1803 LED CG-S



Brillant 1504 ... 1804 LED CG-S

- Escape sign panel luminaire in LED technology
- Special LED converter, with integrated monitoring module for single luminaire monitoring
- Minimum service requirement due to high service life of the LEDs (up to 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
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

1504 LED CG-S



1604 LED CG-S



1704 LED CG-S



1804 LED CG-S



Viewing distance	28 m
Luminous flux Φ_E/Φ_N at the end of rated operating time	100 %
Housing material	Aluminium, sheet steel
Weight incl. panel	2.7 kg (1504 LED CG-S) 2.5 kg (1604 LED CG-S) 2.2 kg (1704 LED CG-S) 3.3 kg (1804 LED CG-S)
Housing colour	White
Type of mounting	Wall mounting (1504 LED CG-S, 1604 LED CG-S) Ceiling surface, suspended, chain mounting (1704 LED CG-S) Ceiling recessed mounting (1804 LED CG-S)
Connection terminals	Plug in terminals 2.5 mm ²
Connection voltage	220 – 240 V AC, 50/60 Hz 176 – 275 V DC
Current consumption - battery operation (220 V)	17 mA
Power consumption mains operation (apparent power / effective power)	7,1 VA / 4.1 W
Permissible ambient temperature	-10 °C to +40 °C
Light source	LED batten

Ordering details

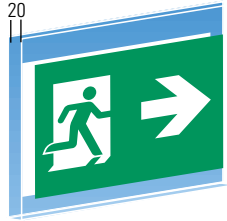
Type	Scope of supply	Order No.
1504 LED CG-S	Panel luminaire with CEWA GUARD monitoring and 20 digit address switches; with wall bracket for parallel wall mounting, without panel; design: white, RAL 9010	40071350903
1604 LED CG-S	Panel luminaire with CEWA GUARD monitoring and 20 digit address switches; with wall bracket, without panel; design: white, RAL 9010	40071350904
1704 LED CG-S	Panel luminaires with CEWA GUARD monitoring and 20 digit address switches; for surface ceiling mounting, suitable for chain and pendant mounting (not included), without panel; design: white, RAL 9010	40071350905
1804 LED CG-S	Panel luminaires with CEWA GUARD monitoring and 20 digit address switches; for recessed ceiling mounting, without panel; design: plastic shield white, RAL 9010	40071350678

Attention: Phase out of the product end of 2016!

Brillant 1504 ... 1804 LED CG-S

Escape sign panel luminaire

Panel PL/PR



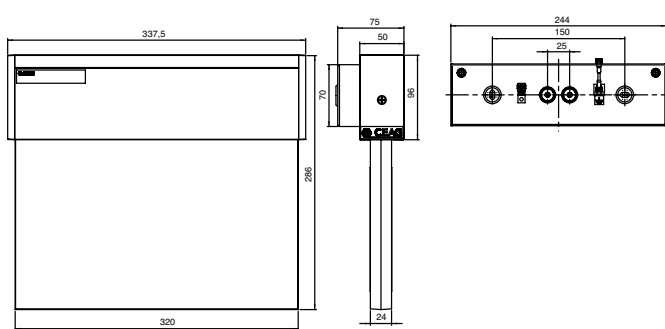
Ordering details

Type	Scope of supply	Order No.
Panel PL/PR acc. to ISO 7010	Two-sided pictogram panel	40071354630
Panel PU/PU acc. to ISO 7010	Two-sided pictogram panel	40071354631
Panel PU/BL acc. to ISO 7010	Two-sided pictogram panel	40071354632

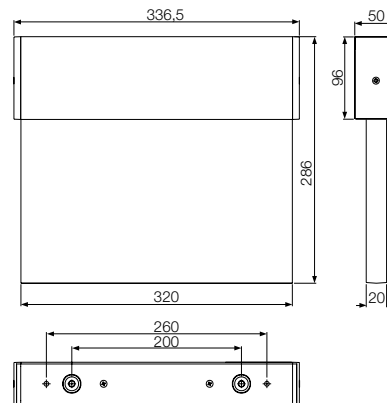
Ordering details

Type	Order No.
Bezel for 1804	metal shield white, RAL 9010 40071348859
Concrete mounting box for 1804 ...	for installation in concrete ceilings 40071341710
Mounting kit for 1804 ...	for installation in concrete recessing box 40071341720
Suspension set 0.5 m	white canopy and aluminium pendulum tube 40071348721
Suspension set 1.5 m	white canopy and aluminium pendulum tube 40071348722
Chain suspension metal	Chain fastening for 1704 40071348723

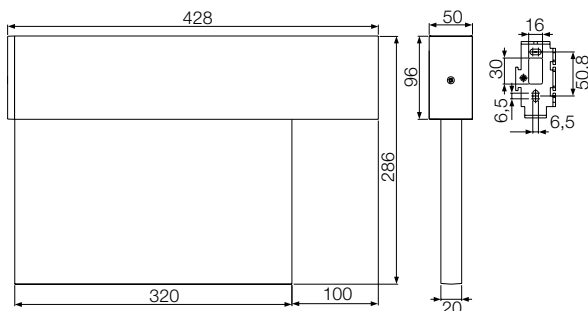
Attention: Phase out of the product end of 2016!



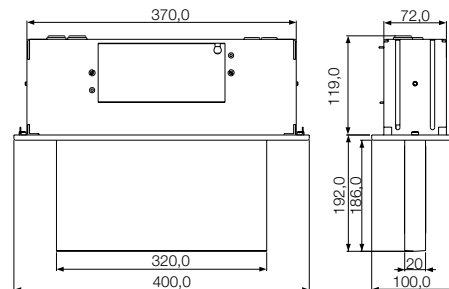
1504 LED CG-S



1704 LED CG-S



1604 LED CG-S



1804 LED CG-S

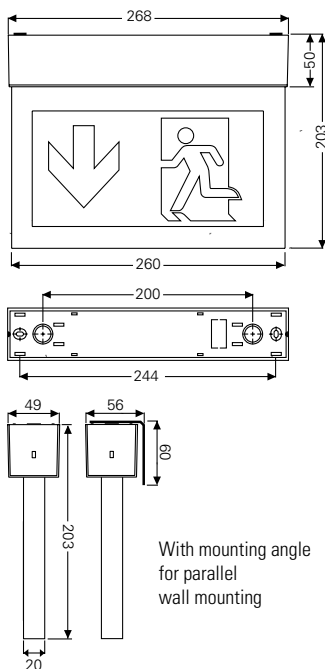
Ceiling cut-out
387^(+2.5) x 75^(+2.5)



1903 LED CG-S aluminium with panel PL/PR



1903 LED CG-S white with panel PL/PR W 90°



1903 LED CG-S

- LED escape sign panel luminaire in surface-mounted design with minimised rectangular housing form
- Simple mounting of screenprinted pictogram panel via snap-fitting
- 90° wall mounting achieved via special pictogram panel rotated at 90°
- Special LED converter, with integrated monitoring module for single luminaire monitoring
- Minimum maintenance effort via high LED service life (up to 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
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

Viewing distance	22 m
Luminous flux Φ_E/Φ_N at the end of rated operating time	100 %
Housing material	Plastic
Weight incl. panel	1.28 kg
Housing colour	White / Aluminium
Type of mounting	Wall or ceiling mounting
Connection terminals	Clamp terminal 2.5 mm ²
Connection voltage	220 – 240 V AC, 50/60 Hz 176 – 275 V DC
Current consumption - battery operation (220 V)	12 mA
Power consumption mains operation (apparent power / effective power)	5.5 VA / 3.0 W
Permissible ambient temperature	-10 °C to +40 °C
Light source	LED batten

Ordering details

Type	Scope of supply	Order No.
1903 LED CG-S white	Luminaire housing plastic, without panel, colour white, with CEWA GUARD monitoring and 20-digit address switch	40071352230
1903 LED CG-S aluminium	Luminaire housing plastic, without panel, colour aluminium, with CEWA GUARD monitoring and 20-digit address switch	40071352235
Panel PL/PR acc. to ISO 7010	Two-sided pictogram panel 22 m	40071354660
Panel PU/PU acc. to ISO 7010	Two-sided pictogram panel 22 m	40071354661
Panel PU/BL acc. to ISO 7010	Two-sided pictogram panel 22 m	40071354662
Panel PL/BL acc. to ISO 7010	Two-sided pictogram panel 22 m	40071354663
Panel PR/BL acc. to ISO 7010	Two-sided pictogram panel 22 m	40071354664
Panel PL/PR-R* 90° acc. to ISO 7010	Two-sided pictogram panel 22 m, wall mounting	40071354666
Panel PL/PR-W* 90° acc. to ISO 7010	Two-sided pictogram panel 22 m, wall mounting	40071354665

Accessories

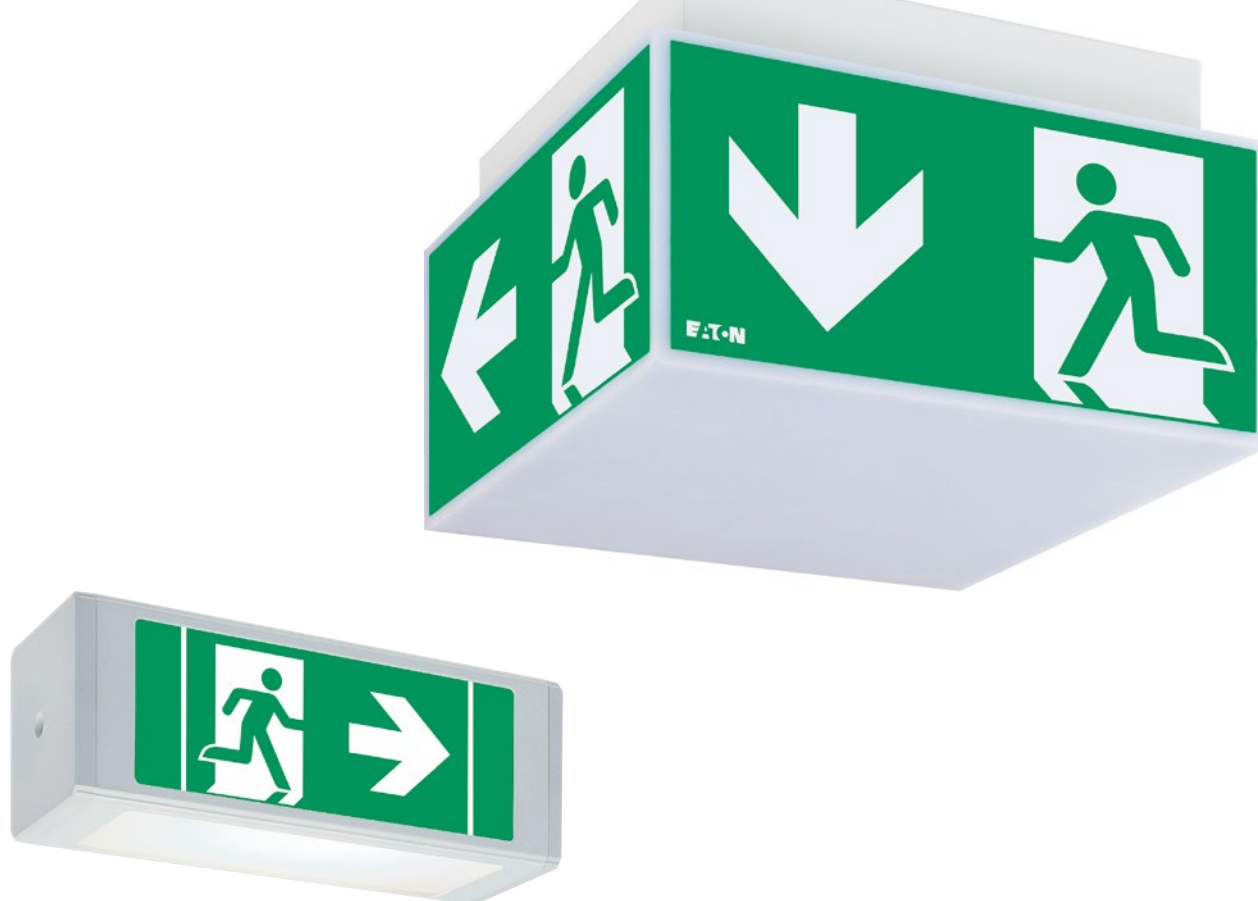
Type	Order No.
Mounting angle for parallel wall mounting, white	40071350599
Suspension set 0.5 m white canopy and aluminium pendulum tube	40071348721
Suspension set 0.5 m aluminium canopy and pendulum tube	40071352842

Attention: Phase out of the product end of 2016!

* R = Arrow from mounting wall
W = Arrow to mounting wall



Escape sign luminaires
with three-sided light
outlet



Exit sign luminaires for low room heights and wide areas

The RZ 134 CG-S series features small enclosure lighting. Thus, it provides the possibility of an unobtrusive though regular escape route integrated into the decor.

The exit cube with LED Technology has three-sided illumination, making it suitable for large, wide areas, for example warehouses or retail areas. Easy and flexible mounting options are possible (ceiling, wall, cable and chain) by just sliding the cube onto the installed luminaire. In addition, high efficiency LEDs with a service life of 50,000 hours ensure high operational safety and also significantly minimise effort for maintenance.

Features 134 CG-S:

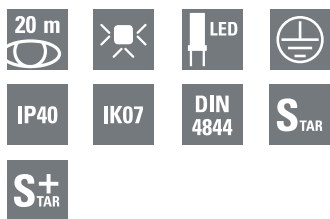
- Small enclosure dimensions – suitable especially for low ceiling-height
- Variety of mounting possibilities due to three-sided light outlet

Features Exit Cube 33022, 33042 LED CG-S:

- Multiple mounting options
- Easy and flexible mounting with space to land cables
- Robust design with impact-resistance of IK07

Exit Cube 33022 LED CG-S

Emergency Sign Luminaire



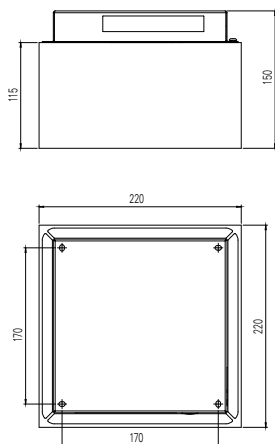
Exit Cube 33022 LED CG-S

- Exit sign cube with LED Technology for large, wide areas, e.g. warehouses or retail areas
- Robust design with impact-resistance of IK07
- Low operating costs via low connected load
- Minimum maintenance effort via use of LEDs with high service life (up to 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 $L_{min}/L_{max} > 0,4$ (in mains operation)
- Reduced operating costs on account of especially low power consumption
- Shorten inspection effort due to CEWA GUARD technology
- Automatic function monitoring for up to 20 luminaires per circuit
- Reduced installation cost with STAR Technology
- Freely programmable mixed operation, allowing the switching of luminaire modes within one circuit

Exit Cube 33022 LED CG-S



Dimensions in mm



Wall bracket



Chain mounting kit



Cable mounting kit



Replacement escape sign cube



Viewing Distance	20 m
Luminous flux Φ_E/Φ_N at the end of rated operating time	100 %
Housing material	Cube: polycarbonate; enclosure: coated steel sheet
Housing colour	White RAL 9010
Weight	Luminaire 1.1 kg Cube: 0.6 kg
Type of mounting	Ceiling or wall mounting (bracket required)
Connection terminals	Loop terminals 3 x 2.5 mm ²
Connection voltage	220 - 240 V AC, 50/60 Hz 176 - 275 V DC
Current consumption with battery operating	25 mA
Power consumption mains operation (apparent power / effective power)	9.5 VA / 5.9 W
Permissible temperature range	-20 °C to +40 °C
Light source	HighPower LEDs 4 x 1 W

Ordering details

Scope of supply

Exit Cube 33022 LED CG-S: Enclosure and exit sign cube, for 20 m viewing distance with LED Supply and CG-S Technology (20 addresses), silkscreened pictograms (arrow left, right, down) acc. to ISO 7010



Order No

40071353421

Ordering details accessories

Scope of supply

Wall bracket incl. attachments

Order No

40071353444

Chain mounting kit with 4 eyelets (chain not included)

40071353457

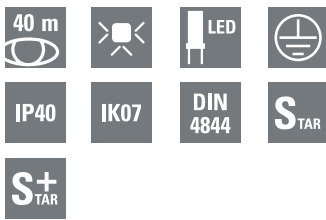
Cable mounting kit with 4 fasteners and cables, adjustable hanging height (max 1.5 m)

40071353443

Replacement escape sign cube (20 m viewing distance) silkscreened pictograms (arrow left, right, down) acc. to ISO 7010



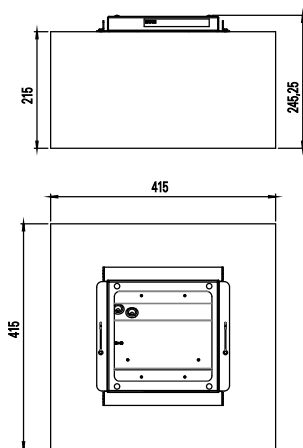
40071354450



Exit Cube 33042 LED CG-S



Dimensions in mm



Replacement escape sign cube




Exit Cube 33042 LED CG-S


- Exit sign cube with LED Technology for large, wide areas, e.g. warehouses or retail areas
- Robust design with impact-resistance of IK07
- Low operating costs via low connected load
- Minimum maintenance effort via use of LEDs with high service life (up to 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 ceiling or chain (four mounting eyes existing).
- Optimal perceptibility due to high luminance of the white contrasting colour ($> 500 \text{ cd/m}^2$) acc. DIN 4844-1 / ISO 3864-1 (for bright environments) and high uniformity $L_{\text{min}}/L_{\text{max}} > 0,4$ (in mains operation)
- Reduced operating costs on account of especially low power consumption
- Shorten inspection effort due to CEWA GUARD technology
- Automatic function monitoring for up to 20 luminaires per circuit
- Reduced installation cost with STAR Technology
- Freely programmable mixed operation, allowing the switching of luminaire modes within one circuit

Viewing Distance	40 m
Luminous flux Φ_E/Φ_N at the end of rated operating time	100 %
Housing material	Cube: PMMA; enclosure: coated steel sheet
Housing colour	White RAL 9010
Weight	Luminaire 1.6 kg Cube: 3,1 kg
Type of mounting	Ceiling mounting
Connection terminals	Loop terminals 3 x 2.5 mm ²
Connection voltage	220 - 240 V AC, 50/60 Hz 176 - 275 V DC
Current consumption with battery operating	46 mA
Power consumption mains operation (apparent power / effective power)	17.6 VA / 10.6 W
Permissible temperature range	-20 °C to +40 °C
Light source	HighPower LEDs 8 x 1 W

Ordering details

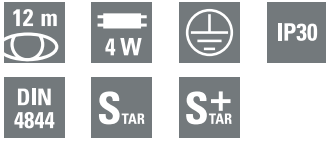
Scope of supply	Bestell-Nr.
Exit Cube 33042 LED CG-S: Enclosure and exit sign cube, for 40 m viewing distance with LED Supply and CG-S Technology (20 addresses), silkscreened pictograms (arrow left, right, down) acc. to ISO 7010 	40071353422

Ordering details accessories

Scope of supply	Bestell-Nr.
Replacement escape sign cube (40 m viewing distance) silkscreened pictograms (arrow left, right, down) acc. to ISO 7010 	40071354451

134 CG-S

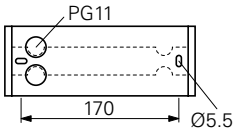
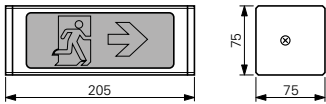
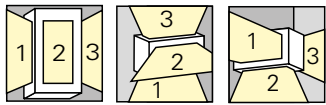
Escape sign luminaire Hotel



134 CG-S

- Safety luminaire with three-sided light outlet
- For horizontal and vertical wall or ceiling mounting
- Low construction height means especially suitable for areas with low ceilings
- Shortened inspection effort due to CEWA GUARD technology
- Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation expenditure with STAR technology
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

134 CG-S



Viewing distance	12 m
Luminous flux Φ_E/Φ_N at the end of rated operating time	75 %
Housing material	Aluminium/Plastic cover
Weight incl. panel	0.70 kg
Housing colour	White
Type of mounting	Wall or ceiling mounting
Connection terminals	Loop terminals 3 x 2.5 mm ²
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	8 VA
Permissible ambient temperature	-10 °C to +40 °C
Light source	4 W/T16

Ordering details

Type	Scope of supply	Order No.
134 CG-S	Luminaire with CEWA GUARD monitoring and 20-digit address switch, without covers	40071341874
Cover PL	Cover with pictogram acc. to ISO 7010	40071354290
Cover PR	Cover with pictogram acc. to ISO 7010	40071354291
Cover PU	Cover with pictogram acc. to ISO 7010	40071354292
Cover	Opaque cover	40071345562
Blind cover		40071345563

Each luminaire requires 3 covers

Accessories

Type	Order No.
Wire guard	40071348370

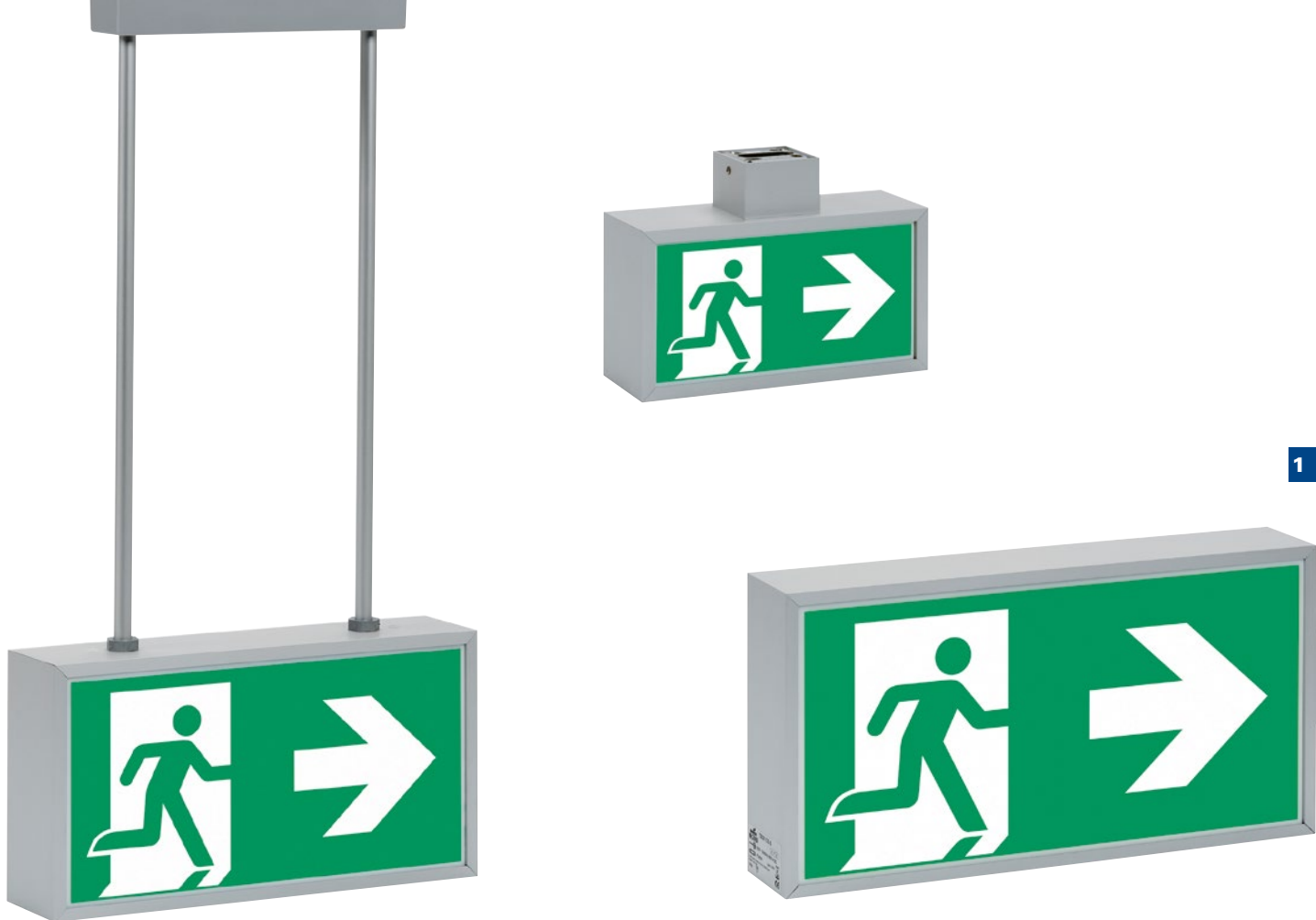
Planning help for 134 CG-S for E = 1.0 lx (0.5 lx)

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

Mounting height [m]	Types of mounting	L1	L2
2.0	Wall mounting	2.6 (3.3)	6.6 (7.8)
2.5		2.4 (3.3)	6.6 (8.4)
3.0		2.3 (3.2)	6.4 (8.6)

Safety and exit sign luminaires with aluminum housings





1

Robust luminaires with diverse uses

The aluminium luminaire series has 5 mounting methods for a wide variety of installation situations.

A consistently uniform design with viewing distances of 20 m, 32 m and even 60 m means a homogenous appearance of complete safety lighting system. All three sizes can be equipped with a prismatic cover of transparent polycarbonate, thus making them also suitable for escape route illumination.

The new LED technology with viewing distances of 20 m and 32 m is characterised by especially low connected loads. This means that the 71011 LED CG-S single-sided luminaire with viewing distance of 32 m only requires 3.1 W with mains operation.

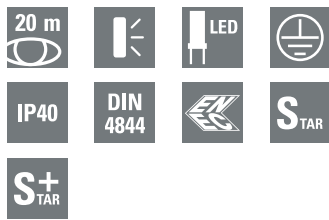
The operating conditions of the LEDs are designed for a service life of $\geq 50,000$ h, thus significantly minimising maintenance requirements.

Features:

- 5 types of mounting for different mounting situations
- 3 sizes for viewing distances of 20 m up to 60 m
- Suitable as escape sign and safety luminaires
- Also available with especially efficient and long-life LED technology

70011 ... 70021 LED CG-S

Escape sign luminaire



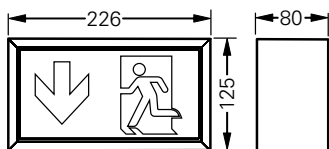
70011 ... 70021 LED CG-S

- Enclosure made of slim aluminium profile, anodised, with silk-screened pictogram cover
- Special LED converter, with integrated monitoring module for single luminaire monitoring
- Minimum service requirement due to high service life of the LEDs (up to 50,000 hours)
- Low operating costs with low effective connected load of only 3.1 W (2.0 W with single-sided emission)
- Shortened inspection effort due to CEWA GUARD technology
- Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation expenditure with STAR technology
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

70011 LED CG-S






Dimensions in mm



Viewing distance	20 m
Luminous flux Φ_E/Φ_N at the end of rated operating time	100 %
Housing material	Aluminium
Weight incl. panel	1.20 kg (70011 LED CG-S) 1.25 kg (70021 LED CG-S)
Housing colour	Aluminium, anodised
Type of mounting	Wall mounting (70011 LED CG-S) Wall, ceiling and pendant mounting (70021 LED CG-S)
Connection terminals	3 x 2.5 mm ²
Connection voltage	220 – 240 V AC, 50/60 Hz 176 – 275 V DC
Current consumption - battery operation (220 V)	8.7 mA (70011 LED CG-S) 14.0 mA (70021 LED CG-S)
Power consumption mains operation (apparent power / effective power)	4.36 VA/2.0 W (70011 LED CG-S) 5.80 VA/3.1 W (70021 LED CG-S)
Permissible ambient temperature	-10 °C to +40 °C
Light source	HighPower LEDs 1 x 1.1 W LED (70011 LED CG-S) HighPower LEDs 2 x 1.1 W LED (70021 LED CG-S)

Ordering details

Type	Scope of supply	Order No.
70011 LED CG-S	Luminaire with CEWA GUARD monitoring and 20-digit address switch, without cover	40071351270
70021 LED CG-S WM	Luminaire with CEWA GUARD monitoring for wall mounting, with 20-digit address switch, without covers*	40071351271
70021 LED CG-S DM	Luminaire with CEWA GUARD monitoring for ceiling mounting, with 20-digit address switch, without covers*	40071351272
70021 LED CG-S PM	Luminaire with CEWA GUARD monitoring for pendant mounting, with 20-digit address switch, without covers*	40071351273
Cover PL	Cover with pictogram acc. to ISO 7010 	40071354220
Cover PR	Cover with pictogram acc. to ISO 7010 	40071354221
Cover PU	Cover with pictogram acc. to ISO 7010 	40071354222
Blind cover		40071351196

* Each luminaire requires 2 covers.

Installation material is not included in the scope of delivery of the luminaire. Please order installation material separately depending on the type of mounting (see accessories).

WM = Wall mounting, DM = Ceiling mounting, PM = Pendant mounting

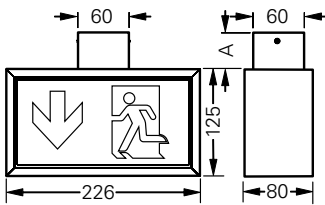
70021 LED CG-S DM
with wall/ceiling mounting kit



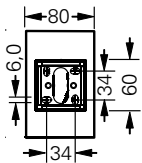
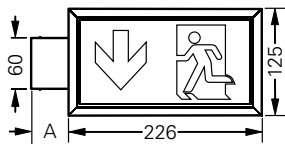
Accessories

Type		Order No.
Wall/ceiling mounting kit	for WM / DM, A = 42 mm	40071351011
Wall/ceiling mounting kit	for WM / DM, A = 100 mm	40071351497
Single suspension	for PM	40071351157

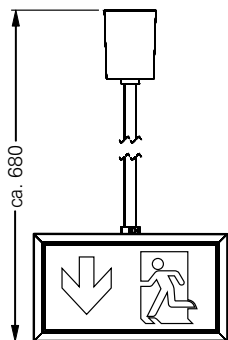
Dimensions in mm



70021 LED CG-S DM



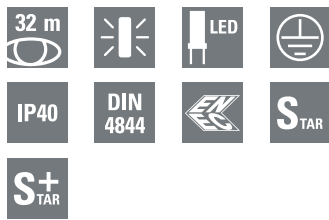
70021 LED CG-S WM



70021 LED CG-S PM

71011 ... 71021 LED CG-S

Escape sign luminaire



71011 ... 71021 LED CG-S

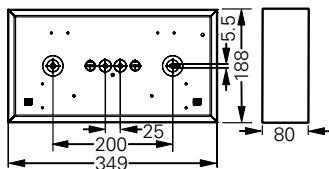
- Enclosure made of slim aluminium profile, anodised, with silk-screened pictogram cover
- Special LED converter, with integrated monitoring module for single luminaire monitoring
- Minimum service requirement due to high service life of the LEDs (up to 50,000 hours)
- Low operating costs with low connected load of only 5.8 W (3.1 W with single-sided emission)
- Shortened inspection effort due to CEWA GUARD technology
- Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation expenditures by STAR technology
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

1

71011 LED CG-S






Dimensions in mm



Viewing distance	32 m
Luminous flux Φ_E/Φ_N at the end of rated operating time	100 %
Housing material	Aluminium
Weight incl. panel	1.75 kg (71011 LED CG-S) 1.50 kg (71021 LED CG-S)
Housing colour	Aluminium, anodised
Type of mounting	Wall mounting (71011 LED CG-S) Wall, ceiling and pendant mountings (71021 LED CG-S)
Connection terminals	3 x 2.5 mm ²
Connection voltage	220 – 240 V AC, 50/60 Hz 176 – 275 V DC
Current consumption - battery operation (220 V)	14 mA (71011 LED CG-S) 25 mA (71021 LED CG-S)
Power consumption mains operation (apparent power / effective power)	5.8 VA/3.1 W (71011 LED CG-S) 9.5 VA/5.8 W (71021 LED CG-S)
Permissible ambient temperature	-10 °C to +40 °C
Light source	HighPower LEDs 2 x 1.1 W LED (71011 LED CG-S) HighPower LEDs 4 x 1.1 W LED (71021 LED CG-S)

Ordering details

Type	Scope of supply	Order No.
71011 LED CG-S	Luminaire with CEWA GUARD monitoring and 20-digit address switch, without cover	40071351280
71021 LED CG-S WM	Luminaire with CEWA GUARD monitoring for wall mounting, with 20-digit address switch, without covers*	40071351281
71021 LED CG-S DM	Luminaire with CEWA GUARD monitoring for ceiling mounting, with 20-digit address switch, without covers*	40071351282
71021 LED CG-S PM	Luminaire with CEWA GUARD monitoring for pendant mounting, with 20-digit address switch, without covers*	40071351283
Cover PL	Cover with pictogram acc. to ISO 7010 	40071354240
Cover PR	Cover with pictogram acc. to ISO 7010 	40071354241
Cover PU	Cover with pictogram acc. to ISO 7010 	40071354242
Blind cover		40071351197

* Each luminaire requires 2 covers.

Installation material is not included in the scope of delivery of the luminaire. Please order installation material separately depending on the type of mounting (see accessories).

WM = Wall mounting, DM = Ceiling mounting, PM = Pendant mounting

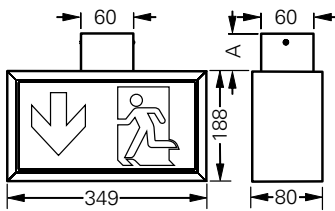
71021 LED CG-S WM
with wall/ceiling mounting kit



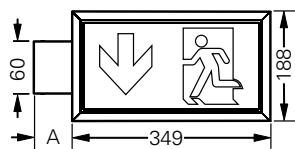
Accessories

Type		Order No.
Wire guard	for 71011 LED CG-S	40071348370
Wall/ceiling mounting kit	for WM / DM, A = 42 mm	40071351011
Wall/ceiling mounting kit	for WM / DM, A = 100 mm	40071351497
Suspension set 0.5 m	with canopy, silver, square form, for PM	40071344599
Suspension set 1.0 m	with canopy, silver, square form, for PM	40071350775
Suspension set 1.5 m	with canopy, silver, square form, for PM	40071350776
Chain fastening	Ring eyelets, for PM	40071351158

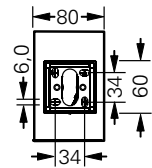
Dimensions in mm



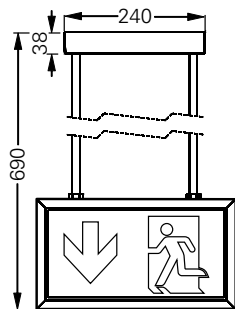
71021 LED CG-S DM



71021 LED CG-S WM



71021 LED CG-S WM



71021 LED CG-S PM

70011 ... 70021 CG-S

Safety luminaire and escape sign luminaire



70011 ... 70021 CG-S

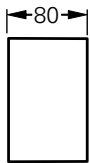
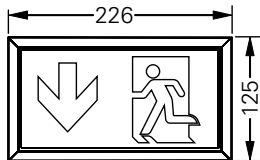
- Enclosure made of slim aluminium profile, anodised, with silk-screened pictogram cover
- Shortened inspection effort due to CEWA GUARD technology
- Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation expenditures by STAR technology
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

1

70011 CG-S



Dimensions in mm



Viewing distance	20 m
Luminous flux Φ_E/Φ_N at the end of rated operating time	75 %
Housing material	Aluminium
Weight incl. panel	1.15 kg (70011 CG-S) 1.10 kg (70021 CG-S)
Housing colour	Alu eloxiert
Type of mounting	Wall mounting (70011 CG-S) Wall, ceiling and pendant mounting (70021 CG-S)
Connection terminals	3 x 2.5 mm ²
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	8 VA
Permissible ambient temperature	-10 °C to +40 °C
Light source	4 W/T16, 140 lm

Ordering details

Type	Scope of supply	Order No.
70011 CG-S	Luminaire with CEWA GUARD monitoring and 20-digit address switch, without cover	40071351201
70021 CG-S WM	Luminaire with CEWA GUARD monitoring for wall mounting, with 20-digit address switch, without covers*	40071351205
70021 CG-S DM	Luminaire with CEWA GUARD monitoring for ceiling mounting, with 20 digit address switch, without covers*	40071351206
70021 CG-S PM	Luminaire with CEWA GUARD monitoring for pendant mounting, with 20 digit address switch, without covers*	40071351207
Cover PL	Cover with pictogram acc. to ISO 7010	40071354220
Cover PR	Cover with pictogram acc. to ISO 7010	40071354221
Cover PU	Cover with pictogram acc. to ISO 7010	40071354222
Cover SL	Transparent cover	40071351186
Blind cover		40071351196

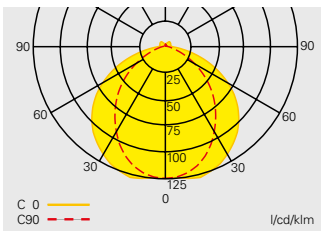
* Each luminaire requires 2 covers.

Installation material is not included in the scope of delivery of the luminaire. Please order installation material separately depending on the type of mounting (see accessories).

WM = Wall mounting, DM = Ceiling mounting, PM = Pendant mounting

Accessories

Type		Order No.
Wall/ceiling mounting kit	for WM / DM, A = 42 mm	40071351011
Wall/ceiling mounting kit	for WM / DM, A = 100 mm	40071351497
Single suspension	for PM	40071351157



Light distribution curve 70011 CG-S

Planning help for 70011 CG-S for E = 1.0 lx (0.5 lx) with transparent cover

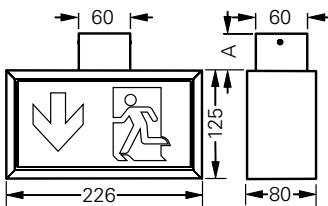
Measuring level 0.02 m, maintenance factor MF = 80 %, battery operation, distances in m

Mounting height [m]	Types of mounting	L1	L2	L3	L4
2.5	Ceiling mounting	1.2 (2.0)	3.9 (5.4)	1.5 (2.4)	4.8 (6.6)
3.0	Escape route centre	0.8 (1.9)	3.8 (5.5)	1.0 (2.3)	4.7 (6.8)
3.5		- (1.7)	3.4 (5.6)	- (2.1)	4.2 (6.8)
2.0	Wall mounting	0.6 (1.4)	2.8 (4.0)	- (-)	2.2 (4.0)
2.5		- (0.9)	2.0 (3.4)	- (-)	2.0 (2.0)
3.0		- (-)	2.0 (2.4)	- (-)	2.0 (2.0)
2.5	Ceiling mounting	1.3 (1.9)	4.2 (5.5)	0.7 (1.3)	4.6 (5.8)
3.0	Room illumination	0.8 (1.8)	4.1 (5.8)	0.8 (1.0)	5.0 (6.2)
3.5		0.7 (1.6)	4.0 (5.9)	0.5 (1.0)	4.9 (6.6)
4.0		0.5 (1.2)	3.6 (5.9)	0.5 (0.8)	4.7 (6.9)

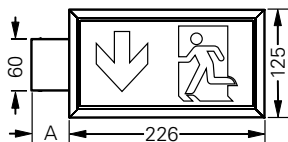
70021 CG-S DM
with wall/ceiling mounting kit



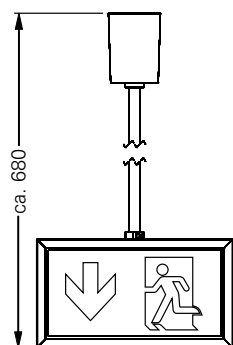
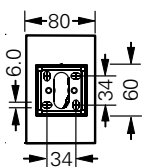
Dimensions in mm



70021 CG-S DM



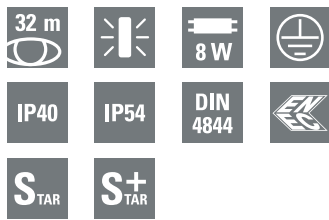
70021 CG-S WM



70021 CG-S PM

71011 ... 71021 CG-S

Safety luminaire and escape sign luminaire



71011 ... 71021 CG-S

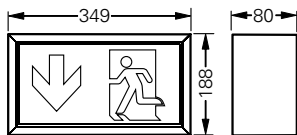
- Enclosure made of slim aluminium profile, anodised, with silk-screened pictogram cover
- Shortened inspection effort due to CEWA GUARD technology
- Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation expenditure with STAR technology
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

Viewing distance	32 m
Luminous flux Φ_E/Φ_N at the end of rated operating time	75 %
Housing material	Aluminium
Weight incl. panel	1.65 kg (71011 CG-S) 1.30 kg (71021 CG-S) 1.95 kg (71011 IP54 CG-S)
Housing colour	Aluminium, anodised
Type of mounting	Wall mounting (71011 CG-S) Wall, ceiling and pendant mounting (71021 CG-S)
Connection terminals	Loop terminals 3 x 2.5 mm ²
Connection voltage	220 – 240 V AC, 50/60 Hz 176 – 275 V DC
Current consumption - battery operation (220 V)	30 mA
Power consumption mains operation	16 VA
Permissible ambient temperature	-10 °C to +40 °C
Light source	8W/T16, 450 lm

71011 CG-S



Dimensions in mm



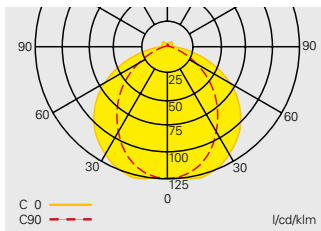
Ordering details

Type	Scope of supply	Order No.
71011 CG-S	Luminaire with CEWA GUARD monitoring and 20-digit address switch, without cover	40071351211
71011 CG-S IP54	Luminaire with CEWA GUARD monitoring and 20-digit address switch, without cover	40071351213
71021 CG-SWM	Luminaire with CEWA GUARD monitoring for wall mounting, with 20-digit address switch, without covers*	40071351217
71021 CG-S DM	Luminaire with CEWA GUARD monitoring for ceiling mounting, with 20-digit address switch, without covers*	40071351218
71021 CG-S PM	Luminaire with CEWA GUARD monitoring for pendant mounting, with 20-digit address switch, without covers*	40071351219
Cover PL	Cover with pictogram acc. to ISO 7010	40071354240
Cover PR	Cover with pictogram acc. to ISO 7010	40071354241
Cover PU	Cover with pictogram acc. to ISO 7010	40071354242
Cover SL	Transparent cover	40071351187
Blind cover		40071351197

* Each luminaire requires 2 covers.

Installation material is not included in the scope of delivery of the luminaire. Please order installation material separately depending on the type of mounting (see accessories).

WM = Wall mounting, DM = Ceiling mounting, PM = Pendant mounting



Light distribution curve 71011 CG-S

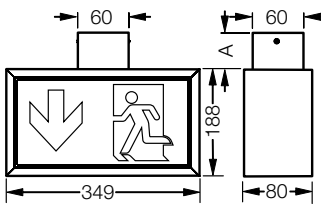
Accessories

Type		Order No.
Wire guard	for 71011 CG-S	40071348370
Wall/ceiling mounting kit	for WM / DM, A = 42 mm	40071351011
Wall/ceiling mounting kit	for WM / DM, A = 100 mm	40071351497
Suspension set 0.5 m	with canopy, silver, square form, for PM	40071344599
Suspension set 1.0 m	with canopy, silver, square form, for PM	40071350775
Suspension set 1.5 m	with canopy, silver, square form, for PM	40071350776
Chain fastening	Ring eyelets, for PM	40071351158

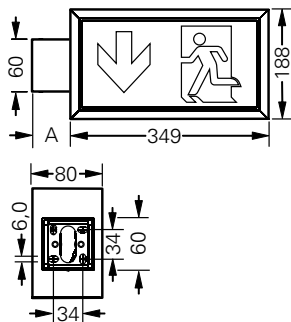
71021 CG-S WM
with wall/ceiling mounting kit



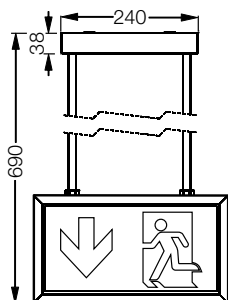
Dimensions in mm



71021 CG-S DM



71021 CG-S WM



71021 CG-S PM

Planning help for 71011 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	2.5 (3.2)	6.4 (7.9)	3.1 (4.1)	8.2 (10.2)
3.0	Escape route centre	2.5 (3.4)	6.7 (8.5)	3.2 (4.3)	8.6 (11.0)
3.5		2.5 (3.5)	6.9 (9.0)	3.1 (4.4)	8.9 (11.5)
4.0		2.4 (3.5)	7.1 (9.4)	3.0 (4.5)	9.0 (12.0)
4.5		2.2 (3.5)	7.1 (9.6)	2.8 (4.5)	9.0 (12.3)
5.0		1.9 (3.5)	7.0 (9.8)	2.4 (4.4)	8.9 (12.6)
5.5		1.3 (3.4)	6.9 (10.0)	1.8 (4.3)	8.6 (12.7)
2.0	Wall mounting	1.9 (2.4)	4.8 (5.8)	1.9 (2.7)	5.4 (6.8)
2.5		1.7 (2.4)	4.8 (6.0)	– (2.4)	4.8 (6.6)
3.0		1.3 (2.2)	4.4 (6.0)	– (–)	2.0 (6.0)
2.5	Ceiling mounting	2.0 (2.9)	6.2 (8.0)	2.5 (2.5)	7.5 (8.7)
3.0	Room illumination	2.4 (3.0)	7.0 (8.6)	1.3 (2.6)	7.6 (9.5)
3.5		2.2 (2.8)	7.2 (8.9)	1.8 (3.1)	8.2 (10.4)
4.0		2.0 (2.8)	7.4 (9.3)	1.3 (3.2)	8.6 (11.0)
4.5		1.5 (3.1)	7.4 (10.0)	1.7 (2.2)	9.1 (11.1)
5.0		1.2 (2.6)	7.5 (10.0)	1.1 (3.0)	9.3 (11.9)
5.5		0.7 (2.7)	7.5 (10.5)	0.7 (1.4)	9.5 (12.0)
6.0		0.6 (2.5)	7.4 (10.6)	0.6 (1.4)	9.4 (12.4)
6.5		0.5 (2.2)	7.2 (10.7)	0.6 (1.1)	9.3 (12.7)
7.0		0.5 (1.8)	6.8 (10.7)	0.5 (1.1)	9.2 (13.0)

79011 ... 79021 CG-S

Safety luminaire and escape sign luminaire



79011 ... 79021 CG-S

- Enclosure made of slim aluminium profile, anodised, with silk-screened pictogram cover
- Shortened inspection effort due to CEWA GUARD technology
- Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation expenditures by STAR technology
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

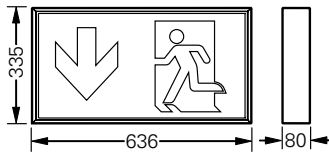
Viewing distance	60 m
Luminous flux Φ_E/Φ_N at the end of rated operating time	75 %
Housing material	Aluminium
Weight incl. panel	3.55 kg (79011 CG-S) 3.00 kg (79021 CG-S)
Housing colour	Aluminium, anodised
Type of mounting	Wall mounting (79011 CG-S) Wall, ceiling and pendant mounting (79021 CG-S)
Connection terminals	Loop terminals 3 x 2.5 mm ²
Connection voltage	220 – 240 V AC, 50/60 Hz 176 – 275 V DC
Current consumption - battery operation (220 V)	70 mA
Power consumption mains operation	30 VA
Permissible ambient temperature	-10 °C to +40 °C
Light source	18 W/T26, 1350 lm

1




79011 CG-S



Dimensions in mm



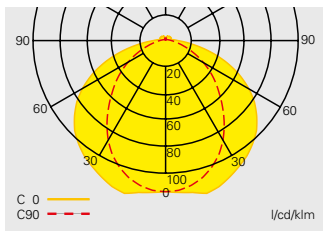
Ordering details

Type	Scope of supply	Order No.
79011 CG-S	Luminaire with CEWA GUARD monitoring and 20-digit address switch, without cover and without light source	40071351230
79021 CG-S WM	Luminaire with CEWA GUARD monitoring for wall mounting, with 20-digit address switch, without covers* and without light source	40071351231
79021 CG-S DM	Luminaire with CEWA GUARD monitoring for ceiling mounting, with 20-digit address switch, without covers* and without light source	40071351232
79021 CG-S PM	Luminaire with CEWA GUARD monitoring for pendant mounting, with 20-digit address switch, without covers* and without light source	40071351233
Cover PL	Cover with pictogram acc. to ISO 7010 	40071354260
Cover PR	Cover with pictogram acc. to ISO 7010 	40071354261
Cover PU	Cover with pictogram acc. to ISO 7010 	40071354262
Cover SL	Transparent cover	40071351189
Blind cover		40071351199

* Each luminaire requires 2 covers.

Installation material is not included in the scope of delivery of the luminaire. Please order installation material separately depending on the type of mounting (see accessories).

WM = Wall mounting, DM = Ceiling mounting, PM = Pendant mounting



Light distribution curve 79011 CG-S

Accessories

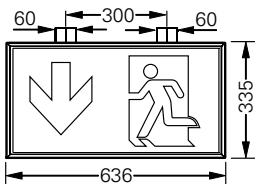
Type		Order No.
Wall/ceiling mounting kit	for WM / DM, A = 42 mm*	40071351011
Wall/ceiling mounting kit	for WM / DM, A = 100 mm*	40071351497
Suspension set 0.5 m	with canopy, silver, square form, for PM	40071344599
Suspension set 1.0 m	with canopy, silver, square form, for PM	40071350775
Suspension set 1.5 m	with canopy, silver, square form, for PM	40071350776
Chain fastening	Ring eyelets, for PM	40071351158

* for 79021 2 x required

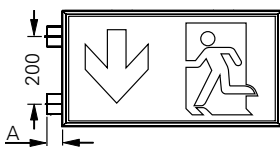
79021 CG-S
with wall/ceiling mounting kit



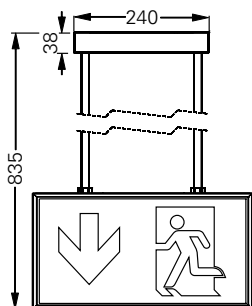
Dimensions in mm



79021 CG-S DM



79021 CG-S WM



79021 CG-S PM

Planning help for 79011 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	3.8 (4.6)	9.3 (11.1)	4.8 (5.9)	11.8 (14.3)
3.0	Escape route centre	4.0 (5.0)	10.0 (12.2)	5.1 (6.4)	12.8 (15.6)
3.5		4.2 (5.3)	10.6 (13.0)	5.4 (6.8)	13.5 (16.7)
4.0		4.3 (5.6)	11.2 (13.8)	5.5 (7.1)	14.2 (17.6)
4.5		4.4 (5.8)	11.6 (14.5)	5.6 (7.4)	14.7 (18.5)
5.0		4.5 (6.0)	11.9 (15.1)	5.7 (7.6)	15.2 (19.2)
5.5		4.5 (6.1)	12.2 (15.6)	5.7 (7.8)	15.5 (19.9)
6.0		4.5 (6.2)	12.3 (16.1)	5.6 (7.9)	15.8 (20.5)
6.5		4.4 (6.3)	12.5 (16.5)	5.5 (8.0)	16.0 (21.0)
7.0		4.3 (6.3)	12.6 (16.8)	5.4 (8.0)	16.1 (21.4)
7.5		4.1 (6.3)	12.7 (17.1)	5.1 (8.1)	16.1 (21.8)
8.0		3.9 (6.3)	12.7 (17.3)	4.8 (8.0)	16.1 (22.1)
8.5		3.6 (6.3)	12.6 (17.5)	4.5 (8.0)	15.9 (22.3)
9.0		3.2 (6.3)	12.5 (17.6)	4.0 (7.9)	15.7 (22.5)
9.5		2.7 (6.2)	12.4 (17.8)	3.5 (7.7)	15.5 (22.7)
10.0		1.9 (6.1)	12.1 (17.8)	2.7 (7.5)	15.1 (22.8)
2.0	Wall mounting	2.8 (3.3)	6.6 (7.8)	3.2 (3.9)	7.8 (9.6)
2.5		2.8 (3.4)	6.8 (8.2)	3.0 (3.9)	7.8 (9.6)
3.0		2.7 (3.4)	6.8 (8.4)	2.6 (3.7)	7.4 (9.6)
2.5	Ceiling mounting	3.4 (3.5)	9.1 (10.3)	3.1 (4.6)	10.0 (12.7)
3.0	Room illumination	3.4 (4.0)	9.7 (11.5)	3.5 (4.6)	11.1 (13.6)
3.5		3.3 (4.2)	10.2 (12.4)	3.9 (4.8)	12.1 (14.6)
4.0		3.3 (4.4)	10.7 (13.3)	4.0 (4.8)	12.9 (15.4)
4.5		3.5 (4.8)	11.4 (14.3)	3.8 (4.5)	13.3 (15.9)
5.0		3.5 (4.5)	11.9 (14.5)	3.8 (5.3)	13.8 (17.2)
5.5		3.4 (4.6)	12.2 (15.2)	3.9 (5.2)	14.4 (17.8)
6.0		3.6 (5.0)	12.9 (16.1)	2.1 (4.7)	14.4 (18.0)
6.5		3.4 (5.0)	13.1 (16.5)	2.1 (4.9)	14.9 (18.7)
7.0		3.2 (4.9)	13.3 (16.9)	1.7 (4.9)	15.3 (19.3)
7.5		2.9 (5.0)	13.4 (17.5)	1.6 (4.4)	15.7 (19.6)
8.0		2.7 (5.1)	13.5 (18.0)	1.3 (3.3)	16.0 (19.9)
8.5		1.8 (4.7)	13.2 (18.0)	2.2 (4.5)	16.7 (20.7)
9.0		1.7 (4.5)	13.5 (18.2)	1.1 (4.5)	16.6 (21.2)
9.5		1.2 (4.5)	13.5 (18.6)	0.7 (2.8)	16.8 (21.4)
10.0		0.6 (4.2)	13.4 (18.7)	0.6 (2.8)	17.0 (21.9)



Safety luminaires



Efficient escape route illumination with suitable light distribution

Whether for low or high mounting positions, for wide-area illumination or for escape route lighting, the safety luminaires from CEAG offer a wide variety of light distribution characteristics for the efficient lighting of escape routes in accordance with standards.

The various designs of the surface-mounted and recessed luminaires offer solutions for the diverse applications of escape route lighting.

Special emergency light electronic control gear with integral luminaire monitoring ensures safe, reliable and economic operation.

LED luminaires enable especially efficient escape route lighting with a low connected load, and therefore lower costs for energy and battery capacity. And despite their small construction sizes they achieve similar values to the watt-intensive luminaires with fluorescent lamps. The 50,000 h service life of the LEDs distinctly reduces maintenance costs.

Features:

- Special light distribution for emergency lighting acc. to EN 1838
- Electronic ballasts with integral monitoring (CEWA GUARD) and individual switching on the circuit (STAR)
- Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation expenditure with STAR technology

Micropoint 2 CG-S

Safety luminaire



Micropoint 2 CG-S

- Safety luminaire in LED technology for recessed mounting
- High spacing by special optics and highly efficient HighPower LED
- Up to 20 m from luminaire to luminaire with optics for escape route illumination
- Up to 10 m from luminaire to luminaire with optics for open area illumination
- Minimum service requirement due to high service life of the LED (50 000 hours)

1 Micropoint 2 E CG-S recessed installation with asymmetric optics

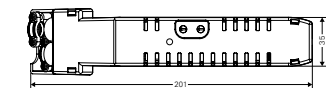
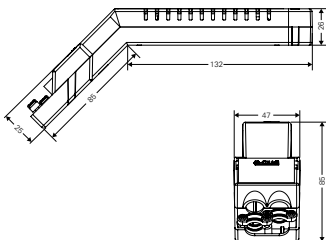
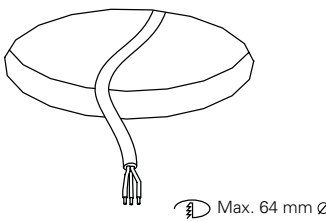
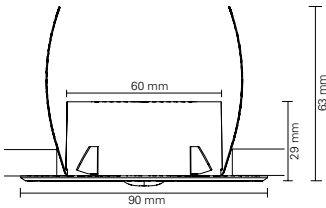


Micropoint 2 O CG-S recessed installation with symmetric optics



Luminous flux	142 lm
Luminous flux Φ_E/Φ_N at the end of rated operating time	100%
Housing material	Polycarbonate
Housing colour	White
Weight	0.24 kg
Type of mounting	Recessed mounting
Connection terminals	3 x 2 x 2.5 mm ²
Connection voltage	220- 240 V AC, 50/60 Hz 176- 275 V DC
Current consumption - battery operation (220 V)	13 mA
Power consumption mains operation (apparent power / effective power)	6.1 VA / 2.9 W
Permissible ambient temperature	-15°C to +40°C
Light source	HighPower LED 1 x 1.6 W

Dimensions in mm



Deckeneinbaugehäuse

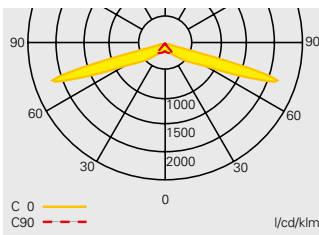
Ordering details

Type	Order No.
Micropoint 2 E CG-S recessed mounting with asymmetric optics for escape route illumination, LED supply and CG-S technology (20 addresses) in housing with strain relief	40071352191
micropoint 2 O CG-S recessed mounting with symmetric optics for anti-panic / open area illumination, LED supply and CG-S technology (20 addresses) in housing with strain relief	40071352192

* Degree of protection of the luminaire: IP44
Degree of protection of the module housing: IP20

Engineering help for Micropoint 2 E CG-S – Asymmetric optics for E = 1.0 lx (0.5 lx)

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

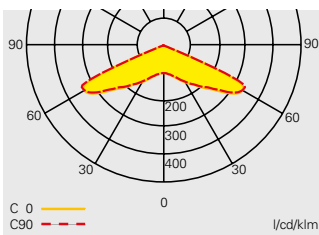


Light distribution curve
Micropoint 2 E CG-S
with asymmetric optics

Mounting height [m]	Types of mounting	L1	L2	L3	L4
2.5	Ceiling mounting	2.2 (2.4)	4.8 (4.9)	7.7 (8.8)	17.6 (18.7)
3.0	Escape route centre	2.5 (2.8)	5.6 (5.8)	7.9 (10.1)	19.8 (21.8)
3.5		2.6 (3.2)	6.3 (6.7)	5.0 (11.1)	19.3 (24.8)
2.5	Ceiling mounting	1.5 (1.8)	3.8 (4.2)	7.0 (8.3)	16.3 (17.7)
3.0	Room illumination	1.2 (2.0)	4.2 (4.9)	6.3 (9.0)	18.6 (20.4)
3.5		1.4 (2.0)	4.6 (5.4)	5.1 (9.6)	18.4 (22.8)
4.0		1.9 (1.8)	5.7 (5.8)	0.5 (10.0)	16.1 (25.2)

Engineering help for Micropoint 2 O CG-S – Symmetric optics for E = 1.0 lx (0.5 lx)

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



Light distribution curve
Micropoint 2 O CG-S
with symmetric optics

Mounting height [m]	Types of mounting	L1	L2	L3	L4
2.5	Ceiling mounting	3.6 (5.1)	10.0 (11.3)	3.6 (5.0)	9.9 (11.2)
3.0	Escape route centre	2.8 (5.2)	10.5 (13)	2.9 (5.2)	10.4 (12.8)
3.5		- (5.1)	8.7 (14.1)	- (5.2)	8.2 (13.9)
4.0		- (4.2)	8.5 (14.7)	- (4.5)	6.8 (14.7)
2.5	Ceiling mounting	3.5 (4.6)	9.0 (9.6)	3.5 (4.6)	8.9 (9.6)
3.0	Room illumination	2.6 (5.1)	10.0 (11.2)	2.3 (5.1)	10 (11.1)
3.5		0.9 (4.7)	9.4 (12.6)	0.9 (4.9)	9.5 (12.6)
4.0		0.8 (3.5)	7.9 (13.7)	0.8 (3.7)	7.9 (14.1)

3503.1 ... 3604.1 LED CG-S

Safety luminaire



3503.1 ... 3604.1 LED CG-S

- Safety luminaire with LED technology for recessed mounting with round or quadratic bezel
- Typical ceiling cut-out diameter of 68 mm and low profile of only 30 mm
- Compact housing for LED supply (required height for entering the ceiling only 100 mm) including through-wiring clamp and strain relief
- Wide light point spacing due to wide light distribution optics and high power LEDs
- Up to 14 m from luminaire to luminaire for escape route illumination and wide area illumination
- Minimum service requirement due to high service life of the LEDs (up to 50,000 hours)

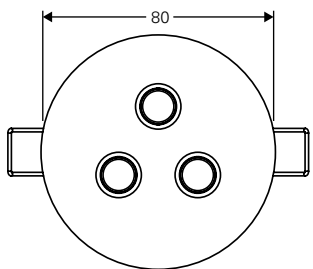
3503.1 LED CG-S stainless steel



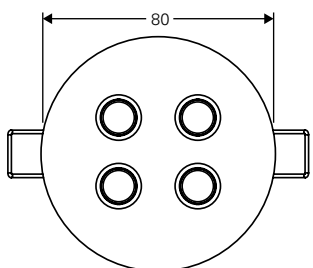
3503.1 LED CG-S white



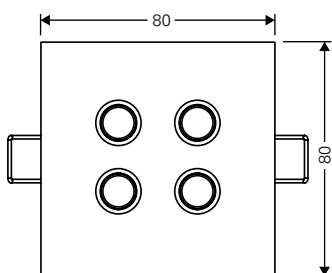
Dimensions in mm



3503.1 LED CG-S



3504.1 LED CG-S



3604.1 LED CG-S

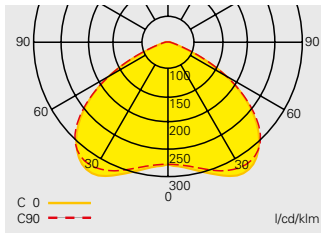
Luminous flux	3503.1: 260 lm 3x04.1: 315 lm
Luminous flux Φ_E/Φ_N at the end of rated operating time	100%
Housing material	Bezel: Stainless steel brushed / sheet steel, white (sim. RAL 9010) Module: Polycarbonate
Weight	Luminaire: 0.13 kg Module: 0.12 kg (incl. enclosure)
Type of mounting	Recessed ceiling mounting
Connection terminals	Loop terminals 3 x 2.5 mm ²
Connection voltage	220 - 240 V, 50/60 Hz 176 V - 275 V DC
Current consumption - battery operation (220 V)	3503.1: 19 mA 3x04.1: 25 mA
Power consumption mains operation (apparent power / effective power)	3503.1: 7.6 VA / 4.4 W 3x04.1: 9.5 VA / 5.8 W
Permissible ambient temperature	-10 °C to +40 °C
Light source	3503.1: HighPower LEDs 3 x 1.1 W 3x04.1: HighPower LEDs 4 x 1.1 W

Ordering details

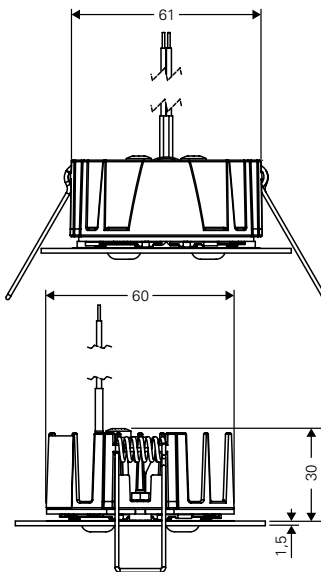
Type	Scope of supply	Order No.
3503.1 stainless steel	Round LED recessed luminaire with wide beam optics, 3 x HighPowerLED, incl. LED supply and CG-S technology (20 addresses) in housing with strain relief, bezel stainless steel brushed	40071352900
3503.1 white	Round LED recessed luminaire with wide beam optics, 3 x HighPowerLED, incl. LED supply and CG-S technology (20 addresses) in housing with strain relief, bezel white	40071352901
3504.1 stainless steel	Round LED recessed luminaire with wide beam optics, 4 x HighPowerLED, incl. LED supply and CG-S technology (20 addresses) in housing with strain relief, bezel stainless steel brushed	40071352904
3504.1 white	Round LED recessed luminaire with wide beam optics, 4 x HighPowerLED, incl. LED supply and CG-S technology (20 addresses) in housing with strain relief, bezel white	40071352905
3604.1 stainless steel	Quadratic LED recessed luminaire with wide beam optics, 4 x HighPowerLED, incl. LED supply and CG-S technology (20 addresses) in housing with strain relief, bezel stainless steel brushed	40071352908
3604.1 white	Quadratic LED recessed luminaire with wide beam optics, 4 x HighPowerLED, incl. LED supply and CG-S technology (20 addresses) in housing with strain relief, bezel white	40071352909

Planning help for 3503.1 LED CG-S for E = 1.0 lx (0.5 lx)

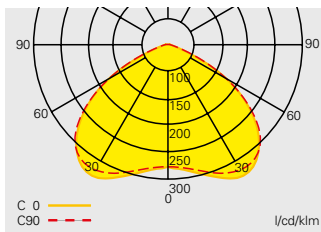
Measuring level 0.02 m, maintenance factor MF = 80 %, battery operation, distances in m



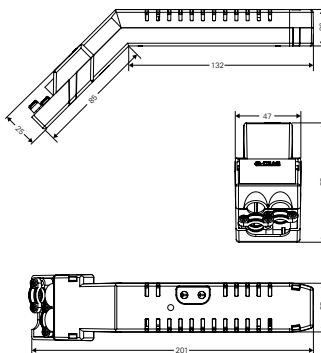
Dimensions in mm



Ceiling cut out: D = 68 mm
Slab thickness 1-20 mm



Dimensions in mm



Module housing

Mounting height [m]	Types of mounting	L1	L2	L3	L4
2.5	Ceiling mounting	3.8 (4.5)	9.1 (10.4)	3.8 (4.6)	9.1 (10.5)
3.0	Escape route centre	4.1 (5.0)	10.0 (11.7)	4.2 (5.0)	10.0 (11.7)
3.5		4.4 (5.4)	10.8 (12.8)	4.4 (5.4)	10.8 (12.8)
4.0		4.5 (5.7)	11.5 (13.8)	4.6 (5.8)	11.5 (13.8)
4.5		4.6 (6.0)	12.0 (14.6)	4.7 (6.0)	12.0 (14.6)
5.0		4.6 (6.2)	12.4 (15.4)	4.7 (6.3)	12.5 (15.4)
5.5		4.6 (6.4)	12.7 (16.0)	4.6 (6.4)	12.8 (16.1)
6.0		4.5 (6.5)	13.0 (16.6)	4.4 (6.6)	13.1 (16.7)
6.5		4.2 (6.6)	13.1 (17.1)	4.0 (6.6)	13.2 (17.2)
7.0		3.7 (6.6)	13.1 (17.5)	3.4 (6.6)	13.2 (17.6)
7.5		2.5 (6.5)	13.1 (17.8)	1.9 (6.6)	13.1 (18.0)
2.5	Ceiling mounting	3.2 (3.7)	7.4 (8.3)	3.1 (3.6)	7.3 (8.3)
3.0	Room illumination	3.4 (4.0)	8.3 (9.4)	3.3 (3.9)	8.2 (9.4)
3.5		3.5 (4.3)	9.1 (10.4)	3.4 (4.2)	9.0 (10.3)
4.0		3.6 (4.5)	9.8 (11.3)	3.5 (4.4)	9.7 (11.3)
4.5		3.7 (4.6)	10.4 (12.1)	3.5 (4.6)	10.3 (12.2)
5.0		3.6 (4.8)	10.9 (12.9)	3.5 (4.7)	10.9 (12.9)
5.5		3.6 (4.9)	11.4 (13.6)	3.4 (4.7)	11.3 (13.6)
6.0		3.5 (4.9)	11.8 (14.3)	3.3 (4.7)	11.7 (14.2)
6.5		3.3 (4.9)	12.1 (14.8)	3.2 (4.8)	12.1 (14.8)
7.0		3.1 (5.0)	12.4 (15.4)	2.9 (4.7)	12.4 (15.3)
7.5		2.9 (4.9)	12.7 (15.9)	2.6 (4.6)	12.6 (15.8)

Planning help for 3504.1/3604.1 LED CG-S for E = 1.0 lx (0.5 lx)

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 (4.7)	9.5 (10.7)	4.0 (4.8)	9.5 (10.9)
3.0	Escape route centre	4.4 (5.3)	10.5 (12.1)	4.4 (5.3)	10.5 (12.2)
3.5		4.7 (5.7)	11.4 (13.3)	4.7 (5.7)	11.4 (13.4)
4.0		4.9 (6.1)	12.1 (14.4)	4.9 (6.1)	12.1 (14.4)
4.5		5.0 (6.4)	12.7 (15.3)	5.1 (6.4)	12.8 (15.3)
5.0		5.1 (6.6)	13.2 (16.2)	5.1 (6.7)	13.3 (16.2)
5.5		5.1 (6.8)	13.6 (16.9)	5.1 (6.9)	13.7 (16.9)
6.0		5.1 (7.0)	14.0 (17.6)	5.1 (7.1)	14.1 (17.6)
6.5		4.9 (7.1)	14.2 (18.1)	4.9 (7.2)	14.4 (18.2)
7.0		4.7 (7.2)	14.4 (18.6)	4.6 (7.3)	14.5 (18.8)
7.5		4.4 (7.2)	14.4 (19.1)	4.1 (7.3)	14.6 (19.2)
8.0		3.6 (7.2)	14.4 (19.5)	3.1 (7.3)	14.5 (19.6)
2.5	Ceiling mounting	3.3 (3.8)	7.6 (8.6)	3.3 (3.7)	7.6 (8.5)
3.0	Room illumination	3.6 (4.2)	8.6 (9.7)	3.5 (4.1)	8.5 (9.7)
3.5		3.7 (4.5)	9.4 (10.8)	3.7 (4.4)	9.4 (10.7)
4.0		3.8 (4.7)	10.2 (11.7)	3.7 (4.7)	10.2 (11.7)
4.5		4.0 (4.9)	10.9 (12.6)	3.8 (4.9)	10.8 (12.6)
5.0		4.0 (5.1)	11.5 (13.5)	3.8 (4.9)	11.4 (13.4)
5.5		3.9 (5.2)	12.0 (14.2)	3.8 (5.1)	12.0 (14.2)
6.0		3.9 (5.3)	12.5 (14.9)	3.7 (5.2)	12.4 (14.9)
6.5		3.9 (5.4)	12.9 (15.6)	3.6 (5.2)	12.8 (15.5)
7.0		3.7 (5.4)	13.3 (16.2)	3.4 (5.2)	13.2 (16.1)
7.5		3.5 (5.4)	13.6 (16.7)	3.2 (5.2)	13.5 (16.7)
8.0		3.3 (5.3)	13.8 (17.2)	3.0 (5.1)	13.8 (17.2)
8.5		3.0 (5.3)	14.0 (17.7)	2.7 (5.0)	14.0 (17.6)

3514 LED CG-S

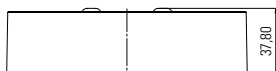
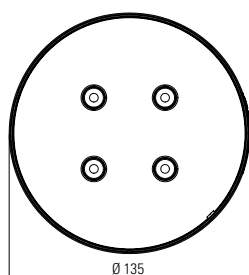
Safety luminaire



3514 LED CG-S



Dimensions in mm



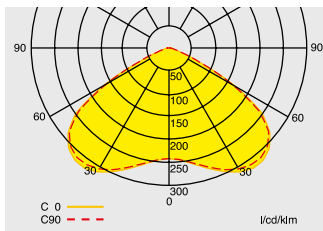
3514 LED CG-S

- Safety luminaire with LED technology for surface mounting with round enclosure
- A screw-less design and special snapping mechanism allows the Luminaire to be opened and closed easily and safely
- Unobtrusive appearance with 135 mm diameter and low profile of only 38 mm
- Up to 18 m from luminaire to luminaire for escape route and wide area illumination
- Minimum service requirement due to high service life of the LEDs (up to 50,000 hours)
- Shortened inspection effort due to CEWA GUARD technology
- Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation expenditure with STAR technology
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

Luminous flux Φ_N	512 lm
Luminous flux Φ_E/Φ_N at the end of rated operating time	100 %
Housing material	Bezel: Sheet steel
Housing colour	White sim. RAL 9016
Weight	0.45 kg
Type of mounting	Surface ceiling mounting
Connection terminals	Loop terminals 3 x 2.5 mm ²
Connection voltage	220 - 240 V AC, 50/60 Hz 176 - 275 V DC
Current consumption with battery operating	25 mA
Power consumption mains operation (apparent power / effective power)	9.5 VA / 5.8 W
Permissible temperature range	-10 °C to +40 °C
Light source	HighPower LEDs 4 x 1 W

Ordering details

Type	Scope of supply	Order No
3514 LED CG-S	Round LED surface ceiling-mounted luminaire with 4 x HighPower LEDs, including LED Supply and CG-S technology (20 addresses) in enclosure with stainless steel bezel	40071350381



Light distribution curve 3514 LED CG-S

Engineering help for 3514 LED CG-S for E = 1.0 lx (0.5 lx)

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	4.6 (5.3)	10.6 (12.1)	4.6 (5.3)	10.6 (12.1)
3.0	Escape route centre	5.1 (6.0)	11.9 (13.6)	5.2 (6.0)	11.9 (13.6)
3.5		5.5 (6.5)	13.0 (14.9)	5.6 (6.5)	13.0 (14.9)
4.0		5.9 (7.0)	14.0 (16.2)	5.9 (7.1)	14.1 (16.2)
4.5		6.1 (7.5)	14.9 (17.4)	6.1 (7.5)	14.9 (17.4)
5.0		6.3 (7.9)	15.7 (18.5)	6.3 (7.9)	15.7 (18.5)
5.5		6.4 (8.2)	16.3 (19.5)	6.5 (8.2)	16.4 (19.6)
6.0		6.5 (8.5)	16.9 (20.5)	6.5 (8.5)	17.0 (20.5)
6.5		6.5 (8.7)	17.3 (21.3)	6.5 (8.7)	17.4 (21.3)
7.0		6.4 (8.9)	17.7 (22.0)	6.5 (8.9)	17.8 (22.1)
7.5		6.4 (9.0)	18.0 (22.7)	6.4 (9.1)	18.1 (22.8)
8.0		6.2 (9.1)	18.1 (23.4)	6.2 (9.1)	18.2 (23.5)
8.5		5.9 (9.1)	18.2 (23.9)	5.9 (9.2)	18.3 (24.0)
9.0		5.5 (9.2)	18.3 (24.3)	5.5 (9.2)	18.3 (24.4)
9.5		4.9 (9.1)	18.2 (24.7)	4.9 (9.2)	18.3 (24.8)
10.0		3.9 (9.1)	18.1 (25.1)	3.9 (9.1)	18.1 (25.2)
2.5	Ceiling mounting	3.6 (4.2)	8.5 (9.5)	3.6 (4.2)	8.5 (9.5)
3.0	Room illumination	4.0 (4.5)	9.6 (10.8)	3.9 (4.5)	9.5 (10.8)
3.5		4.3 (4.9)	10.5 (12.0)	4.3 (4.8)	10.5 (11.9)
4.0		4.6 (5.3)	11.4 (13.1)	4.6 (5.2)	11.4 (13.0)
4.5		4.7 (5.7)	12.3 (14.0)	4.7 (5.6)	12.3 (14.0)
5.0		4.8 (5.9)	13.1 (14.9)	4.8 (6.0)	13.1 (15.0)
5.5		4.9 (6.2)	13.8 (15.9)	4.9 (6.2)	13.8 (15.9)
6.0		5.0 (6.4)	14.5 (16.8)	4.9 (6.3)	14.5 (16.8)
6.5		4.9 (6.5)	15.1 (17.6)	4.8 (6.5)	15.1 (17.7)
7.0		4.9 (6.6)	15.7 (18.4)	4.7 (6.6)	15.6 (18.4)
7.5		4.7 (6.8)	16.2 (19.2)	4.5 (6.6)	16.1 (19.1)
8.0		4.5 (6.8)	16.6 (19.9)	4.4 (6.7)	16.6 (19.8)
8.5		4.2 (6.8)	17.0 (20.6)	4.1 (6.7)	17.0 (20.5)
9.0		4.0 (6.8)	17.4 (21.1)	3.7 (6.7)	17.3 (21.1)
9.5		3.6 (6.7)	17.7 (21.7)	3.4 (6.6)	17.6 (21.7)
10.0		3.0 (6.6)	17.9 (22.2)	3.0 (6.5)	17.9 (22.2)

3301 CG-S

Safety luminaire and escape sign luminaire



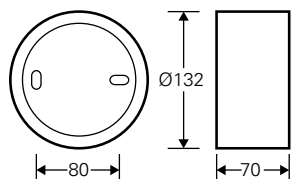
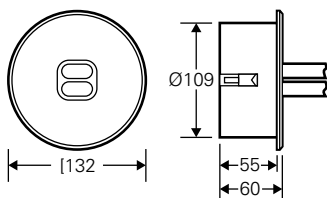
3301 CG-S

- Safety luminaire for recessed or surface ceiling mounting
- Easy mounting and relamping
- Shortened inspection effort due to CEWA GUARD technology
- Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation expenditures by STAR technology
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

3301 CG-S with ceiling-recessed housing



Dimensions in mm



Ceiling tube

Viewing distance (mit RZ-Würfel)	20 m
Luminous flux Φ_E/Φ_N at the end of rated operating time	75 %
Housing material	Plastic
Weight incl. panel	2.26 kg
Housing colour	White
Type of mounting	Recessed and surface ceiling mounting
Connection terminals	Loop terminals 2 x 2.5 mm ²
Connection voltage	220 - 240 V, 50/60 Hz 176 V - 275 V DC
Current consumption - battery operation (220 V)	35 mA (TC-DEL 10 W) 50 mA (TC-DEL 13 W)
Power consumption mains operation	16 VA (TC-DEL 10 W) 23 VA (TC-DEL 13 W)
Permissible ambient temperature	-10 °C to +40 °C
Light source	10-13 W/TC-DEL

Ordering details

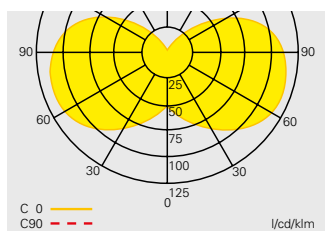
Type	Scope of supply	Order No.
3301 CG-S	Luminaire with CEWA GUARD monitoring and 20-digit address switch, without light source, with bezel white, plastic	40071342680

Accessories

Type	Order No.
Ceiling tube	Additional enclosure for surface mounting 40071342916
Bezel metal RAL 9010	40071345779

Planning help for 3301 CG-S with TC-DEL 10 W for E = 1.0 lx (0.5 lx)

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



Light distribution curve 3301 CG-S

Mounting height [m]	Types of mounting	L1	L2	L3	L4
2.5	Ceiling mounting	3.9 (5.3)	10.6 (14)	3.9 (5.3)	10.6 (14.0)
3.0	Escape route centre	3.8 (5.5)	10.9 (14.6)	3.8 (5.5)	10.9 (14.6)
3.5		3.7 (5.5)	11.0 (15.0)	3.7 (5.5)	11.0 (15.0)
4.0		3.3 (5.5)	11.0 (15.3)	3.3 (5.5)	11.0 (15.3)
2.5	Ceiling mounting	2.9 (3.8)	9.9 (12.7)	2.9 (3.8)	9.8 (12.7)
3.0	Room illumination	2.9 (3.9)	10.3 (13.4)	2.8 (3.8)	10.2 (13.3)
3.5		2.7 (3.9)	10.6 (13.9)	2.7 (3.9)	10.6 (13.9)
4.0		2.6 (3.9)	10.8 (14.4)	2.6 (3.8)	10.8 (14.3)
4.5		2.3 (3.8)	11.0 (14.7)	2.2 (3.8)	10.9 (14.7)
5.0		1.9 (3.7)	11.0 (15.0)	1.9 (3.7)	11.0 (15.0)
5.5		1.5 (3.6)	10.2 (15.2)	1.5 (3.6)	10.2 (15.2)
6.0		0.9 (3.3)	9.0 (15.4)	0.9 (3.3)	9.0 (15.4)
6.5		0.8 (3.0)	8.1 (15.5)	0.8 (3.0)	8.1 (15.5)

8011 CG-S

Safety luminaire



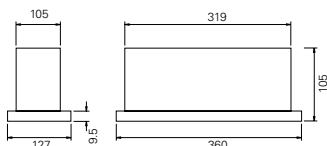
8011 CG-S

- Safety luminaire for ceiling thickness up to 40 mm
- Enclosure made of sheet steel, coated bezel
- Structured plastic cover
- Max. spacing of 15.40 m from luminaire to luminaire
- Shortened inspection effort due to CEWA GUARD technology
- Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation expenditure with STAR technology
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

8011 CG-S



Dimensions in mm



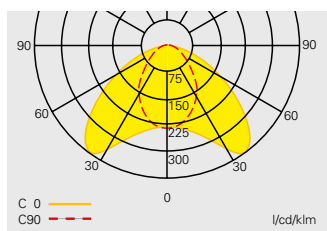
Luminous flux Φ_E/Φ_N at the end of rated operating time	75 %
Housing material	Sheet steel
Weight incl. panel	1.5 kg
Housing colour	Bezel RAL 9010
Type of mounting	Recessed ceiling mounting
Ceiling cut-out (mm)	325 x 106
Max. recess depth (mm)	100
Connection terminals	Loop terminals 3 x 2.5 mm ²
Connection voltage	220 - 240 V, 50/60 Hz 176 V - 275 V DC
Current consumption - battery operation (220 V)	30 mA
Power consumption mains operation	16 VA
Permissible ambient temperature	-10 °C to +40 °C
Light source	8W/T16, 450 lm

Ordering details

Type	Scope of supply	Order No.
8011 CG-S	Recessed ceiling luminaire with CEWA GUARD monitoring and 20-digit address switch, complete with light source	40071348681

Planning help for 8011 CG-S for E = 1.0 lx (0.5 lx)

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

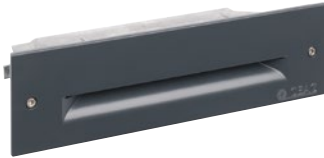


Light distribution curve 8011 CG-S

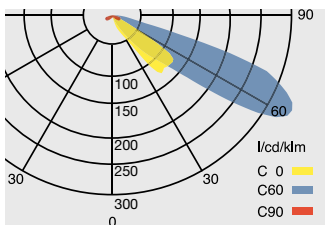
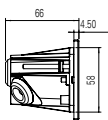
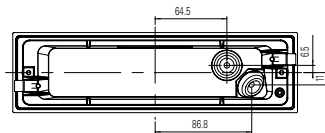
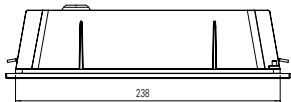
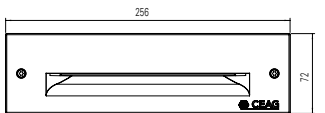
Mounting height [m]	Types of mounting	Types of mounting			
		L1	L2	L3	L4
2.5	Ceiling mounting	2.7 (3.3)	6.5 (7.9)	4.2 (5.1)	10.2 (12.1)
3.0	Escape route centre	2.9 (3.6)	7.2 (8.4)	4.6 (5.6)	11.2 (13.3)
4.0		3.2 (3.9)	7.9 (9.9)	5.1 (6.3)	12.7 (15.4)
5.0		3.1 (4.4)	8.8 (10.7)	5.4 (6.9)	13.8 (17.0)
6.0		2.8 (4.5)	9.0 (11.5)	5.6 (7.4)	14.7 (18.3)
7.0		2.1 (4.4)	8.9 (12.3)	5.4 (7.7)	15.4 (19.5)
2.0	Wall mounting	2.0 (2.7)	5.4 (6.8)	2.1 (2.9)	5.8 (7.2)
2.5		1.9 (2.7)	5.4 (7.0)	0.1 (2.8)	5.6 (7.4)
3.0		1.6 (2.6)	5.0 (7.0)	0.1 (2.5)	4.8 (7.2)
2.5	Ceiling mounting	2.7 (3.1)	6.5 (7.9)	3.2 (3.5)	8.3 (9.8)
3.0	Room illumination	2.8 (3.3)	7.1 (8.4)	3.4 (4.1)	9.3 (11.0)
4.0		2.9 (3.6)	8.0 (9.7)	3.9 (4.6)	11.0 (12.8)
5.0		2.9 (3.8)	8.8 (10.7)	4.1 (5.0)	12.3 (14.6)
6.0		2.7 (4.0)	9.2 (11.7)	4.3 (5.3)	13.7 (15.9)
7.0		2.2 (4.0)	9.2 (12.5)	4.8 (5.3)	15.1 (17.2)



91011 LED CG-S



Dimensions in mm



Light distribution curve 91011 LED CG-S

91011 LED CG-S

- Aluminum LED Step light for safety lighting, suitable for recessed mounting
- High IP65 protection class
- Optimised step illumination achieved through integrated lens optic in the cover
- Developed for applications where people are situated in deeper positions for example lecture halls. A special optical arrangement avoids blinding those facing the audience.
- Four adjustable levels of brightness (100%, 80%, 60%, 40%) to adapt to the ambient brightness
- Side mounting claw-fastening for easy installation in hollow walls or wooden steps (clamping range 3-30 mm)
- Shortened inspection effort due to CEWA GUARD technology
- Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation expenditure with STAR technology
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

Luminous flux	33 lm
Luminous flux Φ_E/Φ_N at end of rated operating time	100 %
Housing material	Aluminium diecast
Housing colour	Anthracite RAL 7016 (Bezel)
Weight	0.57 kg
Type of mounting	Wall or step recessed
Terminals	Clamp terminal 2 x 3 x 2.5 mm ²
Connection voltage	220 - 240 V AC, 50/60 Hz 176 - 275 V DC
Power consumption mains operation (apparent power/effective power)	4.6 VA / 2.1 W
Permissible ambient temperature	-20 °C to +40 °C
Current consumption, battery operation (220 V)	10 mA
Light source	7 x 0.2 W LED / 4000 K

Ordering details

Type	Scope of supply	Order No.
91011 LED CG-S	Step light IP65 with LED supply, CG-S technology and LED PCB (4000 K), including fixing claw-fastening for installation in hollow walls	40071352091

Accessories

Type	Order No.
Recessed enclosure for Luminaire 91011 LED CG-S, for plastering or for installation in concrete	40071354961

Safety luminaire and
escape sign luminaires
with high degree
of ingress protection





IP65: Protection against dust and water

Luminaires for safety lighting are also required in damp rooms or room subject to a high degree of soiling, as well as outdoor applications. This means significantly greater demands for housing technology to prevent the ingress of water and dust. With outdoor use, the influence of UV rays is also a factor.

Inspections according to EN 60529 and DIN EN 60598-1 are carried out for testing the degree of tightness. The luminaires are accordingly designated a protection rating IPXY, whereby the first number signifies protection against touch or foreign bodies and the second number signifies degree of water protection. Typical protection ratings for technical luminaires are IP54 (dust and splashwater protection) and IP65 (dust and water jet protection).

All luminaires in this chapter fulfill protection rating IP65, and with UV-resistant materials and an especially tough constructions offer excellent preconditions for use in outdoor areas and areas with high soiling.

Features:

- High degree of protection of IP65
- Especially robust enclosure made of diecast aluminium and impact-resistant polycarbonate covers
- UV-resistant materials
- At least two cable infeeds for through-wiring
- Safety luminaires with especially narrow beam optics and efficient HighPower LEDs are suitable for mounting heights up to 28 m

Atlantic LED CG-S

Escape sign luminaire



Atlantic LED CG-S

- LED escape sign luminaire with high protection class (IP65) for indoor and outdoor use
- Luminaire with limited surface temperatures for use in operating areas with fire hazard
- Acc. IFS and HACCP suitable for use in food processing industry
- Robust construction from aluminium diecast and high impact resistant cover made of polycarbonate
- Numerous knock-outs for cable entries and double terminal for through-wiring
- Minimum service requirement due to high service life of the LEDs (up to 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
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

Atlantic LED S CG-S

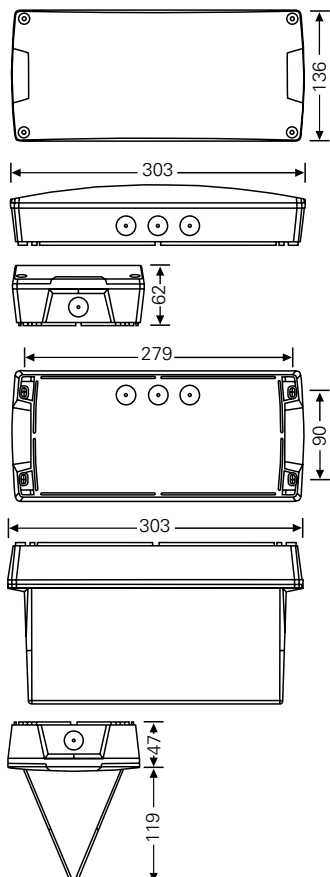


Atlantic LED D CG-S



Viewing distance	24 m
Luminous flux Φ_E/Φ_N at the end of rated operating time	100 %
Housing material	Aluminium diecast, Polycarbonate (850 °C glow wire resistant)
Housing colour	grey
Weight	Atlantic LED S 1.4 kg Atlantic LED D 1.6 kg
Type of mounting	Wall- and ceiling mounting
Connection terminals	3 x 2.5 mm ²
Connection voltage	220 - 240 V, 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 to +40 °C
Light source	HighPower LEDs 2 x 1.5 W

Dimensions in mm



Ordering details

Type	Order No.
Escape sign luminaire Atlantic LED S CG-S, single sided, incl. LED supply and CG-S technology (20 addresses), without pictogram	120-052-024
Escape sign luminaire Atlantic LED D CG-S, double sided, incl. LED supply and CG-S technology (20 addresses), without pictograms	120-052-025

Accessories

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



Atlantic LED, Outdoor Wall CG-S

- LED safety luminaire with high protection class (IP65) for indoor and outdoor use
- Luminaire with limited surface temperatures for use in operating areas with fire hazard
- Acc. IFS and HACCP suitable for use in food processing industry (Type R and O)
- Robust construction from aluminium diecast and high impact resistant cover made of polycarbonate
- Numerous knock-outs for cable entries and double terminal for through-wiring (outdoor wall only one cable entry)
- High spacing by double optics technology and highly efficient HighPower LEDs
- Up to 29 m from luminaire to luminaire with optics for escape route illumination
- Minimum service requirement due to high service life of the LEDs (up to 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
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

Atlantic LED R CG-S



Atlantic LED O CG-S



Outdoor Wall CG-S

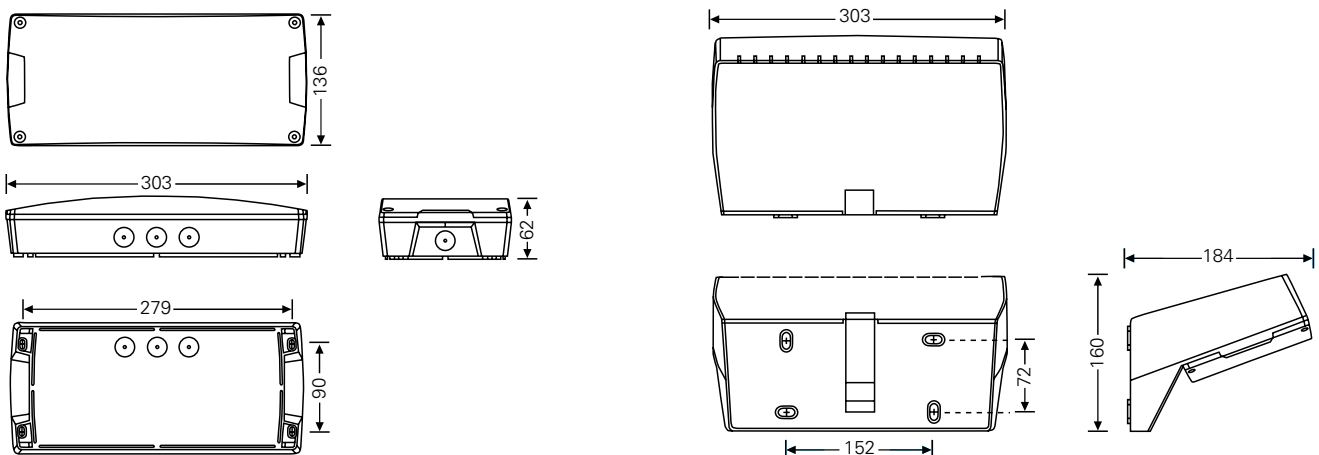


Luminous flux	Atlantic LED R, Outdoor Wall 225 lm Atlantic LED O 220 lm
Luminous flux Φ_E/Φ_N at the end of rated operating time	100 %
Housing material	Aluminium diecast, Polycarbonate (850 °C glow wire resistant)
Housing colour	Grey
Weight	Atlantic LED 1.4 kg Outdoor Wall 2.8 kg
Type of mounting	Wall or ceiling mounting
Connection terminals	3 x 2.5 mm ²
Connection voltage	220 - 240 V, 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 to +40 °C
Light source	HighPower LEDs 2 x 1.5 W

Ordering details

Type	Order No.
Safety luminaire Atlantic LED R CG-S, with asymmetric optics for escape route illumination, incl. LED supply and CG-S technology (20 addresses)	120-052-026
Safety luminaire Atlantic LED O CG-S, with symmetric optics for anti-panic / open area illumination, incl. LED supply and CG-S technology (20 addresses)	120-052-028
Safety luminaire Outdoor Wall CG-S, with asymmetric optics for escape route illumination, incl. LED supply and CG-S technology (20 addresses)	120-052-524

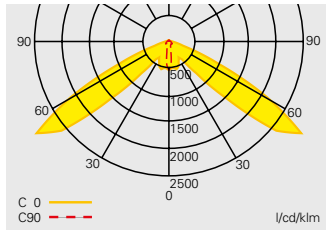
Dimensions in mm



Atlantic LED, Outdoor Wall CG-S

Safety luminaire

Atlantic LED R CG-S



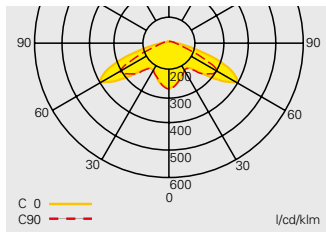
Atlantic R CG-S with asymmetric optics

Planning help for Atlantic LED R – Asymmetric optics for E = 1.0 lx (0.5 lx)

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

Mounting height [m]	Types of mounting	Mounting types			
		L1	L2	L3	L4
2.5	Ceiling mounting	6.0 (6.5)	13.0 (14.2)	2.0 (3.0)	6.1 (7.3)
3.0	Escape route centre	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)	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)

Atlantic LED O CG-S



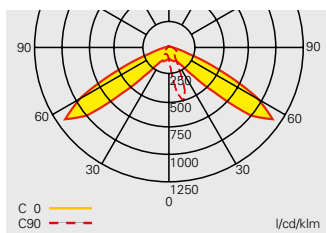
Atlantic O CG-S with symmetric optics

Planning help for Atlantic LED O – Symmetric optics for E = 1.0 lx (0.5 lx)

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

Mounting height [m]	Types of mounting	Mounting types			
		L1	L2	L3	L4
2.5	Ceiling mounting	4.5 (5.4)	10.7 (12.4)	3.8 (4.5)	8.9 (10.0)
3.0	Escape route centre	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)
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 (5.1)	11.6 (13.2)	3.1 (4.2)	8.8 (10.4)
4.0		3.4 (5.6)	12.5 (14.6)	2.8 (4.1)	9.4 (11)
4.5		2.4 (5.9)	13.0 (15.6)	1.8 (4.1)	10.2 (11.8)
5.0		1.9 (6.2)	12.1 (16.8)	0.8 (3.8)	11.1 (12.3)

Outdoor Wall CG-S

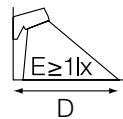


Outdoor Wall CG-S with asymmetric optics

Planning help for Outdoor Wall – Asymmetric optics for E = 1.0 lx (0.5 lx)

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

Mounting height [m]	Types of mounting	Mounting types		
		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
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





Atlantic LED HB CG-S

- LED safety luminaire with high protection class (IP65) for indoor and outdoor use
- Luminaire with limited surface temperatures for use in operating areas with fire hazard
- Acc. IFS and HACCP suitable for use in food processing industry
- Robust construction from aluminium diecast and high impact resistant cover made of polycarbonate
- Numerous knock-outs for cable entries and double terminal for through-wiring
- Suitable for mounting heights up to 28 m by narrow beam optics and exceptionally efficient High Power LEDs
- Spacing up to 25 m from luminaire to luminaire with optics for escape route illumination
- Up to 14 m from luminaire to luminaire with optics for open area illumination.
- Minimum service requirement due to high service life of the LEDs (up to 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
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

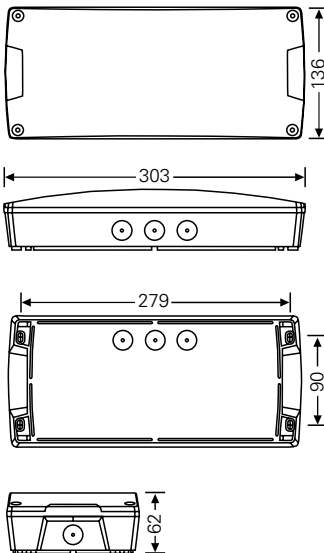
Atlantic LED R HB CG-S



Atlantic LED O HB CG-S



Dimensions in mm



Luminous flux	340 lm
Luminous flux Φ_E/Φ_N at the end of rated operating time	100 %
Housing material	Aluminium diecast, Polycarbonate (850 °C glow wire resistant)
Housing colour	Grey
Weight	1.4 kg
Type of mounting	Ceiling mounting
Connection terminals	3 x 2.5 mm ²
Connection voltage	220 - 240 V, 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 to +40 °C
Light source	HighPower LEDs 2 x 1.5 W

Ordering details

Type	Order No.
Safety luminaire Atlantic LED R HB CG-S, with asymmetric narrow beam optics, for escape route illumination, incl. LED supply and CG-S technology (20 addresses), including a M20 cable gland	40071354991
Safety luminaire Atlantic LED O HB CG-S, with symmetric narrow beam optics for anti-panic / open area illumination, incl. LED supply and CG-S technology (20 addresses), including a M20 cable gland	40071354990

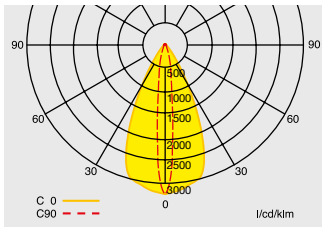
Atlantic LED HB CG-S

Safety lighting with narrow-beam lenses

Atlantic LED R HB CG-S



1



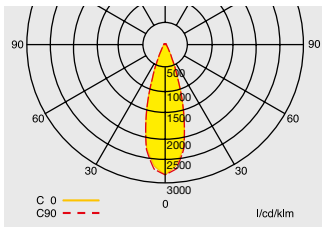
Atlantic R HB CG-S
with asymmetric optics

Planning help for Atlantic LED R HB – Asymmetric optics for E = 1.0 lx (0.5 lx)

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

Mounting height [m]	Types of mounting	Types of mounting			
		L1	L2	L3	L4
8	Ceiling mounting	5.8 (6.7)	13.3 (15.2)	2.7 (3.4)	6.8 (9.3)
10	Escape route centre	6.7 (7.6)	15.2 (17.4)	2.9 (3.6)	7.3 (9.6)
12		7.4 (8.5)	17.0 (19.5)	2.9 (4.0)	8.0 (9.7)
14		7.9 (9.4)	18.7 (21.4)	2.7 (4.1)	8.2 (10.2)
16		8.4 (10.1)	20.1 (23.1)	2.6 (4.1)	8.2 (11.0)
18		8.7 (10.7)	21.4 (25.0)	2.5 (4.0)	8.0 (11.5)
20		9.0 (11.3)	22.5 (26.6)	2.4 (3.8)	7.7 (11.5)
22		9.0 (11.7)	23.4 (28.0)	2.2 (3.7)	7.4 (11.6)
24		8.9 (12.1)	24.2 (29.3)	2.1 (3.6)	7.2 (11.5)
26		8.4 (12.4)	24.8 (30.5)	1.8 (3.5)	7.0 (11.2)
28		6.5 (12.6)	25.2 (31.6)	1.4 (3.4)	6.8 (10.9)
30		2.9 (12.7)	25.4 (32.6)	0.8 (3.2)	6.5 (10.6)

Atlantic LED O HB CG-S

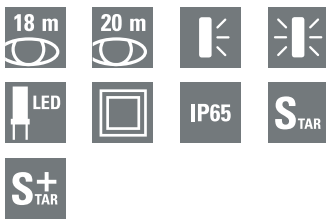


Atlantic O HB CG-S
with symmetric optics

Planning help for Atlantic LED O HB – Symmetric optics for E = 1.0 lx (0.5 lx)

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

Mounting height [m]	Types of mounting	Types of mounting			
		L1	L2	L3	L4
8	Ceiling mounting	3.9 (4.6)	9.2 (11.2)	3.9 (4.8)	9.6 (11.6)
10	Escape route centre	4.3 (5.2)	10.3 (12.3)	4.3 (5.3)	10.5 (12.8)
12		4.8 (5.7)	11.4 (13.5)	4.6 (5.6)	11.2 (13.9)
14		5.1 (6.2)	12.3 (14.5)	5.0 (6.0)	12.0 (14.8)
16		5.2 (6.5)	13.0 (15.5)	5.2 (6.4)	12.8 (15.5)
18		5.3 (6.9)	13.7 (16.5)	5.2 (6.8)	13.5 (16.2)
20		5.2 (7.2)	14.3 (17.4)	5.1 (7.1)	14.1 (17.1)
22		4.9 (7.3)	14.6 (18.2)	4.8 (7.3)	14.5 (17.8)
24		4.3 (7.4)	14.8 (18.9)	4.3 (7.4)	14.6 (18.6)
26		3.0 (7.4)	14.8 (19.6)	3.3 (7.4)	14.6 (19.3)
28		0.2 (7.4)	14.6 (20.1)	0.5 (7.3)	14.4 (19.8)
30		- (7.1)	12.9 (20.5)	- (7.0)	12.3 (20.3)
8	Ceiling mounting	3.0 (3.1)	7.8 (9.4)	2.8 (3.6)	8.0 (10.4)
10	Room illumination	3.1 (3.9)	8.2 (10.7)	3.4 (3.5)	9.1 (10.6)
12		3.4 (4.2)	8.9 (11.4)	3.6 (3.9)	9.8 (11.4)
14		3.4 (4.5)	9.2 (12.0)	4.1 (4.2)	10.9 (12.3)
16		3.5 (4.7)	9.7 (12.6)	4.4 (4.6)	11.7 (13.1)
18		4.0 (4.4)	10.7 (12.3)	4.3 (5.5)	11.8 (14.9)
20		3.5 (4.9)	10.7 (13.4)	4.8 (5.5)	13.1 (15.1)
22		4.1 (5.0)	11.9 (13.8)	4.2 (5.8)	12.8 (16.0)
24		3.6 (5.0)	12.1 (14.3)	4.3 (6.1)	13.7 (16.8)
26		3.4 (5.5)	12.6 (15.3)	4.0 (5.9)	14.0 (16.9)
28		2.6 (4.8)	12.8 (15.1)	3.8 (6.5)	14.6 (18.4)
30		1.9 (4.9)	13.5 (15.7)	2.3 (6.5)	14.4 (18.8)



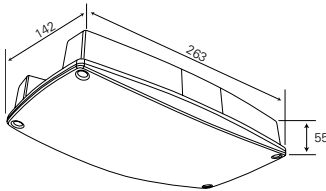
i-P65 LED CG-S

- LED safety luminaire with high protection class (IP65) for indoor and outdoor use
- Robust construction made of polycarbonate with numerous knock-outs for cable entries
- Low operating cost due to low power consumption
- Minimum service requirement due to high service life of the LEDs (up to 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
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

i-P65 S CG-S



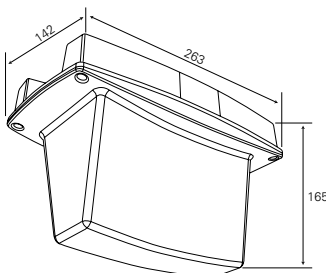
Dimensions in mm



i-P65 D CG-S



Dimensions in mm



Viewing distance	20 m one-sided / 18 m double-sided
Luminous flux Φ_E/Φ_N at the end of rated operating time	100 %
Housing material	Polycarbonate
Housing colour	Light grey
Weight	one-sided 0.54 kg two-sided 0.74 kg
Type of mounting	Wall or ceiling mounting
Connection terminals	3 x 2.5 mm ²
Connection voltage	230 V AC, 50/60 Hz 176 - 275 V DC
Current consumption - battery operation (220 V)	16 mA
Power consumption mains operation (apparent power / effective power)	7.0 VA / 3.6 W
Permissible ambient temperature	-15 °C to +40 °C
Light source	HighPower LEDs 2 x 1.0 W

Ordering details

Type	Order No.
Escape sign luminaire i-P65 S CG-S, single sided, incl. LED supply and CG-S technology (20 addresses), without pictogram-kit	IP65LEDO230CG
Escape sign luminaire i-P65 D CG-S, double sided, incl. LED supply and CG-S technology (20 addresses), without pictogram-kit	IP65LEDEX230CG

M20- gland is not included in delivery and double terminal for through-wiring

Accessories

Type	Order No.
Pictogram kit for i-P65 S, single sided, ISO 7010	IP65LEG7010
Pictogram kit for i-P65 D, double sided, ISO 7010	IP65DBLLEG7010

i-P65 LED CG-S

Safety luminaire



i-P65 LED CG-S

- LED safety luminaire with high protection class (IP65) for indoor and outdoor use
- Robust construction made of polycarbonate with numerous knock-outs for cable entries (M20- gland is not included in delivery) and double terminal for through-wiring
- High spacing by special optics technology and highly efficient HighPower LEDs
- Low operating cost due to low power consumption
- Minimum service requirement due to high service life of the LEDs (up to 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
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

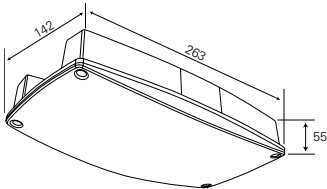
1
i-P65 E CG-S



i-P65 O CG-S



Dimensions in mm



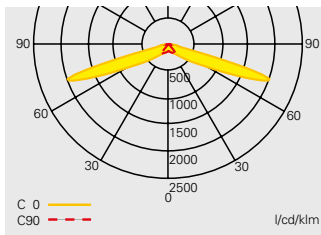
Luminous flux	225 lm
Luminous flux Φ_E/Φ_N at the end of rated operating time	100 %
Housing material	Polycarbonate
Housing colour	Light grey
Weight	0.54 kg
Type of mounting	Ceiling mounting
Connection terminals	3 x 2.5 mm ²
Connection voltage	220 - 240 V AC, 50/60 Hz 176 - 275 V DC
Current consumption - battery operation (220 V)	16 mA
Power consumption mains operation (apparent power / effective power)	7.0 VA / 3.6 W
Permissible ambient temperature	-15 °C to +40 °C
Light source	HighPower LEDs 2 x 1.0 W

Ordering details

Type	Order No.
Safety luminaire i-P65 E CG-S, with asymmetric optics for escape route illumination, incl. LED supply and CG-S technology (20 addresses)	IP65LEDE230CG
Safety luminaire i-P65 O CG-S, with symmetric optics for anti-panic / open area illumination, incl. LED supply and CG-S technology (20 addresses)	IP65LEDO230CG

Planning help for i-P65 E CG-S – Asymmetric optics for E = 1.0 lx (0.5 lx)

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

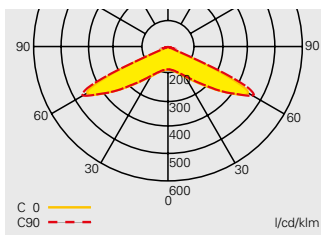


i-P65 E CG-S
with asymmetric optics

Mounting height [m]	Types of mounting	L1	L2	L3	L4
2.5	Ceiling mounting	8.2 (8.9)	17.7 (18.7)	2.3 (2.4)	4.8 (5.1)
3.0	Escape route centre	9.3 (10.3)	20.5 (21.8)	2.6 (2.8)	5.6 (5.9)
3.5		10.2 (11.6)	23.1 (24.9)	3.0 (3.2)	6.4 (6.7)
4.0		10.3 (12.7)	25.4 (27.7)	3.2 (3.5)	7.1 (7.5)
4.5		7.1 (13.7)	27.3 (30.4)	3.2 (3.9)	7.8 (8.3)
2.5	Ceiling mounting	4.0 (8.5)	16.6 (17.7)	1.7 (1.9)	4.1 (4.5)
3.0	Room illumination	8.3 (9.6)	19.1 (20.7)	1.8 (2.0)	4.6 (5.1)
3.5		8.8 (10.5)	21.5 (23.4)	1.8 (2.2)	5.0 (5.7)
4.0		5.9 (5.9)	23.4 (25.8)	1.6 (2.4)	5.4 (6.3)
4.5		6.3 (6.5)	23.7 (28.2)	1.4 (2.5)	5.6 (6.8)
5.0		0.5 (12.1)	19.4 (30.5)	2.7 (2.4)	7.0 (7.2)

Planning help for i-P65 O CG-S – Symmetric optics for E = 1.0 lx (0.5 lx)

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



i-P65 O CG-S
with symmetric optics

Mounting height [m]	Types of mounting	L1	L2	L3	L4
2.5	Ceiling mounting	4.8 (5.3)	10.7 (11.2)	4.7 (5.3)	10.6 (11.3)
3.0	Escape route centre	4.8 (6.1)	12.2 (13.1)	4.8 (6.0)	12.0 (13.2)
3.5		4.1 (6.7)	12.7 (15.0)	4.0 (6.6)	12.6 (14.9)
2.5	Ceiling mounting	5.0 (5.7)	10.4 (10.9)	4.9 (5.7)	10.4 (11.0)
3.0	Room illumination	3.9 (6.3)	11.9 (12.9)	4.0 (4.1)	11.9 (12.9)
3.5		3.1 (4.7)	12.1 (14.6)	2.8 (6.8)	11.9 (14.7)
4.0		0.9 (4.7)	10.1 (16.3)	5.6 (4.7)	10.1 (16.3)

Alfalux LED CG-S

Safety lighting for high mounting heights and large areas



Alfalux LED CG-S

- LED safety luminaire with high protection class (IP65) for indoor and outdoor use
- Robust construction from aluminium diecast and high impact resistant cover made of polycarbonate
- With narrow-beam reflector technology, the Alfalux LED E variant is suitable for emergency lighting and mounting heights up to 19 m
- With wide-beam symmetrical lenses, the Alfalux LED O variant is suitable for illuminating large areas and mounting heights up to 10 m
- Minimum service requirement due to high service life of the LEDs (up to 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
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

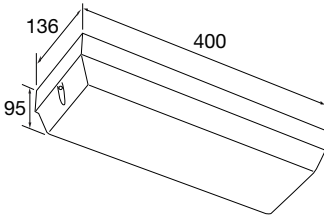
Alfalux LED E CG-S



Alfalux LED O CG-S



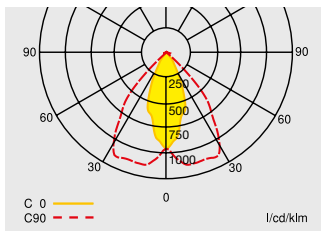
Dimensions in mm



Luminous flux	Alfalux LED E 480 lm Alfalux LED O 660 lm
Luminous flux Φ_E/Φ_N at the end of rated operating time	100 %
Housing material	Aluminium diecast, Polycarbonate
Housing colour	White
Weight	Alfalux LED E 2.7 kg Alfalux LED O 2.5 kg
Type of mounting	Ceiling mounting
Connection terminals	2 x 2.5 mm ²
Connection voltage	220 - 240 V AC, 50/60 Hz 176 - 275 V DC
Current consumption - battery operation (220 V)	36 mA
Power consumption mains operation (apparent power / effective power)	13.8 VA / 8.2 W
Permissible ambient temperature	-15 °C to +40 °C
Light source	HighPower LEDs 6.2 W

Ordering details

Type	Order No.
Safety lighting Alfalux LED E CG-S with narrow-beam lenses for emergency lighting, incl. LEDs, driver-module and CG-S technology (20 addresses)	HLLEDH230CG
Safety lighting Alfalux LED O CG-S, with wide-beam, symmetrical lenses for anti-panic/ open area illumination, incl. LEDs, driver-module and CG-S technology (20 addresses).	HLLEDL230CG



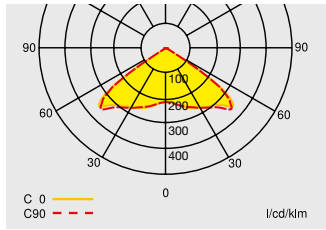
Alfalux LED E CG-S
with asymmetric optics

Planning help for Alfalux LED E CG-S – Asymmetric optics for E = 1.0 lx (0.5 lx)
Measuring level 0.02 m, maintenance factor MF = 80 %, battery operation

Mounting height [m]	Types of mounting	L1	L2	L3	L4
4	Ceiling mounting	4.3 (4.5)	9.1 (9.4)	3.1 (3.2)	6.4 (6.7)
5	Escape route centre	5.2 (5.5)	11.1 (11.5)	3.5 (3.9)	7.8 (8.2)
6		6.1 (6.5)	12.9 (13.6)	3.8 (4.5)	8.9 (9.6)
7		6.9 (7.4)	14.7 (15.5)	4.1 (4.9)	9.9 (11.0)
8		7.6 (8.2)	16.4 (17.4)	4.4 (5.2)	10.3 (12.1)
9		8.2 (9.0)	18.0 (19.2)	4.6 (5.5)	11.0 (13.0)
10		8.6 (9.8)	19.5 (21.0)	4.7 (5.8)	11.6 (14.0)
11		8.9 (10.5)	20.9 (22.7)	4.8 (6.1)	12.2 (14.5)
12		9.0 (11.1)	22.2 (24.3)	4.8 (6.3)	12.6 (15.1)
13		9.1 (11.7)	23.3 (25.9)	4.8 (6.5)	13.1 (15.7)
14		9.3 (12.1)	24.3 (27.4)	4.6 (6.7)	13.3 (16.3)
15		9.4 (12.5)	24.9 (28.9)	3.6 (6.7)	13.5 (16.9)
16		9.3 (12.7)	25.3 (30.2)	3.1 (6.8)	13.6 (17.4)
17		9.2 (12.8)	25.5 (31.5)	2.7 (6.8)	13.4 (17.9)
18		8.5 (12.9)	25.7 (32.6)	1.9 (6.8)	12.8 (18.3)
19		6.7 (13.0)	26.0 (33.6)	0.3 (6.7)	12.3 (18.7)
20		- (13.2)	21.1 (34.5)	- (6.3)	11.9 (18.9)
4	Ceiling mounting	3.5 (3.7)	7.1 (7.5)	3.1 (3.3)	6.0 (6.4)
5	Room illumination	4.3 (2.6)	8.9 (8.9)	3.4 (3.9)	6.9 (7.8)
6		4.2 (5.2)	10.1 (10.8)	3.9 (4.3)	8.2 (8.7)
7		4.9 (5.4)	11.9 (12.0)	4.0 (4.9)	8.9 (10.1)
8		5.8 (5.7)	13.7 (13.6)	4.0 (5.2)	9.4 (11.1)
9		6.3 (5.9)	15.0 (15.1)	4.2 (5.5)	10.1 (12.1)
10		6.7 (7.0)	16.4 (17.1)	4.2 (5.5)	10.7 (12.6)
11		7.2 (7.7)	17.7 (18.8)	4.3 (5.6)	11.2 (13.2)
12		7.6 (8.4)	18.8 (20.4)	4.3 (5.6)	11.7 (13.7)
13		4.0 (8.9)	19.8 (21.7)	4.3 (5.7)	12.3 (14.4)
14		7.8 (4.7)	21.1 (23.0)	4.0 (5.8)	12.6 (15.1)
15		7.8 (4.9)	22.2 (24.2)	3.8 (5.9)	12.9 (15.7)
16		5.1 (10.0)	23.4 (25.3)	3.1 (6.0)	13.1 (16.2)
17		5.5 (10.3)	24.7 (26.4)	2.2 (6.1)	13.1 (16.7)
18		5.3 (10.7)	26.0 (27.7)	1.2 (5.9)	12.9 (17.1)
19		6.0 (5.5)	27.1 (28.8)	0.6 (5.8)	12.3 (17.6)
20		5.9 (11.1)	27.8 (30.2)	0.5 (5.4)	11.9 (17.8)

Alfalux LED CG-S

Safety lighting for high mounting heights and large areas

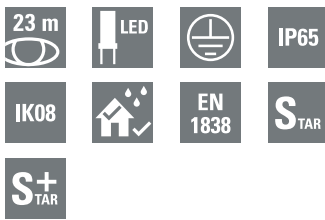


Planning help for Alfalux LED O CG-S – Symmetric optics for E = 1.0 lx (0.5 lx)

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

Mounting height [m]	Types of mounting	L1	L2	L3	L4
3.0	Ceiling mounting	4.6 (4.8)	9.6 (9.9)	4.6 (4.7)	9.5 (9.8)
4.0	Escape route centre	5.9 (6.2)	12.4 (12.8)	5.9 (6.2)	12.3 (12.7)
5.0		7.0 (7.5)	15.1 (15.7)	7.1 (7.5)	15.0 (15.6)
6.0		7.8 (8.8)	17.5 (18.5)	7.9 (8.8)	17.6 (18.4)
7.0		8.3 (9.8)	19.7 (21.2)	8.4 (9.9)	19.7 (21.1)
8.0		8.3 (10.7)	21.4 (23.7)	7.7 (10.9)	21.1 (23.6)
9.0		6.9 (11.4)	22.0 (25.9)	6.7 (11.5)	21.4 (26.0)
10.0		5.4 (11.7)	22.2 (28.1)	5.4 (11.9)	21.7 (28.1)
11.0		- (11.9)	18.3 (29.9)	- (11.4)	17.6 (29.8)
12.0		- (10.6)	17.9 (31.1)	- (10.2)	16.8 (29.9)
3.0	Ceiling mounting	4.5 (4.6)	8.6 (8.9)	4.4 (4.5)	8.5 (8.8)
4.0	Room illumination	5.5 (5.8)	11.2 (11.5)	5.5 (5.8)	11.1 (11.5)
5.0		6.4 (6.9)	13.6 (14.1)	6.5 (6.9)	13.6 (14.1)
6.0		7.2 (8.0)	16.0 (16.7)	7.1 (7.9)	15.9 (16.6)
7.0		7.7 (8.8)	18.2 (19.1)	7.8 (8.9)	18.1 (19.1)
8.0		7.9 (9.5)	20.3 (21.5)	8.0 (9.6)	20.2 (21.5)
9.0		5.3 (10.2)	20.7 (23.8)	5.4 (10.3)	20.5 (23.7)
10.0		4.4 (10.6)	20.5 (26.0)	4.3 (10.8)	20.4 (25.9)
11.0		0.6 (11.1)	18.4 (28.2)	0.6 (10.9)	18.4 (27.9)
12.0		0.6 (7.0)	18.0 (29.8)	0.6 (5.5)	17.9 (29.3)
13.0		0.6 (7.0)	17.9 (29.1)	0.6 (7.4)	17.8 (29.0)
14.0		0.5 (6.1)	17.8 (29.0)	0.5 (6.0)	17.8 (28.9)
15.0		0.5 (4.9)	17.6 (29.0)	0.5 (4.8)	17.6 (29.0)

1 Alfalux LED O CG-S with symmetric optics

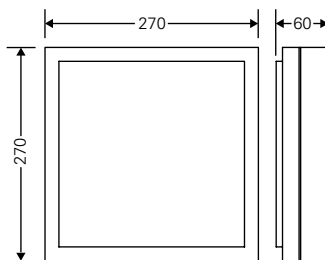
**83022 LED CG-S**

- Square safety and escape route luminaire with LED technology with high protection class (IP65) for indoor and outdoor use
- Robust construction from aluminium diecast with powder coating (UV stabilised)
- High impact resistant (IK08) diffuser made of UV stabilised polycarbonate
- Two waterproof cable infeeds (IP65) and double terminal for through-wiring
- Up to 17 m from luminaire to luminaire for escape route and wide area illumination
- Minimum service requirement due to high service life of the LEDs (up to 50,000 hours)
- Shortened inspection effort due to CEWA GUARD technology
- Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation expenditure with STAR technology
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

83022 LED CG-S




Dimensions in mm



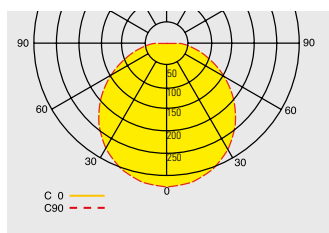
Luminous flux Φ_N	620 lm
Luminous flux Φ_E/Φ_N at the end of rated operating time	100 %
Housing material	Aluminium diecast, PC
Housing colour	White sim. RAL 9010
Weight	2.20 kg
Type of mounting	Wall and ceiling mounting
Terminals	2 x 3 x 2.5 mm ²
Connection voltage	220 - 240 V AC, 50/60 Hz 176 - 275 V DC
Power consumption mains operation (apparent power/effective power)	16.9 VA / 9.6 W
Current consumption- battery operating (220 V)	47 mA
Permissible temperature range	-20 °C bis +40 °C
Light source	LowPower LEDs 42 x 180 mW, 4000 K

Ordering details

Type	Scope of supply	Order No
83022 LED CG-S	Square safety and escape route luminaire, including LED Supply and CG-S technology (20 addresses)	40071351530
Pictogram-set for 83022 acc. to ISO 7010	arrow left, right, down 	40071351924

83022 LED CG-S

Safety luminaire



1 Light distribution curve 83022 LED CG-S

Engineering help for 83022 LED CG-S for E = 1.0 lx (0.5 lx)

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	4.9 (6.0)	12.1 (14.7)	4.9 (6.0)	12.1 (14.8)
3.0	Escape route centre	5.2 (6.5)	13.0 (15.9)	5.3 (6.5)	13.0 (15.9)
3.5		5.5 (6.9)	13.8 (17.0)	5.5 (6.9)	13.8 (17.0)
4.0		5.7 (7.3)	14.5 (18.0)	5.8 (7.3)	14.5 (18.0)
4.5		5.9 (7.6)	15.1 (18.8)	5.9 (7.6)	15.2 (18.9)
5.0		6.1 (7.8)	15.6 (19.6)	6.1 (7.8)	15.7 (19.7)
5.5		6.2 (8.1)	16.1 (20.3)	6.2 (8.1)	16.1 (20.4)
6.0		6.2 (8.3)	16.5 (21.0)	6.2 (8.3)	16.5 (21.0)
6.5		6.2 (8.4)	16.8 (21.5)	6.2 (8.4)	16.9 (21.6)
7.0		6.2 (8.6)	17.1 (22.1)	6.2 (8.6)	17.1 (22.1)
7.5		6.1 (8.7)	17.3 (22.5)	6.2 (8.7)	17.3 (22.6)
8.0		6.0 (8.7)	17.4 (23.0)	6.0 (8.7)	17.5 (23.0)
8.5		5.9 (8.8)	17.5 (23.3)	5.9 (8.8)	17.6 (23.4)
9.0		5.7 (8.8)	17.6 (23.7)	5.7 (8.8)	17.6 (23.7)
9.5		5.5 (8.8)	17.6 (24.0)	5.5 (8.8)	17.6 (24.0)
10.0		5.1 (8.8)	17.5 (24.2)	5.2 (8.8)	17.6 (24.3)
2.2	Wall mounting	3.6 (6.0)	9.2 (14.7)	3.6 (6.0)	9.2 (14.8)
2.5		3.6 (6.5)	9.3 (15.9)	3.6 (6.5)	9.3 (15.9)
3.0		3.5 (7.6)	9.4 (18.8)	3.5 (7.6)	9.4 (18.9)
3.5		3.2 (8.3)	9.3 (21.0)	3.2 (8.3)	9.3 (21.0)
4.0		3.0 (8.6)	9.1 (22.1)	3.0 (8.6)	9.1 (22.1)
2.5	Ceiling mounting	3.7 (4.4)	10.4 (12.7)	3.7 (4.4)	10.4 (12.7)
3.0	Room illumination	3.9 (4.7)	11.3 (13.8)	3.8 (4.6)	11.2 (13.7)
3.5		4.1 (5.0)	12.0 (14.7)	4.1 (4.9)	12.0 (14.6)
4.0		4.2 (5.2)	12.7 (15.5)	4.2 (5.2)	12.7 (15.5)
4.5		4.3 (5.4)	13.3 (16.3)	4.3 (5.4)	13.3 (16.3)
5.0		4.4 (5.6)	13.9 (17.1)	4.3 (5.5)	13.8 (17.0)
5.5		4.5 (5.8)	14.4 (17.8)	4.4 (5.7)	14.3 (17.7)
6.0		4.5 (5.8)	14.8 (18.4)	4.5 (5.8)	14.8 (18.4)
6.5		4.5 (6.0)	15.2 (19.0)	4.5 (5.9)	15.2 (18.9)
7.0		4.5 (6.0)	15.6 (19.5)	4.4 (6.0)	15.6 (19.6)
7.5		4.5 (6.1)	15.9 (20.1)	4.4 (6.0)	15.9 (20.0)
8.0		4.4 (6.1)	16.2 (20.5)	4.3 (6.1)	16.2 (20.5)
8.5		4.2 (6.2)	16.5 (21.0)	4.2 (6.1)	16.5 (20.9)
9.0		4.1 (6.1)	16.8 (21.4)	4.0 (6.1)	16.7 (21.4)
9.5		4.0 (6.2)	17.0 (21.8)	3.9 (6.1)	16.9 (21.7)
10.0		3.8 (6.1)	17.1 (22.2)	3.8 (6.0)	17.1 (22.1)



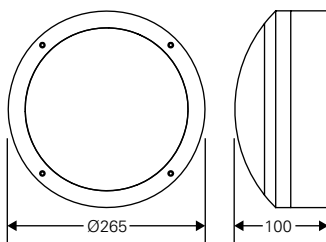
84022 LED CG-S

- Round safety luminaire with LED technology with high protection class (IP65) for indoor and outdoor use
- Robust construction from aluminium diecast with powder coating (UV stabilised)
- High impact resistant (IK08) diffuser made of UV stabilised polycarbonate
- Two waterproof cable infeeds (IP65) and double terminal for through-wiring
- Up to 17 m from luminaire to luminaire for escape route and wide area illumination
- Minimum service requirement due to high service life of the LEDs (50,000 hours)
- Shortened inspection effort due to CEWA GUARD technology
- Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation expenditure with STAR technology
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

84022 LED CG-S



Dimensions in mm



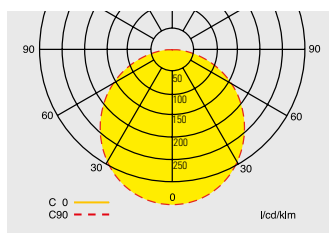
Luminous flux Φ_N	600 lm
Luminous flux Φ_E/Φ_N at the end of rated operating time	100 %
Housing material	Aluminium diecast, PC
Housing colour	White sim. RAL 9010
Weight	1.85 kg
Type of mounting	Wall and ceiling mounting
Terminals	2 x 3 x 2.5 mm ²
Connection voltage	220 - 240 V AC, 50/60 Hz 176 - 275 V DC
Power consumption mains operation (apparent power/effective power)	16.9 VA / 9.6W
Current consumption- battery operating (220 V)	47 mA
Permissible temperature range	-20 °C bis +40 °C
Light source	LowPower LEDs 42 x 180 mW, 4000 K

Ordering details

Type	Scope of supply	Order No
84022 LED CG-S	Round safety luminaire, including LED Supply and CG-S technology (20 addresses)	40071351531

84022 LED CG-S

Safety luminaire



1 Light distribution curve 84022 LED CG-S

Engineering help for 84022 LED CG-S for E = 1.0 Lx (0.5 lx)

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	4.9 (6.0)	11.9 (14.5)	4.9 (6.0)	11.9 (14.5)
3.0	Escape route centre	5.2 (6.5)	12.9 (15.7)	5.2 (6.5)	12.9 (15.7)
3.5		5.5 (6.9)	13.8 (16.8)	5.5 (6.9)	13.8 (16.8)
4.0		5.7 (7.2)	14.5 (17.8)	5.7 (7.2)	14.5 (17.8)
4.5		5.9 (7.6)	15.1 (18.7)	5.9 (7.6)	15.1 (18.7)
5.0		6.1 (7.8)	15.6 (19.5)	6.1 (7.8)	15.6 (19.5)
5.5		6.2 (8.1)	16.1 (20.3)	6.2 (8.1)	16.1 (20.3)
6.0		6.2 (8.3)	16.5 (20.9)	6.2 (8.3)	16.5 (20.9)
6.5		6.2 (8.4)	16.8 (21.5)	6.2 (8.4)	16.8 (21.5)
7.0		6.2 (8.6)	17.1 (22.1)	6.2 (8.6)	17.1 (22.1)
7.5		6.2 (8.7)	17.3 (22.5)	6.2 (8.7)	17.3 (22.5)
8.0		6.1 (8.7)	17.5 (23.0)	6.1 (8.7)	17.5 (23.0)
8.5		5.9 (8.8)	17.6 (23.4)	5.9 (8.8)	17.6 (23.4)
9.0		5.7 (8.8)	17.6 (23.7)	5.7 (8.8)	17.6 (23.7)
9.5		5.5 (8.8)	17.6 (24.0)	5.5 (8.8)	17.6 (24.0)
10.0		5.2 (8.8)	17.5 (24.2)	5.2 (8.8)	17.5 (24.2)
2.2	Wall mounting	3.3 (6.0)	8.5 (14.5)	3.3 (6.0)	8.5 (14.5)
2.5		3.3 (6.9)	8.5 (16.8)	3.3 (6.9)	8.5 (16.8)
3.0		3.1 (7.6)	8.4 (18.7)	3.1 (7.6)	8.4 (18.7)
3.5		2.8 (8.3)	8.1 (20.9)	2.8 (8.3)	8.1 (20.9)
4.0		2.4 (8.6)	7.7 (22.1)	2.4 (8.6)	7.7 (22.1)
2.5	Ceiling mounting	3.7 (4.4)	10.2 (12.3)	3.7 (4.4)	10.2 (12.2)
3.0	Room illumination	3.9 (4.8)	11.1 (13.4)	3.9 (4.7)	11.1 (13.3)
3.5		4.1 (5.0)	11.9 (14.4)	4.1 (5.0)	11.8 (14.3)
4.0		4.2 (5.2)	12.6 (15.3)	4.2 (5.2)	12.6 (15.3)
4.5		4.3 (5.4)	13.2 (16.1)	4.3 (5.4)	13.2 (16.1)
5.0		4.4 (5.6)	13.8 (16.9)	4.4 (5.6)	13.8 (16.9)
5.5		4.4 (5.7)	14.3 (17.6)	4.4 (5.7)	14.3 (17.6)
6.0		4.5 (5.9)	14.8 (18.3)	4.4 (5.8)	14.7 (18.2)
6.5		4.4 (6.0)	15.2 (18.9)	4.4 (5.9)	15.2 (18.8)
7.0		4.5 (6.0)	15.6 (19.5)	4.4 (6.0)	15.5 (19.4)
7.5		4.4 (6.1)	15.9 (20.0)	4.4 (6.0)	15.9 (19.9)
8.0		4.3 (6.2)	16.2 (20.5)	4.3 (6.1)	16.2 (20.4)
8.5		4.2 (6.1)	16.5 (20.9)	4.2 (6.1)	16.5 (20.9)
9.0		4.1 (6.1)	16.7 (21.4)	4.1 (6.1)	16.7 (21.3)
9.5		4.0 (6.1)	16.9 (21.8)	4.0 (6.0)	16.9 (21.7)
10.0		3.8 (6.1)	17.1 (22.1)	3.8 (6.1)	17.1 (22.1)



**Explosion protected
safety luminaires
and escape sign
luminaires**



1

Safety in explosive areas

Our explosion-protected linear luminaires, safety and escape sign luminaires are approved for areas with gas explosion-hazard zones 1 and 21 as well as dust explosion-hazard zones 21 and 22, according to the APEX 94/9/EG directive. The linear luminaires are equipped with energy-saving dual-channel ECGs. This ensures that with failure of a lamp the second lamp remains independently in operation. The EXIT safety and escape sign luminaire series features white high performance LEDs enabling maintenance-free operation without replacement of the light sources over the complete service life of the luminaire. The dKLK allows both the operation of energy-saving compact fluorescent lamps as well as the installation of a flash module for use as a flashing luminaire.

All luminaires are equipped with the CG-S monitoring module and can therefore be operated as individually monitored safety luminaires with CEAG safety light supply systems.

Features:

- Approved for explosive areas with gas explosion-hazard zones 1 and 21 as well as dust explosion-hazard zones 2 and 22
- High IP66 protection
- Robust housing for industrial applications
- For fluorescent lamps, compact fluorescent lamps and with state-of-the-art LED technology
- Connection and monitoring via CEAG safety light supply systems

dKLLK 23 CG-S

Explosion protected safety luminaire and escape sign luminaire



dKLLK 23 CG-S

- Explosion protected safety and escape sign luminaire
- For operation with compact-fluorescent lamps with integrated ECG
- Enclosure made of reinforced polyester
- Shortened inspection effort due to CEWA GUARD technology
- Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation expenditure with STAR technology
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

dKLLK 23 CG-S with eXLink



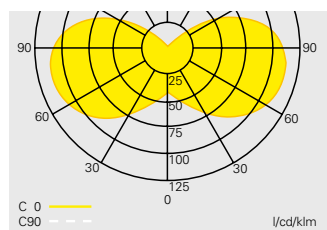
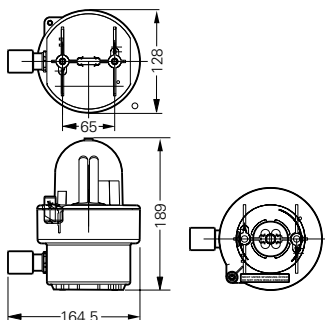
dKLLK 23 CG-S



Escape sign cube for dKLLK 23 CG-S



Dimensions in mm



Light distribution curve
dKLLK 23 CG-S

Viewing distance	20 m (with cube 40071352757)
Marking acc. to RL 94/9/EG	Ex d II 2 G / Ex tb II 2 D
Ignition protection type	Ex d IIC T6 Gb / Ex tb IIIC T80 °C Db IP66
EU-type inspection certificate	BVS 10 ATEX E003
Housing material	glass-fibre reinforced polyester
Protective cover	Polycarbonate (850 °C glow wire resistant)
Rated voltage	AC: 230 V +/- 10 %, 50-60 Hz DC: 220 V + 25 %/- 20 %
Rated current	max. 25 mA
Permissible ambient temperature	-20 °C to +45 °C (depends on lamp wattage and mounting position)
Power connection	pressure-resistant connector plug eXLink, 3pole Ex d cable entry M20 x 1.5 for cables Ø 8.5-16 mm
Coupler (enclosed) (type: exLink)	2 + PE cage clamp terminal for power Ø 8-11 mm and max. 1.5 mm ² (rigid)
Connection terminals (Ex-d-Verschluss)	L, N, PE, max. 2.5 mm ² terminals
Light source	Compact fluorescent lamp with integrated EVG, socket E27, power 5-8 W, suitable for DC-operation Brand: e.g. Philips Master PLE
Weight	approx. 1.7 kg

Ordering details

Type	Scope of supply	Order No.
dKLLK 23 CG-S with eXLink	Luminaire with CG monitoring and 20-digit address switch, without light source, with eXLink	GHG8712001R0001
dKLLK 23 CG-S with Ex d screw	Luminaire with CG monitoring and 20-digit address switch, without light source, with pressure-resistant cable entry	GHG8712001R0101

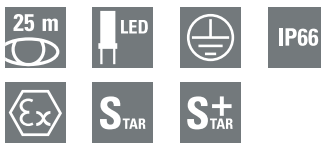
Accessories

Type	Order No.
Cube Escape sign (242 x 227 x 242) Viewing distance 20 m acc. to ISO 7010	40071354680

Planning help for dKLLK CG-S for E = 1.0 lx (0.5 lx) - Light source 7 W/400 lm

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

Mounting height [m]	Types of mounting	L1		L3	
		Diagram	Distance	Diagram	Distance
2.5	Ceiling mounting		3.5 (5.0)		10.0 (13.2)
3.0	Escape route centre		3.4 (5.1)		10.1 (13.7)
3.5			2.9 (5.1)		10.1 (14.1)
4.0			– (4.9)		9.8 (14.3)
4.5			– (4.6)		9.2 (14.3)
2.5	Ceiling mounting		3.0 (4.0)		9.4 (12.0)
3.0	Room illumination		2.4 (4.4)		9.6 (12.6)
3.5			2.4 (4.4)		10.0 (13.2)
4.0			– (3.4)		10.0 (13.4)
4.5			– (3.4)		8.2 (13.8)



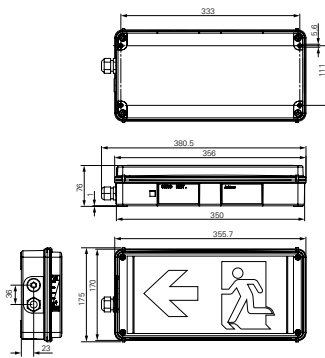
EXIT CG-S

- Explosion protected safety luminaire with white high power LEDs
- Minimum maintenance effort with high LED service life via optimised power output control of LED regulation
- Shortened inspection effort due to CEWA GUARD technology
- Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation expenditure with STAR technology
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

EXIT CG-S



Dimensions in mm



Viewing distance	25 m (gem. DIN EN 1838)
Marking acc. to 94/9/EG	II 2 G Ex e ib mb IIC Gb T5/T6 II 2 D Ex tb IIIC T80 °C Db IP66
EU-type inspection certificate	BVS 09 ATEX E029
IECEX-inspection certificate	IECEX BKI 06.0003
Marking acc. to IECEx	Ex em ib IIC T4/T5/T6 Ex tD A21 IP66 T80 °C
Housing material	Polycarbonate (850 °C glow wire resistant)
Housing colour	Grey, RAL 7035
Protective cover	Polycarbonate
Rated voltage EXIT CG-S	AC: 220 - 254 V, 50/60 Hz
admissible tolerances acc. to EN 60079-0	DC: 195 - 250 V
Current consumption - battery operation (220 V)	25 mA
Rated power	approx. 6 VA
Permissible temperature range	- 20 °C to + 40/50 °C (T6/T5)
Cable infeeds	1 x Ex e-cable entry M20 x 1.5 (Plastic) 1 x Ex e-blanking plug M20 x 1.5
Connection terminals	3 x Loop terminals 2.5 mm ²
Type of mounting	Wall mounting
Light source	High-power LEDs, white

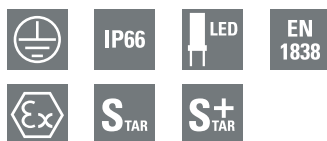
Ordering details

Type	Scope of supply		Order No.
EXIT CG-S	including cover with silkscreened pictogram PR		12191020021
	including cover with silkscreened pictogram PL		12191020022
	including cover with silkscreened pictogram PU		12191020023

Other pictograms on request

Linear fluorescent luminaire LED V-CG-S

Explosion protected safety luminaire



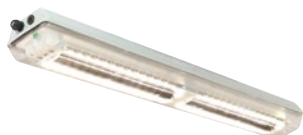
Linear fluorescent luminaire LED V-CG-S

- Completely monitored explosion-protected LED light
- Await live of the LED module from 75.000 hours
- Different luminous colours available – 4000 K / 5600 K
- Single lamp operation during DC power supply (emergency operation)
- Enclosure made of reinforced polyester
- Double ended through-wiring with Ex-e cable infeeds for double-ended cable connection
- Shortened inspection effort due to CEWA GUARD technology
- Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation expenditure with STAR technology
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

eLLK 92 LED 400 V-CG-S (2 x 13 W)



eLLK 92 LED 800 V-CG-S (2 x 26 W)



Marking acc. to 94/9/EG	II 2G Ex de mb II T4 Gb II 2D Ex tb IIIC T80 °C Db IP66
EC-Type Examination Certificate	BVS 09 ATEX E 034
IECEx-inspection certificate	IECEx BVS 09.0033
Marking acc. to IECEx	Ex de mb IICT4 Gb Ex tb IIIC T80 °C Db
Housing material	Glasfaserverstärkter Polyester
Protective bowl	Polycarbonat
Rated voltage	AC: 220-254 V DC: 195-250 V
Circuit	EVG / CG-S
Rated current	0,15 A / 0,08 A (Notbetrieb), (eLLK 92 LED 400 V-CG-S) 0,25 A / 0,13 A (Notbetrieb), (eLLK 92 LED 800 V-CG-S)
Power factor cos φ	≥ 0,95
Permissible ambient temperature	-25 °C bis + 45 °C
Cable infeeds	Ex e-Leitungseinführungen M25 x 1,5 (Kunststoff) Option: M20 x 1,5 Metallgewinde*
Connection terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm ² eindrätig je Klemme
Light source	LED Modul 400 - 2 x 13 W (eLLK 92 LED 400 V-CG-S) LED Modul 800- 2 x 26 W (eLLK 92 LED 800 V-CG-S)
Weight	7,4 kg (eLLK 92 LED 400 V-CG-S) 11,1 kg (eLLK 92 LED 800 V-CG-S)

*With dust cover by unlocked entering/metal thread

Ordering details

Type	Luminous colour	Circuit	open-circuit operation AC	open-circuit operation ¹⁾ DC	Cos φ	Order-No.
eLLK 92 LED 400 V-CG-S 2 x M25, Kunststoff	4000 K	EVG/CG-S	0,15 A	0,08 A	0,95	12265510103
eLLK 92 LED 400 V-CG-S 4 x M20, Metallgewinde	4000 K	EVG/CG-S	0,15 A	0,08 A	0,95	12265510111
eLLK 92 LED 800 V-CG-S 2 x M25, Kunststoff	4000 K	EVG/CG-S	0,25 A	0,13 A	0,95	12266510103
eLLK 92 LED 800 V-CG-S 4 x M20, Metallgewinde	4000 K	EVG/CG-S	0,25 A	0,13 A	0,95	12266510111
eLLK 92 LED 400 V-CG-S 2 x M25, Kunststoff	5600 K	EVG/CG-S	0,15 A	0,08 A	0,95	12265512103
eLLK 92 LED 400 V-CG-S 4 x M20, Metallgewinde	5600 K	EVG/CG-S	0,15 A	0,08 A	0,95	12265512111
eLLK 92 LED 800 V-CG-S 2 x M25, Kunststoff	5600 K	EVG/CG-S	0,25 A	0,13 A	0,95	12266512103
eLLK 92 LED 800 V-CG-S 4 x M20, Metallgewinde	5600 K	EVG/CG-S	0,25 A	0,13 A	0,95	12266512111

¹⁾ Only 1 light source active during DC-operation
Delivery without mounting accessories!

Permissible number of luminaires per output circuit

Connection with	eLLK 92 LED 400 CG-S	eLLK 92 LED 800 CG-S
SKU 4 x 1 A	6	4
SKU 2 x 3 A, SKU CG 2 x 3 A	12	12
SKU CG-S 2 x 3 A	19	12
SKU 1 x 6 A, SKU CG 1 x 6 A	18	18
SKU CG-S 1 x 6 A	20	20
SKU CG-S 4 x 1.5 A	6	6

Ordering details fixing materials eLLK 92

Type/ code	Corrosion protection	Qty. per light fitting	Order No.
Eye bolt A2	galvanized	2	22480002000
Hexagon screw S4	stainless steel	2	22480054000
Ceiling mounting bracket D92 incl. screws and washer	stainless steel	2	22480092000

Ordering details fixing materials

Type/ code	Corrosion protection	for pipes DIN	Outer Ø D (mm)	Qty. per light fitting	Order No.
Pipe clamp R12	hot galvanized	1 1/4"	38-42	2	22480462000
Pipe clamp R14	CrNi	1 1/4"	38-42	2	22480464000
Pipe clamp R22	hot galvanized	1 1/2"	47-51	2	22480472000
Pipe clamp R24	CrNi	1 1/2"	47-51	2	22480474000
Pipe clamp R32	hot galvanized	2"	56-60	2	22480482000
Pipe clamp R34	CrNi	2"	56-60	2	22480484000
Wall bracket W27	hot galvanized		42.4	1	22480027000
Luminaire wall suspension 30° incl. screws and washer	hot galvanized			2	22480000122

Linear fluorescent luminaire CG-S

Explosion protected safety luminaire



IP66

EN 1838



Linear fluorescent luminaire CG-S

- Completely monitored explosion-protected light fittings
- Single lamp operation during DC power supply (emergency operation)
- Enclosure made of reinforced polyester
- Double ended through-wiring with Ex-e cable infeeds for double-ended cable connection
- Shortened inspection effort due to CEWA GUARD technology
- Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation expenditure with STAR technology
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

eLLK 92018/18 CG-S (2 x 18 W)



eLLK 92036/36 CG-S (2 x 36 W)



eLLK 92058/58 CG-S (2 x 58 W)



Marking acc. to 94/9/EG	II 2G Ex de mb IIC T4 Gb II 2D Ex tb IIIC T80 °C Db IP66
EU-type inspection certificate	BVS 09 ATEX E 034
IECEX-inspection certificate	IECEX BVS 09.0033
Marking acc. to IECEx	Ex de mb IIC T4 Gb Ex tb IIIC T80 °C Db
Housing material	glass-fibre reinforced polyester
Protective bowl	Polycarbonate
Rated voltage	AC: 220-254 V 50/60 Hz DC: 195-250 V
Circuit	EVG / CG-S
Rated current	0.19 A (eLLK 92018/18) 0.35 A (eLLK 92036/36) 0.54 A (eLLK 92058/58)
Power factor cos φ	≥ 0.95
Permissible ambient temperature	-25 °C to + 55 °C (eLLK 92018/18 and eLLK 92036/36) -25 °C to + 40 °C (eLLK 92058/58)
Cable infeeds	Ex e-cable infeeds M25 x 1.5 (Plastic) for cables Ø 8-17 mm
Connection terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm ² single wire per terminal
Light source	Bi-pin lamp: 18 W, 36 W, 58 W Socket G13
Weight	approx. 5.6 kg (eLLK 92018/18) approx. 7.7 kg (eLLK 92036/36) approx. 9.6 kg (eLLK 92058/58)

Ordering details

Type	Light source	Circuit	open-circuit operation AC	open-circuit operation ¹⁾ DC	Cos φ	Order No.
eLLK 92018/18 CG-S 2/6-2	2 x 18 W	EVG/CG-S	0.19 A	0.1 A	0.95	12265881103
eLLK 92036/36 CG-S 2/6-2	2 x 36 W	EVG/CG-S	0.35 A	0.17 A	0.95	12266881103
eLLK 92058/58 CG-S 2/6-2	2 x 58 W	EVG/CG-S	0.54 A	0.27 A	0.95	12267881103

2/6-2 double-sided through-wiring
2 cable infeeds M25 x 1.5 with dust screen
2 Ex-blind plugs M25 x 1.5

¹⁾ Only 1 light source active during DC-operation
Delivery without light source and mounting accessories

Permissible number of luminaires per output circuit

Connection with	eLLK 92018/18 CG-S 2/6-2	eLLK 92036/36 CG-S 2/6-2	eLLK 92058/58 CG-S 2/6-2
SKU 4 x 1 A/4 x 1 A CG	5	3	2
SKU 2 x 3 A, 2 x 3 A CG	12	9	6
SKU 2 x 3 A CG-S	16	9	6
SKU 1 x 6 A.1, 1 x 6 A.1 CG	18	17	11
SKU 1 x 6 A.1 CG-S	20	17	11

1

Ordering details fixing materials eLLK 92

Type/ code	Corrosion protection	Qty. per light fitting	Order No.
Eye bolt A2	galvanized	2	22480002000
Hexagon screw S4	stainless steel	2	22480054000
Ceiling mounting bracket D92 incl. screws and washer	stainless steel	2	22480092000

Ordering details fixing materials

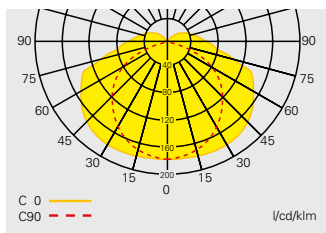
Type/ code	Corrosion protection	for pipes DIN	Outer Ø D (mm)	Qty. per light fitting	Order No.
Pipe clamp R12	hot galvanized	1 1/4"	38-42	2	22480462000
Pipe clamp R14	CrNi	1 1/4"	38-42	2	22480464000
Pipe clamp R22	hot galvanized	1 1/2"	47-51	2	22480472000
Pipe clamp R24	CrNi	1 1/2"	47-51	2	22480474000
Pipe clamp R32	hot galvanized	2"	56-60	2	22480482000
Pipe clamp R34	CrNi	2"	56-60	2	22480484000
Wall bracket W27	hot galvanized		42.4	1	22480027000
Luminaire wall suspension 30° incl. screws and washer	hot galvanized			2	22480000122

Linear fluorescent luminaire CG-S

Explosion protected safety luminaire

Planning help for eLLK 92018/18 CG-S for E = 1.0 lx (0.5 lx)

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

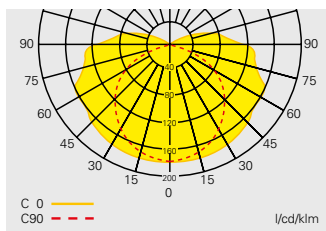


Light distribution curve
eLLK 92018/18 CG-S

Mounting height [m]	Types of mounting	Types of mounting			
		L1	L2	L3	L4
4.0	Ceiling mounting	5.7 (7.0)	14.0 (16.8)	7.3 (9.6)	19.0 (23.8)
5.0	Escape route centre	6.1 (7.7)	15.4 (18.6)	7.7 (10.2)	20.2 (26.0)
6.0		6.4 (8.2)	16.4 (20.2)	8.0 (10.5)	21.0 (27.6)
7.0		6.5 (8.6)	17.2 (21.6)	8.1 (10.9)	21.6 (28.6)
8.0		6.4 (8.9)	17.8 (22.8)	8.0 (11.2)	22.2 (29.2)
10.0		5.9 (9.2)	18.2 (24.4)	7.2 (11.4)	22.4 (30.8)
2.0	Wall mounting	3.9 (4.7)	9.4 (11.0)	5.0 (6.5)	13.0 (16.4)
2.5		4.2 (5.1)	10.0 (12.0)	5.2 (6.9)	13.6 (17.6)
3.0		4.4 (5.4)	10.8 (12.8)	5.4 (7.2)	14.2 (18.4)
4.0	Ceiling mounting	5.4 (5.4)	13.4 (16.6)	5.5 (8.5)	17.6 (21.6)
5.0	Room illumination	4.4 (5.4)	14.4 (18.2)	7.5 (9.5)	19.2 (23.8)
6.0		5.4 (7.4)	15.6 (19.4)	6.5 (7.5)	19.6 (25.8)
7.0		5.4 (6.4)	16.4 (21.0)	6.5 (9.5)	20.4 (26.4)
8.0		4.4 (7.4)	17.4 (21.8)	7.5 (8.5)	20.8 (27.4)
10.0		4.5 (7.4)	18.2 (24.0)	5.4 (8.5)	22.0 (28.2)

Planning help for eLLK 92036/36 CG-S for E = 1.0 lx (0.5 lx)

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

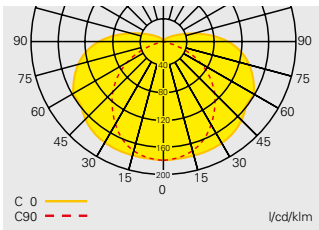


Light distribution curve
eLLK 92036/36 CG-S

Mounting height [m]	Types of mounting	Types of mounting			
		L1	L2	L3	L4
5.0	Ceiling mounting	8.4 (10.1)	20.2 (24.0)	11.3 (14.1)	28.0 (34.4)
6.0	Escape route centre	9.0 (11.0)	22.0 (26.4)	11.8 (15.1)	30.0 (37.2)
7.0		9.5 (11.8)	23.6 (28.6)	12.1 (15.9)	31.6 (39.6)
8.0		9.9 (12.5)	24.8 (30.4)	12.5 (16.5)	32.6 (41.6)
10.0		10.3 (13.5)	27.0 (33.6)	12.9 (17.2)	34.2 (45.0)
12.0		10.4 (14.2)	28.4 (36.0)	12.9 (17.9)	35.4 (46.8)
2.0	Wall mounting	5.1 (6.1)	12.2 (14.4)	7.0 (8.9)	17.8 (22.2)
2.5		5.5 (6.6)	13.2 (15.6)	7.5 (9.5)	18.8 (23.8)
3.0		5.8 (7.0)	14.0 (16.8)	7.8 (10.0)	19.8 (25.0)
5.0	Ceiling mounting	7.4 (8.4)	19.8 (24.6)	8.5 (11.5)	25.2 (30.2)
6.0	Room illumination	7.4 (9.4)	20.8 (26.2)	9.5 (11.5)	28.0 (33.4)
7.0		8.4 (9.4)	22.6 (28.4)	8.5 (12.5)	29.2 (35.2)
8.0		7.4 (9.4)	23.6 (29.6)	10.5 (13.5)	30.6 (37.8)
10.0		8.4 (10.4)	25.6 (31.8)	9.5 (13.5)	31.8 (42.0)
12.0		8.4 (10.0)	27.2 (33.8)	9.5 (14.5)	33.4 (44.0)

Planning help for eLLK 92058/58 CG-S for E = 1.0 lx (0.5 lx)

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



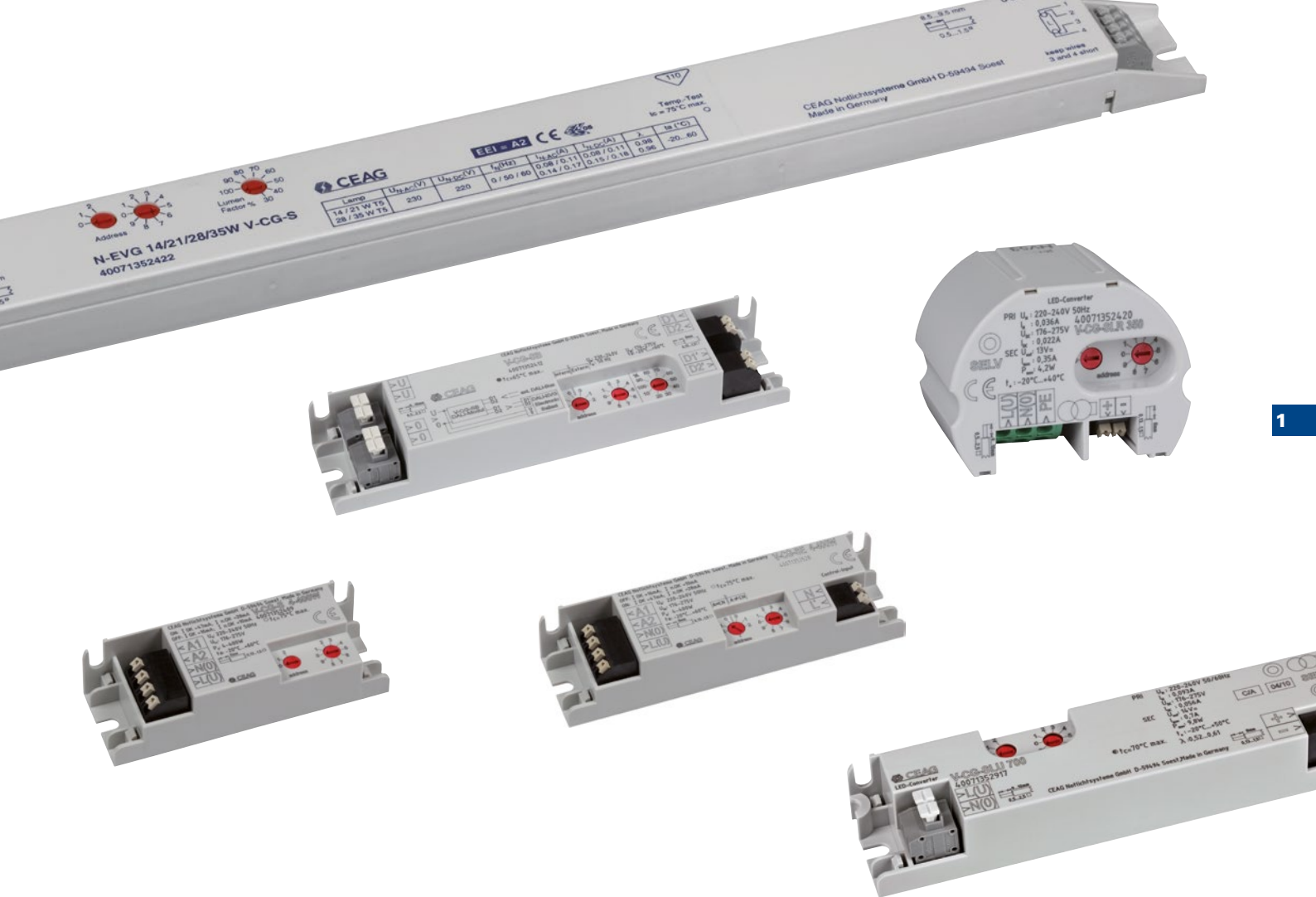
Light distribution curve
eLLK 92058/58 CG-S

Mounting height [m]	Types of mounting	L1	L2	L3	L4
5.0	Ceiling mounting	9.5 (11.4)	22.8 (26.8)	13.1 (16.1)	32.0 (39.2)
6.0	Escape route centre	10.3 (12.5)	24.8 (29.6)	14.0 (17.4)	34.6 (42.4)
7.0		11.0 (13.4)	26.8 (32.2)	14.6 (18.5)	36.8 (45.4)
8.0		11.6 (14.3)	28.4 (34.4)	14.9 (19.4)	38.6 (48.0)
10.0		12.4 (15.6)	31.2 (38.2)	15.7 (20.6)	41.0 (52.4)
12.0		12.9 (16.7)	33.4 (41.4)	16.1 (21.4)	42.4 (55.8)
14.0		13.1 (17.5)	35.0 (44.0)	16.2 (22.1)	44.0 (57.8)
2.0	Wall mounting	5.7 (6.8)	13.6 (16.0)	8.2 (10.4)	20.6 (25.8)
2.5		6.2 (7.4)	14.6 (17.6)	8.8 (11.1)	22.0 (27.6)
3.0		6.6 (7.9)	15.8 (19.0)	9.2 (11.7)	23.2 (29.2)
5.0	Ceiling mounting	8.4 (9.4)	22.4 (26.8)	9.5 (13.5)	29.0 (35.8)
6.0	Room illumination	9.4 (11.4)	24.6 (29.8)	9.5 (12.5)	31.0 (38.0)
7.0		9.4 (10.4)	25.4 (32.2)	10.5 (15.5)	34.2 (40.4)
8.0		9.4 (10.4)	27.4 (34.0)	11.5 (16.5)	35.4 (43.0)
10.0		9.4 (12.4)	29.8 (37.4)	12.5 (15.5)	38.2 (47.2)
12.0		10.4 (14.4)	31.6 (39.2)	11.5 (14.5)	39.6 (52.2)
14.0		10.4 (14.4)	33.2 (41.6)	11.5 (15.5)	41.4 (54.6)



Monitoring modules,
electronic ballasts,
LED supply modules





Intelligent modules ensure greater safety

With CEAG monitoring modules, electronic ballasts or LED supply modules, luminaires for general lighting systems from any manufacturer can be connected to group and central batteries and thus integrated into the building emergency lighting concept.

The modules matched to the requirements of central and group battery installations make it possible to monitor and control up to 20 luminaires in only one circuit. Using the ballasts, luminaires on one circuit can be operated in different switching modes such as maintained light, non-maintained light or switched maintained light. Here in the case of the N-EVGs (electronic ballasts), the emergency lighting level of each lamp can be individually set for battery operation from 30 to 100 % of the nominal luminous flux.

Addressing and adjustment of the luminous flux is performed, as usual, via easy to access coding switches.

Please observe our electronic control unit requirements for monitoring third-party luminaires. Currently valid requirements can be viewed at: <http://www.ceag.de/en/products/centrally-supplied-luminaires/interfaces-ballasts>.

Features:

- Reduced battery capacity / costs due to settable luminous flux ratio
- Low operating costs due to decreased standby losses
- Shortened inspection effort due to CEWA GUARD technology: Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation expenditure with STAR technology: Freely programmable mixed operation of the switching modes per luminaire in one circuit
- Reduced installation expenditures as no additional data line to the luminaires is needed
- Avoidance of installation failures due to mains connection being protected against polarity reversal
- Minimised dimensions
- Greater ambient temperature ranges
- With ENEC symbol, certified by independent test centre

Monitoring modules, electronic ballasts, LED supply modules

Shortened inspection effort due to CEWA GUARD technology. Automatic function monitoring of up to 20 luminaires per circuit.

When an emergency lighting system is put into operation, it is in perfect condition. What, however, counts more, is its reliable functioning in case of emergency, regardless of whether this happens after 4 weeks or 5 years.

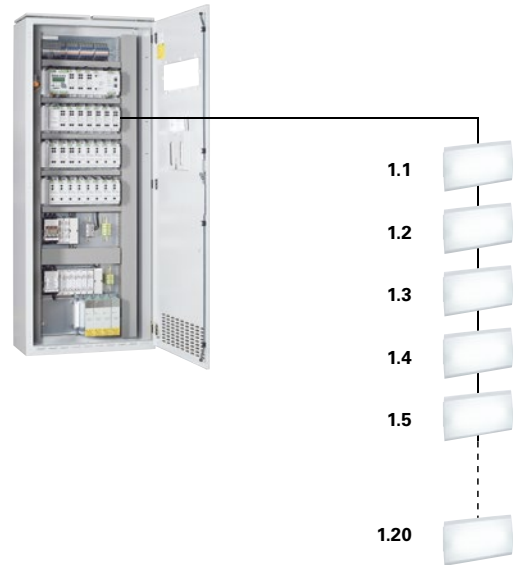
Maintenance, service and inspection are the prerequisite for such reliability. Apart from regular visual checks, all luminaires must be submitted to function and duration tests. Test data and system-related information must be documented in a log book.

CEAG emergency lighting systems with CEWA GUARD functions considerably simplify inspection effort and thereby provide for a distinct reduction of costs and reliable inspection.

CEWA GUARD is an automatic testing and monitoring system that inspects the functioning of the connected luminaires at individually set periods, saving the results to an electronic log book and also forwarding these to a higherlevel display system.

In order to design this system as efficiently as possible and to keep installation costs to a minimum, only one cable for power supply and data transfer is required for the CG technology. As such, no additional shielded data cables to the luminaires are needed for operating the system.

A polarity reversal-protected mains connection to the monitoring modules makes installation simpler and prevents annoying installation errors.



Reduced installation expenditures by STAR technology. Freely programmable mixed operation of the switching modes per luminaire in one circuit.



The **STAR Technology** allows different switching modes to be implemented in one and the same circuit, and the switching mode of each individual luminaire can be re-programmed at any time.

The number of outgoing circuits needed can be sharply reduced, since maintained, non-maintained and switched maintained light 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 a result, this technology offers not just the proven CEWA GUARD safety when it comes to operating an emergency lighting system, it also gives planners the confidence of knowing that the system can respond and adapt at any time to any changes that are made to a building and its use.

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

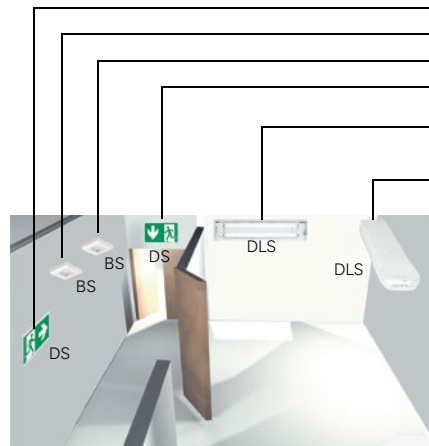
S+-Technologie



Automatic function monitoring of up to 20 luminaires, freely programmable mixed operation of switching modes per luminaire in one circuit also **for AC safety power sources**.

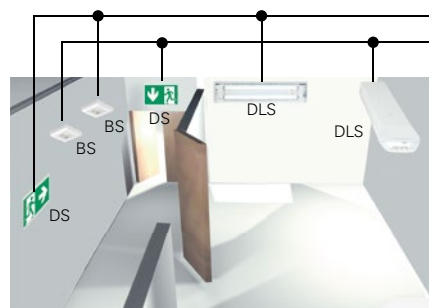
Conventional Installation:

- Maintained light 1 (DS)
- Non-maintained light 1 (BS)
- Non-maintained light 2 (BS)
- Maintained light 2 (DS)
- Switched maintained light 1 (DLS)
- Switched maintained light 2 (DLS)



ZB-S Installation with STAR-Technology:

- All types of switching modes
- All types of switching modes



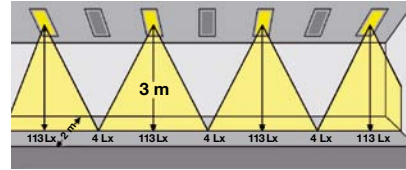
Reduced battery capacity costs with settable luminous flux ratio.

CEAG offers a wide range of special ballasts for emergency lighting for installation into existing light fittings. The ballasts include a monitoring module which signals the luminaire's current status to the central emergency lighting system.

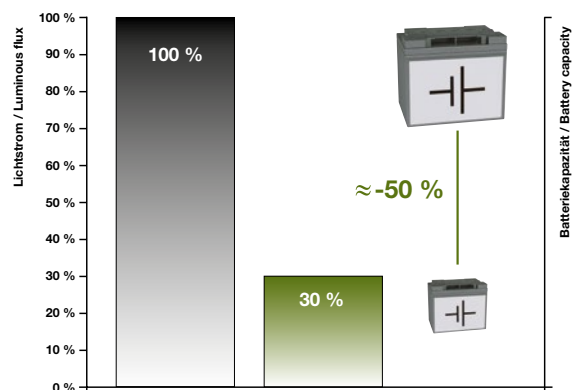
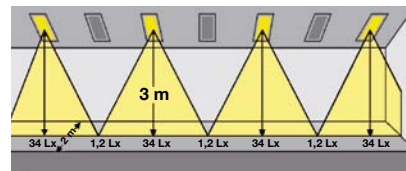
This means that only one ballast must be installed into the luminaire, safe operation in the DC voltage range of 186- 275 V is ensured, and the danger of specifying the wrong ballast is minimised.

By the use of efficient electronic ballasts with automatically reduced luminous flux in battery operation, a considerable reduction of energy is achieved. This saves costs and adds to environmental protection since it provides equal safety with smaller batteries.

Standard EVG 58 W/100 % luminous flux



N-EVG 58 W/30 % luminous flux



ENEC symbol, certified by an independent test centre.

The ENEC symbol (European Norms Electrical Certification) is a European examination symbol created by CENELEC (European Committee for Electrical Standardisation) which confirms that the device on which this symbol is fixed to automatically complies with all requirements of the European testing laboratory.

All CEAG modules must be subjected to these stringent tests and are then allowed to display this symbol.

N-EVG ... V-CG-S

Electronic ballasts



N-EVG ... V-CG-S

- Reduced battery capacity /-costs by adjustable luminous flux of 30 – 100% in DC-operation
- Minimized dimensions of conventional T5 ECG cross section (H x W: 21 x 30 mm)
- Avoidance of installation failures due to a mains connection being protected against polarity reversal
- Shortened inspection effort due to CEWA GUARD and S+-Technology:
Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation costs due to STAR-Technology:
Freely programmable mixed operation of switching modes per luminaire in one circuit
- Reduced installation expenditures as no additional data line to the luminaire is needed
- With automatic lamp wattage detection and optimal operation of the lamp acc. to IEC-standard
- Safety by automatic switchoff at lamp failures or at end of lamp life
- Automatic re-engagement after lamp exchanging

N-EVG 24/39 W V-CG-S



Rated voltage ranges	220 – 240V, 50/60 Hz / 176 – 275 V DC
Energy-Efficiency-Index	EEI = A2
Lamp start	< 1 s with optimum pre-heating
Standby power loss	≤ 1 W (230V / 50 Hz)
Lamp load	See table on next page
Maximum line length	1 m (ECG – lamp)
Type of mounting	To be mounted in luminaires with protection category I or II Attention: Functional earth necessary!
Degree of protection	IP20
Permissible temperature range	t _a = -20 °C to +60 °C
Maximal permissible test point temperature	t _c = 75 °C
Connection terminals	Plug in terminals 1.5 mm ² / reverse-polarity protected
Dimensions in mm (H x L x W)	21 x 360 x 30
Housing material / colour	Flame retardant polycarbonate / grey
Weight	35/39/36 W = 0.166 kg 49 W = 0.174 kg 54/58/80 W = 0.185 kg
Luminous flux Φ_E/Φ_N at the end of rated operating time	In DC-operation acc. setting 30- 100 % (10 %-steps)

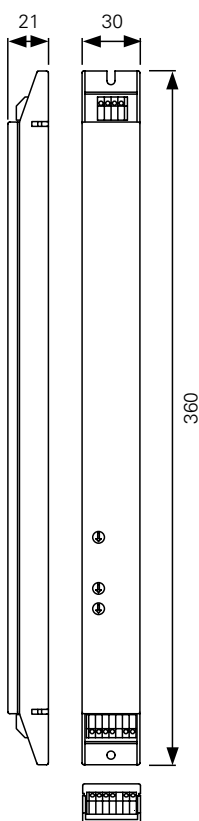
Depending on the luminous flux (30% ... 100%) the correspondend battery current has to be projected.

Dim operation permitted by 30% up to 10°C, 60% up to 0°C only.
For outdoor use set 100 % only!

Ordering details

Type	Order No.
T5 / G5 lamp cap	
N-EVG 14/21/28/35W V-CG-S	40071352422
N-EVG 24/39W V-CG-S	40071352423
N-EVG 49W V-CG-S	40071352424
N-EVG 54W V-CG-S	40071352425
N-EVG 80W V-CG-S	40071352426
T8 / G13 lamp cap	
N-EVG 36W V-CG-S	40071352427
N-EVG 58W V-CG-S	40071352428

Dimensions in mm



N-EVG 54 W V-CG-S



Rated value N-EVG ... V-CG-S for mains and battery operation

Term	T5		T5		T5	T5
Lamp cap	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	24/39 W
Lamp load [W]	14	21	28	35	24	39
Current consumption [A] at 220 V battery operation, setting (Luminous flux Φ_E/Φ_N in %)						
100 %	0.08	0.11	0.15	0.18	0.13	0.19
90 %	0.07	0.10	0.13	0.16	0.12	0.17
80 %	0.064	0.09	0.12	0.14	0.10	0.15
70 %	0.057	0.08	0.11	0.13	0.09	0.13
60 %	0.051	0.07	0.10	0.11	0.08	0.12
50 %	0.045	0.062	0.09	0.10	0.07	0.11
40 %	0.040	0.055	0.08	0.09	0.066	0.10
30 %	0.036	0.050	0.07	0.08	0.059	0.09
Power consumption [A] at 230 V mains operation	0.08	0.11	0.14	0.17	0.12	0.18
Power factor λ	0.94	0.94	0.98	0.98	0.95	0.98
Inrush current [A]	10					
System power lamp + ECG acc. to EN 50294 [W]	16	23	30	37	25	41

N-EVG 58 W V-CG-S



Term	T5		T5	T8	
Lamp cap	G5		G5	G13	
Type N-EVG ... V-CG-S	49W		54W	80W	
Lamp load [W]	49	54	80	36	58
Current consumption [A] at 220 V battery operation, setting (Luminous flux Φ_E/Φ_N in %)					
100 %	0.24	0.26	0.38	0.17	0.25
90 %	0.21	0.23	0.34	0.15	0.22
80 %	0.19	0.21	0.30	0.14	0.20
70 %	0.17	0.18	0.27	0.12	0.18
60 %	0.15	0.16	0.24	0.11	0.16
50 %	0.14	0.15	0.21	0.10	0.14
40 %	0.12	0.13	0.19	0.09	0.13
30 %	0.11	0.12	0.17	0.08	0.11
Power consumption [A] at 230 V mains operation	0.24	0.25	0.37	0.16	0.24
Power factor λ	0.98	0.98	0.98	0.98	0.98
Inrush current [A]	10	10	12	10	10
System power lamp + ECG acc. to EN 50294 [W]	52	57	84	34	53

EVG 13.3 V-CG-S, EVG 18V-CG-S, EVG 18C V-CG-S

Electronic ballasts



EVG 13.3 V-CG-S, EVG 18V-CG-S, EVG 18C V-CG-S

- Low operating costs due to decreased standby losses < 0.5 W
- Without protective conductor connection. For the use in luminaires with insulation class I or II
- Avoidance of installation failures due to a mains connection being protected against polarity reversal
- Shortened inspection effort due to the CEWA GUARD and S+ -Technology:
Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation costs due to STAR-Technology:
Freely programmable mixed operation of the switching modes per luminaire in one circuit
- Reduced installation expenditures as no additional data line to the luminaires is needed
- Enlarged ambient temperature range

EVG 13.3



EVG 13.3 V-CG-S



EVG 18 V-CG-S



EVG 18C V-CG-S

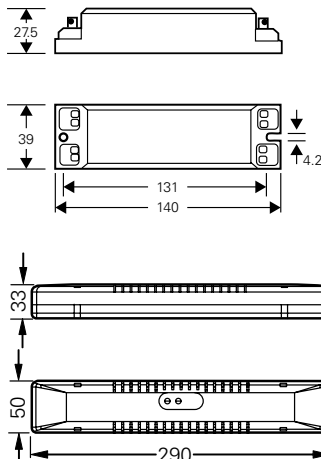


Rated voltage ranges	220 - 240 V, 50/60 Hz / 176- 275 V DC
Standby power loss	< 0.5 W (230 V / 50 Hz)
Lamp load	EVG 13.3 13W (see schedule n. page) EVG 18 18W (see schedule n. page)
Maximum line length	1 m (ECG- lamp)
Type of mounting	To be mounted in luminaires with protection category I or II
Degree of protection	IP20
Permissible temperature range	ta = -20 °C to +60 °C
Maximal permissible test point temperature	tc = 75 °C
Connection terminals	Plug-in terminals 2.5 mm ² / reverse-polarity protected
Dimensions in mm (H x L x W)	27.5 x 140 x 39
Housing material / colour	Flame retardant polycarbonate / grey
Weight	0.07 kg
Luminous flux Φ_E/Φ_N at the end of rated operating time	75 %

Ordering details

Scope of supply	Order No.
EVG 13.3	40071352400
EVG 13.3 V-CG-S	40071352401
EVG 18 V-CG-S	40071352402
EVG 18C V-CG-S	40071352403
Housing with strain relief	40071352851

Dimensions in mm



Housing with strain relief

EVG 13.3



EVG 13.3 V-CG-S




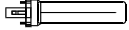
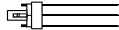
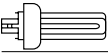
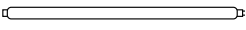
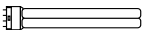
EVG 18 V-CG-S



EVG 18C V-CG-S



Rated value of EVG 13.3 V-CG-S, EVG 18 V-CG-S and EVG 18C V-CG-S for mains and battery operation

International term	Lamp cap	EVG-type EVG...	Lamp load in [W]	Power consumption at battery operation [A] ¹⁾	Power consumption in [VA]	Inrush current [A]	power factor λ	
T16/ T5	G 5	13.3 V-CG-S	4	0.020	8	3	0.6	
		13.3 V-CG-S	6	0.025	12	3	0.6	
		13.3 V-CG-S	8	0.030	16	3	0.6	
			13.3 V-CG-S	13	0.050	23	3	0.6
TC-SEL	2 G 7	13.3 V-CG-S	5	0.020	10	3	0.6	
		13.3 V-CG-S	7	0.025	13	3	0.6	
		13.3 V-CG-S	9	0.030	16	3	0.6	
			13.3 V-CG-S	11	0.040	18	3	0.6
TC-DEL	G 24 q-1	13.3 V-CG-S	10	0.035	16	3	0.6	
		13.3 V-CG-S	13	0.050	23	3	0.6	
			G 24 q-2	18C V-CG-S	18	0.070	30	8
TC-TEL	GX 24 q-1	13.3 V-CG-S	13	0.050	23	3	0.6	
			GX 24 q-2	18C V-CG-S	18	0.070	30	8
T 26 / T8	G 13	18 V-CG-S	18	0.070	30	8	0.6	
								
		TC-F	2 G 10	18 V-CG-S	18	0.070	30	8
TC-L	2 G 11	18 V-CG-S	18	0.070	30	8	0.6	
								

¹⁾ Luminous flux $\Phi_E/\Phi_N = 75 \%$

V-CG-S 4-400 W

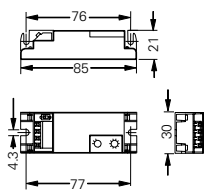
Monitoring module



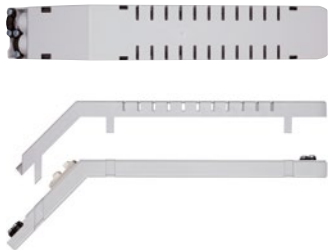
V-CG-S 4-400 W



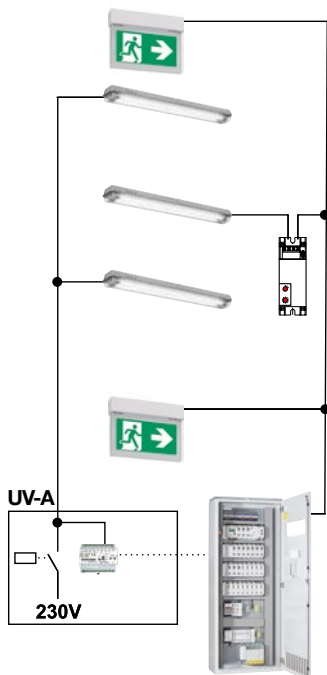
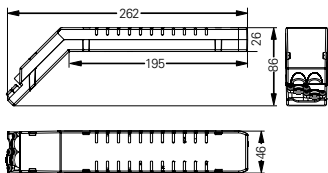
Dimensions in mm



Module housing



Dimensions in mm



V-CG-S 4-400 W

- Low operating costs due to decreased standby losses < 0.5 W
- Minimized dimensions on the basis of conventional T5 EVG cross section (H x B: 21 x 30 mm) for an eased mounting in narrow luminaires
- Without protective conductor connection. For the use in luminaires with insulation class I or II
- Variable mounting possibilities for different mounting positions (horizontal or sidewise upright)
- Avoidance of installation failures due to a mains connection being protected against polarity reversal
- Universal monitoring module for loads 4 – 400 W
- Shortened inspection effort due to the CEWA GUARD and S+-Technology: Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation costs due to STAR-Technology: Freely programmable mixed operation of the switching modes per luminaire in one circuit
- Reduced installation expenditures as no additional data line to the luminaires is needed
- Enlarged ambient temperature range

Rated voltage ranges	220 - 240 V, 50/60 Hz / 176- 275 V DC
Standby power loss	< 0.5 W (230 V / 50 Hz)
Power input	4 W - 400 W
Max. permitted inrush current	30 A
Maximum line length	50 m (module- luminaire)
Type of mounting	To be mounted in luminaires with protection category I or II
Degree of protection	IP20
Permissible temperature range	ta = -20 °C to +60 °C
Maximal permissible test point temperature	tc = 75 °C
Connection terminals	Plug in terminals 1.5 mm ² / reverse-polarity protected
Dimensions in mm (H x L x W)	21 x 85 x 30
Housing material / colour	Flame retardant polycarbonate / grey
Weight	0.035 kg

Ordering details

Scope of supply	Order No.
V-CG-S 4-400 W	40071352409
Module housing with strain relief	40071352765

Attention! The following parameter must be observed.

slidingswitch	I _{OK}	I _{n,OK*}
ON	> 47 mA	< 28 mA
OFF	> 16 mA	< 10 mA

* If the lamp is faulty the charging rate of the control gear must be smaller than I_{n,OK*}.

For the use of standard control gears make sure that a correct function of the control gear is guaranteed as well in the voltage range of 186 to 275 V. We recommend to obtain a corresponding certificate of the manufacturer.

The disconnection of the control gears in case of lamp failure must occur within 1.6 seconds.

The current consumption of the ballast must be sinusoidal for AT-S+-systems.

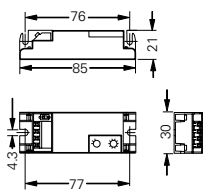
Please observe our electronic control unit requirements for monitoring third-party luminaires. Currently valid requirements can be viewed at: <http://www.ceag.de/de/produkte/systemleuchten/module-und-vorschaltgeraete>.



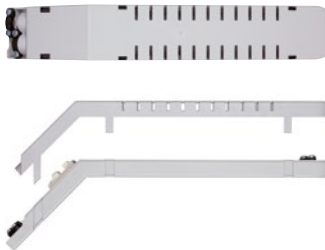
V-CG-S2 1.5-30 W



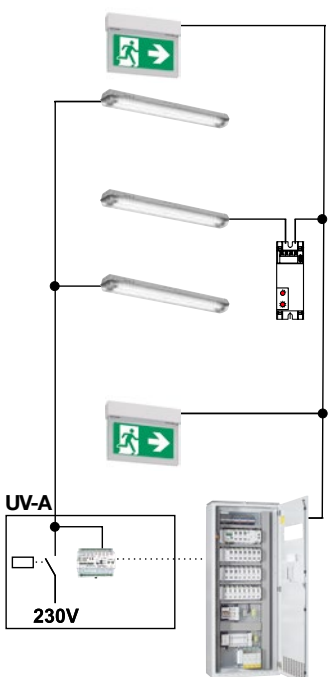
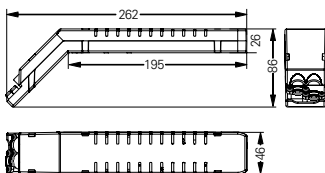
Dimensions in mm



Module housing



Dimensions in mm



V-CG-S2 1,5-30 W

- Low operating costs due to decreased standby losses < 0.5 W
- Minimized dimensions on the basis of conventional T5 EVG cross section (H x W: 21 x 30 mm) for an eased mounting in narrow luminaires
- Without protective conductor connection. For the use in luminaires with insulation class I or II
- Variable mounting possibilities for different mounting positions (horizontal or sidewise upright)
- Avoidance of installation failures due to a mains connection being protected against polarity reversal
- Universal monitoring module for loads 1.5 – 30 W
- Shortened inspection effort due to the CEWA GUARD and S+ -Technology: Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation costs due to STAR-Technology: Freely programmable mixed operation of the switching modes per luminaire in one circuit
- Reduced installation expenditures as no additional data line to the luminaire is needed
- Enlarged ambient temperature range

Connection voltage	220 - 240 V, 50/60 Hz / 176- 275 V DC
Standby power loss	< 0.5 W (230 V / 50 Hz)
Power input	1.5 W-30 W
Maximum inrush current	30 A
Maximum line length	50 m (module- luminaire)
Type of mounting	To be mounted in luminaires with protection category I or II
Degree of protection	IP20
Permissible temperature range	ta = -20 °C to +60 °C
Maximum permissible test point temperature	tc = 75 °C
Connection terminals	Plug in terminals 1.5 mm ² / reverse-polarity protected
Dimensions in mm (H x L x W)	21 x 85 x 30
Housing material / colour	flame retardant polycarbonate / grey
Weight	0.035 kg

Ordering details

Scope of supply	Order No.
V-CG-S2 1.5-30 W	40071352410
Module enclosure with cable relief	40071352765

Attention! The following parameter must be observed.

slidingswitch	I _{OK}	I _{n,OK} *
ON	> 12.7 mA	< 7.9 mA
OFF	> 9.4 mA	< 5.8 mA

* If the lamp is faulty the charging rate of the control gear must be smaller than I_{n,OK}.

For the use of standard control gears make sure that a correct function of the control gear is guaranteed as well in the voltage range of 186 to 275 V. We recommend to obtain a corresponding certificate of the manufacturer.

The disconnection of the control gears in case of lamp failure must occur within 1.6 seconds.

The current consumption of the ballast must be sinusoidal for AT-S⁺-systems.

Please observe our electronic control unit requirements for monitoring third-party luminaires. Currently valid requirements can be viewed at: <http://www.ceag.de/de/produkte/systemleuchten/module-und-vorschaltgeraete>.

V-CG-SE 4-400 W

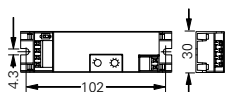
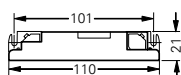
Monitoring module with control input



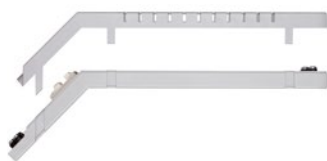
V-CG-SE 4-400 W



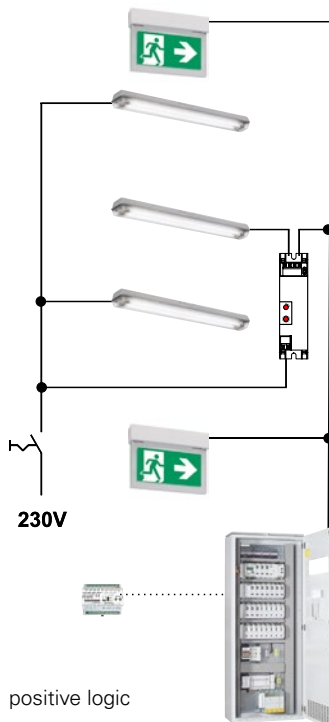
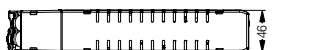
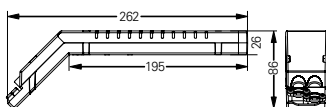
Dimensions in mm



Module housing



Dimensions in mm



V-CG-SE 4-400 W

- Low operating costs due to decreased standby losses < 0.5 W
- Minimized dimensions on the basis of conventional T5 EVG cross section (H x W: 21 x 30 mm) for an eased mounting in narrow luminaires
- Without protective conductor connection. For the use in luminaires with insulation class I or II
- Variable mounting possibilities for different mounting positions (horizontal or sidewise upright)
- Avoidance of installation failures due to a mains connection being protected against polarity reversal
- Universal monitoring modules for loads 4 – 400 W
- Shortened inspection effort due to the CEWA GUARD and S+Technology: Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation costs due to STAR-Technology: Freely programmable mixed operation of the switching modes per luminaire in one circuit
- Reduced installation expenditures as no additional data line to the luminaires is needed
- Enlarged ambient temperature range
- Separate control input for a parallel switching on-site with positive or inverted logic

Rated voltage ranges	220 - 240 V, 50/60 Hz / 176 - 275 V DC
Standby power loss	< 0.5 W (230 V / 50 Hz)
Power input	4 W - 400 W
Max. permitted inrush current	30 A
Maximum line length	50 m (module – luminaires)
Type of mounting	To be mounted in luminaires with protection category I or II
Degree of protection	IP20
Permissible temperature range	ta = -20 °C to +60 °C
Maximal permissible test point temperature	tc = 75 °C
Connection terminals	Plug in terminals 1.5 mm ² / reverse-polarity protected
Dimensions in mm (H x L x W)	21 x 110 x 30
Housing material / colour	Flame retardant polycarbonate / grey
Weight	0.040 kg
Control input	220 - 240 V, 50 Hz (switching threshold acc. EN 60598-2-22)

Ordering details

Scope of supply	Order No.
V-CG-SE 4-400 W	40071352528
Module housing with strain relief	40071352765

Function A = L'N (positive logic)

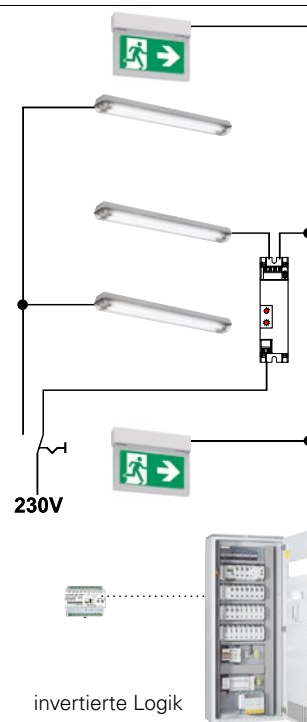
L(U) / N(0)	Address	STAR command	L' / N	A1 / A2
0 V	1- 20	-	0 / 230V AC	0 V
230 V AC	1- 20	OFF	0 V	0 V
230 V AC	1- 20	OFF	230 V AC	230 V AC
230 V AC	1- 20	ON	0 / 230 V AC	230 V AC
230 V AC	1- 20	Emergency mode	0 / 230 V AC	230 V AC
220 V DC	0- 20	-	0 / 230 V AC	220 V DC

Function A ≠ L'N (inverted logic)

L(U) / N(0)	Address	STAR command	L' / N	A1 / A2
0 V	1- 20	-	0 / 230V AC	0 V
230 V AC	1- 20	OFF	0 V	230 V AC
230 V AC	1- 20	OFF	230 V AC	0 V
230 V AC	1- 20	ON	0 / 230 V AC	230 V AC
230 V AC	1- 20	Emergency mode	0 / 230 V AC	230 V AC
220 V DC	0- 20	-	0 / 230 V AC	220 V DC

The module may only be used for final circuits with STAR- or STAR+ technology.

For more information see V-CG-S monitoring module.

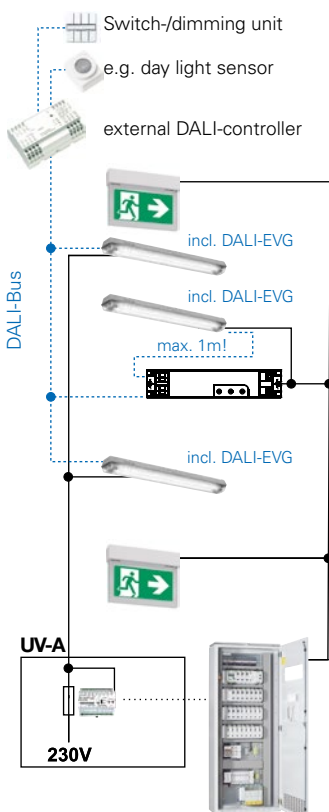
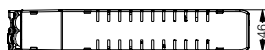
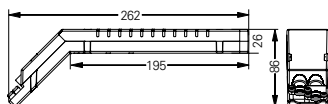
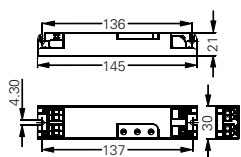




V-CG-SB.1



Dimensions in mm



V-CG-SB.1

- Low operating costs due to decreased standby losses < 1 W
- Minimized dimensions on the basis of conventional T5 EVG cross section (H xW: 21 x 30 mm) for an eased mounting in narrow luminaires
- Variable mounting possibilities for different mounting positions (horizontal or sidewise upright)
- Avoidance of installation failures due to a mains connection being protected against polarity reversal
- Universal monitoring module for all single lamp DALI electronic control gears
- Shortened inspection effort due to the CEWA GUARD and S⁺-Technology: Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation costs due to STAR-Technology: Freely programmable mixed operation of the switching modes per luminaire in one circuit
- Reduced installation expenditures as no additional data line to the luminaires is needed
- Enlarged ambient temperature range
- Safe galvanic isolation of the bus systems (emergency lighting / mains lighting during emergency operation)
- Adjustable luminous flux relation in DC mode in steps between 10 % and 100 %

Rated voltage ranges	220- 240 V, 50/60 Hz / 176- 275 V DC
Standby power loss	< 1 W (230 V / 50 Hz)
Connection	DALI electronic control gear for max. one single lamp
Maximum distance	1 m (module- DALI-ECG / LED driver)
Type of mounting	To be mounted in luminaires with protection category I or II
Degree of protection	IP20
Permissible temperature range	ta = -20 °C to +60 °C
Maximal permissible test point temperature	tc = 65 °C
Connection terminals mains	Plug in terminals 2.5 mm ² / reserve-polarity protected
Connection terminals DALI-BUS	Plug in terminals 1.5 mm ² / reserve-polarity protected
Dimensions in mm (H x L x W)	21 x 145 x 30
Enclosure material / colour	Flame retardant polycarbonate / grey
Weight	0.047 kg
Adjustable luminous flux relation in DC mode	10 % - 100 % (in 10 % steps)

Ordering details

Scope of supply	Order No.
V-CG-SB.1	40071352008
Module housing with strain relief	40071352765

Attention! The following parameter must be observed.

For the use of DALI control gears make sure that a correct function of the control gear is guaranteed as well in the DC voltage range of 186 V to 275 V. We recommend to obtain a corresponding certificate of the manufacturer.

The disconnection of the control gear in case of lamp failure after the switch to emergency mode (DC) must occur within 1.6 seconds.

The module may only be used for final circuits with STAR- or STAR⁺ technology. The functional earth must be connected without fail.

Please observe our electronic control unit requirements for monitoring third-party luminaires. Currently valid requirements can be viewed at: <http://www.ceag.de/de/produkte/systemleuchten/module-und-vorschaltgeraete>.

V-CG-SUW

Monitoring module with change over unit

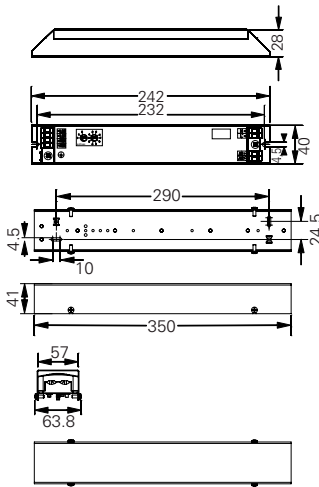


V-CG-SUW

1



Dimensions in mm



V-CG-SUW

- Avoidance of installation failures due to a mains connection being protected against polarity reversal
- Universal monitoring modules for loads 13 – 400 W
- Shortened inspection effort due to the CEWA GUARD and S+-Technology:
Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation costs due to STAR-Technology:
Freely programmable mixed operation of the switching modes per luminaire in one circuit
- Reduced installation expenditures as no additional data line to the luminaires is needed
- Enlarged ambient temperature range
- Integrated change over unit for parallel connection of an external power source

Rated voltage ranges	220 - 240 V, 50/60 Hz / 176- 275 V DC
Standby power loss	< 0.8 W (230 V / 50 Hz)
Power input	13 W-400 W
Max. inrush current	80 A/ms
Maximum line length	50 m (module – luminaires)
Type of mounting	To be mounted in luminaires with protection category I
Degree of protection	IP20
Permissible temperature range	ta = -20 °C to +60 °C
Maximal permissible test point temperature	tc = 75 °C
Connection terminals	Plug-in terminals 2.5 mm ² / reverse-polarity protected
Dimensions in mm (H x L x W)	28 x 242 x 40
Housing material / colour	Sheet steel / white
Weight	0.14 kg
Control input	0- 240 V, 50 Hz

Ordering details

Scope of supply	Order No.
V-CG-SUW	40071352413
Module housing with strain relief, sheet steel	40071349514

Function

L(U) / N(0)	Adress	STAR command	L' / N	A1 / A2
0 V	0- 20	-	0 / 240V AC	wie L' / N
230 V AC	0- 20	-	0 / 240V AC	230 V AC
230 V AC	1- 20	AUS / OFF	0 / 240V AC	wie L' / N
230 V AC	1- 20	EIN / ON	0 / 240V AC	230 V AC
230 V AC	1- 20	Notbetrieb/Emergency	0 / 240V AC	230 V AC
220 V DC	0- 20	-	0 / 240V AC	220 V DC

STAR command:

STAR command of the system to a V-CG-SUW with a defined address

Achtung! Folgende technische Parameter müssen eingehalten werden.

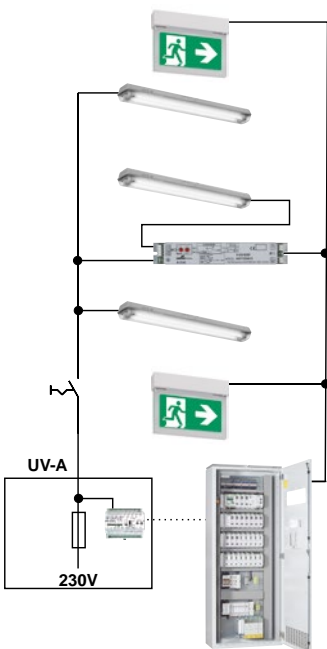
I_{OK}	$I_{n,OK}^*$	
> 47 mA	< 28 mA	* If the lamp is faulty the charging rate of the control gear must be smaller than $\hat{I}_{n,OK}^*$.

For the use of standard control gears make sure that a correct function of the control gear is guaranteed as well in the voltage range of 186 to 275 V. We recommend to obtain a corresponding certificate of the manufacturer.

The disconnection of the control gears in case of lamp failure must occur within 1.6 seconds.

The current consumption of the ballast must be sinusoidal for AT-S+-systems.

Please observe our electronic control unit requirements for monitoring third-party luminaires. Currently valid requirements can be viewed at: <http://www.ceag.de/de/produkte/systemleuchten/module-und-vorschaltgeraete>.

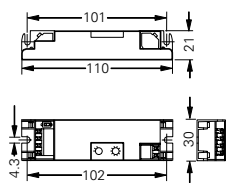




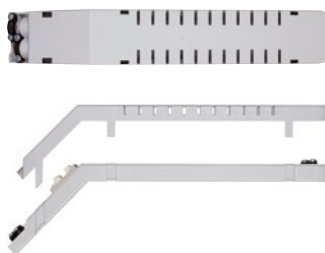
CG-K 4-400 W



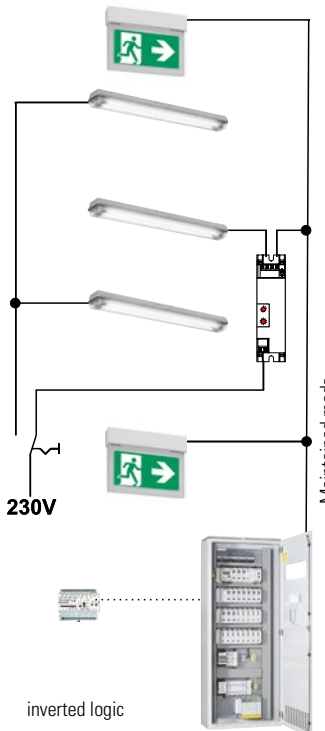
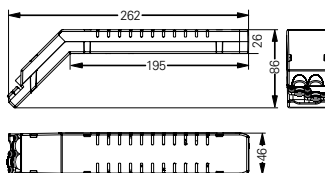
Dimensions in mm



Modulgehäuse



Dimensions in mm



CG-K 4-400 W

- Low operating costs due to decreased standby losses < 0.5 W
- Minimized dimensions on the basis of conventional T5 EVG cross section (H x W: 21 x 30 mm) for an eased mounting in narrow luminaires
- Without protective conductor connection. For the use in luminaires with insulation class I or II
- Variable mounting possibilities for different mounting positions (horizontal or sidewise upright)
- Avoidance of installation failures due to a mains connection being protected against polarity reversal
- Universal monitoring modules for loads 4 – 400 W
- Shortened inspection effort due to the CEWA GUARD technology: Automatic function monitoring of up to 20 luminaires per circuit
- Enlarged ambient temperature range
- Separate control input for a parallel switching on-site with inverted logic

Rated voltage ranges	220 - 240 V, 50/60 Hz / 176 - 275 V DC
Standby power loss	< 0.5 W (230 V / 50 Hz)
Power input	4 W - 400 W
Max. permitted inrush current	30 A
Maximum line length	50 m (module – luminaires)
Type of mounting	To be mounted in luminaires with protection category I or II
Degree of protection	IP20
Permissible temperature range	ta = -20 °C to +60 °C
Maximal permissible test point temperature	tc = 75 °C
Connection terminals	Plug-in terminals 1.5 mm ² / reverse-polarity protected
Dimensions in mm (H x L x W)	21 x 110 x 30
Housing material / colour	Flame retardant polycarbonate / grey
Weight	0.040 kg
Control input	220 - 240 V, 50 Hz (switching threshold acc. EN 60598-2-22)

Ordering details

Scope of supply	Order No.
CG-K 4-400 W	40071352529
Module housing with strain relief	40071352765

Function A ≠ L'N (inverted logic)

L(U) / N(0)	Address	L' / N	A1 / A2
0 V	1- 20	0 / 230V AC	0 V
230 V AC	1- 20	0 V	230 V AC
230 V AC	1- 20	230 V AC	0 V
220 V DC	0- 20	0 / 230 V AC	220 V DC

For the use of standard control gears make sure that a correct function of the control gear is guaranteed as well in the voltage range of 186 to 275 V. We recommend to obtain a corresponding certificate of the manufacturer.

The disconnection of the control gears in case of lamp failure must occur within 1.6 seconds.

The module may not be used for final circuits with STAR or STAR+ technology.

Please observe our electronic control unit requirements for monitoring third-party luminaires. Currently valid requirements can be viewed at: <http://www.ceag.de/de/produkte/systemleuchten/module-und-vorschaltgeraete>.

V-CG-SLU 350

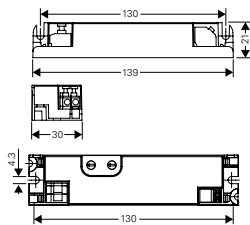
LED supply- and monitoring module



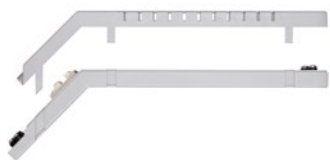
V-CG-SLU 350



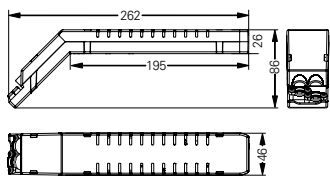
Dimensions in mm



Module housing



Dimensions in mm



V-CG-SLU 350

- Low operating costs due to decreased standby losses < 0.7 W
- Minimized dimensions on the basis of conventional T5 EVG cross section (H x B: 21 x 30 mm) for an eased mounting in narrow luminaires
- Without protective conductor connection. For the use in luminaires with insulation class I or II
- Variable mounting possibilities for different mounting positions (horizontal or sidewise upright)
- Avoidance of installation failures due to a mains connection being protected against polarity reversal
- Shortened inspection effort due to the CEWA GUARD- and S+-Technology: Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation costs due to STAR-Technology: Freely programmable mixed operation of the switching modes per luminaire in one circuit
- Reduced installation expenditures as no additional data line to the luminaires is needed

Primary side

Rated voltage ranges	220 - 240 V, 50/60 Hz / 176 - 275 V DC
Standby power loss	< 0.7 W (230 V / 50 Hz)
Current consumption	91 mA (230 V AC) / 54 mA (220 V DC)
Power input	20.9 VA (230 V AC)
Power factor λ	0.44...0.61
Inrush current	≤ 3.0 A
Operating frequency	25-130 kHz
EEL	A2
Connection terminals	Clamp terminals 2.5 mm ² / reverse-polarity protected

Secondary side

Output current	350 mA (constant current)
Output voltage	28 V DC (open-circuit operation)
Lamp load	1-8 LEDs (rated current 350 mA, UF = 2.85 ... 3.5 V), series connection
Output power (max.)	9.8 W
Connection terminals	Clamp terminals 1.5 mm ² / not reverse-polarity protected
Maximum line length	1 m (module - LED)
Type of mounting	To be mounted in luminaires with protection category I or II
Degree of protection	IP20
Permissible ambient temperature	$t_a = -20$ °C to +50 °C
Maximal permissible test point temperature	$t_c = 70$ °C
Dimensions in mm (H x L x B)	21 x 139 x 30
Housing material / Colour	Flame retardant polycarbonate / grey
Weight	0.061 kg
Luminous flux Φ_E/Φ_N at the end of rated operating time	100 %

Ordering details

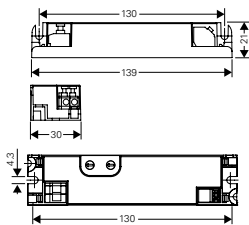
Scope of supply	Order No.
V-CG-SLU 350	40071352915
Module housing with strain relief	40071352765



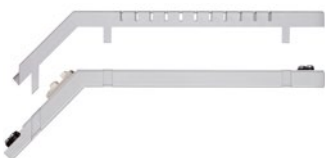
V-CG-SLU 490



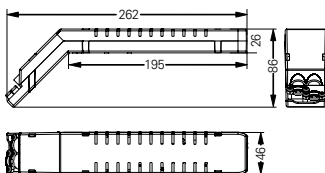
Dimensions in mm



Module housing



Dimensions in mm



V-CG-SLU 490

- Low operating costs due to decreased standby losses < 0.7 W
- Minimized dimensions on the basis of conventional T5 EVG cross section (H x B: 21 x 30 mm) for an eased mounting in narrow luminaires
- Without protective conductor connection. For the use in luminaires with insulation class I or II
- Variable mounting possibilities for different mounting positions (horizontal or sidewise upright)
- Avoidance of installation failures due to a mains connection being protected against polarity reversal.
- Shortened inspection effort due to the CEWA GUARD- and S⁺-Technology:
Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation costs due to STAR-Technology:
Freely programmable mixed operation of the switching modes per luminaire in one circuit
- Reduced installation expenditures as no additional data line to the luminaires is needed

Primary side

Rated voltage ranges	220 - 240 V, 50/60 Hz / 176 - 275 V DC
Standby power loss	< 0.7 W (230 V / 50 Hz)
Current consumption	67 mA (230 V AC) / 41 mA (220 V DC)
Power input	15.4 VA (230 V AC)
Power factor λ	0.45...0.59
Inrush current	≤ 3.0 A
Operating frequency	25-130 kHz
EEL	A2
Connection terminals	Clamp terminals 2.5 mm ² / reverse-polarity protected

Secondary side

Output current	490 mA (constant current)
Output voltage	14 V DC (open-circuit operation)
Lamp load	1-4 LEDs (rated current 490 mA, UF = 2.85 ... 3.5 V), series connection
Output power (max.)	6.9 W
Connection terminals	Clamp terminals 1.5 mm ² / not reverse-polarity protected
Maximum line length	1 m (module – LED)
Type of mounting	To be mounted in luminaires with protection category I or II
Degree of protection	IP20
Permissible ambient temperature	$t_a = -20$ °C to +50 °C
Maximal permissible test point temperature	$t_c = 70$ °C
Dimensions in mm (H x L x B)	21 x 139 x 30
Housing material / Colour	Flame retardant polycarbonate / grey
Weight	0.061 kg
Luminous flux Φ_E/Φ_N at the end of rated operating time	100 %

Ordering details

Scope of supply	Order No.
V-CG-SLU 490	40071352916
Module housing with strain relief	40071352765

V-CG-SLU 700

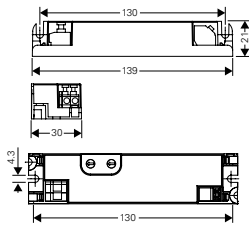
LED supply- and monitoring module



V-CG-SLU 700



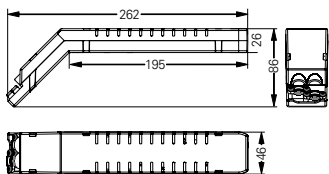
Dimensions in mm



Module housing



Dimensions in mm



V-CG-SLU 700

- Low operating costs due to decreased standby losses < 0.7 W
- Minimized dimensions on the basis of conventional T5 EVG cross section (H x B: 21 x 30 mm) for an eased mounting in narrow luminaires
- Without protective conductor connection. For the use in luminaires with insulation class I or II
- Variable mounting possibilities for different mounting positions (horizontal or sidewise upright)
- Avoidance of installation failures due to a mains connection being protected against polarity reversal
- Shortened inspection effort due to the CEWA GUARD- and S⁺-Technology: Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation costs due to STAR-Technology: Freely programmable mixed operation of the switching modes per luminaire in one circuit
- Reduced installation expenditures as no additional data line to the luminaires is needed

Primary side

Rated voltage ranges	220 - 240 V, 50/60 Hz / 176 - 275 V DC
Standby power loss	< 0.7 W (230 V / 50 Hz)
Current consumption	93 mA (230 V AC) / 56 mA (220 V DC)
Power input	21.4 VA (230 V AC)
Power factor λ	0.52...0.61
Inrush current	≤ 3.0 A
Operating frequency	25-130 kHz
EEL	A2
Connection terminals	Clamp terminals 2.5 mm ² / reverse-polarity protected

Secondary side

Output current	700 mA (constant current)
Output voltage	14 V DC (open-circuit operation)
Lamp load	1-4 LEDs (rated current 700 mA, UF = 2.85 ... 3.5 V), series connection
Output power (max.)	9.8 W
Connection terminals	Clamp terminals 1.5 mm ² / not reverse-polarity protected
Maximum line length	1 m (module – LED)
Type of mounting	To be mounted in luminaires with protection category I or II
Degree of protection	IP20
Permissible ambient temperature	t _a = -20 °C to +50 °C
Maximal permissible test point temperature	t _c = 70 °C
Dimensions in mm (H x L x B)	21 x 139 x 30
Housing material / Colour	Flame retardant polycarbonate / grey
Weight	0.061 kg
Luminous flux Φ _E /Φ _N at the end of rated operating time	100 %

Ordering details

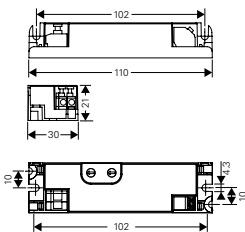
Scope of supply	Order No.
V-CG-SLU 700	40071352917
Module housing with strain relief	40071352765



V-CG-SLS 28



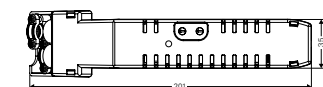
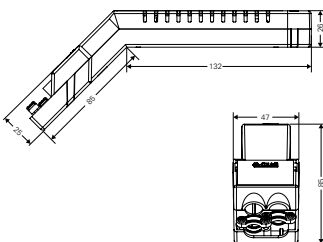
Dimensions in mm



Module housing



Dimensions in mm



V-CG-SLS 28

- Low operating costs due to decreased standby losses < 0.5 W
- Minimized dimensions on the basis of conventional T5 LCG cross section (H x W: 21 x 30 mm) for an eased mounting in narrow luminaires
- Without protective conductor connection. For the use in luminaires with insulation class I or II
- Variable mounting possibilities for different mounting positions (horizontal or sidewise upright)
- Avoidance of installation failures due to a mains connection being protected against polarity reversal
- Shortened inspection effort due to the CEWA GUARD- and S⁺-Technology: Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation costs due to STAR-Technology: Freely programmable mixed operation of the switching modes per luminaire in one circuit
- Reduced installation expenditures as no additional data line to the luminaires is needed

Primary side

Rated voltage ranges	220 - 240 V, 50/60 Hz / 176 - 275 V DC
Standby power loss	< 0.5 W (230 V / 50 Hz)
Current consumption	35 mA (230 V AC) / 20 mA (220 V DC)
Power input	8.1 VA (230 V AC)
Power factor λ	0.45 ... 0.60
Inrush current	≤ 1.5 A
Operating frequency	132 kHz
EEL	A2
Connection terminals	Plug-in terminals 2.5 mm ² / reverse-polarity protected

Secondary side

Output current	110 mA (Maximum current)
Output voltage	28 V DC (Constant voltage)
Lamp load	LED strip with own current control for 28 V DC and max. 110 mA
Output power (max.)	3.1 W
Connection terminals	Plug-in terminals 1.5 mm ² / not reverse-polarity protected
Maximum line length	1 m (module – LED)
Type of mounting	To be mounted in luminaires with protection category I or II
Degree of protection	IP20
Permissible ambient temperature	t _a = -20 °C to +50 °C
Maximal permissible test point temperature	t _c = 70 °C
Dimensions in mm (H x L x B)	21 x 110 x 30
Housing material / Colour	Flame retardant polycarbonate / grey
Weight	0.042 kg
Luminous flux Φ _E /Φ _N at the end of rated operating time	100 %

Ordering details

Scope of supply	Order No.
V-CG-SLS 28	40071352419
Module housing with strain relief	40071351928

V-CG-SLS 350

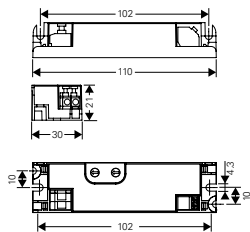
LED supply- and monitoring module



V-CG-SLS 350



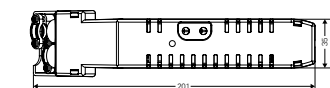
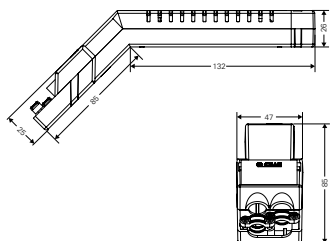
Dimensions in mm



Module housing



Dimensions in mm



V-CG-SLS 350

- Low operating costs due to decreased standby losses < 0.5 W
- Minimized dimensions on the basis of conventional T5 EVG cross section (H x B: 21 x 30 mm) for an eased mounting in narrow luminaires
- Without protective conductor connection. For the use in luminaires with insulation class I or II
- Variable mounting possibilities for different mounting positions (horizontal or sidewise upright)
- Avoidance of installation failures due to a mains connection being protected against polarity reversal
- Shortened inspection effort due to the CEWA GUARD- and S⁺-Technology: Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation costs due to STAR-Technology: Freely programmable mixed operation of the switching modes per luminaire in one circuit
- Reduced installation expenditures as no additional data line to the luminaires is needed

Primary side

Rated voltage ranges	220 - 240 V, 50/60 Hz / 176 - 275 V DC
Standby power loss	< 0.5 W (230 V / 50 Hz)
Current consumption	41 mA (230 V AC) / 26 mA (220 V DC)
Power input	9.4 VA (230 V AC)
Power factor λ	0.60...0.70
Inrush current	≤ 1.5 A
Operating frequency	132 kHz
EEL	A2
Connection terminals	Clamp terminals 2.5 mm ² / reverse-polarity protected

Secondary side

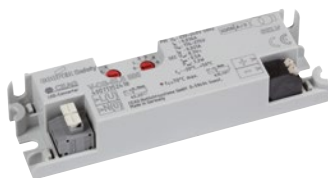
Output current	350 mA (constant current)
Output voltage	14.5 V DC (open-circuit operation)
Lamp load	1-4 LEDs (rated current 350 mA, UF = 3.0 ... 3.3 V), series connection
Output power (max.)	4.62 W
Connection terminals	Clamp terminals 1.5 mm ² / not reverse-polarity protected
Maximum line length	1 m (module - LED)
Type of mounting	To be mounted in luminaires with protection category I or II
Degree of protection	IP20
Permissible ambient temperature	t _a = -20 °C to +50 °C
Maximal permissible test point temperature	t _c = 60 °C
Dimensions in mm (H x L x B)	21 x 110 x 30
Housing material / Colour	Flame retardant polycarbonate / grey
Weight	0.042 kg
Luminous flux Φ _E /Φ _N at the end of rated operating time	100 %

Ordering details

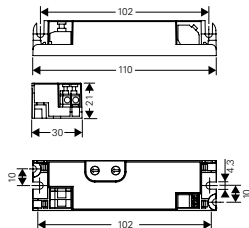
Scope of supply	Order No.
V-CG-SLS 350	40071352417
Module housing with strain relief	40071351928



V-CG-SLS 500



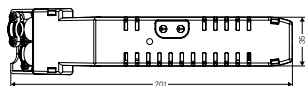
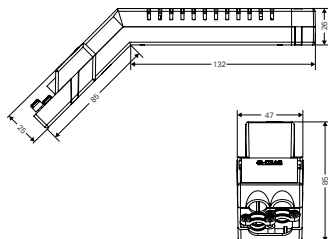
Dimensions in mm



Module housing



Dimensions in mm



V-CG-SLS 500

- Low operating costs due to decreased standby losses < 0.5 W
- Minimized dimensions on the basis of conventional T5 LCG cross section (H x W: 21 x 30 mm) for an eased mounting in narrow luminaires
- Without protective conductor connection. For the use in luminaires with insulation class I or II
- Variable mounting possibilities for different mounting positions (horizontal or sidewise upright)
- Avoidance of installation failures due to a mains connection being protected against polarity reversal
- Shortened inspection effort due to the CEWA GUARD- and S⁺-Technology: Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation costs due to STAR-Technology: Freely programmable mixed operation of the switching modes per luminaire in one circuit
- Reduced installation expenditures as no additional data line to the luminaires is needed

Primary side

Rated voltage ranges	220 - 240 V, 50/60 Hz / 176 - 275 V DC
Standby power loss	< 0.5 W (230 V / 50 Hz)
Current consumption	36 mA (230 V AC) / 21 mA (220 V DC)
Power input	8.2 VA (230 V AC)
Power factor λ	0.55
Inrush current	≤ 1.5 A
Operating frequency	132 kHz
EEL	A2
Connection terminals	Plug-in terminals 2.5 mm ² / reverse-polarity protected

Secondary side

Output current	500 mA (constant current)
Output voltage	8.3 V DC (open-circuit operation)
Lamp load	2 x LED (rated current 500 mA, UF = 2.5 ... 3.5 V), series connection
Output power (max.)	3.2 W
Connection terminals	Plug-in terminals 1.5 mm ² / not reverse-polarity protected
Maximum line length	1 m (module – LED)
Type of mounting	To be mounted in luminaires with protection category I or II
Degree of protection	IP20
Permissible ambient temperature	ta = -20 °C to +50 °C
Maximal permissible test point temperature	tc = 70 °C
Dimensions in mm (H x L x B)	21 x 110 x 30
Housing material / Colour	Flame retardant polycarbonate / grey
Weight	0.042 kg
Luminous flux Φ _E /Φ _N at the end of rated operating time	100 %

Ordering details

Scope of supply	Order No.
V-CG-SLS 500	40071352418
Module housing with strain relief	40071351928

V-CG-SLS 501

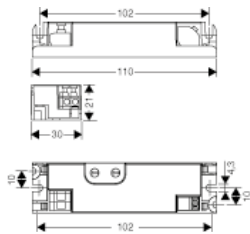
LED supply- and monitoring module



V-CG-SLS 501



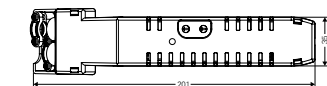
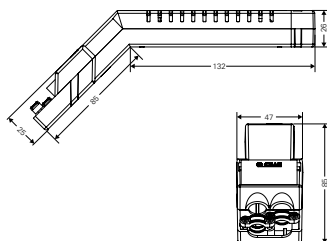
Dimensions in mm



Module housing



Dimensions in mm



V-CG-SLS 501

- Low operating costs due to decreased standby losses < 0.5 W
- Minimized dimensions on the basis of conventional T5 ECG cross section (H x B: 21 x 30 mm) for an eased mounting in narrow luminaires
- Without protective conductor connection. For the use in luminaires with protection class I or II
- Variable mounting possibilities for different mounting positions (horizontal or sidewise upright)
- Avoidance of installation failures due to a mains connection being protected against polarity reversal
- Shortened inspection effort due to the CEWA GUARD- and S+-Technology: Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation costs due to STAR-Technology: Freely programmable mixed operation of the switching modes per luminaire in one circuit
- Reduced installation expenditures as no additional data line to the luminaire is needed

Primary side

Rated voltage ranges	220 - 240 V, 50/60 Hz / 176 - 275 V DC
Standby power loss	< 0.5 W (230 V / 50 Hz)
Current consumption	24 mA (230 V AC) / 15 mA (220 V DC)
Power input	6.0 VA (230 V AC)
Power factor λ	0.57
Inrush current	≤ 1.5 A
Operating frequency	132 kHz
EEL	A2
Connection terminals	Plug-in terminals 2.5 mm ² / reverse-polarity protected

Secondary side

Output current	500 mA (constant current)
Output voltage	4.2 V DC (open-circuit operation)
Lamp load	1 x LED (rated-current 500 mA), (UF = 2.5...3.85 V)
Output power (max.)	2.0 W
Connection terminals	Plug-in terminals 1.5 mm ² / not reverse-polarity protected
Maximum line length	1 m (module - LED)
Type of mounting	To be mounted in luminaires with protection class I or II
Degree of protection	IP20
Permissible ambient temperature	$t_a = -20$ °C to +50 °C
Maximal permissible test point temperature	$t_c = 70$ °C
Dimensions in mm (H x L x B)	21 x 110 x 30
Housing material / Colour	Flame retardant polycarbonate / grey
Weight	0.042 kg
Luminous flux Φ_E/Φ_N at the end of rated operating time	100 %

Ordering details

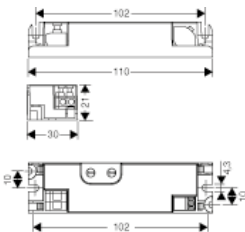
Scope of supply	Order No.
V-CG-SLS 501	40071352369
Module housing with strain relief	40071351928



V-CG-SLS 701



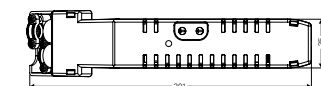
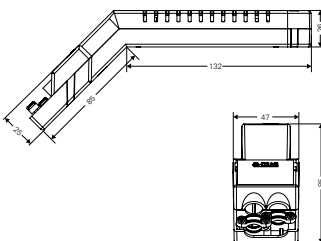
Dimensions in mm



Module housing



Dimensions in mm



V-CG-SLS 701

- Low operating costs due to decreased standby losses < 0.5 W
- Minimized dimensions on the basis of conventional T5 LCG cross section (H x B: 21 x 30 mm) for an eased mounting in narrow luminaires
- Without protective conductor connection. For the use in luminaires with protection class I or II
- Variable mounting possibilities for different mounting positions (horizontal or sidewise upright)
- Avoidance of installation failures due to a mains connection being protected against polarity reversal
- Shortened inspection effort due to the CEWA GUARD- and S⁺-Technology: Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation costs due to STAR-Technology: Freely programmable mixed operation of the switching modes per luminaire in one circuit
- Reduced installation expenditures as no additional data line to the luminaire is needed

Primary side

Rated voltage ranges	220 - 240 V, 50/60 Hz / 176 - 275 V DC
Standby power loss	< 0.5 W (230 V / 50 Hz)
Current consumption	33 mA (230 V AC) / 21 mA (220 V DC)
Power input	7.3 VA (230 V AC)
Power factor λ	0.59
Inrush current	≤ 1.5 A
Operating frequency	132 kHz
EEL	A2
Connection terminals	Plug-in terminals 2.5 mm ² / reverse-polarity protected

Secondary side

Output current	700 mA (constant current)
Output voltage	4.0 V DC (open-circuit operation)
Lamp load	1 x LED (rated-current 700 mA), (UF = 2.5...3.85 V)
Output power (max.)	2.7 W
Connection terminals	Plug-in terminals 1.5 mm ² / not reverse-polarity protected
Maximum line length	1 m (module – LED)
Type of mounting	To be mounted in luminaires with protection class I or II
Degree of protection	IP20
Permissible ambient temperature	ta = -20 °C to +50 °C
Maximal permissible test point temperature	tc = 70 °C
Dimensions in mm (H x L x B)	21 x 110 x 30
Housing material / Colour	Flame retardant polycarbonate / grey
Weight	0.042 kg
Luminous flux Φ _E /Φ _N at the end of rated operating time	100 %

Ordering details

Scope of supply	Order No.
V-CG-SLS 701	40071352399
Module housing with strain relief	40071351928

V-CG-SLR 350

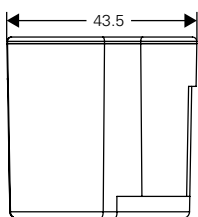
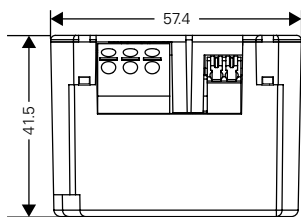
LED supply- and monitoring module



V-CG-SLR 350



Dimensions in mm



V-CG-SLR 350

- Low operating costs due to decreased standby losses < 0.5 W
- Minimized height of the luminaire due to flush-mounted installation of the module
- Avoidance of installation failures due to a mains connection being protected against polarity reversal
- Shortened inspection effort due to the CEWA GUARD Technology:
Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation costs due to STAR-Technology:
Freely programmable mixed operation of the switching modes per luminaire in one circuit
- Reduced installation expenditures as no additional data line to the luminaires is needed

Primary side

Rated voltage ranges	220 - 240 V, 50/60 Hz / 176 - 275 V DC
Standby power loss	< 0.5 W (230 V / 50 Hz)
Current consumption	36 mA (230 V AC) / 22 mA (220 V DC)
Power input	8.2 VA (230 V AC)
Power factor λ	0.60 ... 0.70
Inrush current	≤ 1.5 A
Operating frequency	132 kHz
EEL	A2
Connection terminals	Plug-in terminals 2.5 mm ² / reverse-polarity protected

Secondary side

Output current	350 mA (constant current)
Output voltage	13 V DC (open-circuit operation)
Lamp load	1-3 LED (rated current 350 mA, UF = 3.0 ... 4.0 V), series connection
Output power (max.)	4.2 W
Connection terminals	Plug-in terminals 1.5 mm ² / not reverse-polarity protected
Maximum line length	1 m (module – LED)
Type of mounting	For installation in a flush-mounted switch box. According German standard DIN 49073 (\varnothing 60 mm, height min. 61 mm!)
Degree of protection	IP20
Permissible ambient temperature	$t_a = -20$ °C to +40 °C
Maximal permissible test point temperature	$t_c = 70$ °C
Dimensions in mm (H x L x B)	41.5 x 57.4 x 43.5
Housing material / Colour	Flame retardant polycarbonate / grey
Weight	0.05 kg
Luminous flux Φ_E/Φ_N at the end of rated operating time	100 %

Ordering details

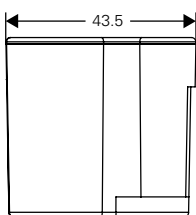
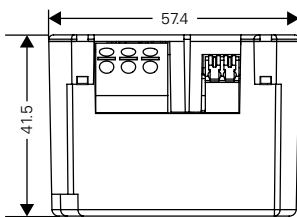
Scope of supply	Order No.
V-CG-SLR 350	40071352420



V-CG-SLR 28



Dimensions in mm



V-CG-SLR 28

- Low operating costs due to decreased standby losses < 0.5 W
- Minimized height of the luminaire due to flush-mounted installation of the module
- Avoidance of installation failures due to a mains connection being protected against polarity reversal
- Shortened inspection effort due to the CEWA GUARD Technology:
Automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation costs due to STAR-Technology:
Freely programmable mixed operation of the switching modes per luminaire in one circuit
- Reduced installation expenditures as no additional data line to the luminaires is needed

Primary side

Rated voltage ranges	220 - 240 V, 50/60 Hz / 176 - 275 V DC
Standby power loss	< 0.5 W (230 V / 50 Hz)
Current consumption	35 mA (230 V AC) / 20 mA (220 V DC)
Power input	8.1 VA (230 V AC)
Power factor λ	0.45 ... 0.60
Inrush current	≤ 1.5 A
Operating frequency	132 kHz
EEL	A2
Connection terminals	Plug-in terminals 2.5 mm ² / reverse-polarity protected

Secondary side

Output current	110 mA (Maximum current)
Output voltage	28 V DC (Constant voltage)
Lamp load	LED strip with own current control for 28 V DC and max. 110 mA
Output power (max.)	3.1 W
Connection terminals	Plug-in terminals 1.5 mm ² / not reverse-polarity protected
Maximum line length	1 m (module - LED)
Type of mounting	For installation in a flush-mounted switch box. According German standard DIN 49073 (\varnothing 60 mm, height min. 61 mm!)
Degree of protection	IP20
Permissible ambient temperature	$t_a = -20$ °C to $+50$ °C
Maximal permissible test point temperature	$t_c = 70$ °C
Dimensions in mm (H x L x B)	41.5 x 57.4 x 43.5
Housing material / Colour	Flame retardant polycarbonate / grey
Weight	0.05 kg
Luminous flux Φ_E/Φ_N at the end of rated operating time	100 %

Ordering details

Scope of supply	Order No.
V-CG-SLR 28	40071352421





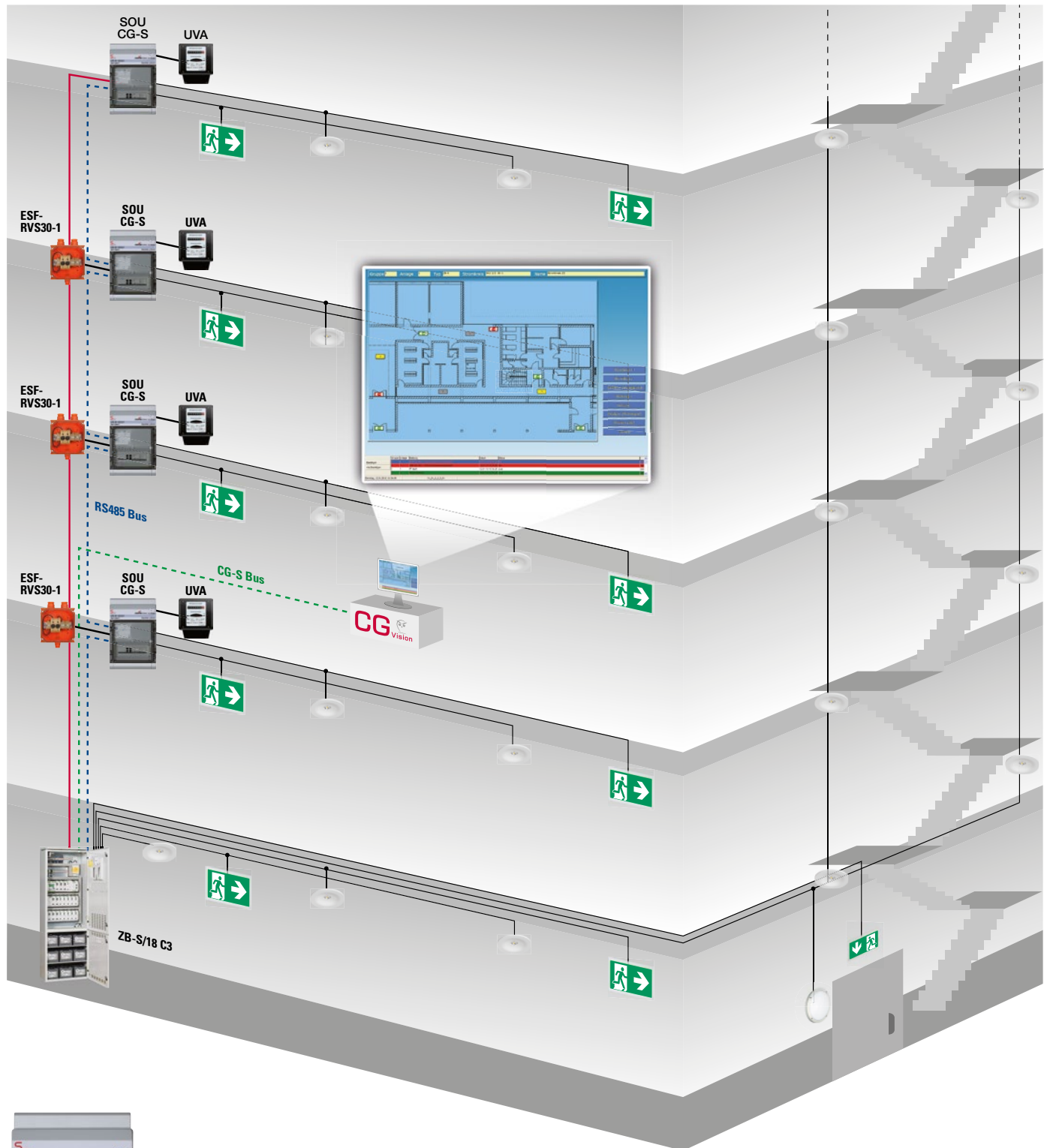
Central battery system ZB-S with single luminaire monitoring and STAR technology



Central battery system ZB-S with STAR technology

Installation example

Please note the country-specific regulations and guidelines for planning and realisation.



US-S/ SOU1

Distribution board for area by area installation allows electricity costs allocation per rental area



As well as providing a dependable supply of power (230V AC/220 V DC) to safety and exit luminaires, the central battery system ZB-S tests itself automatically and individually monitors each CG-S luminaire (up to 20 per circuit), and it does all this using the power supply cable alone.

The new type of STAR technology allows the switching mode of every connected CG-S luminaire to be freely programmed within a 50 or 60 Hz supply network using the central battery system's controller. This means that maintained light, switched maintained light and non-maintained light modes can be combined in one and the same circuit – there is no need for separate data cables!

The control module with its nonvolatile program memory and large graphic display monitors and controls the central battery system. It automatically tests all functions of the devices and emergency luminaires connected to it, and reports any faults that occur.

An integral search function automatically detects all system-dependent luminaires and modules that are assigned an address during installation. A central monitoring device can be connected via an interface.

Properties:

- Shortened inspection effort due to CEWA GUARD technology; automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation expenditures by STAR-technology; freely programmable mixed operation of the switching modes per luminaire in one circuit
- Less installation costs as no data line is required to the luminaires
- Automatic luminaire search function
- Plain text display on the control module down to the last luminaire
- Flexible data storage for test log and system configuration with memory card
- Modular charging technology in the range of 5.5 to 1,000 Ah
- Energy-saving and increased service life via alternating switching of the charging modules and optimised efficiency

Central battery system ZB-S with STAR technology

What is STAR?

S = Switching
T = Technology
A = Advanced
R = Revision
STAR TECHNOLOGY

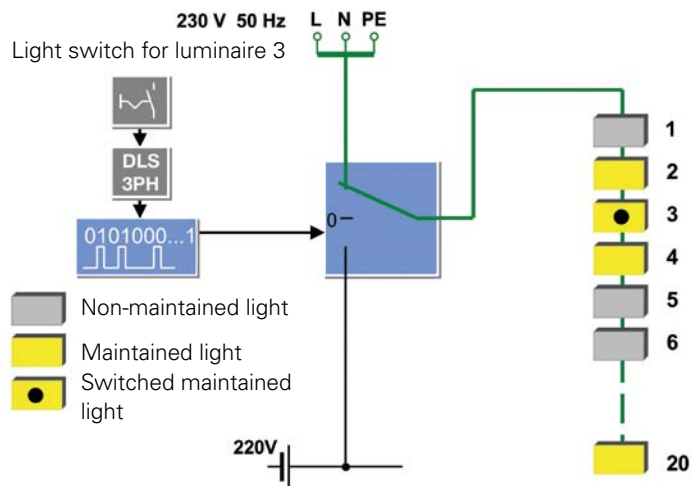
Switch to safety!

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 one and 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.



Operation of the STAR technology

Your Advantages:

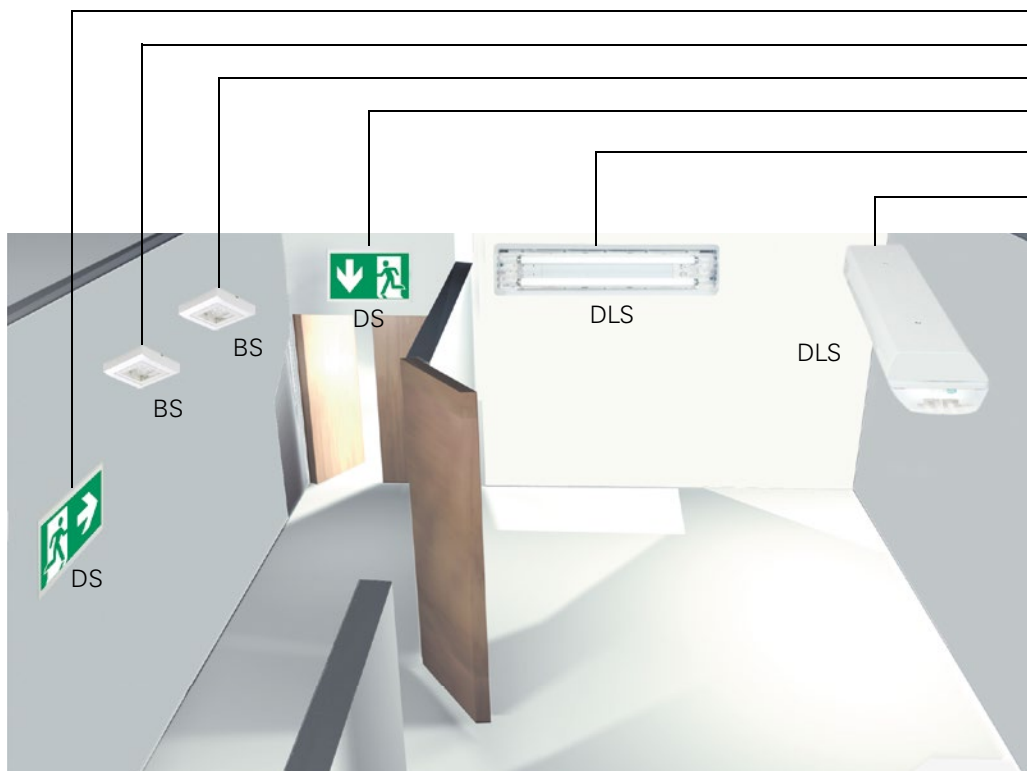
The number of outgoing circuits needed can be sharply reduced, since continuously operating, stand-by and switchable permanent lighting can be realised in one common circuit.

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

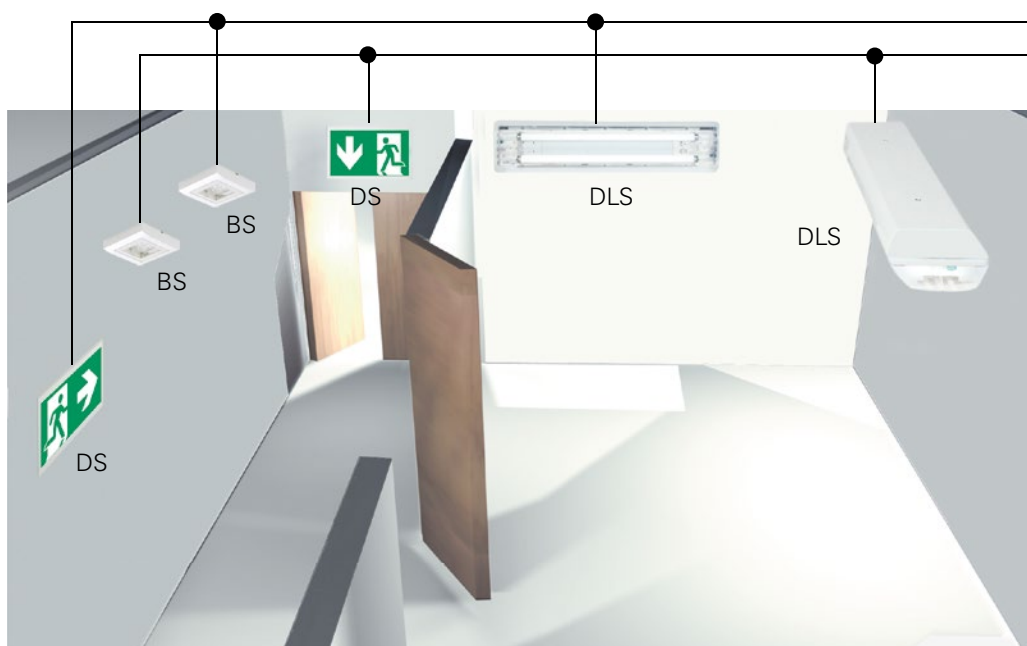
2



Conventional Installation:

- Maintained light 1 (DS)
- Non-maintained light 1 (BS)
- Non-maintained light 2 (BS)
- Maintained light 2 (DS)
- Switched maintained 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

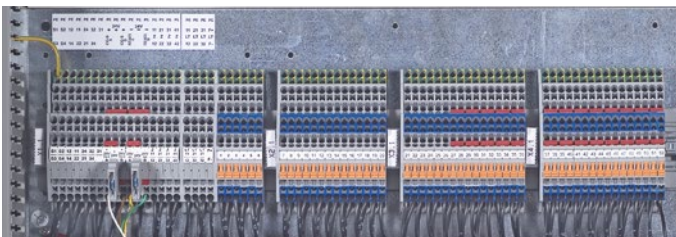
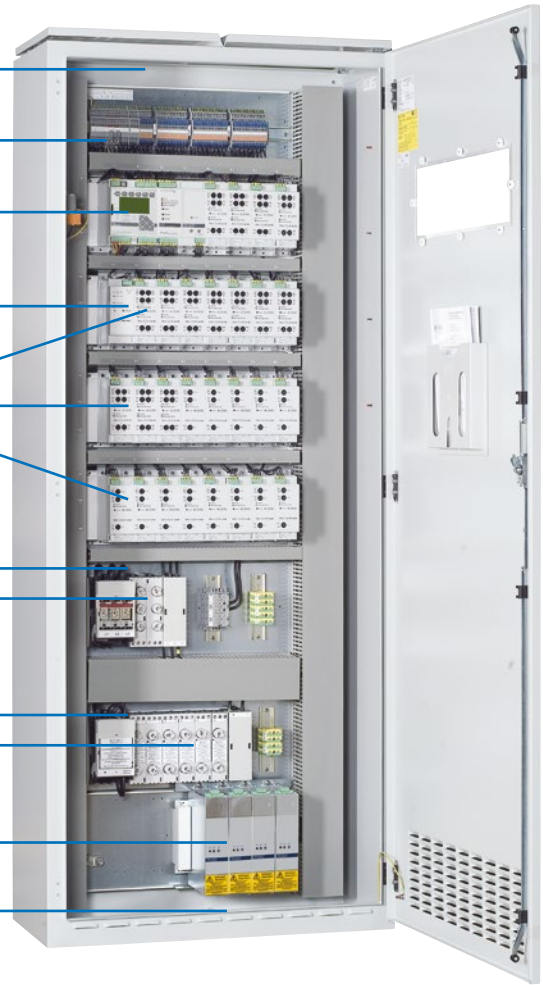
- Only two outgoing circuits for all types of switching modes
- Maintained light, non-maintained light and switched maintained light are possible in one common circuit
- Later circuit modifications do not pose any problems

Central battery system ZB-S with STAR technology

Modules

2

- Cable entry from top
- 3-tier-installation terminal with tension spring connection and N-isolation
- Control module (CU CG-S), battery control module (BCM), charge module CM 1.7 A, 4 x SKU's
- DC/DC converter (DCM)
- Circuit change-over module 23 x SKU's
- Load break switch, mains
- Terminal strip mains (optional)
- Load break switch, battery
- Terminal strip battery (optional)
- Charging module CM 3,4 A
- Cable entry from bottom



Plenty of connection space for convenient wiring

All connections are run to 3-level neutral disconnect terminals at the top of the switch cabinet.

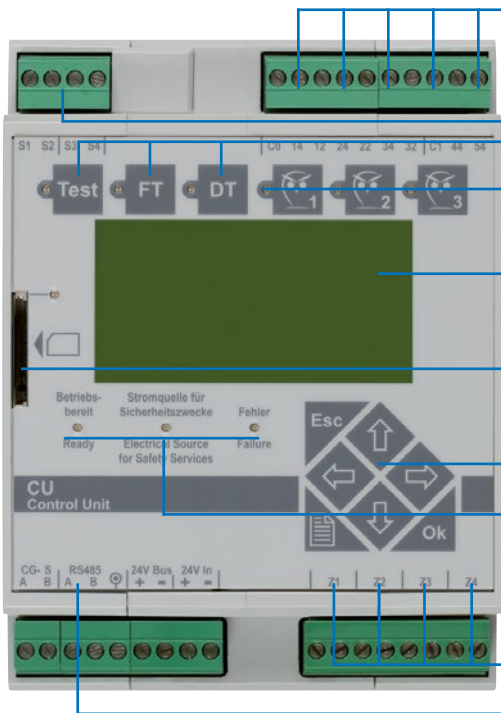
The wiring of the control module and the battery control module is standard. Wiring of the SKU's to 4 mm² triple deck installation terminals with spring connection and N disconnect terminal is optional.

Charge modules CM 3.4 A each with a charging current of 3.4 A

The battery control module (BCM) drives up to 32 Charge modules CM 3.4 A to which the standby power batteries with a rated capacity of up to 1,000 Ah that are installed outside the switch cabinet are connected.



Freely programmable control module



Connections for phase monitor and blocking switch with differential loop monitoring

three function keys, freely assignable

128 x 64 pixel graphic display, backlit, contrast and brightness adjustable

Seven control buttons for user-friendly navigation

four 24 V-inputs, freely allocated

Three potential-free alarm contacts, freely assignable, two potential-free alarm contacts with definite assignment

separate keys for

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

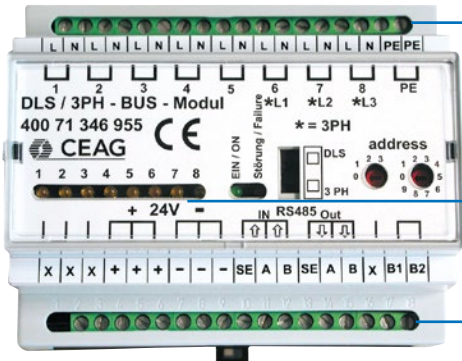
Test book and device configuration easily stored on SD-Card. Easy programming from PC using SD-card-reader and CEAG's software.

LEDs for operation display

Terminals for data bus

2

External DLS/3PH-Bus-Module for common switching of safety- and general lighting

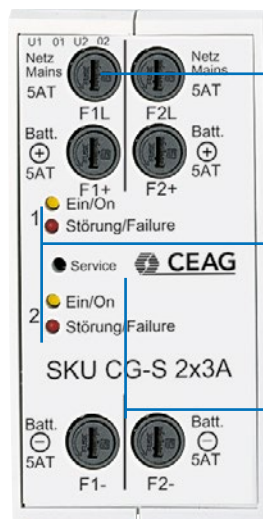


Freely programmable assignment of independent DLS inputs (2.5 mm²) per emergency lighting circuit or per light

8 DLS-inputs with LED display

can be used as phase monitor module and for light switch monitoring

Circuit change-over module SKU CG-S 2 x 3 A



separate fuse protection for mains- and battery operation (two-pole) fuses on front side of the module, easily accessible

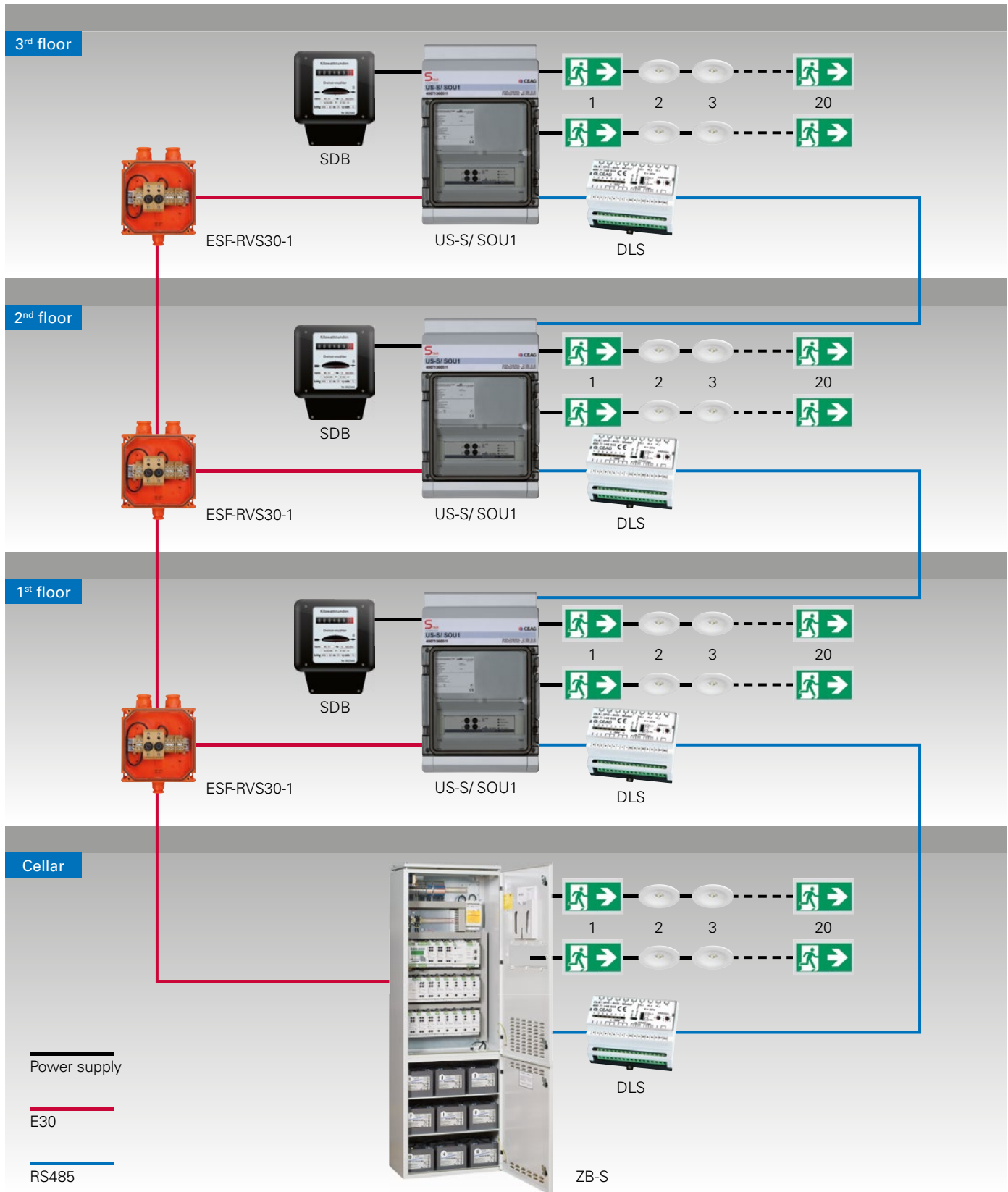
LED display for operation/ON and failure of each circuit

Service key for direct display in clear text at the control module of the change-over module status

Central battery system ZB-S with STAR technology

Distribution board US-S/ SOU1

Installation example Emergency lighting system ZB-S with distribution board US-S/ SOU1.
Please note the country-specific regulations and guidelines for planning and realisation.



Central battery system ZB-S with STAR technology

Distribution board US-S/ SOU1

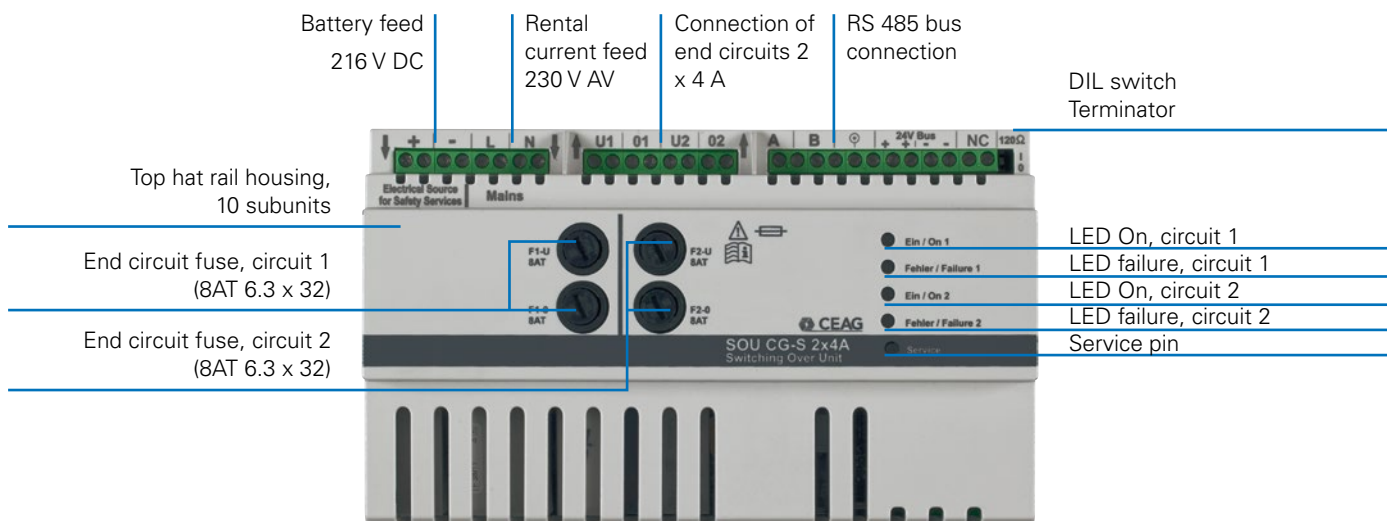


Distribution Board US-S/ SOU1

- Area by area installation
- Electricity costs allocation per rental area
- Maintained light, non-maintained light and switched maintained light are possible in one common circuit
- Later circuit modifications do not pose any problem

2

Switching over unit SOU CG-S 2 x 4 A



Central battery system ZB-S with STAR technology

Substations with functional integrity of 30 minutes

Safe operation under the most extreme environmental conditions

There are different types of sub-distributors available for compliance with the requirements on functional integrity of MLAR 11/2005.



ESF-E30/13-S



Sub-distributor in sheet steel housing

In accordance with the model guideline on fire protection requirements pertaining to wire systems (MLAR specimen guideline on wire systems), version 11/2005, verified by a National Material Testing Office.

Approved by the Deutsches Institut für Bautechnik (DIBT- German Institute for Civil Engineering) as an electrical distributor with functional integrity, including electrical equipment and technical air ventilation with approval number: Z-86-2-1.



Electric distributor with functional integrity

Experimental design for application as an electrical distributor with functional integrity. The functioning of all the installed electronic components was tested in a fire test.

Central battery system ZB-S with STAR technology

Substations with functional integrity of 30 minutes



US-S ESF30 13-P

Sub-distributor in Priodec housing

In accordance with the model guideline on fire protection requirements pertaining to wire systems (MLAR specimen guideline on wire systems), version 11/2005, verified by a National Material Testing Office.

Approved by the Deutsches Institut für Bautechnik (DIBT- German Institute for Civil Engineering) as an empty enclosure for fire protection with a fire resistance rating of minimum 30 minutes in case of external fire exposure, approval number of the empty enclosure: Z-86.1-46

Functional integrity exceeding 30 minutes is certified in an expert opinion, based on a fire test.



2

Please scan the following QR code for direct access:

Fire test in a video documentation

Please watch the video documentation of the fire test of the types of enclosures presented here:

<http://youtu.be/dk8qieMSiTI>



ESF30 SOU2

Small distributor

In accordance with the model guideline on fire protection requirements pertaining to wire systems (MLAR specimen guideline on wire systems), version 11/2005, verified by a National Material Testing Office.

Tested by a Material Testing Office (MPA) as an empty fire protection enclosure with a fire resistance rating of minimum 30 minutes in case of an external fire exposure, with fire test number: No. 210006480-01.

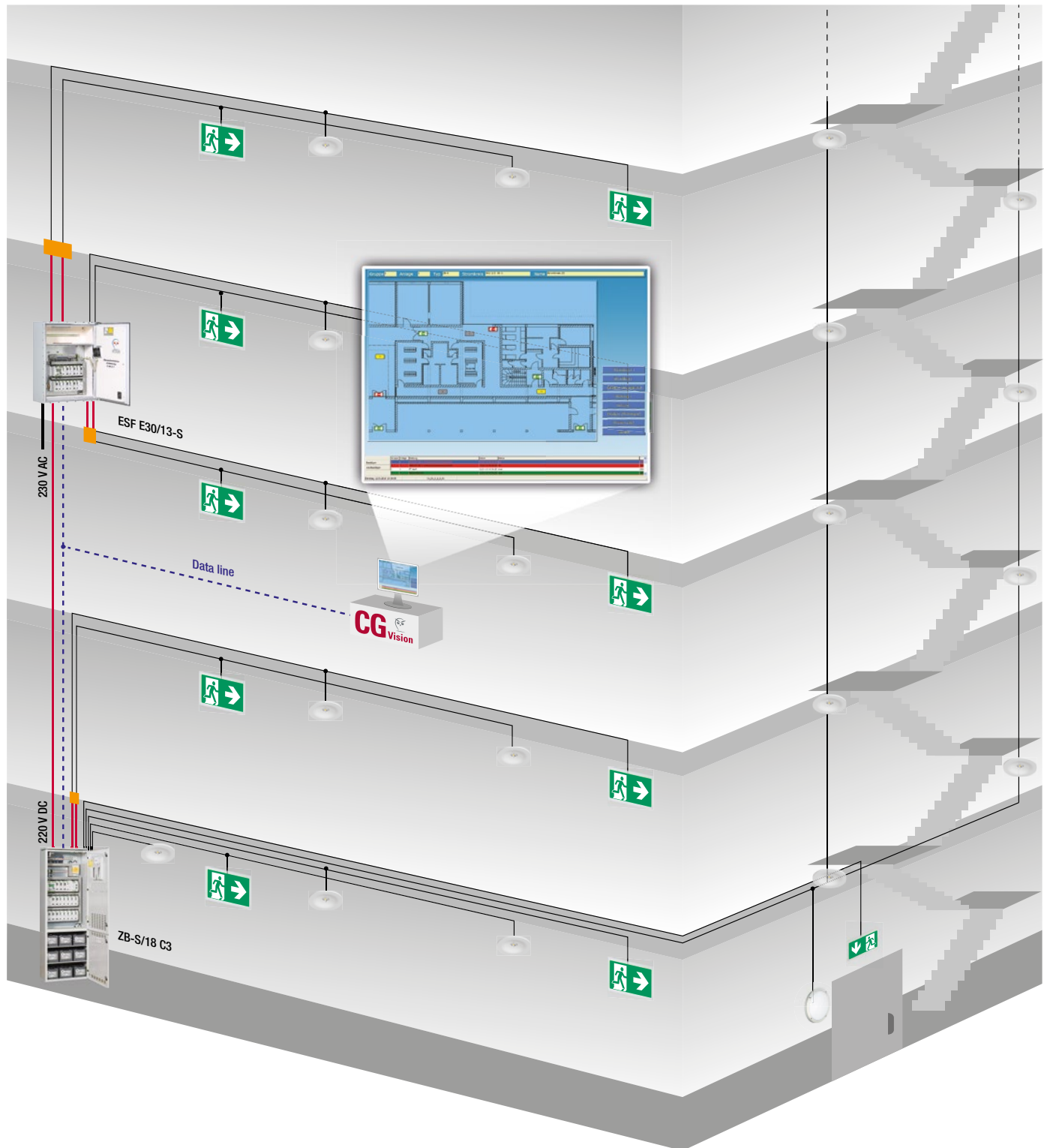
Functional integrity exceeding 30 minutes is certified by a VDE certificate, together with an expert opinion relating to the electrical equipment based on a fire test.



Central battery system ZB-S with STAR technology

Installation example

Please note the country-specific regulations and guidelines for planning and realisation.



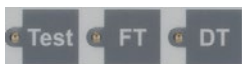


Controle module

A freely programmable control module with non-volatile program memory and 4-line alphanumeric graphic display monitors and controls the central battery system. All functions such as charging, mains/ emergency lighting selection and deep discharge protection of the devices and the emergency luminaires are tested automatically. Any faults that occur are signalled immediately. An interface enables a central monitoring facility to be connected. In the event of a short circuit or open circuit in current loops, differential monitors immediately power on the system (maintained light) or put the system in readiness.

- Non-volatile memory
- Automatic luminaire search function
- Individual luminaire monitoring
- Automatic DLS/TLS search function
- Selective manual reset/circuit
- Selective emergency light/circuit
- Password function
- Final circuit fuse monitoring
- Module-selective battery operation
- Control module with multi-master mode M³

Sealed keypad with 3 keys for:



- Test (mains failure- battery operation)
- Function test start / cancel
- Operating duration test start / cancel

3 freely assignable function keys for:

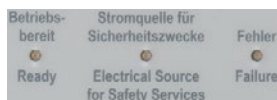


- System disable/enable
- Manual reset
- Cancel function test
- Show fault list
- Maintained light off/on
- Power on complete safety lighting system (continuity lighting)
- Mains failure simulation UV-A (emergency operation)
- Reset deep discharge protection
- Find insulation failure
- Service Pin Message



7 control keys

for user-friendly navigation



LED indicators for:

- Ready
- Electrical Source for Safety Services
- Failure

Graphic display:

128 x 64 pixel, backlit, program adjustable contrast and brightness.



Displays include:

- Date/Time
- Charging malfunction
- 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 min.)
- Luminaire failure with location label
- Insulation fault with circuit indication
- Failure mains sub DB (with location label)
- Failure/programming information

Connections

• Connection for disable switch:

Control loops for blocking the installation during factory shutdowns with differential loop monitoring for short-circuit and open circuit detection. Differential monitoring: Short-circuit or open circuit result in readiness for operation of the system.

• Connection for phase monitor:

24V current loop for requesting emergency lighting using differential loop monitoring for the detection of short-circuit and open circuits. Differential monitoring: Short-circuit or open circuit result in immediate power on (maintained light) of the system.

• Connection for floating signalling contacts and buzzer:

3 relays with common root, each 1x switch-over contact, 24 V 0,5 A.

2 relays with common root, each 1 x make contact, 24V 0.5A;

Buzzer

One or several of 12 various messages can be freely assigned to the three zero-potential contacts and buzzer. DIN VDE specification can be called up at any time as a pre-setting.

• Connection for analog inputs:

4 of freely assignable 24 V analog inputs, can be programmed negated and non-negated, e.g. for start / cancel function test, start / cancel operating duration test, disable / enable system, manual reset, maintained light on / off, power on safety lighting as continuity lighting.

Central battery system ZB-S with STAR technology

Components and options



Display	128 x 64 pixel graphic display, program adjustable contrast
Illumination	backlighting, program adjustable brightness
Keypad	sealed, with 6 function and 7 control keys
Readout	Battery voltage Battery charge current (+) Battery discharge current in test or failure (-) Charge fault Luminaire failure with location label Deep discharge protection Manual reset Delay-time on mains return Failure mains sub DB (with 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

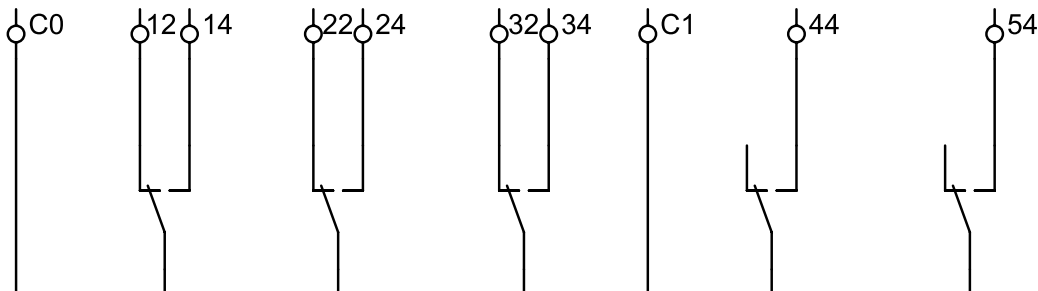
3 relays with common potential, 1 x switching contact each, Free programmable, VDE requirement can be called at any time as a preset.

2 relays with common potential, 1 x normally open contact each, 24 V 0.5 A; buzzer.

ZB-S default setting

Designation	Relay 1 C0/14/12	Relay 2 C0/24/22	Relay 3 C0/34/32	Relay 4 C1/44	Relay 5 C1/54	Buzzer
Mains operation		X				
Mains failure	X		X			
Mains failure UV	X					
Charging fault	X					
Circuit fault	X					
Luminaire fault	X					
Common system fault	X					
Total discharge protection	X					
ISO fault	X					
Function test		X				
Continuous operation test		X				
Device fault						

Permanently configured to external buzzer operation (analogue to internal buzzer)
 Permanently configured for control of a technical cabinet ventilation. Default setting > 40°C ON < 35°C OFF.



Ordering details

Type	Model	Order No.
Control module ZB-S for SD-card	Plug-in module	40071360300

SD Card



SD card reader



Secure-Digital-Card

Flexible data storage for system and log book configuration, e.g. of the mandatory archiving of log book information for a minimum of 4 years.

The system can also be programmed at any PC using optional SD-card reader and CEAG software. Texts can also be entered on the control module in the switch cabinet.

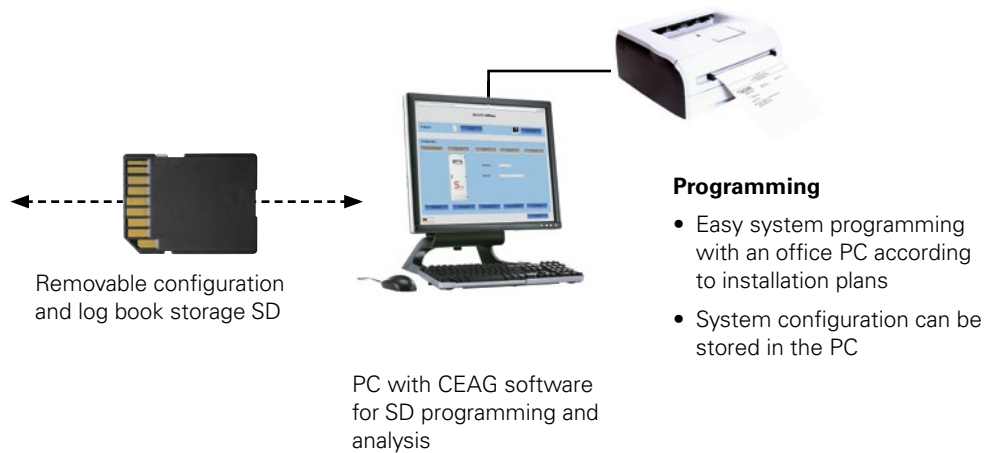
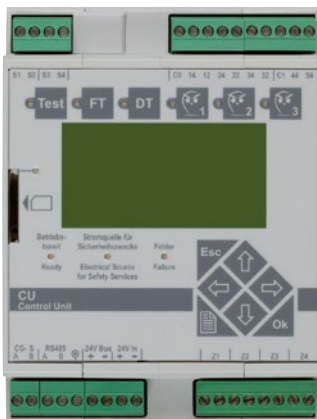
Storage of:

- 360,000 log book entries
- Location texts for the luminaires (20 characters per luminaire)
- Location texts of external modules such as phase monitor, DLS, TLS (20 characters per module)
- Circuit names (20 characters per circuit)
- System name (20 characters)

Ordering details

Type	Model	Order No.
SD card	SD card formatted for ZB-S	40071347911
SD card reader	SD card reader for USB-Port	40064070561
Software	Software for external programming of the ZB-S via PC	40071347152

Basic information about the SD card (Secure-Digital-Card)



Central battery system ZB-S with STAR technology

Components and options

DC-DC converter.2 (DCM)



DC/DC-Converter.2 (DCM)

The DC/DC converter.2 converts the 220 V DC battery voltage to 24 V DC and 6 V DC to supply the modules and processor.

After more than 13 SKU CG-S 4 x 1.5 A or 26 SKU CG-S 2 x 3 A / 1 x 6 A a second DC/DC converter is needed. Please observe that all DC/DC converters are operated on the same module assembly frame next to each other:

- Supplies 26 SKUs CG-S 2 x 3 A/1 x 6 A or 13 SKUs 4 x 1.5 A
- Incoming supply can be run via AC/AC
- Gear tray mounting

24 V external	20 W continuous rating Outgoing circuit with front panel connector Isolated voltage
24 V internal	100 W continuous rating 140 W peak rating (20 ms)

Ordering details

Type	Order No.
DC/DC-converter.2 (DCM)	70071347071

AC-Module



AC-Module

Together with the DC/DC converter.2, the optional AC module supplies the internal system voltage when the battery supply is isolated, e. g. for maintenance.

Constructed to	EN 61558/VDE 570
Rated voltage	230 V 50 Hz
Nominal power	240 VA
Fusing	1.6 A

Ordering details

Type	Scope of supply	Order No.
AC-Module	external transformer module AC/AC-module 240 VA incl. mounting adapter	40071347162

SKU CG-S 4 x 1,5 A



SKU CG-S 4 x 1,5 A

Hybrid operation of maintained light, non-maintained light and switched maintained light per module can be programmed with no additional data cable.

- Up to 20 luminaires can be monitored individually
- AC/DC switching per module
- Easy access to fuses
- LED indicates fault and Run/ON for each circuit
- Supplies electronic ballast and LED luminaires
- Service-friendly modular units are wired up and ready to connect to 3-tier 4 mm² disconnect neutral terminals (optional)
- Gear tray mounting

Fusing	2.5 AT / 6.3 x 32
Continuous current rating	1.5 A per circuit
Max. inrush current*	60 A per circuit/240 A per module
Typical switch over time	AC/DC approx. 450 ms
Own consumption	7.7 W

* Example: For two circuits => 120 A per circuit
For one circuits => 60 A per circuit

Ordering details

Type	Scope of supply	Order No.
SKU	Circuit change over module SKU CG-S 4 x 1.5 A	40071347840
Spare part	Fuse 2.5 AT (6.3 x 32), PU: 10 pcs.	40071070716

SKU CG-S 2 x 3 A



SKU CG-S 2 x 3 A

Hybrid operation of maintained light, non-maintained light and switched maintained light in a single circuit can be programmed with no additional data cable.

- Up to 20 luminaires can be monitored individually
- AC/DC switching per each circuit
- Separate fusing for mains and battery operation
- Easy access to fuses
- LED indicates fault and Run/ON for each circuit
- Supplies electronic ballast and LED-luminaires
- Service-friendly modular units are wired up and ready to connect to 3-tier 4 mm² disconnect neutral terminals (optional)
- Gear tray mounting

Fusing	5 AT / 6.3 x 32
Continuous current rating	3 A per circuit
Max. inrush current	250 A per circuit
Typical switch over time	AC/DC approx. 450 ms
Own consumption	3.85 W

Ordering details

Type	Scope of supply	Order No.
SKU	Circuit change over module SKU CG-S 2 x 3 A	40071347051
Spare part	Fuse 5.0 AT (6.3 x 32), PU: 10 pcs.	40071689047

Central battery system ZB-S with STAR technology

Components and options

SKU CG-S 1 x 6 A



SKU CG-S 1 x 6 A

Hybrid operation of maintained light, non-maintained light and switched maintained light in a single circuit can be programmed with no additional data cable.

- Up to 20 luminaires can be monitored individually
- Separate fusing for mains and battery operation
- Easy access to fuses
- LED indicates fault and Run/ON for each circuit
- Supplies electronic ballast and LED luminaires
- Service-friendly modular units are wired up and ready to connect to 3-tier 4 mm² disconnect neutral terminals (optional)
- Gear tray mounting

Fusing	10 AT / 6.3 x 32
Continuous current rating	6 A per circuit
Max. inrush current	250 A per circuit
Typical switch over time	AC/DC approx. 450 ms
Own consumption	3.85 W

Ordering details

Type	Scope of supply	Order No.
SKU	Circuit change over module SKU CG-S 1 x 6 A	40071347345
Spare part	Fuse 10 AT (6.3 x 32), PU: 10 pcs.	40071070715

SOU CG-S 2 x 4 A



SOU CG-S 2 x 4 A

Hybrid operation of maintained light, non-maintained light and switched maintained light in a single circuit can be programmed with no additional data cable.

- Up to 20 luminaires can be monitored individually
- AC/DC switching per module
- Separate AV-feed for rental current
- Easy access to fuses
- LED indicates fault and Run/ON for each circuit
- Supplies electronic ballast and LED luminaires
- Service-friendly modular units are wired up and ready to connect to 3-tier 4 mm² disconnect neutral terminals (optional)
- DIN rail mounting

Fusing	8 AT / 6.3 x 32
Continuous current rating	4 A per circuit
Max. inrush current	250 A per circuit
Typical switch over time	AC/DC approx. 450 ms
Own consumption	≤ 9 W (for 2 x 4 A)

Ordering details

Type	Scope of supply	Order No.
SOU CG-S 2 x 4 A	Switching over unit SOU CG 2 x 4 A	40071360430
Spare part	Fuse 8 AT (6.3 x 32), PU: 10 pcs.	40071360484

SKU CG 2 x 3 A



SKU CG 2 x 3 A

Change-over module SKU, module without STAR Function

- Up to 20 luminaires can be monitored individually
- AC/DC switching per each circuit
- Separate fusing for mains and battery operation
- Easy access to fuses
- LED indicates fault and Run/ON for each circuit
- Supplies electronic ballast and LED-luminaires
- Service-friendly modular units are wired up and ready to connect to 3-tier 4 mm² disconnect neutral terminals (optional)
- Gear tray mounting

Fusing	5 AT / 6.3 x 32
Continuous current rating	3 A per circuit
Max. inrush current	120 A per circuit
Typical switch over time	AC/DC approx. 450 ms
Own consumption	3.85 W

Ordering details

Type	Scope of supply	Order No.
SKU	Circuit change over module SKU CG 2 x 3 A	40071347290
Spare part	Fuse 5 AT (6.3 x 32), PU: 10 pcs.	40071689047

SKU CG 1 x 6 A



SKU CG 1 x 6 A

Change-over module SKU, module without STAR Function

- Up to 20 luminaires can be monitored individually
- Separate fusing for mains and battery operation
- Easy access to fuses
- LED indicates fault and Run/ON
- Supplies electronic ballast and LED luminaires
- Service-friendly modular units are wired up and ready to connect to 4 mm² 3-tier disconnect neutral terminals (optional)
- Gear tray mounting

Fusing	10 AT / 6.3 x 32
Continuous current rating	6 A per circuit
Max. inrush current	180 A per circuit
Typical switch over time	AC/DC approx. 450 ms
Own consumption	3.85 W

Ordering details

Type	Scope of supply	Order No.
SKU	Circuit change over module SKU CG 1 x 6 A	40071347346
Spare part	Fuse 10 AT (6.3 x 32), PU: 10 pcs.	40071070715

Central battery system ZB-S with STAR technology

Components and options

SWR 150 sinus inverter supplies



SWR 150

The SWR 150 sinus inverter supplies and monitors emergency luminaires with conventional ballasts. In battery operation, the sinus inverter supplies a sinus voltage of 230 V AC. By altering the frequency of the output sinus voltage, the luminous flux of emergency luminaires with conventional ballast can be regulated in emergency lighting operation so that an optimum utilization of the available power is ensured. The functioning of a connected luminaire is checked by circuit monitoring.

- Gear tray mounting

Slots		1
Fusing	G-Fuse 0.5 x 20	1.6 AT
Max. rated current AC		0.65 A
Max. rated current DC		1.00 A
Max. connection terminals		150 VA
for luminaire		KVG
Rated power DC/DC-converter		2.3 W
Distortion factor		< 5 %

Ordering details

Type	Scope of supply	Order No.
SWR 150	Indicate light source and luminous flux ratio	40071347960

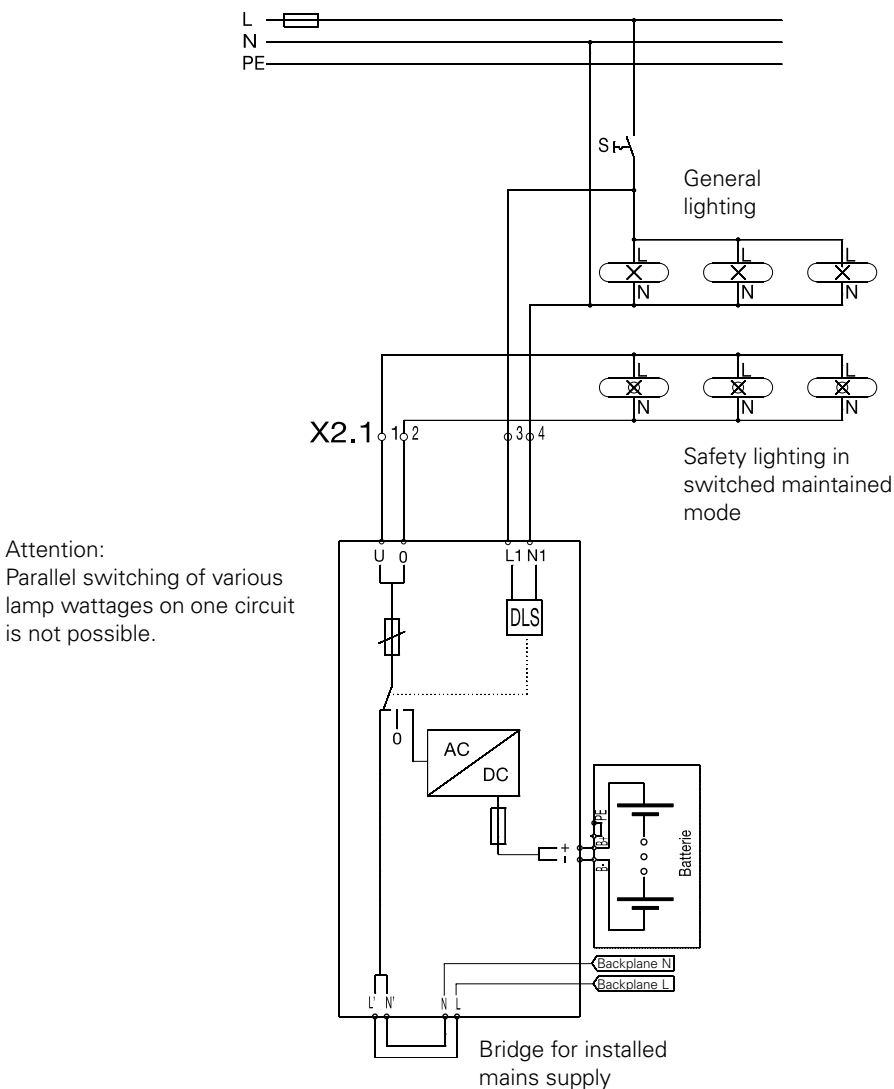


Table 1. Battery current consumption values (A) dependent upon number of luminaires and luminous flux ratio (LV%) at 20°C ambient temperature at the luminaire.

International description	T5		
Base	G5		
Lamp power (W)	8W-VVG		
Luminous flux ratio (%)	100	51	35
Switch setting	0	4	9
Number of luminaires / Current consumption from the battery / Apparent power	[A] [VA]	[A] [VA]	[A] [VA]
1	0.175 / 36	0.123 / 19	0.118 / 12
2	0.258 / 72	0.150 / 37	0.090 / 24
3	–	0.213 / 56	0.120 / 36
4	–	0.246 / 74	0.157 / 48
5	–	0.276 / 92	0.192 / 60
6	–	0.322 / 110	0.220 / 71
7	–	–	0.240 / 83
8	–	–	0.260 / 94
9	–	–	0.280 / 105

Table 2. Battery current consumption values (A) dependent upon number of luminaires and luminous flux ratio (LV%) at 20°C ambient temperature at the luminaire.

International description	T26																					
Base	G13																					
Lamp power (W)	58	58	58	36	36	36	36	18	18	18	18											
Luminous flux ratio (%)	100	48	32	100	75	54	32	100	87	54	36											
Switch setting	0	5	9	0	2	4	8	0	1	5	9											
Number of luminaires / Current consumption from the battery / Apparent power	[A] [VA]	[A] [VA]	[A] [VA]	[A] [VA]	[A] [VA]	[A] [VA]	[A] [VA]	[A] [VA]	[A] [VA]	[A] [VA]	[A] [VA]											
1	0.62	147	0.37	84	0.35	81	0.47	107	0.34	80	0.31	71	0.30	70	0.37	85	0.31	72	0.26	60	0.26	60
2	–	–	–	–	–	–	–	–	0.59	137	0.47	109	0.36	83	–	–	0.56	121	0.33	75	0.29	67
3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.47	108	0.35	82

Central battery system ZB-S with STAR technology

Components and options

Table 3. Battery current consumption values (A) dependent upon number of luminaires and luminous flux ratio (LV%) at 20 °C ambient temperature at the luminaire.

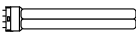
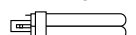
		TC-L																					
International description																							
Base		2G11																					
Lamp power (W)		36	36	36	24	24	24	24	18	18	18	18	18	18	18	18							
Luminous fluxverhältnis (%)		100	59	43	100	73	57	46	100	71	52	47	100	71	52	47							
Switch setting		0	5	9	0	3	6	9	0	3	7	9	0	3	7	9							
Number of luminaires /																							
Current consumption from the battery /		[A]	[VA]	[A]	[VA]	[A]	[VA]	[A]	[VA]	[A]	[VA]	[A]	[VA]	[A]	[VA]	[A]	[VA]	[A]	[VA]	[A]	[VA]		
Apparent power																							
1		0.47	108	0.30	70	0.29	68	0.38	89	0.28	64	0.27	62	0.27	65	0.39	90	0.26	60	0.26	60	0.25	60
2		-	-	0.43	96	0.33	76	-	-	0.42	99	0.34	79	0.32	74	-	-	0.42	98	0.31	70	0.28	65
3		-	-	0.58	135	0.44	103	-	-	0.61	136	0.44	103	0.37	86	-	-	0.57	135	0.40	94	0.34	80
4		-	-	-	-	-	-	-	-	-	-	0.56	130	0.47	105	-	-	-	-	0.50	117	0.46	104

Table 4. Battery current consumption values (A) dependent upon number of luminaires and luminous flux ratio (LV%) at 20 °C ambient temperature at the luminaire.

		TC-D																													
International description																															
Base		G24Q1. G24Q2																													
Lamp power (W)		26	26	26	26	18	18	18	18	13	13	13	13	10	10	10															
Luminous flux ratio (%)		100	71	61	47	100	79	63	48	100	77	63	42	100	68	52															
Switch setting		0	3	5	9	0	2	5	9	0	2	4	9	0	4	9															
Number of luminaires /																															
Current consumption from the battery /		[A]	[VA]	[A]	[VA]	[A]	[VA]	[A]	[VA]	[A]	[VA]	[A]	[VA]	[A]	[VA]	[A]	[VA]	[A]	[VA]	[A]	[VA]	[A]	[VA]								
Apparent power																															
1		0.36	85	0.28	63	0.27	61	0.27	64	0.30	51	0.26	37	0.24	29	0.23	24	0.26	60	0.26	49	0.21	49	0.21	49	0.25	58	0.21	49	0.20	44
2		-	-	0.39	93	0.35	80	0.33	76	0.47	87	0.35	64	0.29	47	0.28	37	0.39	90	0.30	68	0.28	63	0.29	66	0.39	90	0.26	58	0.26	62
3		-	-	0.54	126	0.45	104	0.36	80	0.65	114	0.48	86	0.36	65	0.32	48	0.53	121	0.41	91	0.32	73	0.30	71	0.54	125	0.31	74	0.30	70
4		-	-	-	-	0.57	132	0.43	97	-	-	0.60	106	0.44	81	0.34	62	-	-	0.53	110	0.38	87	0.32	74	-	-	0.38	88	0.32	72
5		-	-	-	-	-	-	-	-	-	-	0.71	125	0.53	94	0.40	73	-	-	0.57	130	0.48	103	0.33	76	-	-	0.47	104	0.36	75
6		-	-	-	-	-	-	-	-	-	-	0.60	108	0.44	83	-	-	-	-	0.52	120	0.38	87	-	-	0.54	121	0.40	81	-	-
7		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.59	136	0.42	94	-	-	0.59	137	0.45	94	-	-

PD 3 printer



PD 3 printer

The printer logs and memorizes all function tests and mains failures of a ZB-S cover or a substation. After the performance of an automatic function test, the results are printed out in plain text stating also the time and date. The printing is automatic with each entry into the log book of the control module. A mains failure is also logged with time and date. The printer documents the operational state of emergency luminaires of an emergency lighting supply system. By means of the printer, the information on possible failures of the luminaires (e. g. defective lamp) can be printed out in detail.

- Gear tray mounting

Printing paper	Woodfree printer paper
Paper width	57.5 mm
Max. diameter of the paper roll	61 mm
Plug-in module	12 mm

Ordering details

Type	Scope of supply	Order No.
PD 3	Plug-in module	40071347316
Spare part	1 roll printing paper	40078079666
Spare part package	1 colour ribbon and 1 roll printing paper	40071346042

Central battery system ZB-S with STAR technology

Components and options

CG IV relay modules



CG IV / CG V relay modules

The bipolar CG IV relay module transmits data and operational states of the covers/substations to a central building management system.

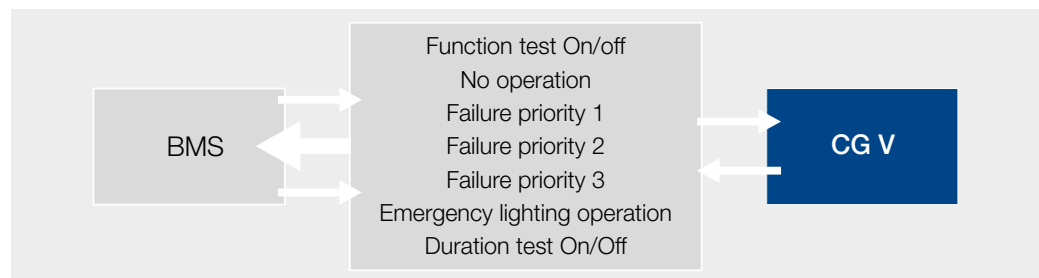
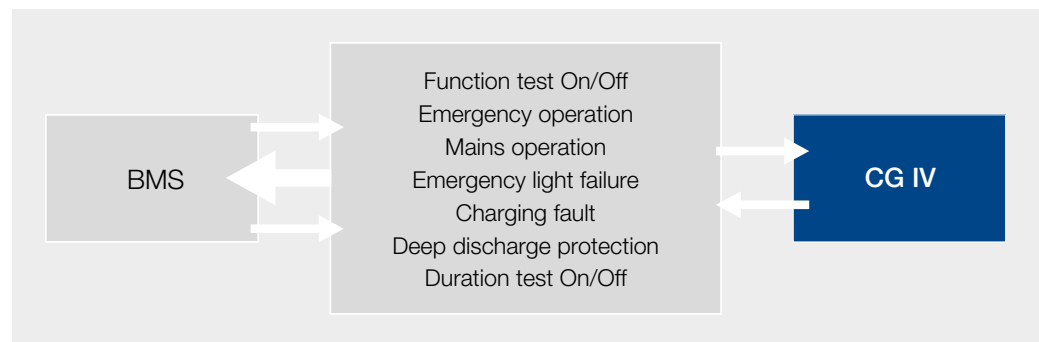
- Gear tray mounting

Connection terminals/Clamp terminals	2.5 mm ² rigid and flexible
Switching capacity of the contacts	24 V/0.5 A AC DC

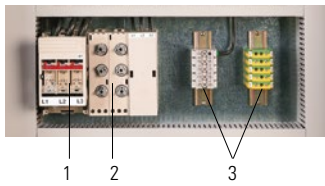
Ordering details

Type	Scope of supply	Order No.
CG IV	Plug-in module	40071343971
CG V	Plug-in module	40071347800

CG V relay modules



Mains distribution board



Mains distribution board

The mains supply to a ZB-S/26 or ZB-S/18 system comes via a modular mains distribution board. This includes a size 00C load disconnecter (1) with a maximum conductor size of 50 mm² and allows the connection of up to 6 slave stations to modular size D02-E18 outgoing mains circuits (2) with the necessary terminals for neutral and ground (3).

The same mains distribution boards must also be used three-phase for feeders to powerful slave-stations (accommodates up to 2 slave stations in this case). The components are simply plugged on from the front and securely contacted.

Mains distribution module D02-E18



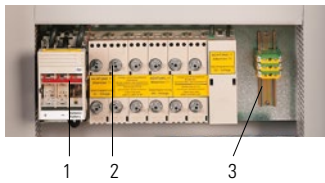
Current rating	63 A
Rated operating voltage	400 V
Box terminal for circulator conductor	to 16 mm ²
Material	Polyamide (PA 6.6), 30 % glass-fibre-reinforced
Scope of supply	incl. 3 pcs. screw caps E18 and 3 pcs. D02-fuse inserts 25 A

2

Ordering details

Type	Scope of supply	Order No.
Mains distribution module for track mounting	incl. 3 pcs. screw caps E18 and 3 pcs. D02-fuse inserts 25 A	40071347160

Battery distribution board



Battery distribution board

The battery supply to a ZB-S/26 or ZB-S/18 system comes via a modular battery distribution board. This includes a size 00C load disconnecter (1) with a maximum conductor size of 50 mm² and allows the connection of up to 6 slave stations to modular size D02-E18 outgoing battery circuits (2) with related terminals for ground (3). The components are simply plugged on from the front and securely contacted.

Battery distribution module D02-E18



Current rating	63 A
Rated operating voltage	400 V
Box terminal for circulator conductor	to 16 mm ²
Material	Polyamide (PA 6.6), 30 % glass-fibre-reinforced
Scope of supply	incl. 2 pcs. screw caps E18 and 2 pcs. D02-fuse inserts 25 A

Ordering details

Type	Scope of supply	Order No.
Battery distribution module for track mounting	incl. 2 pcs. screw caps E18 and 2 pcs. D02-fuse inserts 25 A	40071347161

Cover strip

Busbar guard: Cover strip for clip-mounting to the trunking section. Ready-cut to module width. Material: Hard PVC.

Ordering details

Type	Scope of supply	Order No.
Busbar cover strip	Cover strip in module width for clip mounting at the trunking section	40071347192

Central battery system ZB-S with STAR technology

Components and options

Battery Control Module (BCM)



Battery Control Modul (BCM)

The BCM battery control module is for control of the CM 1.7 A and CM 3.4 A charging modules via the Charge Control Bus (CCB). Messages such as fault, isolation fault and boost charge can be forwarded via the zero-potential signal contacts of the BCM.

LEDs on the module signal boost charge, charge fault and isolation fault between the battery + and PE or battery – and PE.

For simulating a battery isolation fault there are two buttons: ISO+ and ISO

Charging characteristics	IU
Terminals	2.5 mm ² rigid and flexible
End-of-charge voltage (factory setting for +20°C)	boost charge 259 V DC trickle charge 248 V DC
Deep discharge protection	183.6 V DC
Potential-free signal contacts	0.5 A/24 V AC/DC

Ordering details

Type	Scope of supply	Order No.
BCM	Battery Control Module for installation on gear tray	40071360330

Charging module CM 1.7 A



Charging modules CM 1.7 A and CM 3.4 A

To realise the recharging duration for planned battery sets, the quantity of required charge modules should be used as specified in Table 3 (in this section).

Charging current CM 1.7 A	1.7 A
Charging current CM 3.4 A	3.4 A

Control of the charging modules (32 max.) via the Battery Control Module and the CCB.

To save energy and extend service life of the charge modules, these are alternatively switched with the float charge.

Ordering details

Type	Scope of supply	Order No.
Charging module CM 1,7 A	For installation on gear tray	40071360340
Charging module CM 3.4 A	For installation on separate gear tray	40071360370

Charging module CM 3.4 A



Charging module rack 4-way



Charging module rack

A 4-way Charging module rack with 3-phase supply is mounted in system types ZB-S/26 and ZB-S/18. For supplying the CM 3.4 A boost chargers only!

The optional 2-way Charging module rack can be used to expand the system to 6 slots.

Connection voltage	400 V AC/220 V DC
Slots 3-phase split	
Conductor size	max. 4 mm ²

Charging module rack 2-way



Ordering details

Type	Scope of supply	Order No.
Charging module rack 4-way	Unit accommodates 4 charging modules CM 3.4 A for ZB-S/26 and ZB-S/18	40071347043
Charging module rack 2-way	Unit accommodates 2 additional charging modules CM 3.4 A for ZB-S/26 and ZB-S/18 (only in conjunction with 40071347043)	40071347130

Charging module rack 1-way, compact



Charging module rack, compact

The compact version of the Charging module rack is intended for use in ZB-S compact systems. The single and double compact Charging module racks have been designed for system types ZB-S/10 C and ZB-S/10 C6 respectively. These are for supplying CM 3.4 A boost chargers only!

Connection voltage	230 V AC/220 V DC
Conductor size	max. 2.5 mm ²

Ordering details

Typ	Lieferumfang	Bestell-Nr.
Charging module rack 1-way	Unit accommodates 1 charging module CM 3.4 A compact for ZB-S/10 C	40071347167
Charging module rack 2-way	Unit accommodates 2 charging modules CM 3.4 A compact for ZB-S/10 C6	40071347130

Central battery system ZB-S with STAR technology

Components and options

Connection terminals



Connection terminals

Standard terminals up to 4 mm², rigid or flexible, are provided for connecting the external phase monitors, monitoring equipment and control units. Optional terminals up to 4 mm² on DIN rail for rigid or flexible cables are provided for connecting the final circuits. The terminals are designed as 3-level neutral disconnect terminals.

2

Three-phase monitoring



Three-phase monitoring

The 3-phase monitoring is for monitoring of general lighting distributors. When one phase fails, the module switches a relay contact and interrupts the standard electronic 24 V current loop. The emergency luminaires in non-maintained mode are switched to mains operation, if the mains voltage still applies to the ZB-S cover.

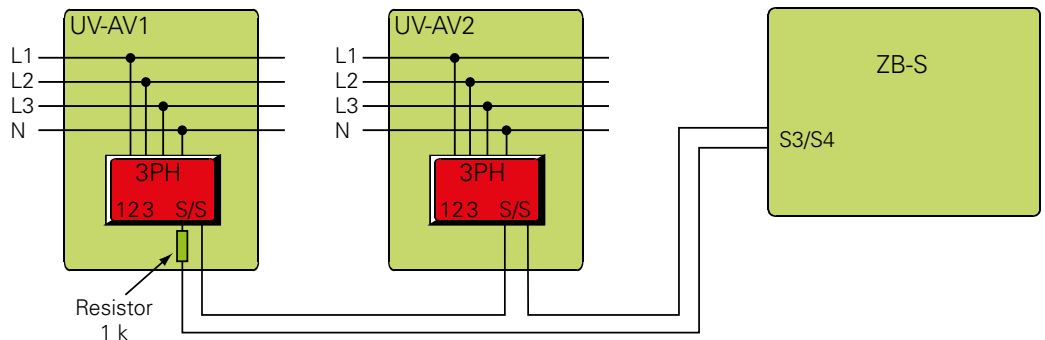
Dimensions mm (H x W x D)	85 x 52.5 x 65, 3 subunits
Enclosure	Plastic, red
Connection terminals	2.5 mm ² rigid and flexible
Type of mounting	DIN mounting rail
Contact	0.5 A/24 V AC/DC, 1 x open contact, 1 x changeover contact
Trigger threshold	$U < 85 \% U_N$

Ordering details

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

Current loop

24 V current loop for emergency lighting request using differential loop monitoring for short-circuit and open circuit detection.



Differential monitoring:

A short or open circuit causes the system to energise immediately (maintained light).

Phase monitor switch closed (1 kΩ):

Normal system mode

F3 remote indication



F3 remote indication

The F3 remote indication ensures display of the most important installation functions via battery supply also with mains power failure. Blocking of emergency lighting operation is possible via a key switch during idle operation times. Blocking of emergency operation does not affect battery maintenance charging. Differential loop monitoring leads to operational readiness of the system with short circuits or wirebreak detection. LED displays: system readiness, source for safety services, failure. As such the F3 remote indication fulfills the requirement that remote switching is only permissible when operation by unauthorized persons is not possible.

Connection terminals wall surface-mounting	2.5 mm ² rigid and flexible
Dimensions mm (H x W x D)	160 x 80 x 55
Connection terminals for flush-mounting	1.5 mm ² rigid or 1 mm ² flexible
Dimensions mm (H x W x D)	80 x 80 x 55
Colour enclosure	sim. RAL 7035 Light grey

F3 remote indication for flush-mounting

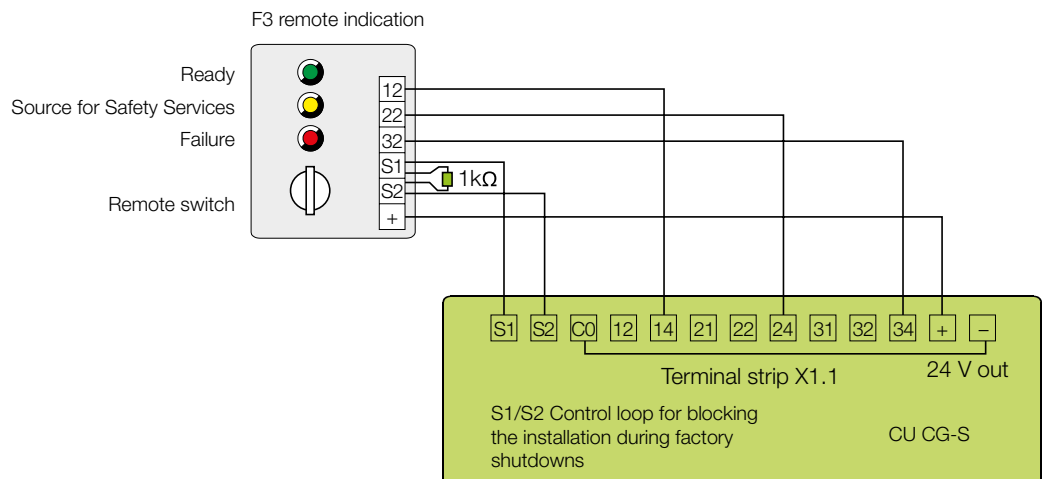


Ordering details

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 acc. to DIN VDE 0606	40071347490

Remote switch

Control loop for blocking the installation during factory shutdowns with differential loop monitoring for short-circuit and open circuit detection.



Differential monitoring:

A short-circuit or open circuit causes the system to be enabled.

F3 switch closed:

System ready

F3 switch open (1 kΩ):

System blocked

Central battery system ZB-S with STAR technology

Components and options

External DLS/3PH-Bus Module



External DLS/3PH-Bus Module

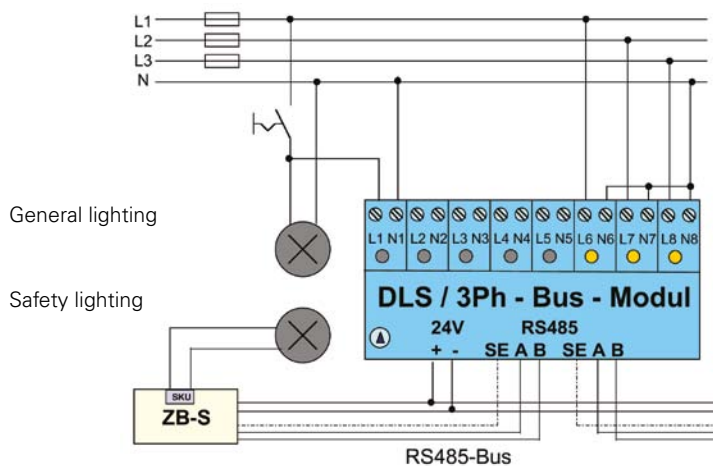
The DLS/3PH bus module can be used as a phase monitor and for light switch polling for the common switching of safety and general lighting systems. Switch cables to the safety luminaires are not required. The housing is suitable for DIN rail mounting. The module has a service button, an RS 485 bus port (integral 120 Ohm bus load resistor) with 24 V module supply, and is addressed with encoding switches. Coloured LEDs indicate fault, ON status and operation.

Freely programmable assignment of independent DLS inputs per emergency light circuit or luminaire and individual name per bus module in control unit. With use a 3-phase monitor, detailed phase failure display with location of failed sub-distribution for general lighting via clear text display in control unit.

Supply voltage device	24 V DC (min. 19 V, max. 30 V)
Current consumption (all 8 channel connected)	20 mA ± 5 mA
Degree of protection	IP20
Insulation class	I
Ambient temperature	- 10 ° to + 40 °C
Input channels 8	$U_N = 230 V$
DLS (channel 1-8) or	> 195 V-> ON < 138 V-> OFF
DLS (channel 1-5) and 3Ph (channel 6-8)	> 195 V-> ON < 138 V-> OFF
Number of light switch inputs	8 pcs. with LED display or 5 pcs. with 3-phase-monitor (selector)
Monitoring threshold	60- 85 % U_{Nom} (meets DIN VDE 0100-718)
Data bus	RS 485
Address range	1-25
Weight	0.2 kg
Dimensions (L x W x H) mm	105 x 85 x 60
Mounting	DIN-rail
Connection terminals/Clamp terminals	2.5 mm ² rigid and flexible

Ordering details

Type	Scope of supply	Order No.
DLS/3Ph-Bus-Module	Module for DIN rail mounting	40071346955
DLS/3Ph-Bus-Module inverse	Module for DIN rail mounting with inverse switching logic	40071347455
DIN mounting rail	4 pcs. DIN-rails for mounting external modules in the cabinet incl. mounting accessories	40071347125



External TLS-Bus Module



External TLS-Bus Module

The TLS bus module is used to poll stairwell light switches, to supply the glow lamps in mains and emergency operation and for the common switching of safety and general lighting. The housing is suitable for DIN rail mounting. General and safety luminaires can be controlled via the same push buttons with use of a TLS switching module (installation in light distributor).

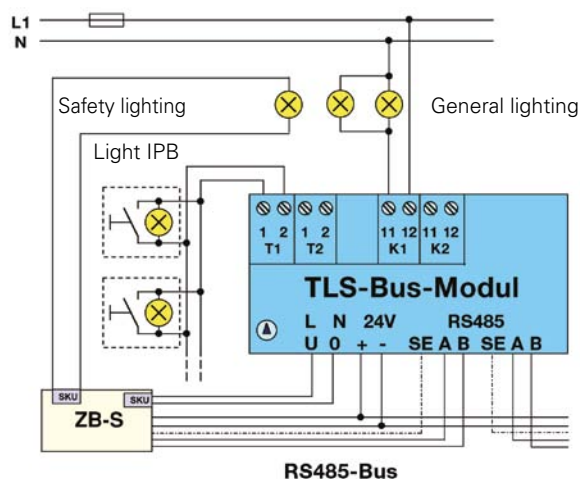
The module has a service button, an RS 485 bus port (integral 120 Ohm bus load resistor), 24 V module supply, and generates the glow lamp voltage. It also has a glow lamp flash function (30 s before On-time timeout). The TLS bus module is addressed with encoding switches. Coloured LEDs indicate fault, ON status and operation. Freely programmable assignment of independent TLS inputs per emergency light circuit and individual name per bus module in control unit.

2

Supply voltage device	24 V DC (min. 19 V, max. 30 V)
Current consumption at 24 V	Standby 10 mA ± 3 mA 1 pushed push-button 35 mA ± 5 mA 2 pushed push-button 60 mA ± 6 mA
Degree of protection	IP20
Insulation class	I
Ambient temperature	- 10 °C to + 40 °C
Connection T1/T2	max. 50 mA each z. B. 50 push-button with glow lamp 1 mA
Connection K1/K2	10 A/250 V AC starting current max. 120 A
Data bus	RS 485
Address range	1-25
Weight	0.2 kg
Dimensions (L x W x H) mm	105 x 85 x 60
Mounting	DIN-rail
Connection terminals/Clamp terminals	2.5 mm ² rigid and flexible
Number of button inputs	2 pcs. incl. supply the glow lamp (max. 50 mA)
Load circuits for general lighting	2 pcs. (10 A/120 A/ms)
Variable on-time	1 to 15 min.

Ordering details

Type	Scope of supply	Order No.
TLS-Bus-Module	Module for DIN rail mounting	40071346965
DIN mounting rail	4 pcs. DIN-rails for mounting external modules in the cabinet incl. mounting accessories	40071347125



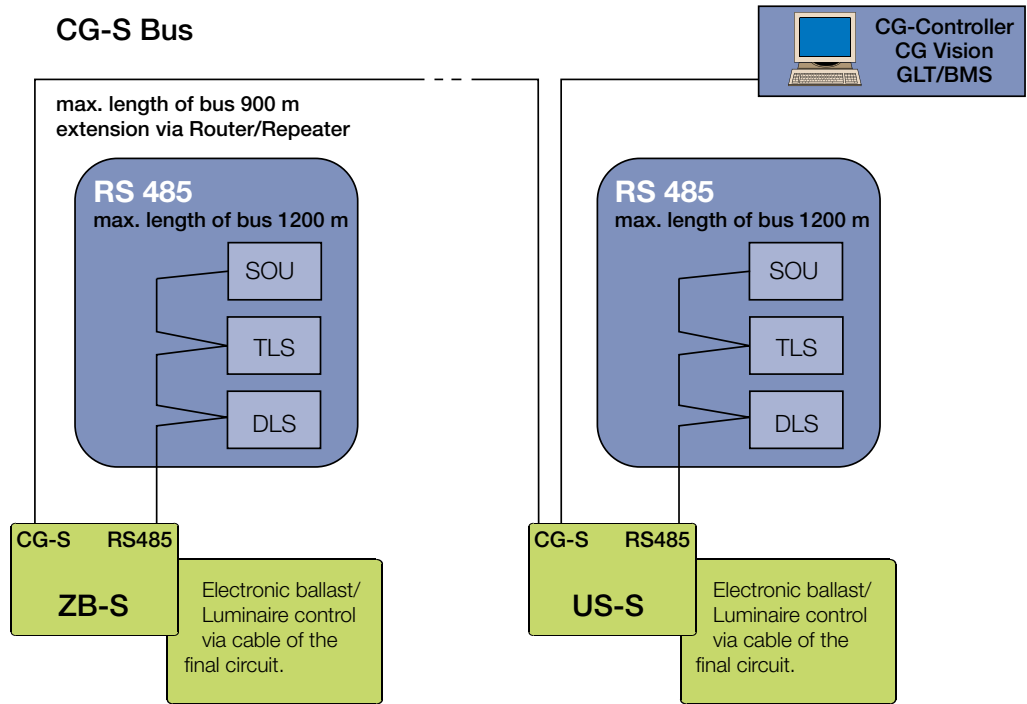
Central battery system ZB-S with STAR technology

Bus technology

Bus technology according to RS 485

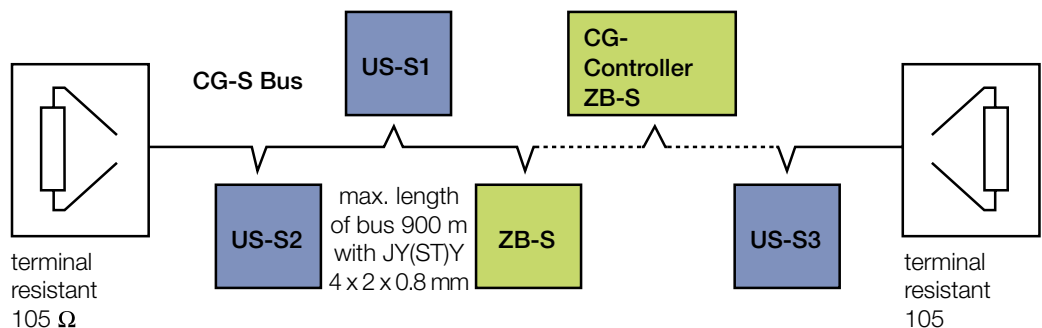
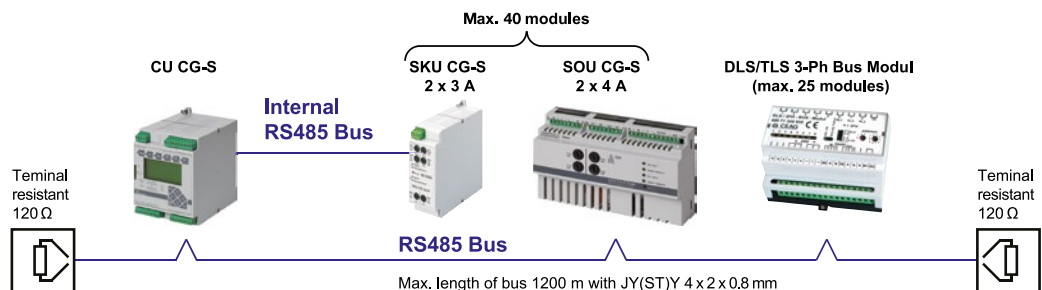
An RS 485 bus is used for data communication with external bus modules (DLS/3PH or TLS). A connection to a central building services management system (BMS) can be made with the CG-S bus. An isolated 24V/0.5 A power supply (SELV) is available for the external modules. The maximum line length depends on the required power and the conductor size.

CG-S Bus



Overall structure of the bus system for communication with external switching modules and master control system.

RS485 bus for communication with external modules (DLS/3PH-, TLS or SOU CG-S bus module). The terminating resistor (120, 0.5 W) can be connected in the modules. The ZB-S control cabinet also includes a resistor. This must be mounted in the ZB-S system if only one cable is laid.



CG-S bus for communication by ZB-S or US-S systems with a CG controller ZB-S.



Notes:

- Bus topology: linear, double terminated (no spur lines allowed)
- The absolutely essential terminating resistors are supplied in a plastic pack in the control cabinet.
- Cable type (minimum requirement): JY(ST)Y 4 x 2 x 0.8 mm (twisted pair, screened).
- The conductor size required for the 24 V bus voltage will depend on the line length and the number of bus modules ($U_{min} = 19V DC$).
- DLS = external maintained light switching module (DLS/3PH bus module)
- TLS = external stairwell light switching module
- BMS = Building Management System

CG-controller ZB-S



SD card



SD card reader



CG-Controller ZB-S

For the central monitoring of ZB-S, the CEAG CG Controller offers a variety of new features:

- Housing: degree of protection IP65
- Control and monitoring of up to 32 emergency supply systems
- SD-card for the storage of systems configuration, luminaire designation and log book
- Programming of the CG Controller via PC preprogrammed memory card via SD can be realized using an SD-card reader
- LED displays: operation, test and fault
- Log book for a period of 4 years
- Storage of luminaire designation for 6400 luminaires with 20 digits
- Functions:
 - Start functional test, test period can be freely defined
 - Start operational duration test, test period can be freely defined
 - Abort operational duration test
 - Continuous status query of devices
 - Recording of individual fault messages
 - Query of current assignment
- Volt-free contact freely programmable for:
 - charging fault, · luminaire fault, · ISO failure, · power failure or, · battery operation
- With universal retainer for trunking systems or wall surface-mounting

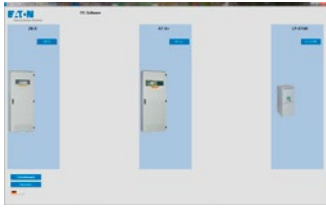
Dimensions mm (H x W x D)	184 x 240 x 112
Enclosure	Plastic RAL 7035, with transparent panel
Degree of protection (IEC 529)	IP65
Supply voltage	230 V 50/60 Hz/24 V DC
Insulation class	II
Ambient temperature	-5 °C to + 40 °C
Connection terminals/Clamp terminals	2.5 mm ² rigid and flexible
Display	Illuminated display, alphanumeric 4 x 20 characters
Keyboard	Membrane keypad 4 x 4
Contact	1 x UM, 24 V 0.5 A; freely programmable

Ordering details

Type	Scope of supply	Order No.
CG controller ZB-S	Controller in enclosure incl. CG-S BUS-interface	40071347900
SD card	SD card formatted for CG-controller ZB-S	40071347871
SD card reader	SD card reader for USB-Port	40064070561
CG-S BUS component	2-way router for CG-S BUS DIN rail mounting	40071347142
CG-S BUS component	2-way repeater for CG-S BUS DIN rail mounting	40071347143

Central battery system ZB-S with STAR technology

PC-programming software



PC programming software for ZB-S

Programming software for preset memory cards for the quick pre-programming via PC and simple reading and editing of the logbook. For documentation all files are saveable on memory card and hard disk.

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

- individual name of the device
- the date and time of automatic battery duration tests, incl. distance
- the date and time of automatic function tests, incl. distance
- manual reset: yes/no
- delay on mains return: 0-15 min
- selective emergency light: yes/no
- Lon switch: yes/no
- capacity in Ah
- quantity of booster
- rated operation time in h
- min. operation time in %
- assignments of the 3 relays
- assignments of the 3 function keys
- assignments of the 4 option inputs
- number, type and individual name of the bus modules

Detailed print of the programmed electrical circuits (line diagram) with the following details per electrical circuit:

- electrical circuit / SKU number and type
- individual electrical circuit name
- type of monitoring
- switching mode of the electrical circuit
- number of luminaires
- address and individual name per luminaire
- switching mode of each luminaire

Logbook prints with the following options:

- fault event (35 different fault events, separate or completely generic)
- time period of the logbook (date and time)
- individual comment per print
- luminaire failure: Detail of the individual luminaire and electrical circuit names

Ordering details

Type	Scope of supply	Order No.
Software	PC-Software for ZB-S, for alternative programming of the system configuration on PC	40071347152

Webmodule ZB-S/AT-S+



Webmodule ZB-S/AT-S+

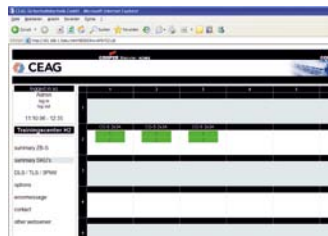
Webmodule ZB-S/AT-S+ for visualisation and monitoring of a central battery system, type ZB-S/US-S via a local ethernet (LAN) or internet (WWW) with a conventional WEB browser. Access to the web-module via internet (WWW) must be administrated from an IT department on-site. Integrated mail-client for comfortable, event orientated failure information, for up to 5 E-mail recipients. Access via administrator account or guest account, with password protection.

- Easy menu structure
- Full visualisation and monitoring of a ZB-S (central battery system) via ethernet (LAN) with conventional WEB browser (e.g. Internet Explorer, Firefox etc.)
- Display of all actual operation modes
- Local failure information of each emergency circuit and luminaires with destination information in plain text
- Permanent actual information of the charging unit and battery
- Parallel access to the web module from different workstations possible (max. 8)
- Integrated mail client for comfortable failure notification via mail
- Type of different failures for the mail transmission is selectable
- Up to 5 mail recipients programmable
- Actualisation cycle of the web browser via the web module is adjustable
- Authenticated access via administrator account with password protection
- Adjustable guest account with restricted access with password protection
- Static or dynamic (DHCP) IP-addressing possible
- Any number of modules can be operated in parallel
- Overview display of all active web modules in local ethernet with status display and hyperlink function

Example: ZB-S-Device status



Example: SKU-Status



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

Ordering details

Type	Scope of supply	Order No.
Webmodule ZB-S/AT-S+	Module for DIN-rail mounting, incl. connection without patch line RJ45	40071347990

Notes:

If a webmodule integrated in the ZB-S is supplied by the DC/DC.2 converter (external 24 V), a maximum of 20 DLS/3-phase modules or TLS bus modules can be connected.

Connection example:

Direct access via IP-address:
e.g.: 192.168.100.5



IP: 192.168.100.5

IP: 192.168.100.6



Central battery system ZB-S with STAR technology

Ordering details



Ordering details

Type	Scope of supply	Order No.
Central battery system ZB-S/26	Central battery system type ZB-S/26 incl. CU CG-S, BCM and DC/DC.2, 26 free module slots* ¹	40071347080
Central battery system ZB-S/18	Central battery system type ZB-S/18 incl. CU CG-S, BCM and DC/DC.2, 18 free module slots* ¹	40071347081
Central battery system ZB-S/LAD	Central battery system type ZB-S/LAD incl. CU CG-S, BCM and DC/DC.2, (2 free module slots possible)	40071347099
Central battery system ZB-S/10 C	Central battery system type ZB-S/10 C, incl. CU CG-S, BCM and DC/DC.2, 10 free module slots* ¹	40071347082
Central battery system ZB-S/26 C6	Central battery system type ZB-S/26 C6 incl. CU CG-S, BCM and DC/DC.2, 26 free module slots* ¹	40071689064
Central battery system ZB-S/18 C6	Central battery system type ZB-S/18 C6 incl. CU CG-S, BCM and DC/DC.2, 18 free module slots* ¹	40071689062
Central battery system ZB-S/10 C6	Central battery system type ZB-S/10 C6 incl. CU CG-S, BCM and DC/DC.2, 10 free module slots* ¹	40071347083
Central battery system ZB-S/18 C3	Central battery system type ZB-S/18 C3, incl. CU CG-S, BCM and DC/DC.2, 19 free module slots	40071347084
Central battery system ZB-S/10 C3	Central battery system type ZB-S/10 C3, incl. CU CG-S, BCM and DC/DC.2, 11 free module slots	40071347085
Central battery system ZB-S/2 C3	Central battery system type ZB-S/2 C3, incl. CU CG-S, BCM and DC/DC.2, 3 free module slots	40071360201
Substation US-S/36	Substation type US-S/36 incl. CU CG-S and DC/DC.2, 36 free module slots	40071347086
Substation US-S/28	Substation type US-S/28 incl. CU CG-S and DC/DC.2, 28 free module slots	40071347087
Substation US-S/21	Substation type US-S/21 incl. CU CG-S and DC/DC.2, 21 free module slots	40071347088
Substation US-S/13	Substation type US-S/13 incl. CU CG-S and DC/DC.2, 13 free module slots	40071347089
Substation US-S/5	Substation type US-S/5 incl. CU CG-S and DC/DC.2, 5 free module slots	40071347090
Substation US-S/ SOU2	Substation type US-S/ SOU2 incl. 2 x SOU CG-S 2 x 4 A	40071360510
Substation US-S/ SOU1	Substation type US-S/ SOU1 incl. 1 x SOU CG-S 2 x 4 A	40071360511
E30 junction box ESF-RVS30-1	For small cabinets type US-S/SOU with 2 NEOZED fuses inside	40036071032
Substation ESF-E30/13-S	Substation type ESF-E30/13-S incl. control module ST-S, DC/DC.2-converter, 13 free module slots	40071347710
Substation ESF-E30/28-S	Substation type ESF-E30/28-S, incl. control module ST-S, DC/DC.2-converter, 28 free module slots	40071347780
Substation US-S ESF30 28-P	Substation type US-S ESF30 28-P incl. control module CU CG-S and DC/DC.2, with space reserve for final assembly up to max. 60 final circuits, however accepts max. 28 variable change-over modules	40071360738
Substation US-S ESF30 13-P	Substation type US-S ESF30 13-P incl. control module CU CG-S and DC/DC.2, with space reserve for final assembly up to max. 40 final circuits, however accepts max. 13 variable change-over modules	40071360737
Substation US-S ESF30 SOU5	Small distribution board US-S ESF30 SOU5, incl. 5 switching over units SOU CG-S 2 x 4 A	40071360734
Substation US-S ESF30 SOU3	Small distribution board US-S ESF30 SOU3, incl. 3 switching over units SOU CG-S 2 x 4 A	40071360732
Substation US-S ESF30 SOU2	Small distribution board US-S ESF30 SOU2, incl. 2 switching over units SOU CG-S 2 x 4 A	40071360729
Substation US-S ESF30 SOU1	Small distribution board US-S ESF30 SOU1, incl. 1 switching over unit SOU CG-S 2 x 4 A	40071360726

*¹ Plus max. two additional slots in correlation of CM 1.7 A and CM 3.4 A placement.



Ordering details

Type	Order No.
4 pcs. DIN-mounting rail incl. mounting accessories	40071347125
3 pcs. C-section rail incl. mounting accessories	40071347126
Base 200 mm for ZB-S, depth 400 mm	40071347121
Base 100 mm for ZB-S, depth 400 mm	40071347120
Base 200 mm for ZB-S/18C3 and 10C3, depth 330 mm	40071360049
Base 800 x 600 x 200 mm for ZB-S/10C6-18C6 and 26C6	40071689084
3-piece baseplate for ZB-S, depth 400 mm, mouse-proof	40071347124
Cable support rail	40071347123
Metal flange plate undrilled for battery cabinet ZB-S	40071346225
Flange plate for foam rubber for battery cabinet ZB-S	40036070164
Fireproof dowel M10 for E30 substation, Set of = 12 pcs., for installation in concrete walls	40036070298
Optional wall mounting plate for wall mounting for ESF-E30/13-S	40071347726
Door with left hinge for ZB-S/18 and ZB-S/26	40071689081
Door with left hinge for ZB-S/10C3	40071689082
Door with left hinge for ZB-S/10C and ZB-10C6	40071689083
Door with left hinge for battery cabinet	40071689085

Central battery system ZB-S with STAR technology

Table of covers, technical data ZB-S

Type	ZB-S/26	ZB-S/18	ZB-S/LAD	ZB-S/10 C
Modules:				
Control module: CU CG-S	1	1	1	1
DC/DC.2-converter (DCM) ^{*5}	1	1	1	1
BCM	1	1	1	1
Circuit module SKU CG-S ^{*5}	0-26 ^{*8}	0-18 ^{*8}	0-2 ^{*2}	0-10 ^{*8}
Maximum number of SWR 150 due to 100% luminous flux and max. rated power	7	7	2	7
2 Charging module 1,7 A	0-2	0-2	0-2	0-2
Charging module 3,4 A	0-6 ^{*1}	0-6 ^{*1}	0-8	0-1 ^{*3}
Electrical cabinet construction:				
Rated voltage	400/230 V	400/230 V	400/230 V	230 V
Rated frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Conductor order and system of earthing in mains power operation/battery operation	TN-C-S / IT	TN-C-S / IT	TN-C-S / IT	TN-C-S / IT
Max. ambient temperature ^{*9}	-5 °C to +35 °C	-5 °C to +35 °C	-5 °C to +35 °C	-5 °C to +35 °C
Insulation class	1	1	1	1
Degree of protection	IP21	IP21	IP21	IP21
Max. current rating mains [Σ L1, L2, L3] [A]	80	80	100	60
Max. rated power mains [KW]	18.4	18.4	23	13.8
Max. current rating battery [A]	80	80	100	35
Max. rated power battery [KW]	17.3	17.3	21.6	7.6
Three-phase distribution	yes	yes	yes	no
Conductor size for mains and battery supply	50 mm ²	50 mm ²	50 mm ²	16 mm ²
Outgoing circuits	0- 6 Feeders	0-6 Feeders	0- 15 Feeders	1 Feeder
Conductor size	16 mm ²	16 mm ²	16 mm ²	35 mm ²
Max. conductor size final circuits	4 mm ²	4 mm ²	4 mm ²	4 mm ²
Max. number of final circuit terminals	80	68	8	40
Mechanical cabinet construction:				
Dimensions H x W x D (mm)	2050 x 800 x 400	2050 x 800 x 400	2050 x 800 x 400	2050 x 800 x 400
Material / Design	Sheet steel / Cabinet	Sheet steel / Cabinet	Sheet steel / Cabinet	Sheet steel / Compact cabinet
Door stop	right	right	right	right
Outer coating	Textured powder paint	Textured powder paint	Textured powder paint	Textured powder paint
Colour	RAL 7035	RAL 7035	RAL 7035	RAL 7035
Partial viewing door	Yes	Yes	No	Yes
Lock	3 mm Two-way	3 mm Two-way	3 mm Two-way	3 mm Two-way
Cable entry from above	yes	yes	yes ^{*7}	yes
Cable entry from below	yes	yes	yes ^{*7}	no
Base (optional)	100/200	100/200	100/200	200
Weight (without batteries)	approx. 180 kg	approx. 170 kg	approx. 170 kg	approx. 155 kg
Battery capacity, installed in:				
Compact cabinet	-	-	-	23.3-53.7 Ah
Battery cabinet	23.3-245 Ah ^{*6}	23.3-245 Ah ^{*6}	23.3-308 Ah ^{*6}	-
Battery rack	23.3-245 Ah ^{*6}	23.3-245 Ah ^{*6}	23.3-308 Ah ^{*6}	-

Other battery sizes on application

*1 When 6 charging modules CM 3,4 A are fitted an additional charging module rack 2-way is necessary.

*2 Max. 8 charging modules are possible when 2 SKUs are fitted.

*3 When 1 charging module CM 3,4 A is fitted an additional charging module rack 1-way is necessary.

*4 When 2 charging modules CM 3,4 A are fitted an additional charging module rack 2-way is necessary. (>240 Ah Special design)

*5 After more than 13 SKU CG-S 4 x 1.5 A or 26 SKU CG-S 2 x 3 A / 1 x 6 A a second DC/DC converter is needed.
Please observe that all DC/DC-converters are operated on the same module assembly frame next to each other.

Central battery system ZB-S with STAR technology

Table of covers, technical data ZB-S

ZB-S/26 C6	ZB-S/18 C6	ZB-S/10 C6	ZB-S/18 C3	ZB-S/10 C3	ZB-S/2 C3
1	1	1	1	1	1
1	1	1	1	1	1
1	1	1	1	1	1
0-26*8	0-18*8	0-10*8	0-19	0-11	0-3
7	7	7	7	7	2
0-2	0-2	0-2	0-2	0-2	1
0-2*3*4	0-2*3*4	0-2*3*4	–	–	–
400/230 V	400/230 V	230 V	230 V	230 V	230 V
50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
TN-C-S / IT	TN-C-S / IT	TN-C-S / IT	TN-C-S / IT	TN-C-S / IT	TN-C-S / IT
-5 °C to +35 °C	-5 °C to +35 °C	-5 °C to +35 °C	-5 °C to +35 °C	-5 °C to +35 °C	-5 °C to +35 °C
1	1	1	1	1	1
IP21	IP21	IP21	IP21	IP21	IP21
63	63	63	25	25	15
14.5	14.5	14.5	5.8	5.8	3.5
63	63	63	25	25	12
13.6	13.6	13.6	5.4	5.4	2.6
yes	yes	no	no	no	no
35 mm ²	35 mm ²	16 mm ²	16 mm ²	16 mm ²	16 mm ²
2 Feeders	2 Feeders	1 Feeder	1 Feeder	1 Feeder	–
35 mm ²	35 mm ²	35 mm ²	16 mm ²	16 mm ²	–
4 mm ²	4 mm ²	4 mm ²	4 mm ²	4 mm ²	4 mm ²
60	60	40	50	40	12
2250 x 800 x 600	2050 x 800 x 600	2050 x 800 x 600	1800 x 600 x 350	1800 x 600 x 350	1000 x 600 x 300
Sheet steel / Compact cabinet	Sheet steel / Compact cabinet	Sheet steel / Compact cabinet	Sheet steel / Compact cabinet	Sheet steel / Compact cabinet	Sheet steel / Compact cabinet
right	right	right	right	right	right
Textured powder paint	Textured powder paint	Textured powder paint	Textured powder paint	Textured powder paint	Textured powder paint
RAL 7035	RAL 7035	RAL 7035	RAL 7035	RAL 7035	RAL 7035
Yes	Yes	Yes	Yes	Yes	No
3 mm	3 mm	3 mm	3 mm	3 mm	3 mm
Two-way	Two-way	Two-way	Two-way	Two-way	Two-way
yes	yes	yes	yes	yes	yes
no	no	no	no	no	no
–	–	–	200	200	–
approx. 250 kg	approx. 205 kg	approx. 206 kg	approx. 120 kg	approx. 115 kg	approx. 50 kg
5.5-89.4 Ah	5.5-89.4 Ah	5.5-89.4 Ah	5.5-23.3 Ah	5.5-23.3 Ah	5.5-14 Ah
–	–	–	–	–	–
–	–	–	–	–	–

*6 Higher battery capacities =>118 Ah are achieved by connecting several battery sets in parallel. After 8 h discharge the maximum battery capacity will be 195.4 Ah.

*7 Please indicate the cable entry when planning the system.

*8 Plus max. two additional slots in correlation of CM 1.7 A and CM 3.4 A placement.

*9 Optimal ambient battery temperature +20 °C.

Central battery system ZB-S with STAR technology

Table of covers, technical data ZB-S

Type	US-S/36	US-S/28	US-S/21	US-S/13
Modules:				
Control module: CU CG-S	1	1	1	1
DC/DC.2-converter (DCM)* ¹	1	1	1	1
Circuit module SKU CG-S* ¹	0-36	0-28	0-21	0-13
Maximum number of SWR 150 due to 100% luminous flux and max. rated power	7	7	–	–
2 Electrical cabinet construction:				
Rated voltage	400/230 V	400/230 V	230 V	230 V
Rated frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Conductor order and system of earthing in mains power operation/battery operation	TN-C-S / IT	TN-C-S / IT	TN-C-S / IT	TN-C-S / IT
Max. ambient temperature	-5 °C to +35 °C	-5 °C to +35 °C	-5 °C to +35 °C	-5 °C to +35 °C
Insulation class	1	1	1	1
Degree of protection	IP21	IP21	IP54	IP54
Max. current rating mains $\sum L1, L2, L3$ [A]	80	80	50	50
Max. rated power mains [KW]	18.4	18.4	11.5	11.5
Max. current rating battery [A]	80	80	50	50
Max. rated power Battery [KW]	17.3	17.3	10.8	10.8
Three-phase distribution	yes	yes	no	no
Conductor size for mains and battery supply	35 mm ²	35 mm ²	35 mm ²	16 mm ²
Outgoing circuits	–	–	–	–
Max. conductor size final circuits	4 mm ²	4 mm ²	4 mm ²	4 mm ²
Max. number of final circuit terminals	80	80	52	24
Mechanical cabinet construction:				
Dimensions H x W x D (mm)	2050 x 800 x 400	2050 x 800 x 400	1200 x 600 x 300	800 x 600 x 250
Material / Design	Sheet steel / Cabinet	Sheet steel / Cabinet	Sheet steel / Wall cabinet	Sheet steel / Wall cabinet
Door stop	right	right	right	right
Outer coating	Textured powder paint	Textured powder paint	Textured powder paint	Textured powder paint
Colour	RAL 7035	RAL 7035	RAL 7035	RAL 7035
Partial viewing door	Yes	Yes	No	No
Lock	3 mm Two-way	3 mm Two-way	3 mm Two-way	3 mm Two-way
Cable entry from above	yes	yes	yes	yes
Cable entry from below	yes	yes	no	no
Base (optional)	100/200	100/200	300	–
Weight (without batteries)	approx. 170 kg	approx. 165 kg	approx. 110 kg	approx. 75 kg

Other battery sizes on application

*1 After more than 13 SKU CG-S 4 x 1.5 A or 26 SKU CG-S 2 x 3 A / 1 x 6 A a second DC/DC converter is needed. Please observe that all DC/DC-converters are operated on the same module assembly frame next to each other.

*2 With admittance no. Z-86.2-1. The supply cabinets ESF-E30 must be mounted on a solid wall with fire resistance of at least 30 minutes.

*3 The housing has insulation class II. The earth conductor must however be routed in the housing.

*4 IP54 with optional IP54 hood.

Central battery system ZB-S with STAR technology

Table of covers, technical data ZB-S

US-S/5	US-S/ SOU2	US-S/ SOU1
1	–	–
1	–	–
0-5	inkl. 2 x SOU CG-S 2 x 4 A	inkl. 1 x SOU CG-S 2 x 4 A
–	–	–
–	–	–
230 V	230 V	230 V
50/60 Hz	50/60 Hz	50/60 Hz
TN-C-S / IT	TN-C-S / IT	TN-C-S / IT
-5 °C to +35 °C	-5 °C to +35 °C	-5 °C to +35 °C
1	2*3	2*3
IP54	IP65	IP65
30	16	8
6.9	3,6	1,8
30	16	8
6.5	3.4	1.7
no	no	no
16 mm ²	10 mm ²	10 mm ²
–	–	–
4 mm ²	4 mm ²	4 mm ²
20	4	2
600 x 400 x 250	583 x 295 x 129	458 x 295 x 129
Sheet steel / Wall cabinet	Plastic / Small distribution board	Plastic / Small distribution board
right	right	right
Textured powder paint	–	–
RAL 7035	RAL 7035	RAL 7035
No	Yes	Yes
3 mm Two-way	On request	On request
yes	yes	yes
no	no	no
–	–	–
approx. 42 kg	approx. 8.8 kg	approx. 7.5 kg

2

Central battery system ZB-S with STAR technology

Table of covers, technical data ZB-S

Type	ESF-E30/13-S	ESF-E30/28-S	US-S ESF30 13-P	US-S ESF30 28-P
Modules:				
Control module: CU CG-S	1	1	1	1
DC/DC.2-converter (DCM)* ¹	1	1	1	1
Circuit module SKU CG-S 1 x 6 A	0-13	0-28	0-13	0-28
Circuit module SKU CG-S 2 x 3 A	0-13	0-28	0-13	0-28
Circuit module SKU CG-S 4 x 1.5 A	–	–	0-13* ³	0-28* ⁴
Switching over unit SOU CG-S 2 x 4 A	–	–	–	–
Maximum number of SWR 150 due to 100% luminous flux and max. rated power	–	–	–	–
Interface module DLS/TLS	2	2	2	2
Web module	–	–	1	1
Electrical cabinet construction:				
Rated voltage	230 V	400/230 V	230 V	400/230 V
Rated frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Artificial ventilation, sound pressure level (dB)	46	60	55	55
Conductor order and system of earthing in mains power operation/battery operation	TN-C-S / IT	TN-C-S / IT	TN-C-S / IT	TN-C-S / IT
Max. ambient temperature	-5 °C to +35 °C	-5 °C to +35 °C	-5 °C to +35 °C	-5 °C to +30 °C
Insulation class	1	1	I	I
Degree of protection	IP42	IP42	IP42	IP42
Maximal permitted heating power loss [W]	50	105	45	90
Maximal rated power [A] depending on the ambient temperature				
+25 °C	35	50	35 (30)* ⁶	40 (45)* ⁶
+30 °C	35	50	17.3 (30)* ⁶	20 (45)* ⁶
+35 °C	35	50	11 (30)* ⁶	– (45)* ⁶
Maximal rated power [kW] depending on the ambient temperature				
+25 °C	7.6	10.8	7.5 (6.4)* ⁶	8.6 (9.7)* ⁶
+30 °C	7.6	10.8	3.7 (6.4)* ⁶	4.3 (9.7)* ⁶
+35 °C	7.6	10.8	2.3 (6.4)* ⁶	– (9.7)* ⁶
Three-phase distribution	no	yes	no	yes
Conductor size for mains and battery supply	16 mm ²	16 mm ²	35 mm ²	35 mm ²
Max. conductor size final circuits	4 mm ²	4 mm ²	4 mm ²	4 mm ²
Max. number of final circuit terminals	26	56	40	60
Mechanical cabinet construction:				
Dimensions H x W x D (mm)	1150 x 885 x 405	2190 x 885 x 405	1278 x 918 x 496	2268 x 918 x 604
Material / Design	Sheet steel / func. endurance 30 min. / Wall cabinet	Sheet steel / func. endurance 30 min. / Stand alone cabinet	Coated plaster board / Wall cabinet	Coated plaster board / Wall cabinet
Door stop	right	right	right	right
Colour	RAL 7035	RAL 7035		
Cable entry	from above* ⁷	from above* ⁷	from above	from above* ⁷
Base (optional)	–	–	–	yes
Weight (without batteries)	approx. 235 kg	approx. 390 kg	approx. 169 kg	approx. 330 kg
Certification / Verification				
ABZ housing including modules	yes	yes	Requested	Requested
ABZ housing without modules	–	–	yes	yes
Fire test fire protection test report short form MPA NRW	–	–	yes	yes
VDE certificate	–	–	–	–
Declaration of expert	–	–	yes	yes

*1: After more than 13 SKU CG-S 4 x 1.5 A or 26 SKU CG-S 2 x 3 A / 1 x 6 A a second DC/DC converter is needed.
Please observe that all DC/DC-converters are operated on the same module assembly frame next to each other.

*2: Protective isolated acc. to VDE 0106

*3: Max. 40 circuits. Attention: Please note the maximum rated power!

*4: Max. 60 circuits. Attention: Please note the maximum rated power!

*5: Please note: Each DLS module reduces the possible number of SOU modules.

*6: (...) = Plannings with SKU CG-S 2 x 3 A and SKU CG-S 1 x 6 A modules.

*7: Cable entry from below on request

Central battery system ZB-S with STAR technology

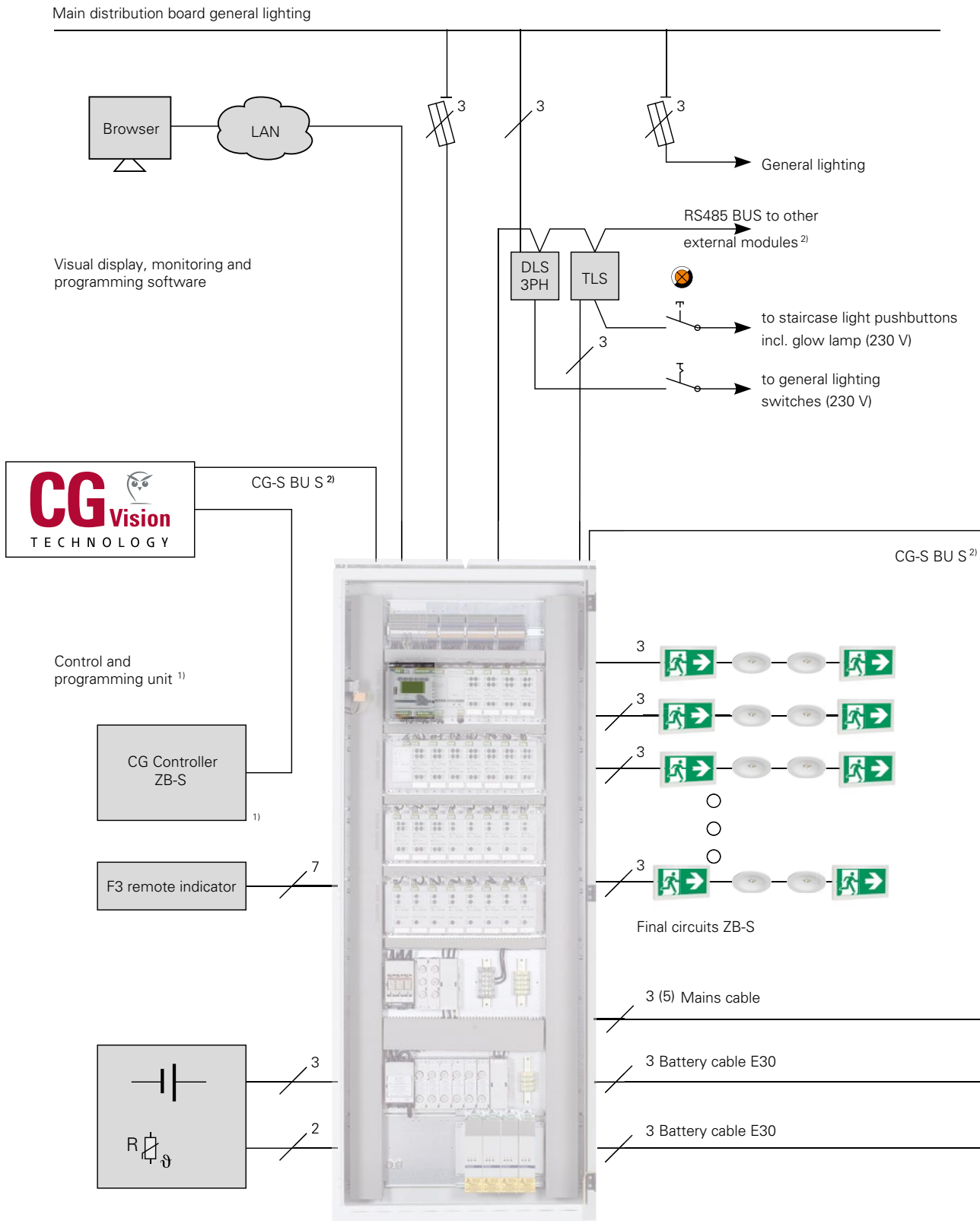
Table of covers, technical data ZB-S

US-S ESF30 SOU5	US-S ESF30 SOU3	US-S ESF30 SOU2	US-S ESF30 SOU1
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
5	3	2	1
-	-	-	-
2*5	1*5	1	-
-	-	-	-
230 V	230 V	230 V	230 V
50 or 60 Hz	50 or 60 Hz	50 or 60 Hz	50 or 60 Hz
-	-	-	-
TN-C-S / IT	TN-C-S / IT	TN-C-S / IT	TN-C-S / IT
-5 °C to +35 °C	-5 °C to +35 °C	-5 °C to +35 °C	-5 °C to +35 °C
I ²	I ²	I ²	I ²
IP65	IP65	IP65	IP65
-	-	-	-
33	20	15	8
28	17	12	6
16	10	9	5
7.1	4.3	3.2	1.7
6.0	3.6	2.5	1.2
3.4	2.1	1.3	1.0
no	no	no	no
10 mm ²	10 mm ²	10 mm ²	10 mm ²
4 mm ²	4 mm ²	4 mm ²	4 mm ²
10	6	4	2
1135 x 396 x 230	835 x 396 x 230	685 x 396 x 230	535 x 396 x 230
Coated plaster board / Wall cabinet	Coated plaster board / Wall cabinet	Coated plaster board / Wall cabinet	Coated plaster board / Wall cabinet
left	left	left	left
from above	from above	from above	from above
-	-	-	-
approx. 81 kg	approx. 61 kg	approx. 51 kg	approx. 34 kg
Requested	Requested	Requested	Requested
Requested	Requested	Requested	Requested
yes	yes	yes	yes
yes	yes	yes	yes
yes	yes	yes	yes

2

Central battery system ZB-S with STAR technology

Installation example



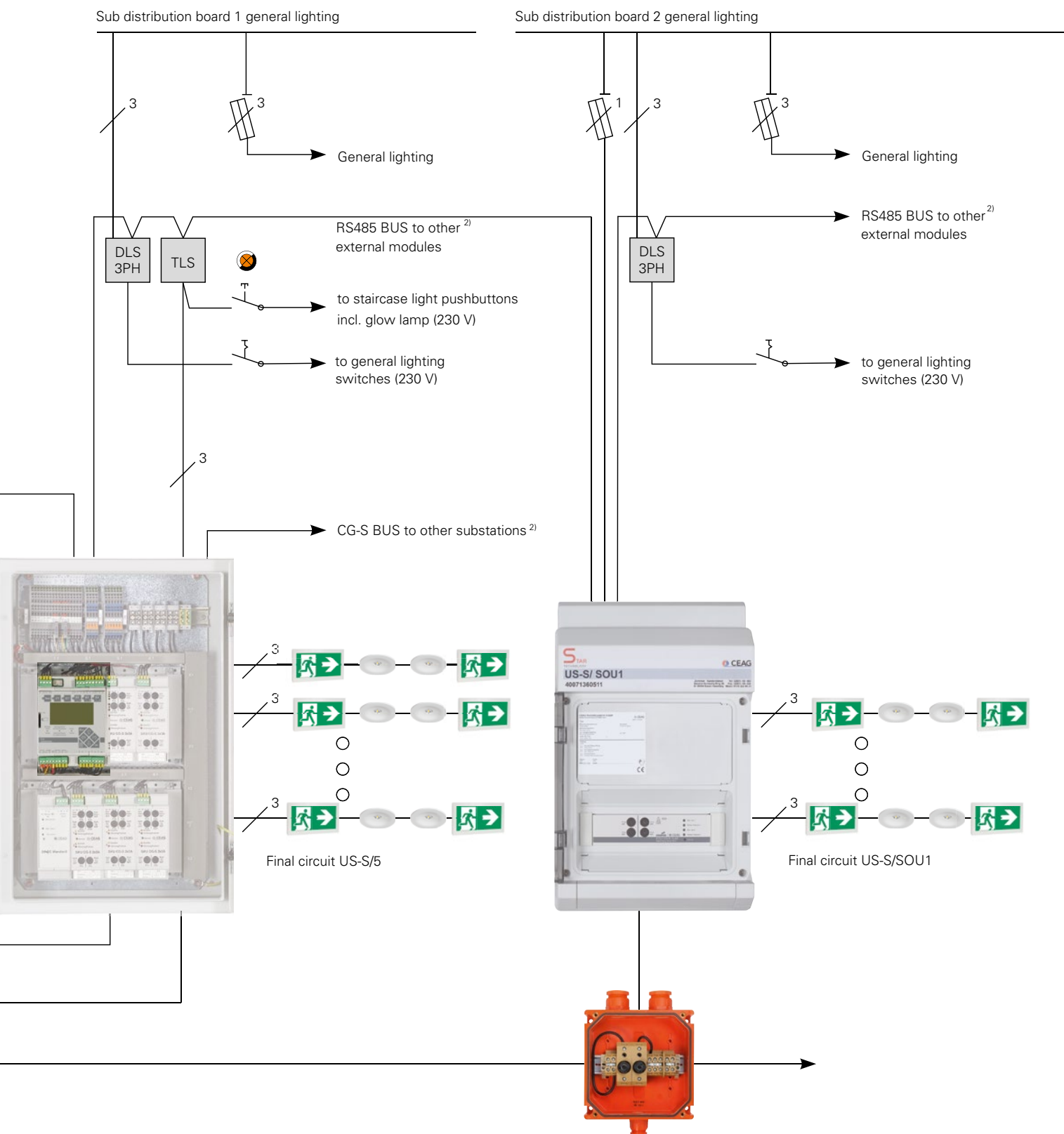
¹⁾ Operation CG-Controller ZB-S in combination with CG Vision only in observer mode possible. In this operation mode the CG-Controller does not provide the functions log book, next FT and next DT.

²⁾ Bus specifications see page ZB-S bus technology

Central Battery system ZB-S

Central battery system ZB-S with STAR technology

Installation example



Substation US-S/5

Substation US-S/SOU1

Central battery system ZB-S with STAR technology

Planning and layout of the ZB-S emergency lighting supply system

Based on the data given in the tables, planning the ZB-S central battery system can easily and quickly be carried out.

We recommend the following procedure:

• Calculation of required battery capacity

The number of required emergency luminaires is known from the emergency lighting design with the engineering guides included in part 1 of this catalogue.

Example:

The following number of luminaires has been calculated for the emergency lighting of a meeting hall (3 h rated duration and 12 h recharge period).

Amount	Type	Current consumption	
		per luminaire	in total
100	55021 CG-S	0.03 A	3.00 A
250	55011 CG-S	0.03 A	7.50 A
100	EVG 13.3	0.05 A	5.00 A
		Total:	15.50 A

Based on table 2a and depending on the required rated duration (1 h, 3 h and 8 h), the battery capacity (C10; **1.8V/Z**; +20° C) is to be calculated, depending on the maximum discharge current that has been determined on the basis of the total current drawn from the battery by all consumers.

According to EN 50171, batteries with a lifetime of 10 years at +20° C will have to be installed.

In the above example with the required rated duration of 3 h the 53.70 Ah battery (C10; 1.8V/Z; +20° C) is to be selected from the table 2a.

The maximum discharge current for a 3 h discharge according to table 2a is at 15.80 A.

• Calculation of required additional booster.

According to EN 50171, 80 % of capacity must be loaded within 12 h into the discharged battery. In the calculation of the required booster the ageing factor of 25 % must not be considered.

Example:

Current consumption battery	=	15.80 A at 3 h discharge
Required number of boosters 1 x CM 1.7 A and 1 x 3.4 A acc. to table 3	=	2 pcs.

• Calculation of required battery capacity including ageing factor according to table 2a

As a lead-acid battery has a capacity loss of 2.5% each year (25% in 10 years) at intended operation this capacity loss has to be included in the battery appointment acc. to EN 50171.

The end of the lifetime is reached when the rated voltage of the battery at full load falls below 90%.

Example:

Current consumption battery 15.50 A + 25% ageing factor	=	19.38 A
U _N battery	=	216 V
90% U _N battery (108 battery) = 194.4 V	=	1,8 V per battery

In this example the battery capacity has to be increased from 53.70 Ah to 85.70 Ah.

The maximum discharge current for a 3h discharge is at 23.10 A.

Attention!

In the calculation of the required booster the ageing factor of 25% must not be considered.

• Fuse protection of the mains input

In order to determine the fuse in the main distribution board of the general power supply, you must know the total connected load of the ZB-S system. This is made up of the sum of mains connected loads of the individual luminaires and consumers (see table 1) and of the ratings of the charging booster CM 1.7 A and CM 3.4 A.

Example:

100 pcs. 55021 CG-S à 16 VA	=	1.60 kVA
250 pcs. 55011 CG-S à 16 VA	=	4.00 kVA
100 pcs. EVG 13.3 for 13 WTC-DEL à 23 VA	=	2.30 kVA
	=	7.90 kVA
Booster CM 1.7 A P _{zu} 0.72 kVA	=	0.72 kVA
Booster CM 3.4 A P _{zu} 0.98 kVA	=	0.98 kVA
Total connected load	=	9.60 kVA

N-EVG 54 W V-CG-S



Rated value N-EVG ... V-CG-S for mains and battery operation

Term	T5		T5		T5	T5
Lamp cap	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	24/39 W
Lamp load [W]	14	21	28	35	24	39
Current consumption [A] at 220 V battery operation, setting (Luminous flux Φ_E/Φ_N in %)						
100 %	0.08	0.11	0.15	0.18	0.13	0.19
90 %	0.07	0.10	0.13	0.16	0.12	0.17
80 %	0.064	0.09	0.12	0.14	0.10	0.15
70 %	0.057	0.08	0.11	0.13	0.09	0.13
60 %	0.051	0.07	0.10	0.11	0.08	0.12
50 %	0.045	0.062	0.09	0.10	0.07	0.11
40 %	0.040	0.055	0.08	0.09	0.066	0.10
30 %	0.036	0.050	0.07	0.08	0.059	0.09
Power consumption [A] at 230 V mains operation	0.08	0.11	0.14	0.17	0.12	0.18
Power factor λ	0.96	0.96	0.98	0.98	0.98	0.98
Inrush current [A]	10	10	10	10	10	10
System power lamp + ECG acc. to EN 50294 [W]	16	23	30	37	25	41

N-EVG 58 W V-CG-S



Term	T5		T5	T8	
Lamp cap	G5		G5	G13	
Type N-EVG ... V-CG-S	49W		54W	80W	
Lamp load [W]	49	54	80	36	58
Current consumption [A] at 220 V battery operation, setting (Luminous flux Φ_E/Φ_N in %)					
100 %	0.24	0.26	0.38	0.17	0.25
90 %	0.21	0.23	0.34	0.15	0.22
80 %	0.19	0.21	0.30	0.14	0.20
70 %	0.17	0.18	0.27	0.12	0.18
60 %	0.15	0.16	0.24	0.11	0.16
50 %	0.14	0.15	0.21	0.10	0.14
40 %	0.12	0.13	0.19	0.09	0.13
30 %	0.11	0.12	0.17	0.08	0.11
Power consumption [A] at 230 V mains operation	0.24	0.25	0.37	0.16	0.24
Power factor λ	0.98	0.98	0.98	0.98	0.98
Inrush current [A]	10	10	12	10	10
System power lamp + ECG acc. to EN 50294 [W]	52	57	84	34	53

Depending on the luminous flux (30% ... 100%) the correspondend battery current has to be projected.

Dim operation permitted by 30% up to 10°C, 60% up to 0°C only.

For outdoor use set 100 % only!

Central battery system ZB-S with STAR technology


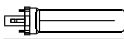
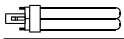

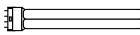
Tables

EVG 13.3



Table 1.2

Rated value of EVG 13.3 V-CG-S, EVG 18 V-CG-S and EVG 18C V-CG-S for mains and battery operation

International term	Lamp cap	EVG-type EVG...	Lamp load in [W]	Power consumption at battery operation [A] ¹	Power consumption in [VA]	Inrush current [A]	Power factor λ		
T16/ T5	G 5	13.3 V-CG-S	4	0.020	8	3	0.6		
		13.3 V-CG-S	6	0.025	12	3	0.6		
		13.3 V-CG-S	8	0.030	16	3	0.6		
			13.3 V-CG-S	13	0.050	23	3	0.6	
TC-SEL	2 G 7	13.3 V-CG-S	5	0.020	10	3	0.6		
		13.3 V-CG-S	7	0.025	13	3	0.6		
		13.3 V-CG-S	9	0.030	16	3	0.6		
			13.3 V-CG-S	11	0.040	18	3	0.6	
TC-DEL	G 24 q-1	13.3 V-CG-S	10	0.035	16	3	0.6		
		13.3 V-CG-S	13	0.050	23	3	0.6		
			G 24 q-2	18C V-CG-S	18	0.070	30	8	0.6
		TC-TEL	GX 24 q-1	13.3 V-CG-S	13	0.050	23	3	0.6
TC-TEL	GX 24 q-2	18C V-CG-S	18	0.070	30	8	0.6		
		T 26 / T8	G 13	18 V-CG-S	18	0.070	30	8	0.6
									
		TC-F	2 G 10	18 V-CG-S	18	0.070	30	8	0.6
TC-L	2 G 11	18 V-CG-S	18	0.070	30	8	0.6		
									

¹ Luminous flux $\Phi_E/\Phi_N = 75\%$

EVG 13.3 V-CG-S



EVG 18 V-CG-S



EVG 18C V-CG-S



Table 1.3

Current ratings of incandescent and tungsten halogen lamps

220 V incandescent lamps (AGL)			12 V tungsten halogen lamps with 220 V electronic transformer		
	Φ rated	Current consumption from the battery	Lamp rating	Current rating from the battery	Mains connected load
7 W	30 lm	30 mA	20 W	115 mA	33.6 VA
15 W	90 lm	70 mA	35 W	200 mA	58.0 VA
25 W	230 lm	110 mA	50 W	285 mA	84.0 VA
40 W	430 lm	180 mA	75 W	420 mA	72.6 VA
60 W	730 lm	270 mA	100 W	570 mA	168.0 VA
75 W	960 lm	340 mA			
100 W	1380 lm	450 mA			

Table 2a

Calculation of the battery capacity of maintenance free OGIv batteries acc. to EN 50171 (higher capacities on request).

Battery capacity C10 at 1.8 V/C and +20°C	Ah	5.5	8.5	11.6	14.0	23.3	32.0	39.8	50.4	53.7	66.2	85.7	89.4	106.0	118.0	143.1	155.6	178.8	195.4	245.0	268.2	308.0	357.6	
														1 x 39.8										
														1 x 66.2										
																1 x 89.4								
																1 x 53.7								
																1 x 89.4								
																1 x 66.2								
																	2 x 89.4							
																	1 x 89.4							
																	1 x 66.2							
																	2 x 89.4							
																	1 x 66.2							
																		3 x 89.4						
																		3 x 89.4						
																		3 x 89.4						
																		1 x 39.8						
																		4 x 89.4						
max. discharge current [A] with operating time [h], 1.8 V per cell and +20°C ambient temperature	1.0	3.2	4.5	6.09	9.3	15.4	20.2	24.1	30.7	37.9	49.2	52.6	63.8	73.3	85.1	101.7	113.0	127.6	137.1	176.8	191.4	215.5	255.2	
	1.5	2.5	3.4	4.71	6.9	11.9	15.0	19.0	22.7	27.6	34.5	38.3	46.1	53.5	60.0	73.7	80.6	92.2	99.6	126.7	138.3	157.3	194.7	
	2.0	2.1	2.9	3.82	5.7	9.2	12.3	14.6	18.5	21.5	26.3	31.0	36.0	40.9	46.9	57.5	62.3	72.0	76.9	98.3	108.0	122.6	144.0	
	3.0	1.5	2.1	2.98	4.1	6.9	9.1	11.0	13.6	15.8	18.2	23.1	26.5	29.2	33.3	42.3	44.7	53.0	55.7	71.2	79.5	90.5	106.0	
	8.0	0.7	1.0	1.37	1.7	2.8	3.7	4.8	5.9	6.6	7.9	10.3	11.0	12.7	14.2	17.6	18.9	22.0	23.7	29.9	33.0	37.8	44.0	

Important note: The aging provision for batteries (25 %) is not included.

Table 3a

Number of 1.7 A and 3.4 A booster acc. to DIN EN 50171 for recharging of:

Battery capacity C10 at 1.8 V/C and +20°C	h	A	5.5	8.5	11.6	14.0	23.3	32.0	39.8	50.4	53.7	66.2	85.7	89.4	106.0	118.0	143.1	155.6	178.8	195.4	245.0	268.2	308.0	357.6	
12 hours / 80 %	1.0	1.7	1	1	1	1	1	1	0	0	0	1	1	1	0	0	1	0	0	1	1	1	1	1	0
		3.4	0	0	0	0	0	0	1	1	1	1	1	1	1	2	2	2	3	3	3	4	4	5	6
	1.5	1.7	1	1	1	1	1	0	0	0	0	1	1	0	0	1	0	0	1	1	1	1	0	0	1
		3.4	0	0	0	0	0	1	1	1	1	1	1	1	2	2	2	3	3	3	3	4	5	6	6
	2.0	1.7	1	1	1	1	1	0	0	0	0	1	1	0	0	1	0	0	1	0	0	1	0	0	1
		3.4	0	0	0	0	0	1	1	1	1	1	1	1	2	2	2	3	3	3	4	5	5	6	7
	3.0	1.7	1	1	1	1	1	0	0	0	0	1	1	1	0	1	1	0	1	0	0	0	0	1	1
		3.4	0	0	0	0	0	1	1	1	1	1	1	1	2	2	2	3	3	4	4	5	6	6	7
	8.0	1.7	1	1	1	1	0	0	0	1	1	1	0	0	1	0	1	0	1	1	1	0	1	1	1
		3.4	0	0	0	0	1	1	1	1	1	1	1	2	2	2	3	3	4	4	4	6	6	7	8

Table 4

Number of battery cabinets; battery weight

Battery capacity C10 at 1.8 V/C and +20°C	5.5	8.5	11.6	14.0	23.3	32.0	39.8	50.4	53.7	66.2	85.7	89.4	106.0	118.0	143.1	155.6	178.8	195.4	245.0	268.2	308.0	357.6
No. of battery cabinets (weight approx. 150 kg) per cabinet	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	3	3	3	4	4
Total weight per battery set approx. kg	45	65	68	100	180	243	252	351	405	499	527	594	612	900	1000	1093	1296	1354	1687	1782	1782	2376

Table 5.1

Calculation of ventilation of electrical rooms acc. to DIN EN 50272-2 (calculated for boost charge):

Battery 216 V	5.5	8.5	11.6	14.0	23.3	32.0	39.8	50.4	53.7	66.2	85.7	89.4	106.0	118.0	143.1	155.6	178.8	195.4	245.0	268.2	308.0	357.6
Air volume flow req. for the ventilation of the place of installation [m³/h]	0.24	0.37	0.50	0.60	1.01	1.38	1.72	2.18	2.32	2.86	3.70	3.86	4.58	5.10	6.18	6.72	7.72	8.44	10.58	11.59	13.31	15.45
Vent cross-section of the air inlets and outlets of the place of installation [cm²]	6.65	10.28	14.03	16.93	28.18	38.71	48.14	60.96	64.96	80.08	103.66	108.14	128.22	142.73	173.09	188.21	216.28	236.36	296.35	324.41	372.56	432.55

Table 5.2

Calculation of ventilation of electrical rooms acc. to DIN EN 50272-2 (calculated for float charge)*:

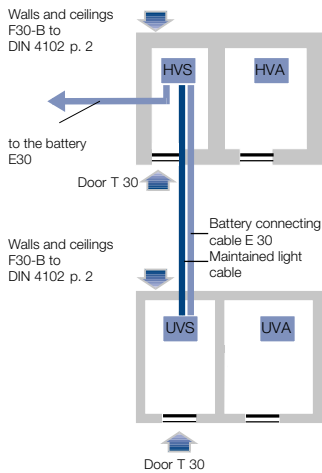
Battery 216 V	5.5	8.5	11.6	14.0	23.3	32.0	39.8	50.4	53.7	66.2	85.7	89.4	106.0	118.0	143.1	155.6	178.8	195.4	245.0	268.2	308.0	357.6
Air volume flow req. for the ventilation of the place of installation [m³/h]	0.03	0.05	0.06	0.08	0.13	0.17	0.21	0.27	0.29	0.36	0.46	0.48	0.57	0.64	0.77	0.84	0.97	1.06	1.32	1.45	1.66	1.93
Vent cross-section of the air inlets and outlets of the place of installation [cm²]	0.83	1.29	1.75	2.12	3.52	4.84	6.02	7.62	8.12	10.01	12.96	13.52	16.03	17.84	21.64	23.53	27.03	29.54	37.04	40.55	46.57	54.07

* If a boost charge only occurs occasionally (e.g. monthly), the float charge current can be used for calculation of the air volume current of ventilation.

Central battery system ZB-S with STAR technology

Accommodation

Example 1



A number of rules and regulations apply to the accommodation of central battery systems, in particular the EitBauVo, DIN EN 50272-2, MLAR and LBO. Depending on the constructional circumstances, the following accommodation possibilities result from these rules and regulations.

Example 1:

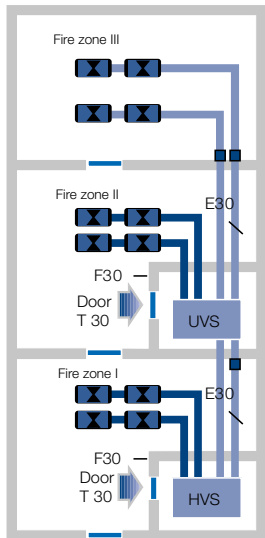
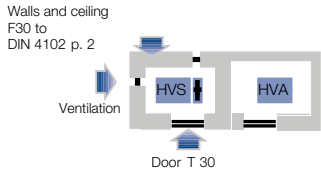
Main distribution board of the general lighting power supply (MDB) and main distribution board of the emergency lighting power supply (ZB) in an electrical room.

In case of accommodation acc. to example 1, attention must be paid that the MDB and ZB are isolated from each other so that arcing is safely prevented.

Example 2:

Main distribution board of the emergency lighting power supply (ZB) including the battery, in a separate electrical room.

Example 2



Example for the possible accommodation of a ZB-S and laying of cables which, however, depend on the building's use.

Ventilation of electrical rooms

Dimensioning of the ventilation acc. to DIN EN 50272-2. The ventilation of rooms, cabinets or containers in the inside of which batteries are operated, is considered sufficient, if a min. air volume flow is ensured that has been calculated according to the following formula:

$$Q = 0.05 \times n \times I_{\text{gas}} \times C_N \times 10^{-3} \text{ [m}^3/\text{h]}$$

Q = needed air volume flow, in m³/h

0,05 = fixed factor

n = no. of accumulator cells

I_{gas} = current in mA per Ah, fits 8 mA per Ah for I_{boost} with VRLA batteries

C_N = capacity C₁₀ for lead acid at 20 °C

Berechnungsbeispiel für den benötigten Luftvolumenstrom einer ZB-S mit 155,6 Ah Bleibatterie verschlossen:

$$Q = 0.05 \times n \times I_{\text{gas}} \times C_N \times 10^{-3}$$

$$Q = 0.05 \times 108 \times 8 \times 155.6 \times 10^{-3} \text{ m}^3/\text{h}$$

$$Q = 6.72 \text{ m}^3/\text{h}$$

In order to ensure the air volume flow of 6.72 m³/h, the air inlets and outlets in the electrical distribution room must have the following minimum cross-sections acc. to DIN EN 50272-2.

Vent cross-section of the air inlets and outlets:

$$A \geq 28 \times Q$$

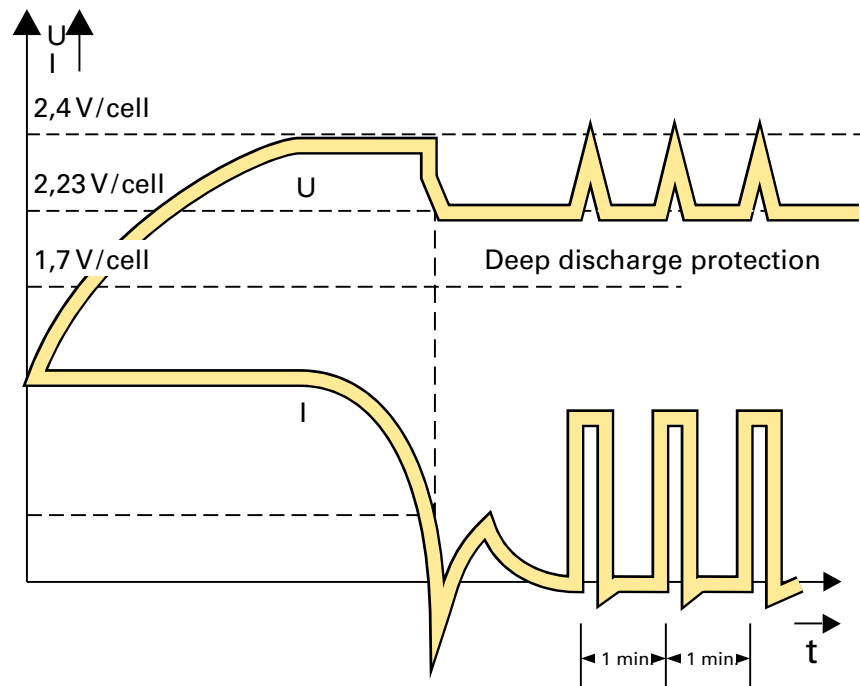
$$A \geq 28 \times 6,72 \text{ m}^3/\text{h}$$

$$A \geq 188,21 \text{ cm}^2$$

The required vents in the F90 walls must be guarded by fire protection measures, e. g. F90 fire shutters. As the calculation shows, the use of even the largest battery does not require an elaborate technical ventilation (e.g. explosion protected fans).

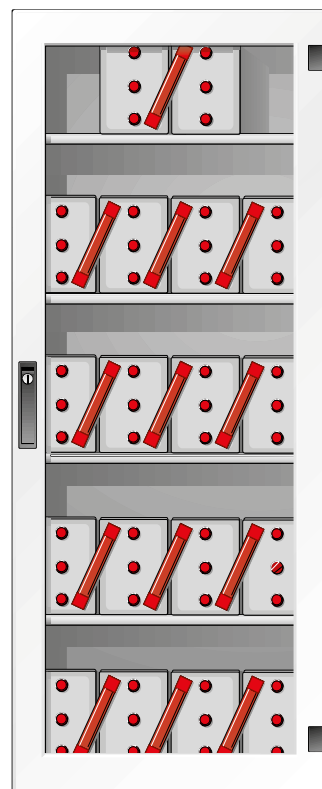
Due to the installed low maintenance of sealed lead acid gas recombination batteries, no further special constructional requirements such as a floor resistant to electrolyte or a floor covering (tiles) etc. have to be met.

VRLA valve regulated lead acid monobloc batteries can operate in any position. Exception on top.



Properties of environmentally friendly battery technology:

- low-maintenance, leak-proof gas recombination battery block
- extremely low gassing due to antimony-free alloys and an internal recombination of the generated oxygen
- service life: 10 years
- density of acid between 1.24 kg/l and 1.26 kg/l
- design according to DIN
- electrolyte and aerial oxygen proof pole bushing
- low self-discharge, therefore the possibility of long rest periods during transport and storage



The patented CEAG charge monitoring method enables the recognition of:

- a blown fuse
- a failure in the charging circuit
- a faulty charging unit
- missing batteries
- battery voltage monitoring

Central battery system ZB-S with STAR technology

Specifications

Central Battery System ZB-S



CEAG Central Battery System ZB-S

Central battery system ZB-S complies with EN 50171 and BGV A3 to supply power to 230V/216V AC/DC safety and exit luminaires. Suited for Emergency escape lighting systems complies with DIN VDE 0100-718, DIN EN 50172 and E DIN VDE 0108-100. With automatic test device and individual status and name monitoring each luminaire in conjunction with system-dependent electronic ballasts including monitoring module, without additional data cable.

The switching mode of each of the safety and exit luminaires with system-dependent electronic ballasts or monitoring modules can be programmed as required in the control module of the central battery system. An additional data cable to the luminaires is not required.

The CEAG STAR technology greatly reduces the number of final circuits, as it is now possible to combine operation of maintained light, switched maintained light and non-maintained light in a single common circuit.

Assignment of all operating modes is via the control unit without encroaching in the luminaire installation. Selection of the non-maintained light or maintained light operating modes via possibly slide switch, coding switch or jumpers on the monitoring module or ECG / LED supply module is not permitted. Surplus costs to installation lines caused by use of devices from other manufacturers or additional components cannot be made valid.

Electronic assemblies in service-compatible module design wired ready for connection to triple deck installation terminals with N isolating terminal 4 sq. mm (AWG 11) and PE connection. The assemblies are simple to install and replace with rapid connections. Simple connection method via pluggable terminal connection to the assemblies.

Connection compartments from above or below on touch-protected connection terminals. With optionally installed distribution box for battery supply and mains supply to the substations including fusing. Design with modular plug technology.

Bus technologies

CG-S bus technology based on LONWorks®-technology

The 2-pole, bi-directional CG-S data bus in series integrated in the control module is used for data communication between the Central Battery System and connected substations or monitoring devices like CG-Controller or CG-Vision (visualisation software).

With an optional available interface-box each Building Management System which is based on LONWorks®-technology can communicate with the systems via the CG-S – bus.

Alternative each Building Management System which is OPC compatible can be connected to the CG-S – bus via an optional available OPC – Server and interface-box.

So the CG-S-Bus has the possibility to call off voluminous status messages and control commands without additional modules.

The following data can be communicated in this way:

- Output data, e.g., system blocked, deep discharge protection, battery open circuit, battery voltage, current and temperature, insulation fault, charger / booster malfunction, bus communication error, mains failure, circuit malfunctions etc.
- Input commands, e.g., start function test, start and cancel operating time test, manual reset, block and release device

16 virtual input switches enable via external LON-sensors to switch independently circuits or even separate luminaires.

Networking of all ZB-S distribution boards with different media. For example fiber optic cable, Ethernet and LAN by optional components possible.

Status and error messages of individual luminaires are recallable.

External units such as the DLS/3PH bus module, DLS/3PH bus module inverse and TLS bus module are connected with the RS485 bus.

Only the power supply cable is required for communication with the system-dependent luminaires.

The central system uses a search function to automatically find the system-dependent luminaires and modules that were addressed when the system was installed.

Control module

A user-programmable control module with non-volatile program memory and 4-line alphanumeric graphic display monitors and controls the central battery system. All functions such as charging, mains/emergency lighting selection and deep discharge protection of the devices and the emergency luminaires are tested automatically. Any faults that occur are signalled immediately.

An interface enables a central monitoring facility to be connected.

In the event of a short circuit or open circuit in current loops, differential monitors immediately power on the system (maintained light) or put the system in readiness.

Graphic display:
4 x 20 characters, backlit, program adjustable contrast and brightness

Readouts:

Battery voltage, battery charge current (+), battery discharge current during test or in case of fault (-), charging malfunction, luminaire fault indicating the location in plain text, deep discharge protection, manual reset, time-delayed emergency light (remaining time in minutes), test operation, date/time, insulation fault indicating the faulty circuit, UV-AV failure (indicating the location in plain text), fault information, programming information, logbook.



LED indicators: Ready for operation, power source for safety purposes, fault.

Sealed keypad:

- separate keys for system test, function test, operating duration test
- 3 programmable function keys for e.g.: system disable/enable, manual reset, maintained light On/Off, show fault list, through lighting On/Off, mains failure simulation UV
- 7 control keys for user-friendly navigation in polling and programming mode.

Each module also has its own service button which can be used to view directly the current module status in the display.

Programming possibilities:

individual luminaire monitoring, current value monitoring, individual name per device, circuit, luminaire and bus-module, device address, selective manual reset, delay on mains return (1-15 min.), selective emergency light, LON switch, timer function, automatically function and battery duration test, selection of menu language.

Connection for disable switch:

Control loop for disabling the installation during factory shutdowns with differential loop monitoring for short-circuit and open circuit detection.

Differential monitoring: Short-circuit or open circuit result in readiness for operation of the system.

Connection for phase monitor:

24 V current loop for requesting emergency lighting using differential loop monitoring for the detection of short and open circuits.

Differential monitoring: Short-circuit or open circuit result in the immediate power on (maintained light) of the system.

3 floating relays with common potential.

One or more of 11 different signals can be assigned to each floating contact or to the buzzer. Freely programmable, DIN VDE requirement can be called at any time as a preset.

2 floating relays with common potential (permanently programmed).

Connection for 24V inputs:

4 off user-assignable 24V inputs, can be programmed negated or non-negated for, e.g.

Function test start/cancel, operating duration test start/cancel, system disable/enable, manual reset, maintained light On/Off, power on safety lighting as through lighting.

Memory Card:

Storage card for archiving the device configuration and mandatory test log information for at least 2 years.

Provides storage for:

- 300,000 test log entries
- Location texts for the luminaires (20 characters per luminaire)

- Location texts of external modules such as phase monitor, DLS, TLS (20 characters per module)
- Names of the circuits (20 characters per circuit)
- System name (20 characters)

Can be programmed offline on a PC using optional CEAG software.

Charging technology

The completely sealed, low-maintenance lead batteries are carefully charged using a micro-processor-controlled I/U charging characteristic with temperature control. Depending on the charge state of the batteries, boost charging is activated to allow the batteries to be charged without exceeding the gassing voltage. The patented charge monitoring process continuously checks the charge and immediately signals faults such as battery open circuit, a faulty charging module or a high-resistance cell.

- With insulation tester to DIN VDE0100 Part 410
- Depending on battery size, with additional charging modules
- LED indicators for charging module on, boost charging on, insulation fault, charging malfunction, mains present
- Floating contacts for charging malfunction, boost charging, insulation fault
- Temperature sensor built into battery cabinet
- Alternate activation of charging modules at trickle charge

Circuit modules for installation on gear tray

The circuit changer supplies and monitors emergency luminaires with electronic ballasts for DC operation and incandescent lamps. The CEWA GUARD monitor checks the function of the luminaires that are connected to the system.

- Up to 20 luminaires can be monitored per circuit with individual status display
- Combined operation of maintained light, switched maintained light and non-maintained light within one circuit is possible. An additional data cable to the luminaires is not required.
- Output voltage in battery mode: 216V DC
- Typical mains / battery switchover time: 450ms,
- User programming for maintained light, switched maintained light or non-maintained light,
- Fuses easily accessible on the front of module,
- permanent monitoring of the fuses.
- LED indicates fault and Run/ON for each circuit
- service button, used to view directly the current module status in the display
- at 3phase feeding selective mains- / battery switchover per phase / module carrier
- automatically luminaire search function

Central battery system ZB-S with STAR technology

Specifications



Circuit modules DIN rail mounting

The circuit changer supplies and monitors emergency luminaires with electronic ballasts for DC operation and incandescent lamps. The CEWA GUARD monitor checks the function of the luminaires that are connected to the system. Separate AC feed for rental current. Decentral arrangement and connection via the RS485 bus for fire protection section-related supply of the safety lighting.

- Up to 20 luminaires can be monitored per circuit with individual status display
- Combined operation of maintained light, switched maintained light and non-maintained light within one circuit is possible. An additional data cable to the luminaires is not required.
- Output voltage in battery mode: 216V DC
- Typical mains / battery switchover time: 450ms,
- User programming for maintained light, switched maintained light or non-maintained light,
- Fuses easily accessible on the front of module,
- permanent monitoring of the fuses.
- LED indicates fault and Run/ON for each circuit
- service button, used to view directly the current module status in the display
- automatically luminaire search function

Sinus Inverter

The sinus inverter supplies and controlled emergency luminaires with conventional ballasts and bulbs. With rotary encoder switch for adjustment of the luminous flux in range of 25% to 100% in battery mode.

- monitoring each module,
- 230V AC sinus voltage in mains and battery mode,
- Adjustable luminous flux in range of 25% up to 100% in battery mode,
- Typical switch over time mains / battery 450ms,
- Alternative mains input each module or via back plane with mains power failure notification,
- 3-phase mains incoming selective mains / battery switch over each phase / back plane,
- Additional light switch polling (DLS) for the common switching of safety and general lighting,
- free programming for maintained, non maintained and switched maintained mode,
- Fuses easily accessible on the front of module,
- permanent monitoring of the fuses,
- service button, used to view directly the current module status in the display

External DLS/3Ph Bus Module

The external DLS/3PH bus module for installation in sub-distribution boards for the general lighting can be used as a phase monitor and for light

switch polling (DLS) for the common switching of safety and general lighting systems.

8 DLS inputs (2.5 sqmm) with LED indicators or 5 DLS inputs combined with 3 phase monitor inputs can be activated by a selector switch.

Monitoring thresholds comply with DIN EN 60598-2-22: 60-85% UNOM.

Connection of RS485 bus and 24 V module supply.

Addressable by decode switch, LEDs for Fault, ON status and Run.

Enclosure for DIN rail mounting.

User-programmable assignment of independent DLS inputs for each emergency light circuit or luminaire as well as individual name per bus-module in the control module.

When using as a 3 phase monitor the detailed phase failure information with location of the mains distribution board will be displayed in the control module.

External DLS/3Ph Bus Module inverse

The external DLS/3PH bus module inverse for installation in sub-distribution boards for the general lighting can be used as a phase monitor and for light switch polling (DLS) with inverse switching logic for the common switching of safety and general lighting systems or for the control of the circuit-breaker.

8 DLS inputs inverted (2.5 mm²) with LED indicators or 5 DLS inputs inverse combined with 3 phase monitor inputs can be activated by a selector switch.

Monitoring thresholds comply with DIN EN 60598-2-22: 60-85% UNOM.

Connection of RS485 bus and 24 V module supply.

Addressable by decode switch, LEDs for Fault, ON status and Run.

Enclosure for DIN rail mounting.

User-programmable assignment of independent DLS inputs for each emergency light circuit or luminaire as well as individual name per bus-module in the control module.

When using as a 3 phase monitor the detailed phase failure information with location of the mains distribution board will be displayed in the control module.

External TLS Bus Module

The external TLS bus module is used to poll stairwell light pushbuttons and to supply the glow lamps in both mains and emergency mode. General and safety luminaires can be controlled with the same pushbuttons by using a TLS switching module (installed in the lighting distribution system).

2 pushbutton inputs (2.5 mm²) including supply of glow lamps, max. 50 mA per TLS input.

2 load circuits for general lighting (2.5 mm²), max. 10 A per circuit (120 A/ms).



Variable 'on' time ranging from 1 to 15 minutes, including glow lamp flash function 30 s before the end of the preset on time.

Connection of RS485 bus, 24 V module power supply and supply cable from final circuit for the generation of the glow lamp voltage.

Addressable by decode switch, LEDs for Fault, ON status and Run.

Enclosure for DIN rail mounting.

User-programmable assignment of independent TLS inputs for each emergency light circuit or luminaire as well as individual name per bus-module in the control module.

Event printer PD3

- For logging and storage of operating states on a ZB-S installation or US-S substation
- With built in 4-needle-printmechanism.

Relay module CG IV

Relay module for signalling the following operating states using potential-free contacts:

Emergency/mains operation, emergency lighting/charging failure, deep discharge

protection, function test on/off, operating time test on/off.

8 pcs. LED indicators for indications given above

Relay module CG V

Relay module for signalling the following operating states using potential-free contacts:

Contact "No operation" is closed during: Unit blocked, deep discharge protection, relay module voltfree,

Contact "Failure priority 1" is closed during: Charger and booster failure, battery failure.

Contact "Failure priority 2 is closed during: Circuit fuse defect.

Contact "Failure priority 3 is closed during: Luminaire failure.

Contact "Emergency Lighting Operation" is closed during: Mains failure, delay on mains return, manual reset, function- and duration test.

Webmodul

Webmodul ZB-S for visualisation and monitoring of a central battery system, Type ZB-S via a local ethernet (LAN) or internet (WWW) with a usual WEB-Browser. An access to the webmodule via internet (WWW) must be administrated from an IT-department at site!

Integrated mail-client for a comfortable, event orientated failure information, for up to 5 E-mail recipients. Access via administrator account or guest account, with password protection.

- Easy menu structure
- Full visualisation and monitoring of a ZB-S (central battery system) via ethernet (LAN) with usual WEB-Browser (e.g. Internet Explorer, Firefox etc.)
- Display of all actual operation modes

- Local failure information of each emergency circuit and luminaires with destination information in plain text
- Permanent actual information of the charging unit and the battery
- Parallel access to the webmodule from different workstations possible (max. 8)
- Integrated mail-client for comfortable failure notification via mail
- Type of different failures for the mail transmission selectable
- Up to 5 mail-recipients programmable
- Actualisation cycle of the web browser via the webmodule adjustable
- Authenticated access via administrator-account with password protection
- Adjustable guest account with restricted access with password protection
- Static or dynamic (DHCP) IP-addressing possible
- Any number of web modules can be operated in parallel
- Overview display of all active web modules in intranet with status display and hyperlink function

Supply voltage: 24V DC

Power consumption: < 1,5W

LAN connection: RJ45

Housing: Polycarbonat for DIN-rail mounting, 2TE

Dimmensions: L=90 mm, W=35 mm, H=58 mm

Weight: approx. 100 g

Degree of protection: IP20

216V OGiV Battery Block

Only low-maintenance- sealed leak-proof OGiV block batteries are used. Nominal operating time 1, 3 or 8 h.

- Extremely low gassing
- Service life 10 years at 20 °C
- Low self-discharge
- Designed to IEC 896-2 requirements
- Battery post bushings sealed against electrolyte and atmospheric oxygen

CEAG is a member of the 'Stiftung Gemeinsames Rücknahmesystem Batterien (GRS)', a battery take back scheme operated jointly by German battery manufacturers.

Under this scheme, batteries undergo proper and complete recycling, thus allowing materials that may be environmentally harmful to be recovered and used to make new products.

The 'Specification for Tender' on the following pages is based on CEAG supplied products. These products must be offered for comparability. The bidder may offer a different supplier of equivalent design in an additional offer (the bidder must show equivalence). The tender must be

Central battery system ZB-S with STAR technology

Specifications



supported by detailed product descriptions to allow equivalence to be assessed:

Source of supply:

CEAG Notlichtsysteme GmbH
Senator-Schwartz-Ring 26
D-59494 Soest/Germany

Telefon +49 (0) 2921 69-870
Telefax +49 (0) 2921 69-617

Internet www.ceag.de
e-mail info-n@eaton.com

Furthermore, the evidence of a DIN EN ISO 9001:4500 Certification has to be provided.

Manufacturer without DIN EN ISO 9001:4500 certification are not admitted.

LONWorks®: registered trademark of Echelon Corporation

Table 2b

Calculation of the battery capacity of maintenance free OGiV batteries not acc. to EN 50171 (higher capacities on request)

Battery capacity C10 at 1.8 V/C and +20°C	Ah	5.5	8.5	14.0	23.3	32.0	39.8	50.4	53.7	66.2	85.7	89.4	106.0	118.0	143.1	155.6	178.8	195.4	245.0	268.2	308.0	357.6
													1 x 39.8 1 x 66.2		1 x 89.4 1 x 53.7	1 x 89.4 1 x 66.2	2 x 89.4	1 x 89.4 1 x 66.2 1 x 39.8	2 x 89.4 1 x 66.2	3 x 89.4	3 x 89.4 1 x 39.8	4 x 89.4
max. discharge current [A] with operating time [h], 1.7 V per cell and +20°C ambient temperature	1.0	3.4	4.7	9.7	16.7	20.8	26.2	31.7	40.9	52.6	55.3	66.8	78.8	90.0	107.7	119.4	133.6	145.6	186.2	200.4	226.6	267.2
	1.5	2.6	3.5	7.3	12.3	15.5	19.8	23.5	29.4	37.2	40.5	47.7	57.0	65.1	77.1	84.9	95.4	104.7	132.6	143.1	162.9	190.8
	2.0	2.2	3.0	6.1	9.8	12.7	16.0	19.2	22.8	28.6	32.9	37.2	44.6	51.7	60.0	65.8	74.4	81.8	103.0	111.6	127.6	148.8
	3.0	1.6	2.2	4.4	7.2	9.3	11.8	14.1	16.6	19.5	24.5	27.2	31.3	35.4	43.8	46.7	54.4	58.5	73.9	81.6	93.4	108.8
	8.0	0.7	1.0	1.8	3.0	3.9	5.1	6.1	6.8	8.2	10.8	11.2	13.3	14.9	18.0	19.4	22.4	24.5	30.6	33.6	38.7	44.8

Important note: The aging provision for batteries (25 %) is not included.

Table 3b

Number of 1.7 A and 3.4 A booster **not acc. to EN 50171** for recharging of 10 h and 20 h:

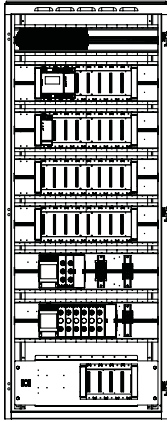
Recharging cycle [h]	h	A	5,5	8,5	14	23,3	32	39,8	50,4	53,7	66,2	85,7	89,4	106	118	143,1	155,6	178,8	195,4	245	268,2	308	357,6		
10	1.0	1.7	1	1	1	1	0	0	0	0	1	0	0	0	0	1	0	0	1	0	1	0	0	0	
		3.4	0	0	0	0	1	1	1	1	1	2	2	2	2	2	3	3	3	4	4	5	6	7	
	1.5	1.7	1	1	1	1	0	0	0	1	1	0	0	1	1	0	1	0	0	0	0	1	1	1	
		3.4	0	0	0	0	1	1	1	1	1	2	2	2	2	3	3	4	4	5	5	6	7		
	2.0	1.7	1	1	1	1	0	0	1	1	1	0	0	1	0	1	1	0	1	1	0	0	0	0	
		3.4	0	0	0	0	1	1	1	1	1	2	2	2	3	3	3	4	4	5	6	7	8		
	3.0	1.7	1	1	1	0	0	0	1	1	0	1	1	0	0	1	0	1	0	0	0	0	1	2	
		3.4	0	0	0	1	1	1	1	1	2	2	2	3	3	3	4	4	5	6	7	7	8		
	8.0	1.7	1	1	1	0	0	1	1	1	0	1	1	0	1	0	1	0	1	0	1	0	1	0	
		3.4	0	0	0	1	1	1	1	1	2	2	2	3	3	4	4	5	5	7	7	8	10		
	20	1.0	1.7	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	1	0	0	1	1	0	1
			3.4	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	2	2	2	2	3	3
1.5		1.7	1	1	1	1	1	1	1	0	0	0	0	1	1	1	0	0	0	0	1	0	1	0	
		3.4	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	2	2	2	2	3	3	4	
2.0		1.7	1	1	1	1	1	1	0	0	0	0	0	1	1	0	0	0	1	0	0	1	0		
		3.4	0	0	0	0	0	0	1	1	1	1	1	1	1	1	2	2	2	2	3	3	3	4	
3.0		1.7	1	1	1	1	1	1	0	0	0	1	1	1	1	0	0	1	1	0	1	0	1		
		3.4	0	0	0	0	0	0	1	1	1	1	1	1	1	1	2	2	2	2	3	3	4	4	
8.0		1.7	1	1	1	1	1	0	0	0	0	1	1	1	0	0	1	1	0	1	0	1	0		
		3.4	0	0	0	0	0	1	1	1	1	1	1	1	1	2	2	2	2	3	3	4	4	5	

Central battery system ZB-S with STAR technology

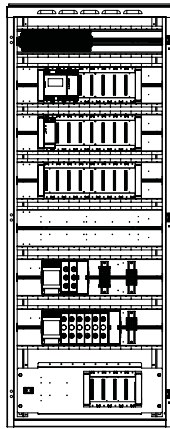
Appendix overview cabinets

Central battery systems

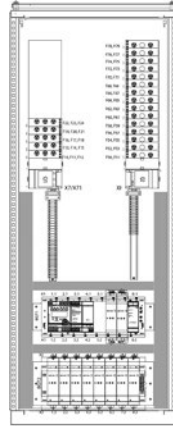
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ZB-S/18



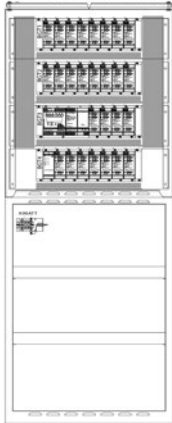
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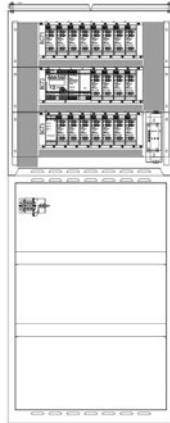
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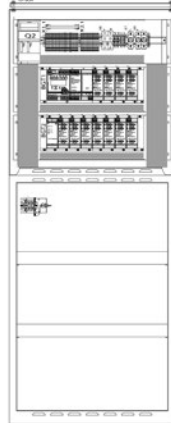
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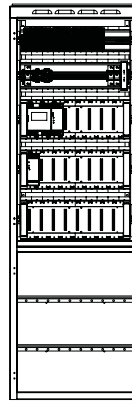
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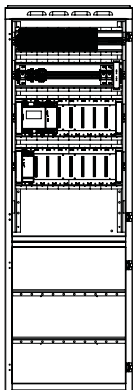
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ZB-S/18C3



ZB-S/10C3



ZB-S/2C3

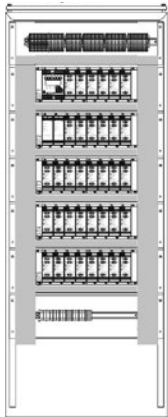


Central battery system ZB-S with STAR technology

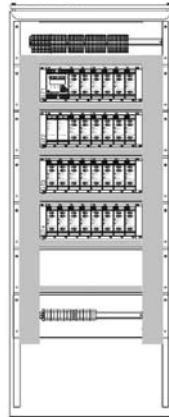
Appendix overview cabinets

Substations

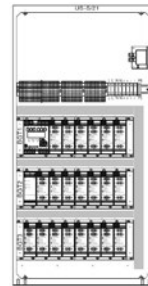
US-S/36



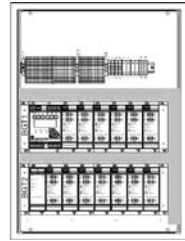
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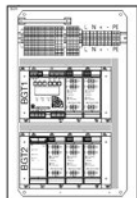
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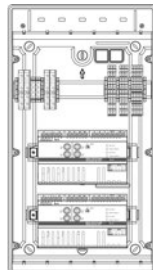
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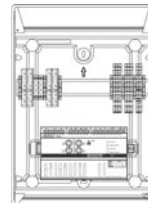
US-S/5



US-S/SOU2

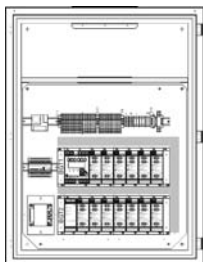


US-S/SOU1

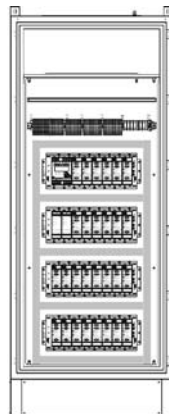


Substations with functional integrity

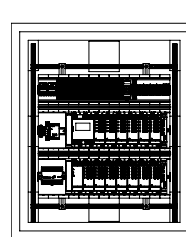
ESF-E30/13S



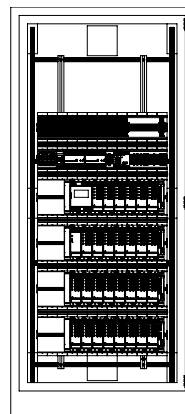
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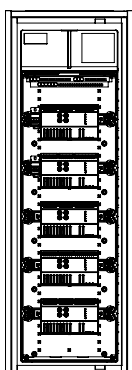
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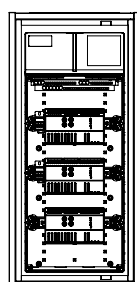
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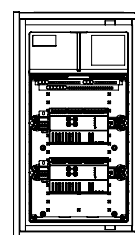
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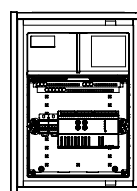
US-S ESF30 SOU3



US-S ESF30 SOU2



US-S ESF30 SOU1





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Bitte verhalten Sie sich in den Bibliothek
möglichst leise, damit Ihre Mitbenutzer
nicht gestört werden können.
Guten Abend
an Mitarbeiterinnen

Lesende Öffnungszeiten
A 02-25.02.2013
Di - Fr 08:00 - 19:00 Uhr
Sa 09:00 - 17:00 Uhr
Pausenzeiten
Di - Fr 08:00 - 09:00 Uhr





LP-STAR: Safe and cost efficient operation with installation per area



Simple installation and reliable power supply



3

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?

S = Switching
T = Technology
A = Advanced
R = Revision

S_{TAR}
TECHNOLOGY

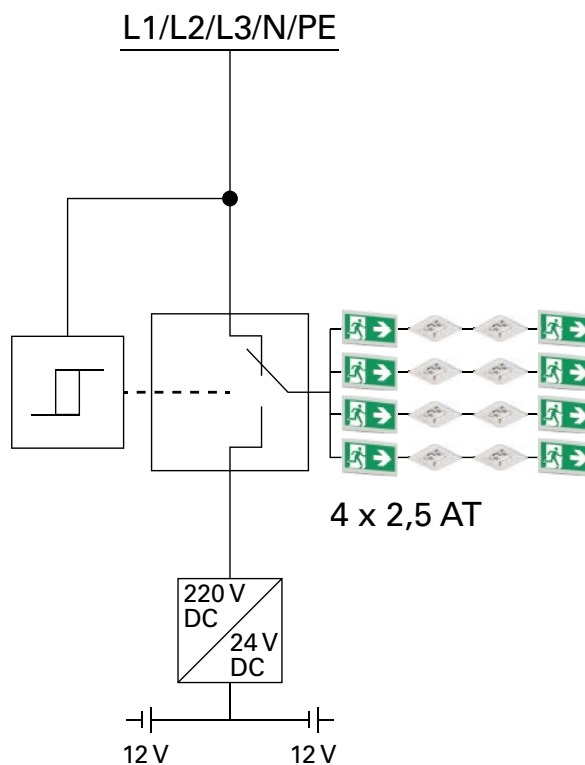
Switch to safety!

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.

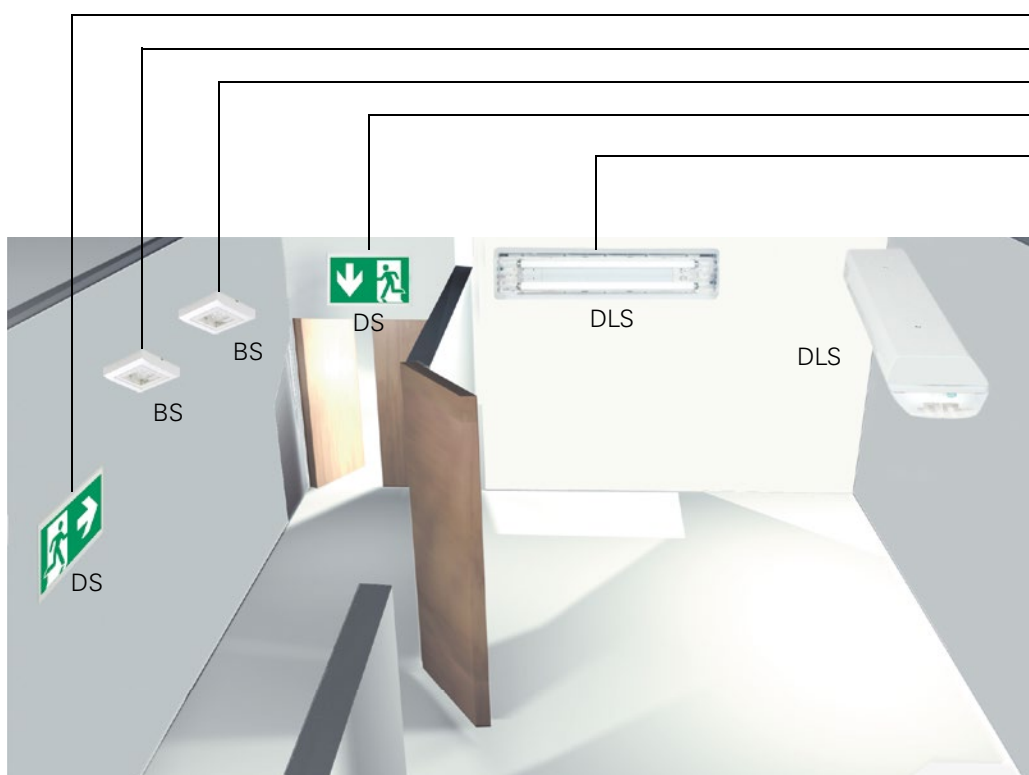


Your Advantages:

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.

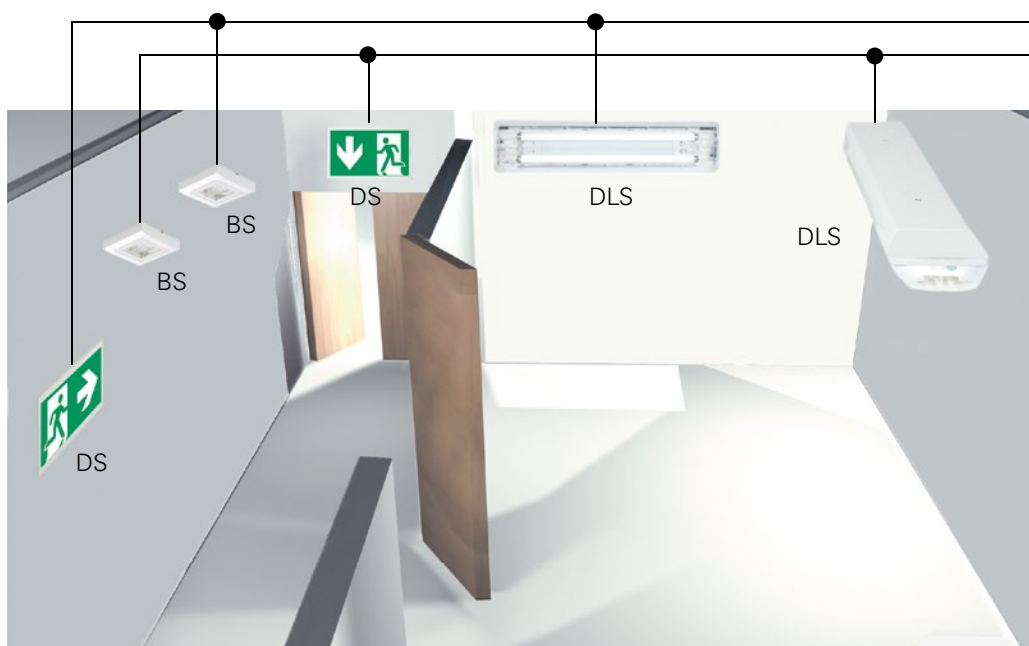


Conventional Installation:

- Maintained light 1 (DS)
- Non-maintained light 1 (BS)
- Non-maintained light 2 (BS)
- Maintained light 2 (DS)
- Switched maintained 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

3



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)

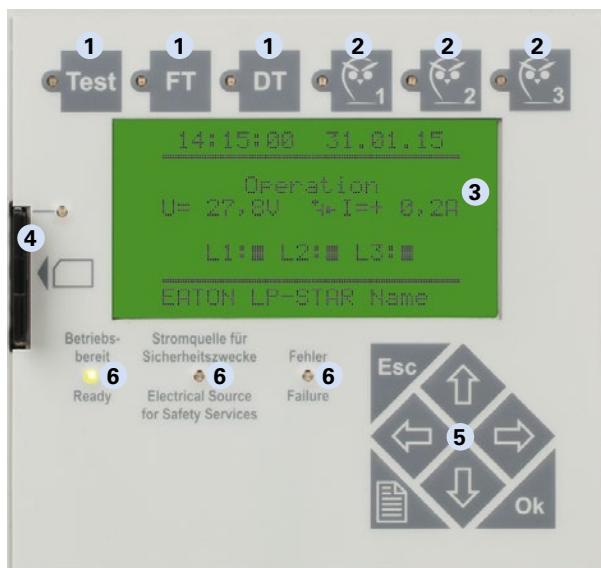
The interface for connecting to a CGVision can be installed on site, see page 13.

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

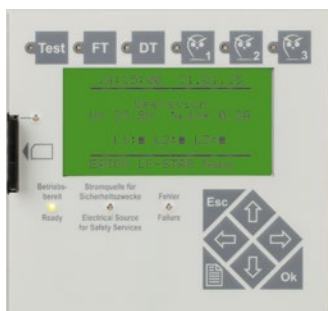
Back-lit, adjustable contrast and brightness

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



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



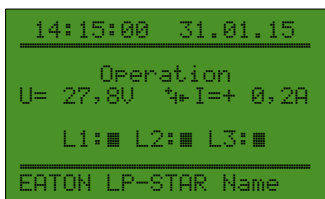
7 control keys

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	<ul style="list-style-type: none"> ☐ Ready ☐ Electrical source for safety services ☐ Failure

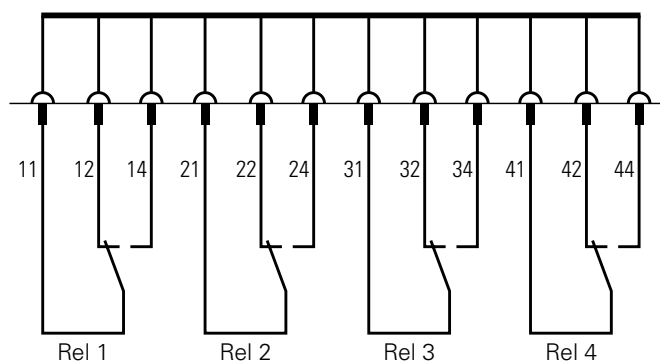
Potential-free signal contacts, buzzer

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.

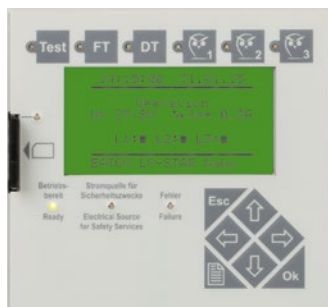
Storing of:

- 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 Replacement SD-Card

Type	Model	Order No.
SD card	SD card formatted for LP-STAR	40071347911
SD card reader	SD card reader for USB port	40064070561

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

Technical Data

LP-STAR 4-24



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 konstant
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
Max. rated current 24 V auxiliary voltage	6 W

LP-STAR 4-48



	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 / 12 Ah	6 x 12 V / 12 Ah	8 x 12 V / 12 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	

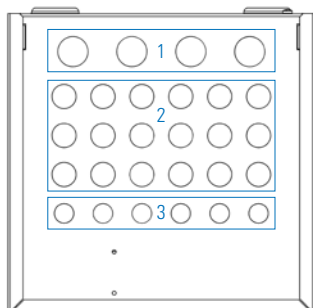
* Maximum Design Lifetime at +20 °C: 10 years

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 pieces	4 pieces: 15.25 8 pieces: 30.50

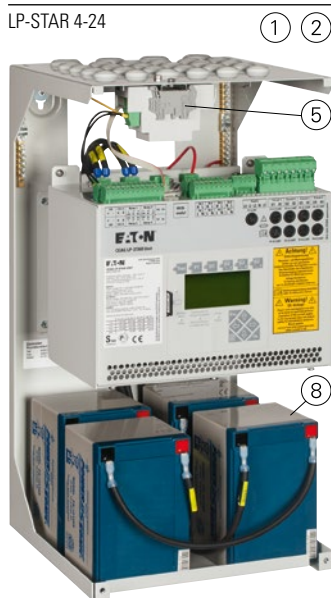
Pre-cut cable entries LP-STAR

(11)



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

LP-STAR 4-24



Ordering details

Type	Model	Order No.	Selection
1 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	<input type="checkbox"/>
2 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	<input type="checkbox"/>
3 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	<input type="checkbox"/>
4 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	<input type="checkbox"/>

Construction group ordering details

Type	Model	Order No.	Selection
5 Webmodule LP-STAR	Module for DIN Rail Mounting, incl. connection line without patch cable RJ45, factory fitted	40071361188	<input type="checkbox"/>
6 Webmodule LP-STAR	Module for DIN Rail Mounting, incl. connection line without patch cable RJ45, for expansion	40071361187	<input type="checkbox"/>
7 CG-S Bus Interface* Attention: Installation must factory-provided happened	Interface* for connection on CGVision or for MasterSlave operation (Connection of more LP-STAR over the CG-S Bus)	40071071178	<input type="checkbox"/>

* **Attention:** The installation of the CG-S Bus Interface must factory-provided happened. A expansion of the module locally is only possible with exchange of the full CSU module. MasterSlave and CGVision operation isn't possible.

LP-STAR 4-48



Battery ordering details

Type	Model	Order No.	Selection
8 12 V/12 Ah	Battery block, period of use: 10 years Period of use specified for a max. battery temperature of +20 °C	40066071147	<input type="checkbox"/>

Fuse ordering details

Type	Model	Order No.	Selection
9 Final circuit fuses	2.5 AT / 250 V (packaging unit 10 pieces)	40071361235	<input type="checkbox"/>
10 Mains feed-in circuits	6.3 AT / 250 V (packaging unit 10 pieces)	40071361234	<input type="checkbox"/>

Accessories ordering details

Type	Model	Order No.	Selection
11 Clamping gland set, 28 pieces	4 x M25, 18 x M20, 6 x M16	40071361159	<input type="checkbox"/>

Optional Webmodule LP-STAR, for expansion



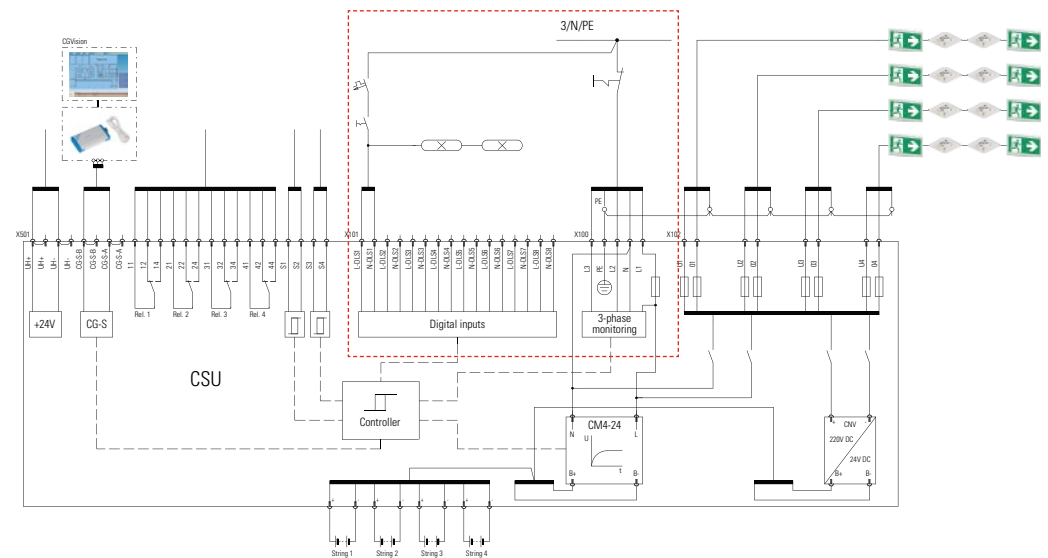
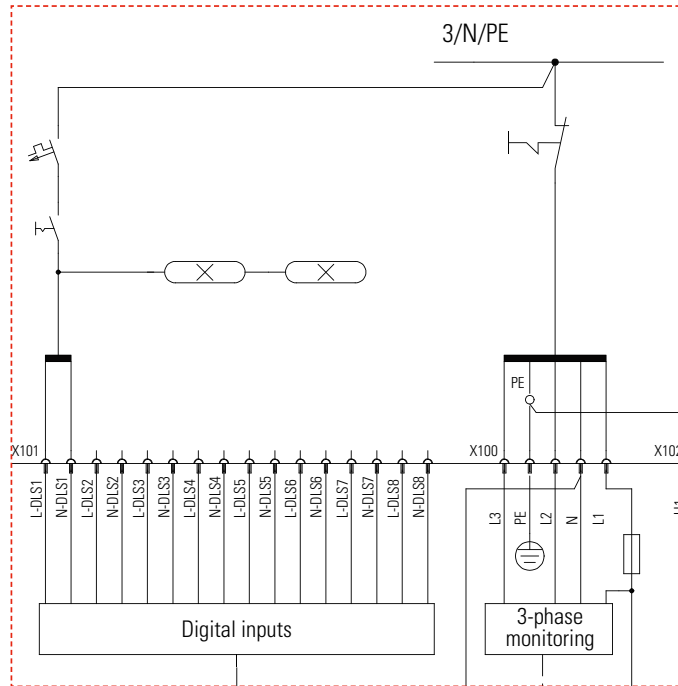
LP-STAR emergency lighting power supply in a compact design

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



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.

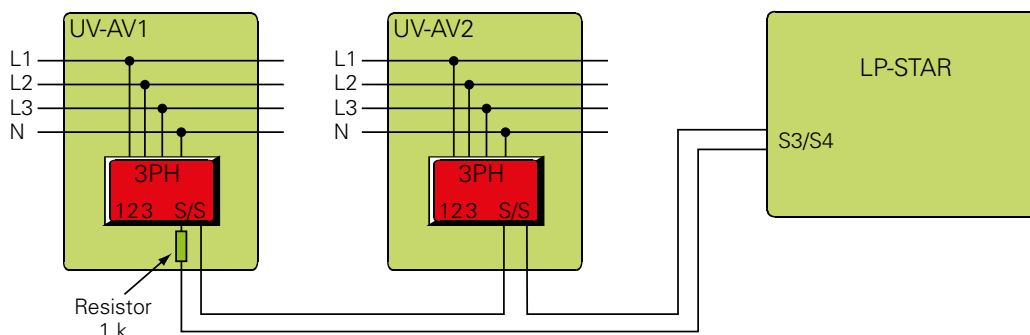
Dimensions in mm (W x H x D)	85 x 52.5 x 65, 3 subunits
Housing	Plastic, red
Connection terminals	2.5 mm ² rigid or flexible
Type of mounting	DIN mounting rail
Contact	0.5 A/24 V AC/DC, 1 x open contact, 1 x change-over contact
Trigger threshold	U < 85 % UN
Grid size	3 units

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

LP-STAR emergency lighting power supply in a compact design

Components and options

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 mm ² solid or flexible
Dimensions in mm (W x H x D)	160 x 80 x 55
Connection terminals for flush-mounting	1.5 mm ² rigid or 1 mm ² 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

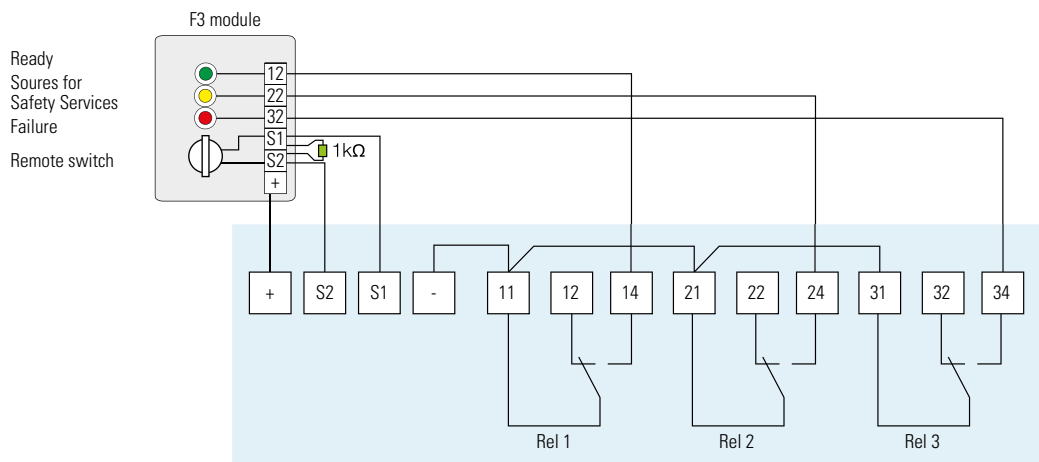


Ordering details

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:
F3 switch closed:
F3 switch open (1 kΩ):

Short circuit or interruption lead to unlock LP-STAR
Device ready
Device blocked

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 web-module 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

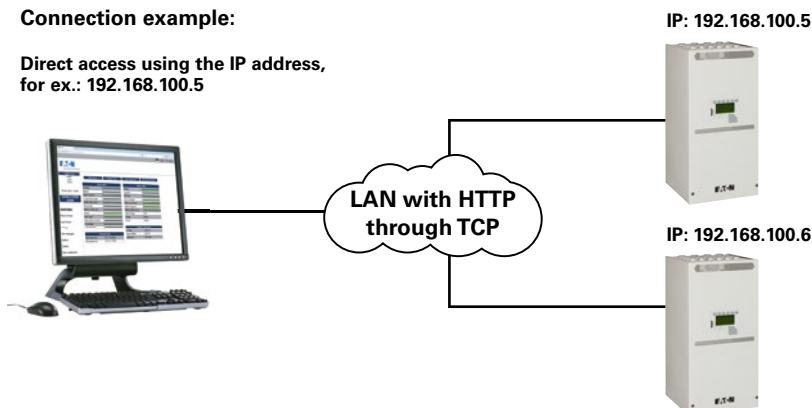
Device supply voltage	24 V DC
Rated power	< 1.5 W
Connection	RJ45
Degree of protection	IP20
Weight	0.1 kg
Dimensions	90 x 35 x 58
Housing	Polycarbonate

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

Components and options

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.

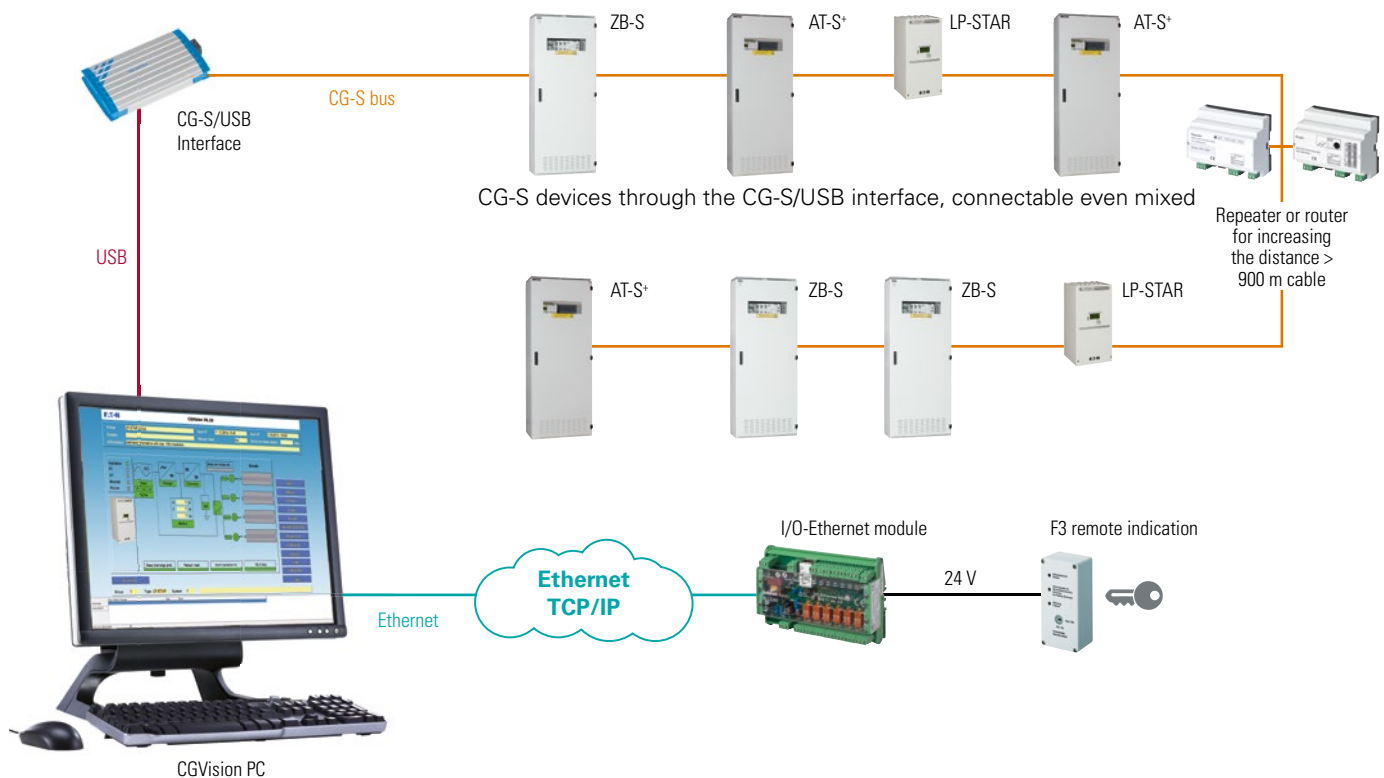
The bus cable can be extended with an optionally available repeater or router.

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.



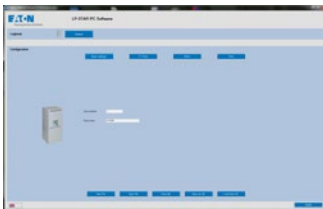
PC programming software LP-STAR

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:

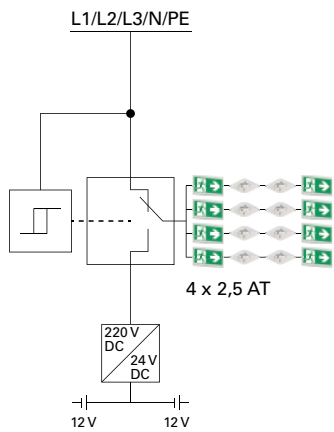
- Fault events (35 various fault events selectable separately or fully)
- Inspection log book period (from – to for date and time)
- Individual comment per print
- For luminaire failure: Information on individual luminaire and circuit names

Ordering details

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

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.


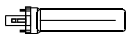
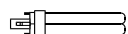

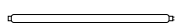

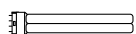
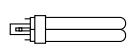

The CEWA GUARD monitoring checks the operation of the connected luminaires. Up to 20 luminaires can be connected.

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	Power consumption battery operation [W]*	Power consumption 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:

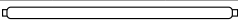
International term	Lamp cap	EVG Type	EVG ...	Lamp load in [W]	Battery operation P [W] at a luminous flux $\Phi_E/\Phi_{Rated} = 75\%$	Mains operation S [VA]	Inrush current [A]
T 16	G5		13.3 ...	4	4.4	8	3
			13.3 ...	6	5.5	12	3
			13.3 ...	8	6.6	16	3
			13.3 ...	13	11.0	23	3
TC-SEL	2G7		13.3 ...	5	4.4	10	3
			13.3 ...	7	5.5	13	3
			13.3 ...	9	6.6	16	3
			13.3 ...	11	8.8	18	3
TC-DEL	G24q-1		13.3 ...	10	7.7	16	3
			13.3 ...	13	11.0	23	3
TC-TEL	GX24q-1		13.3 ...	13	11.0	23	3
T 26	G13		18 ...	18	15.4	30	8
TC-F	2G10		18 ...	18	15.4	30	8
TC-L	2G11		18 ...	18	15.4	30	8
TC-DEL	G24q-2		18C ...	18	15.4	30	8
TC-TEL	GX24q-2		18C ...	18	15.4	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						
Lamp cap	T5	T5	T5	T5	T5	T5
Type N-EVG ... V-CG-S	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 %	18	24	33	40	29	42
90 %	15	22	29	35	26	37
80 %	14	20	26	31	22	33
70 %	13	18	24	29	20	29
60 %	11	15	22	24	18	26
50 %	10	14	20	22	15	24
40 %	9	12	18	20	15	22
30 %	8	11	15	18	13	20
Power consumption [VA]	18	25	32	39	28	41
Inrush current [A]	10	10	10	10	10	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			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 %	53	57	84	37	55
90 %	46	51	75	33	48
80 %	42	46	66	31	44
70 %	37	40	59	26	40
60 %	33	35	53	24	35
50 %	31	33	46	22	31
40 %	26	29	42	20	29
30 %	24	26	37	18	24
Power consumption [VA]	55	58	85	37	55
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:

max. cont. output: 330 W

Mains operation:

max. 345 VA apparent power
max. inrush current 250 A

max. output:

10011 CG-S: 8 x 1.9 W = 15.2 W

35 W/T5: 4 x 40 W (100 %) = 160.0 W

13011 CG-S: 2 x 5 W = 10 W

Total = 185.2 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 39 VA = 156.0 VA

13011 CG-S: 2 x 8.5 VA = 17.0 VA

Total = 205.0 VA **< 345 VA --> OK**

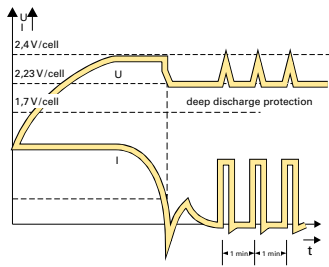
Attention!

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

When connecting external modules to the 24 V auxiliary supply, consider power consumption with battery sizing.

LP-STAR emergency lighting power supply in a compact design

Components and options

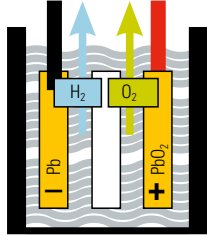


CM 4-24

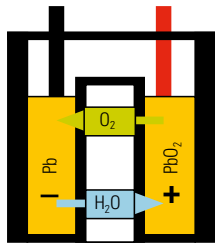
The completely sealed lead batteries are charged gradually based on an IUOU charging curve in function of temperature. Boost charge is activated in function of the battery charge level to ensure that the batteries are charged without exceeding the gassings voltage.

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.



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.

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 W (7.6 A)	303 W (15.2 A)	468 W (22.8 A)	540 W (27.1 A)
1.5 h	81 W (5.2 A)	204 W (10.5 A)	320 W (15.7 A)	437 W (21.0 A)
2.0 h	50 W (3.9 A)	142 W (7.8 A)	232 W (11.7 A)	320 W (15.6 A)
3.0 h	24 W (2.7 A)	86 W (5.3 A)	149 W (8.0 A)	212 W (10.7 A)
8.0 h	-	16 W (2.2 A)	38 W (3.3 A)	66 W (4.4 A)

¹⁾ Values incl. converter efficiency

²⁾ = Discharge current

Important note: The aging provision for batteries (25 %) is included.

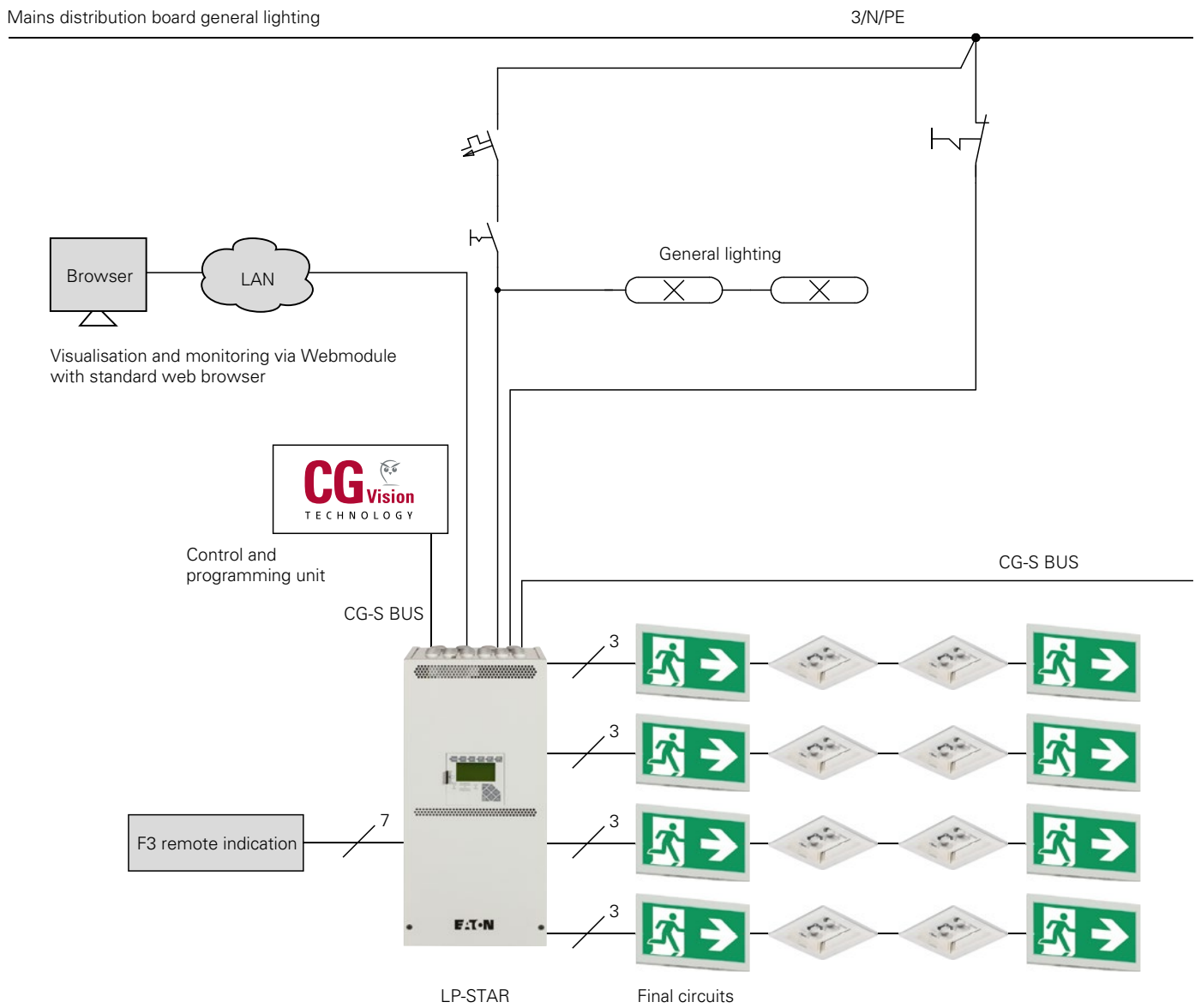
Evaluation of aeration and deaeration of electrical service rooms according to DIN EN 50272-2

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 [cm ²], 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 [cm ²], 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



3

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

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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.

LONWorks®: Registered trademark of the Echelon Corporation



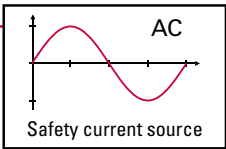
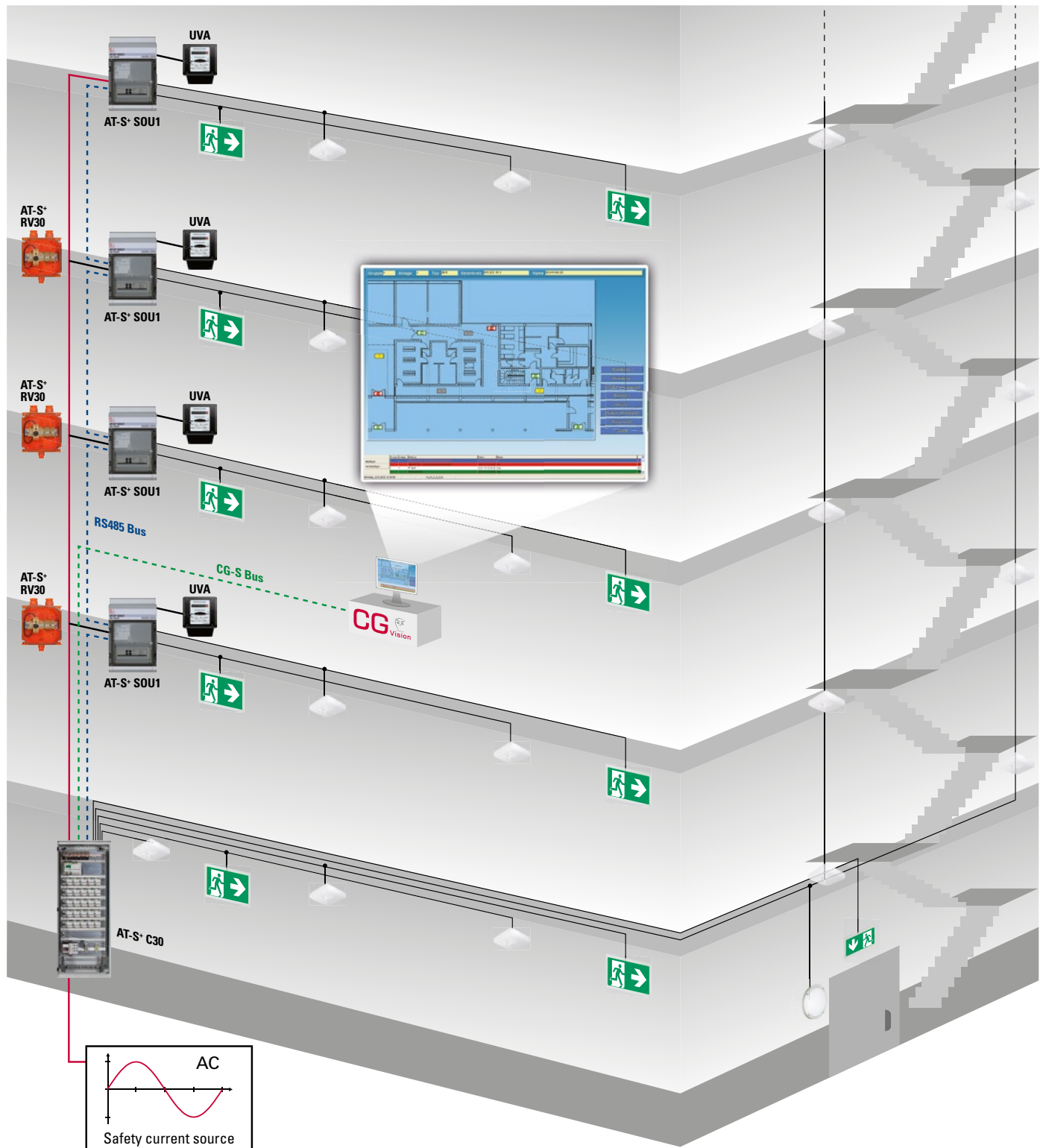


Reliable STAR technology for AC safety power sources



Automatic Test System AT-S+ with STAR+ Technology

Fire compartment-specific installation example



AT-S+ SOU1

Distribution box for area by area installation allows electricity costs allocation per rental area



AT-S⁺ offers all the known benefits of our STAR technology, now also for AC safety power sources. It is the perfect symbiosis of CEWA GUARD and STAR technology.

The Automatic Test System AT-S⁺ individually monitors each CG-S luminaire (up to 20 per circuit), and it does all this using the power supply cable alone.

The new STAR⁺ technology allows the switching mode of every connected V-CG-S luminaire to be freely programmed within a 50 or 60 Hz supply network using the system's controller.

This means that maintained light, switched maintained light and non-maintained light modes can be combined in one and the same circuit – there is no need for separate data cables!

The control module with its nonvolatile program memory and large graphic display automatically monitors and controls all components of the test system as well as emergency luminaires connected to it. Faults occurring are shown by the display, forwarded via freely configurable signal contacts and saved to an inspection book.

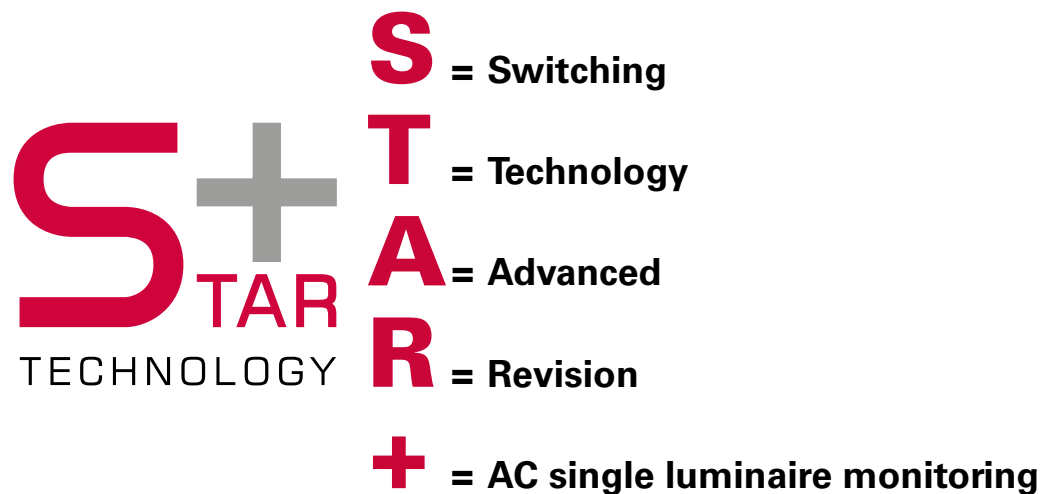
An integral search function automatically detects all system-dependent luminaires and modules that are assigned an address during installation. A central monitoring device can be connected via an interface.

Features:

- Shortened inspection effort due to STAR⁺ technology; automatic function monitoring of up to 20 luminaires per circuit
- Reduced installation expenditures by STAR⁺ technology; freely programmable mixed operation of the switching modes per luminaire in one circuit
- Less installation costs as no data line is required to the luminaires
- Automatic luminaire search function
- Plain text display on the control module down to the last luminaire
- Flexible data storage for test log and system configuration with memory card
- 30 minutes functionality in compliance with model directive for fire protection requirements on electrical wiring systems (MLAR model conduit systems directive), version 11/2005, tested by national material testing office

Automatic Test System AT-S⁺ with STAR⁺ Technology

What is STAR⁺?



Identify STAR⁺ market requirements and consistently implement them!

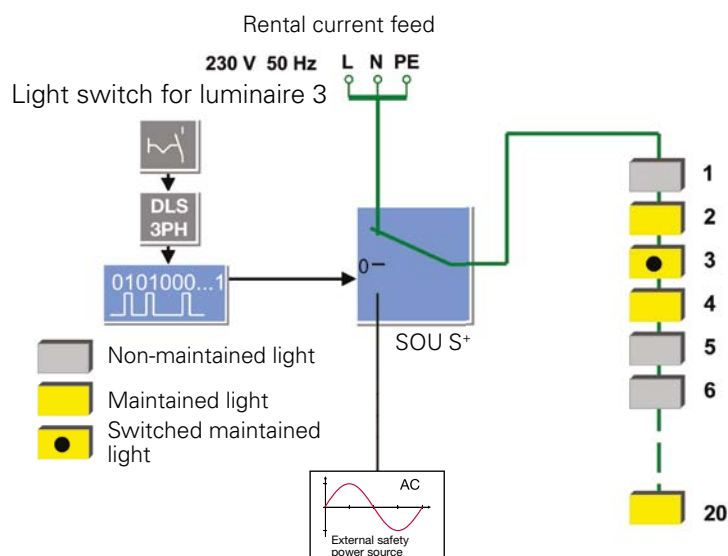
The continuing development of the CEWA GUARD monitoring system has led to the creation of the

Switching
Technology
Advanced
Revision,

or **STAR** for short. This **CG-STAR** technology allows different switching modes to be implemented in one and 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.

We have united both forms of technology to STAR⁺ to take advantage of CEWA GUARD and STAR technology in projects in which batteries as power sources for safety services are not needed, but where generators, dual systems (secondary power supply) or central converter systems are used. This now gives you a highly flexible test system with all the familiar benefits.



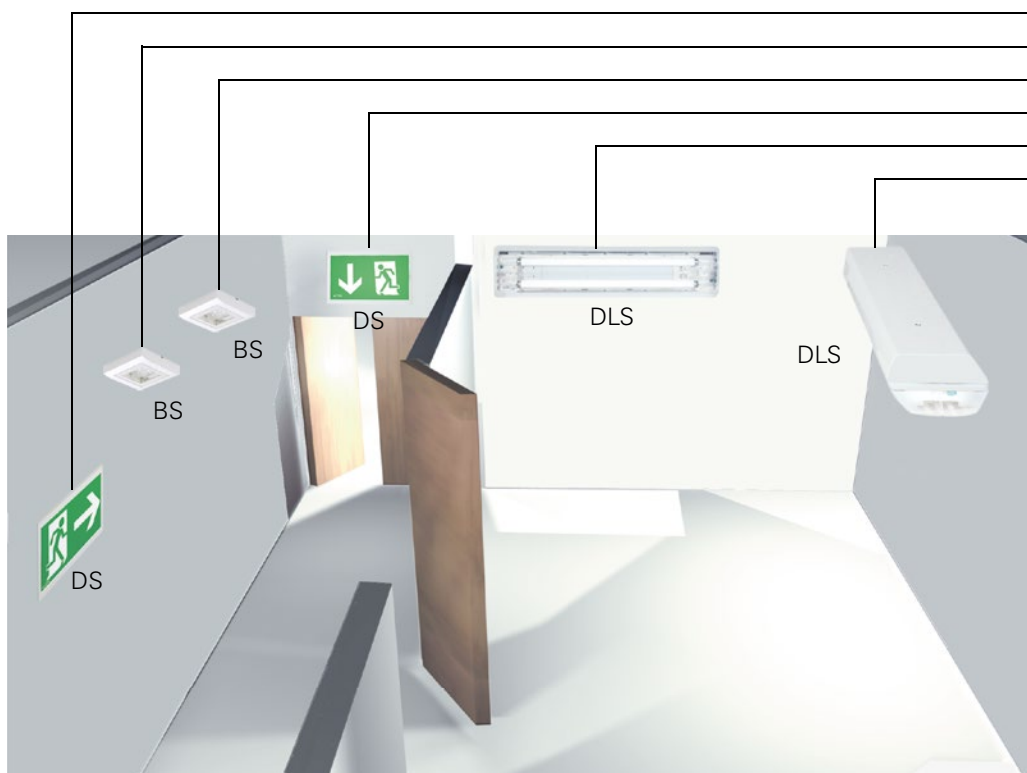
Operation of the STAR⁺ technology

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.

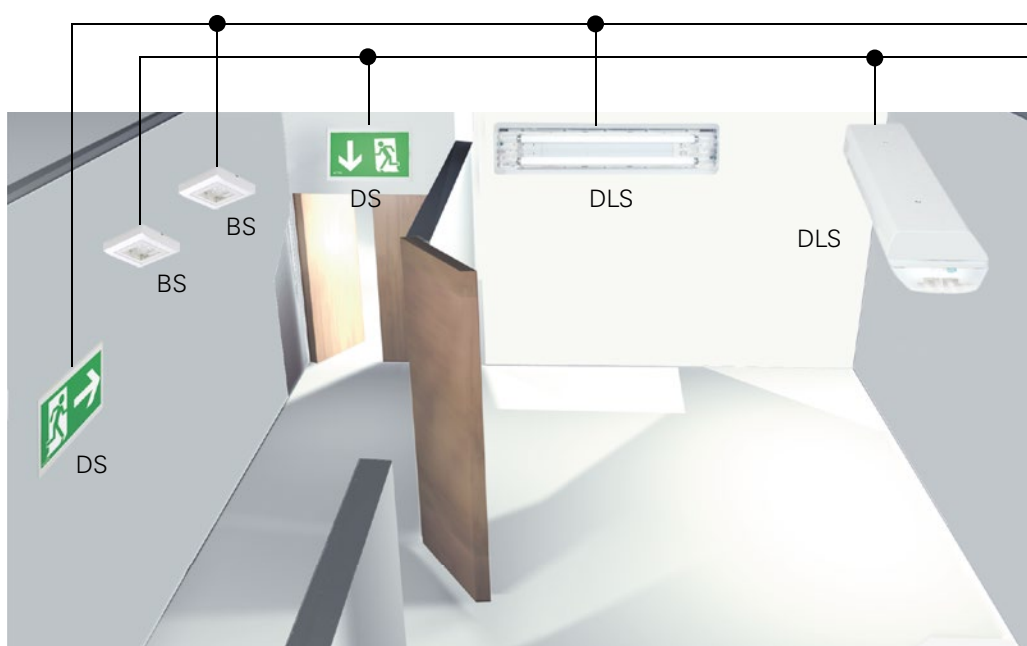
With symbiosis of CEWA GUARD technology and the patented STAR technology to STAR⁺ technology, no supplementary data line to the luminaires is needed even with use of an AC power source for safety services.



Conventional Installation:

- Maintained light 1 (DS)
- Non-maintained light 1 (BS)
- Non-maintained light 2 (BS)
- Maintained light 2 (DS)
- Switched maintained light 1 (DLS)
- Switched maintained light 2 (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



AT-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

Automatic Test System AT-S⁺ with STAR⁺ Technology

Strong in detail

AT-S⁺ cabinet

- Cable infeed from above
- Triple deck tension spring installation terminal with neutral wire disconnect terminal
- Control unit CU S⁺
- DC/DC converter.2
- AC module
- Fuse circuit breaker D02 25 A per field
- Circuit switching modules SU S⁺ 2 x 6 A
- Fuse circuit breaker
- 6-fold mains distribution box (optional)
- Cable infeed from below



4

Large connection compartment for convenient wiring

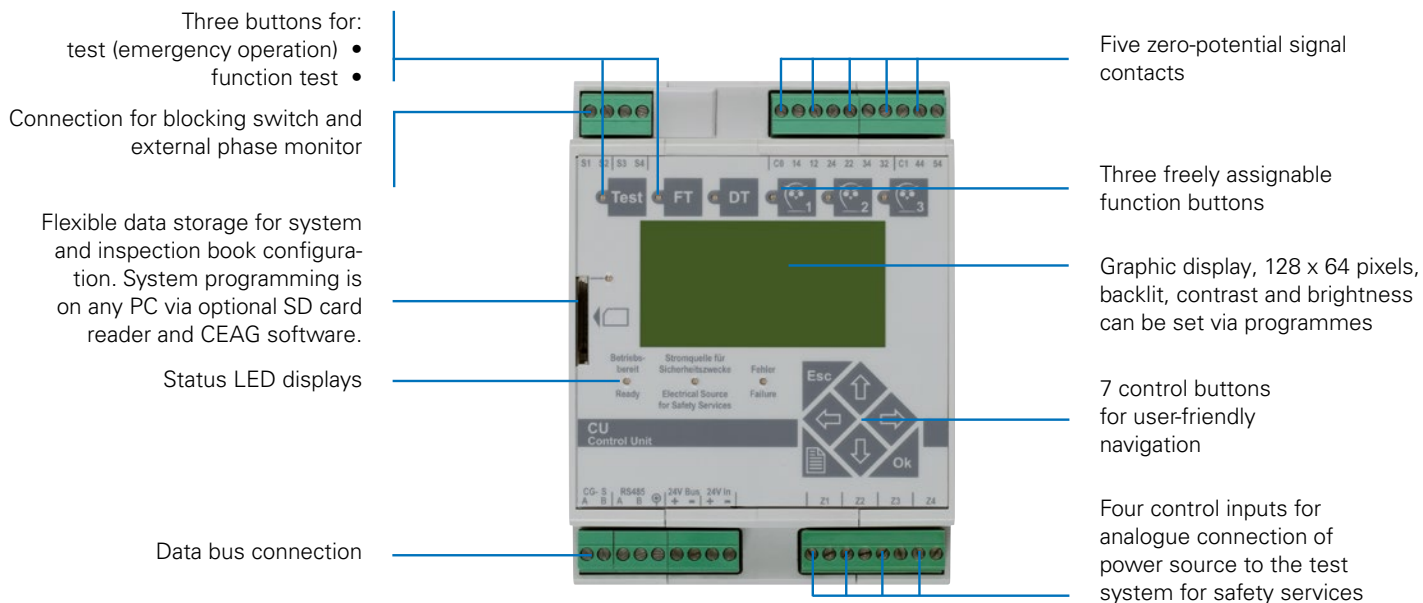
All connections on triple deck installation terminals in the upper part of the central unit.

The control unit, DC/DC converter and the AC module are wired at terminal as standard.

Wiring of the SU-S⁺ modules at terminals is optional.

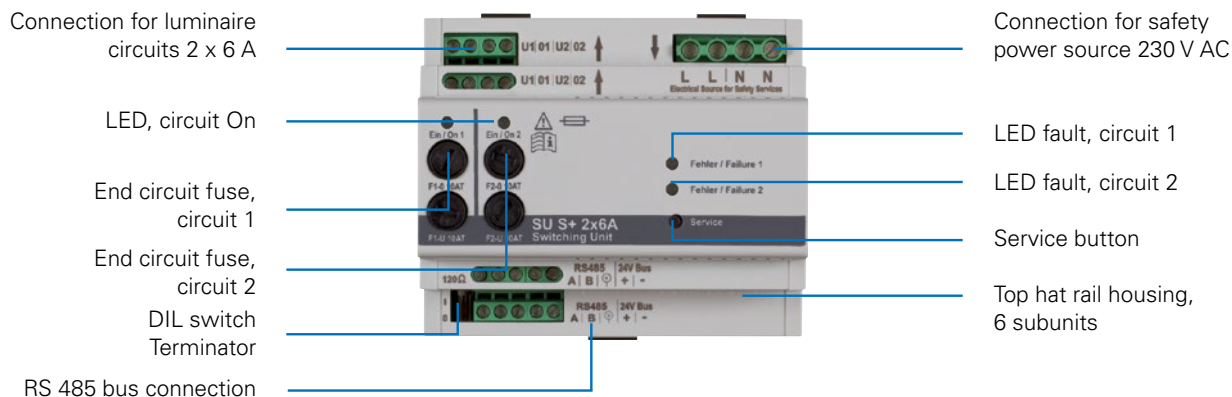


Freely programmable control unit

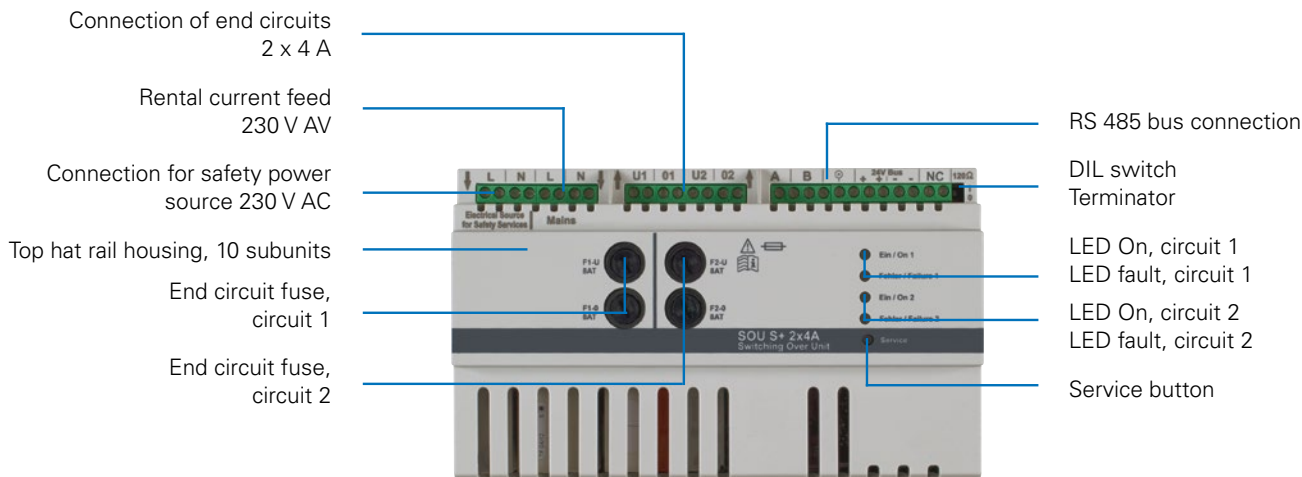


4

Switching unit SU S⁺ 2 x 6 A



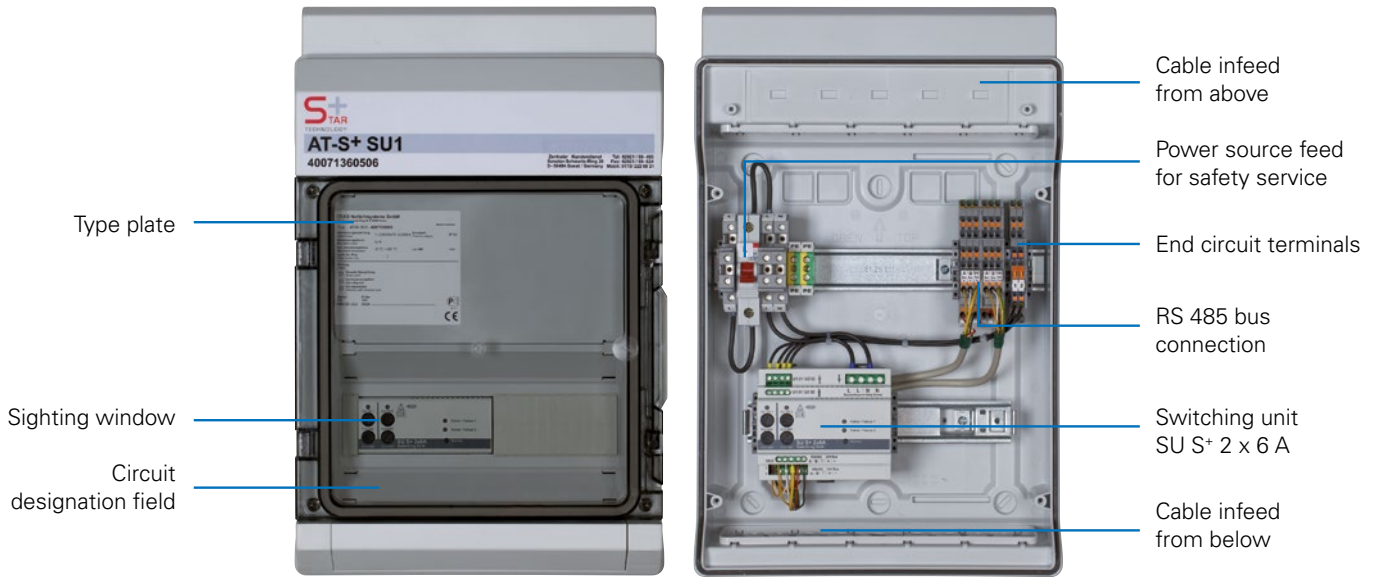
Switching over unit SOU S⁺ 2 x 4 A



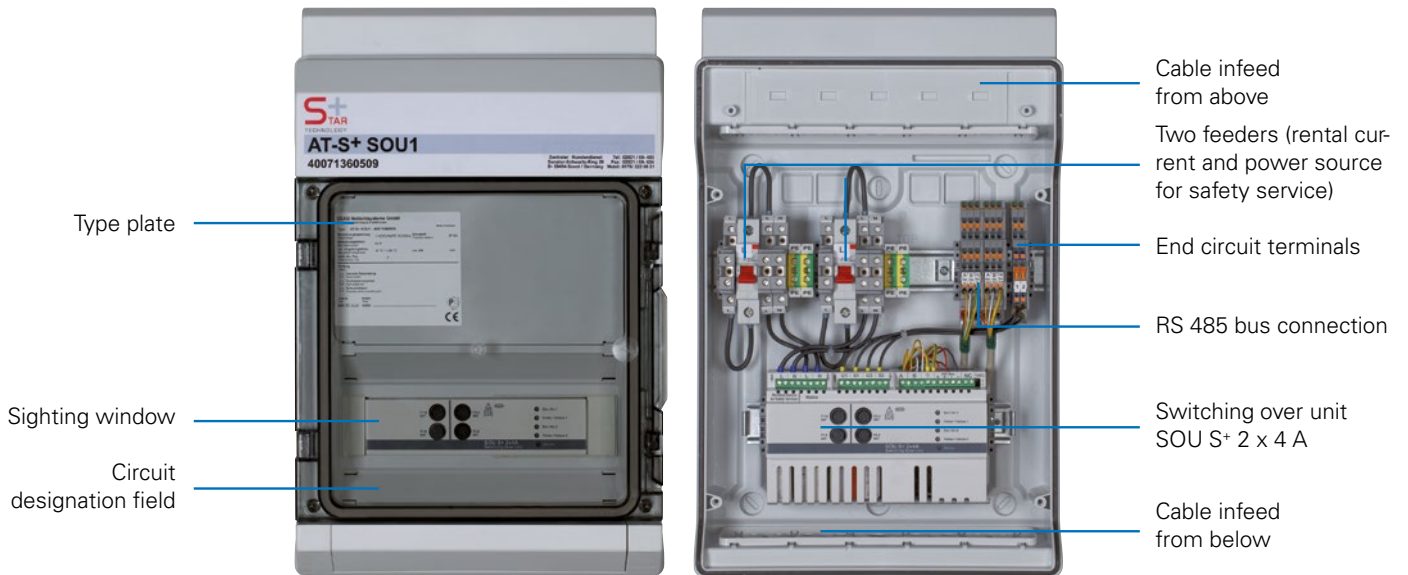
Automatic Test System AT-S+ with STAR+ Technology

Distribution box SU1 and SOU1

AT-S+ SU1



AT-S+ SOU1



Automatic Test System AT-S⁺ with STAR⁺ Technology

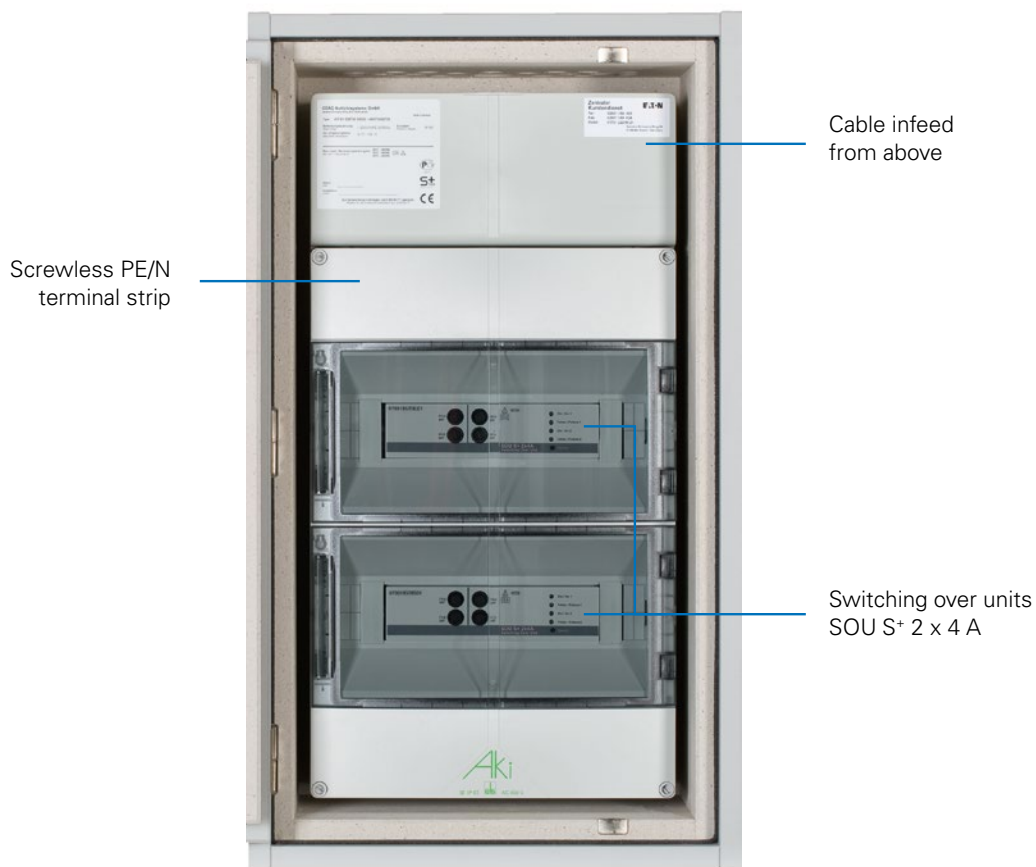
Distribution box ESF30 SU2 and ESF30 SOU2

AT-S⁺ ESF30 SU2



4

AT-S⁺ ESF30 SOU2



Automatic Test System AT-S⁺ with STAR⁺ Technology

Substations with functional integrity of 30 minutes

4

Safe operation under the most extreme environmental conditions

There are different types of sub-distributors available for compliance with the requirements on functional integrity of MLAR 11/2005.



AT-S⁺ ESF30 C10-P



Sub-distributor in sheet steel housing

In accordance with the model guideline on fire protection requirements pertaining to wire systems (MLAR specimen guideline on wire systems), version 11/2005, verified by a National Material Testing Office.

Approved by the Deutsches Institut für Bautechnik (DIBT- German Institute for Civil Engineering) as an electrical distributor with functional integrity, including electrical equipment and technical air ventilation with approval number: Z-86-2-1.



Electric distributor with functional integrity

Experimental design for application as an electrical distributor with functional integrity. The functioning of all the installed electronic components was tested in a fire test.

Automatic Test System AT-S⁺ with STAR⁺ Technology

Substations with functional integrity of 30 minutes



AT-S⁺ ESF30 SOU2

Sub-distributor in Priodec housing

In accordance with the model guideline on fire protection requirements pertaining to wire systems (MLAR specimen guideline on wire systems), version 11/2005, verified by a National Material Testing Office.

Approved by the Deutsches Institut für Bautechnik (DIBT- German Institute for Civil Engineering) as an empty enclosure for fire protection with a fire resistance rating of minimum 30 minutes in case of external fire exposure, approval number of the empty enclosure: Z-86.1-46

Functional integrity exceeding 30 minutes is certified in an expert opinion, based on a fire test.



4



Please scan the following QR code for direct access:



Fire test in a video documentation

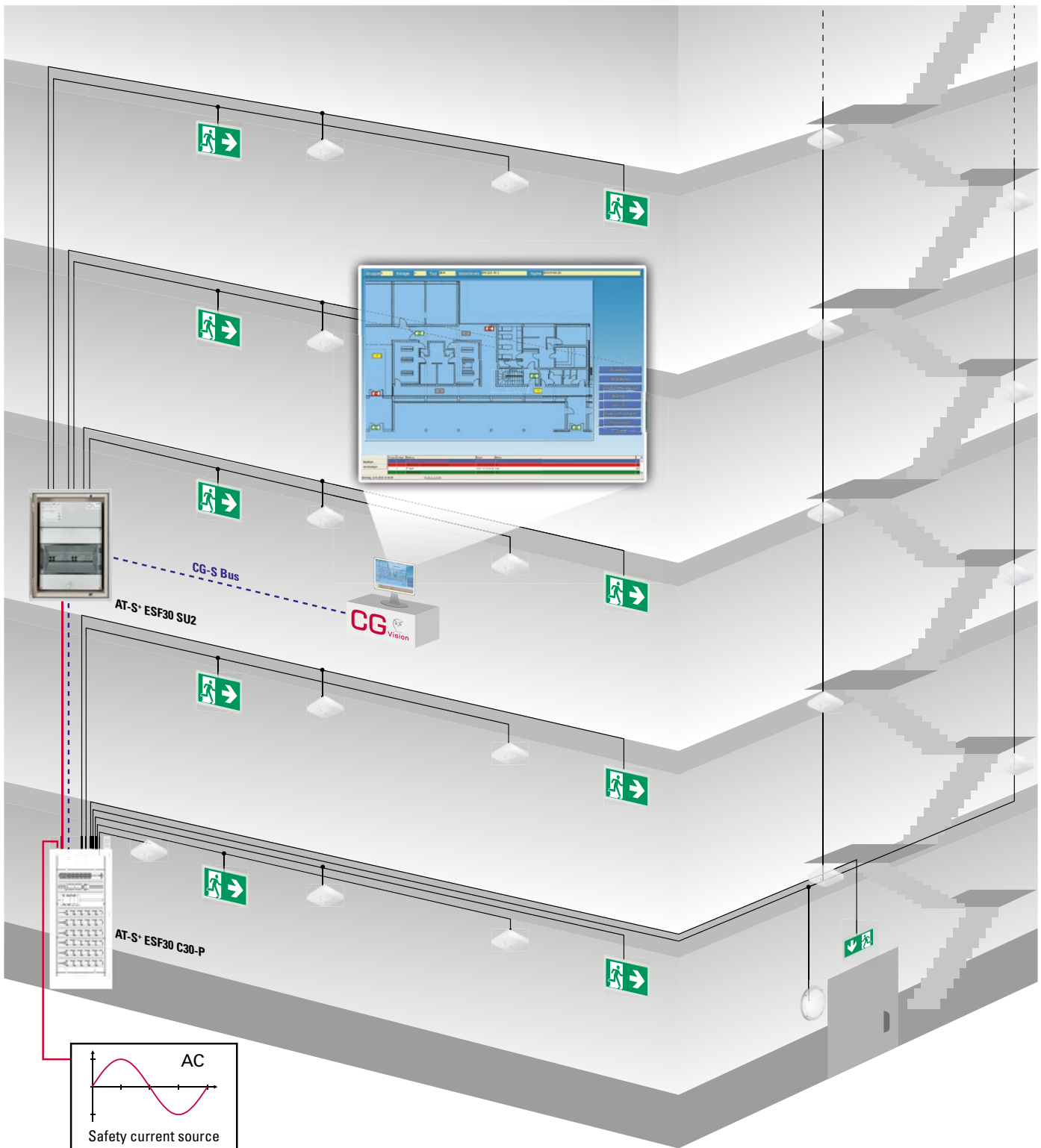
Please watch the video documentation of the fire test of the types of enclosures presented here:

<http://youtu.be/dk8qieMSiTI>

Automatic Test System AT-S⁺ with STAR⁺ Technology

Across fire compartments-specific installation example

4



AT-S⁺ ESF30 SU2
Distribution box for across fire
compartments-specific installation



Controle module

A freely programmable control module with non-volatile program memory and graphic display monitors and controls the test system. All functions such as mains/emergency light switching of the devices and the emergency luminaires are tested automatically. Any faults that occur are signalled immediately. An interface enables a central monitoring facility to be connected.

In the event of a short circuit or open circuit in current loops, differential monitors immediately power on the system (maintained light) or put the system in readiness.

- Non-volatile memory
- Automatic luminaire search function
- Individual luminaire monitoring
- Automatic DLS/TLS search function
- Selective manual reset/circuit
- Selective emergency light/circuit
- Password function
- Final circuit fuse monitoring
- Control module with multi-master mode M³

Sealed keypad with 2 keys for:

- Test (mains failure)
- Function test start / cancel (Key DT without function)



3 freely assignable function keys for:

- System disable/enable
- Manual reset
- Cancel function test
- Show fault list
- Maintained light off/on
- Power on complete safety lighting system (continuity lighting)
- Mains failure simulation UV-A (emergency operation)



7 control keys

for user-friendly navigation



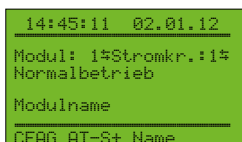
LED indicators for:

- Ready
- Electrical Source for Safety Services
- Failure



Graphic display:

128 x 64 pixels, backlit, program adjustable contrast and brightness.



Displays include:

- Date/Time
- Power source for safety services ready for operation
- Infeed of safety lighting from power source for safety services
- Power source for safety services faulty
- Manual reset
- Test mode
- Delay-time on mains return (remaining time in min.)
- Luminaire failure with location label
- UV-AV failure (location specification)
- Failure/programming information

Connections

- **Connection for disable switch:**
24V control loops for blocking the installation during factory shutdowns with differential loop monitoring for short-circuit and open circuit detection. Differential monitoring: Short-circuit or open circuit result in readiness for operation of the system.

- **Connection for phase monitor:**
24V current loop for requesting emergency lighting using differential loop monitoring for the detection of short-circuit and open circuits. Differential monitoring: Short-circuit or open circuit result in immediate power on (maintained light) of the system.

- **Connection for zero-potential signal contacts and buzzers:**
Connection for zero-potential signal contacts, 24 V 0.5 A:
3 relays with common potential, 1 x switching contact each,
One or several from 11 different messages can be assigned to each zero-potential contact. Freely programmable, DIN VDE specification can be called up at any time as a pre-setting.

2 relays with common potential, 1 x open contact each with fixed assignment.

- **Connection for analog inputs:**
4 of freely assignable 24 V analog inputs, switch function can be programmed negated and non-negated, e.g. for start / cancel function test, disable / enable system, manual reset, maintained light on / off, power on safety lighting as continuity lighting.

Automatic Test System AT-S+ with STAR+ Technology

Components and options



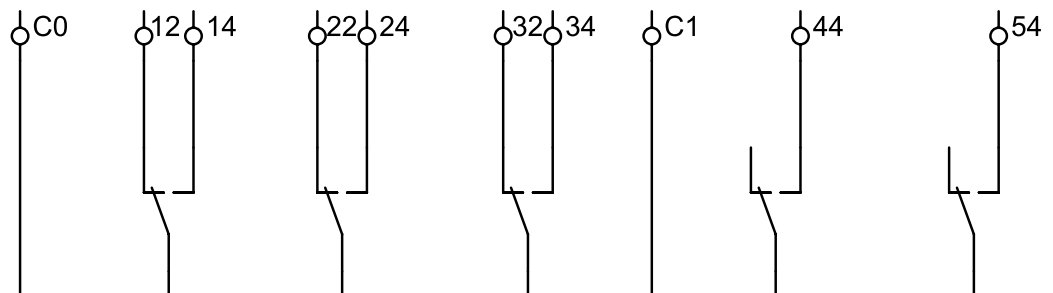
Display	128 x 64 pixel graphic display, program adjustable contrast
Illumination	backlighting, program adjustable brightness
Keypad	sealed, with 6 function and 7 control keys
Readout	Infeed of safety lighting from power source for safety services Power source for safety services ready for operation AC isolation fault External fan fault Luminaire failure with location label Manual reset Delay-time on mains return UV-AV failure (location specification) Test mode Date/Time Failure information Programming information
Status	– Ready – Electrical Source for Safety Services – Failure

Potential-free signal contacts, buzzer

3 freely configurable relays with common potential, 1 x switching contact each, 2 relays with fixed assignment and common potential, 1 x open contact each, 24 V 0.5 A; buzzer. Freely programmable, DIN VDE specification can be called up at any time as a pre-setting.

Default setting AT-S+

Designation	Relay 1 C0/14/12	Relay 2 C0/24/22	Relay 3 C0/34/32	Relay 4 C1/44	Relay 5 C1/54	Buzzer
Ready for operation		X				
Mains failure S3/S4	X				Permanently configured for control of a technical cabinet ventilation. Default setting >40°C ON < 35°C OFF.	
Mains failure DLS/3PH	X					
Ext. source error	X					
Circuit fault	X					
Luminaire fault	X					
Device fault	X					
Ext. source active			X			
ISO error	X					
Function test				X (permanently configured)		
Invert contact		X				



Ordering details

Type	Model	Order No.
Control module CU-S+ with SD	Plug-in module	4 0071 360 371

SD card



SD card reader



Secure-Digital-Card

Flexible data storage for system and log book configuration, e.g. of the mandatory archiving of log book information for a minimum of 4 years.

The system can also be programmed at any PC using optional SD-card reader and CEAG software. Texts can also be entered on the control module in the switch cabinet.

Storage of:

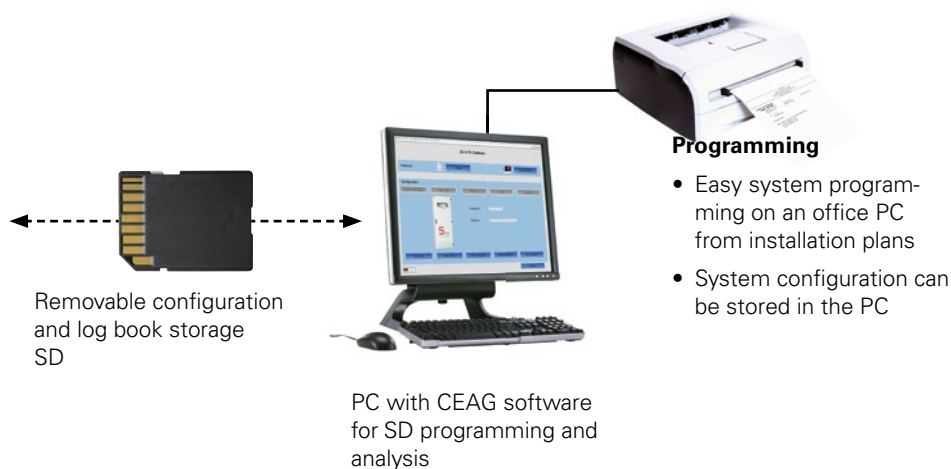
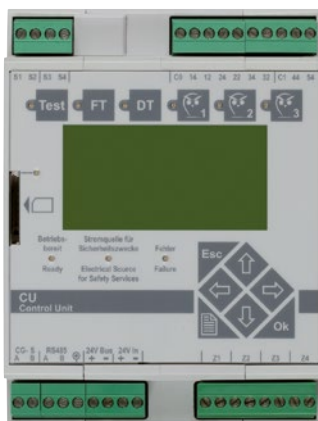
- 360,000 log book entries
- Location texts for the luminaires (20 characters per luminaire)
- Location texts of external modules such as phase monitor, DLS, TLS (20 characters per module)
- Circuit names (20 characters per circuit)
- System name (20 characters)

Ordering details

Type	Model	Order No.
SD card	SD card formatted for AT-S ⁺	40071347911
SD card reader	SD card reader for USB-Port	40064070561
Software	Software for external programming of the AT-S ⁺ via PC	40071347152

4

SD-Card (Secure-Digital-Card)



Automatic Test System AT-S⁺ with STAR⁺ Technology

Components and options

DC/DC-Converter.2



DC/DC-Converter.2

The DC/DC converter.2 converts the 240 V AC from the AC supply with galvanic isolation in 24 V DC and 6 V DC for supply of the CU S⁺ control unit.

24 V external	20 W continuous rating Outgoing circuit with front panel connector Isolated voltage
24 V internal	100 W continuous rating 140 W peak rating (20 ms)

Ordering details

Type	Order No.
DC/DC-Wandler.2	70071347071

4

AC module



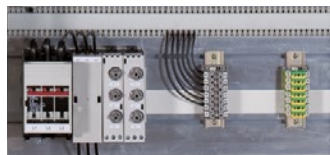
AC module

The AC supply in combination with the DC/DC converter.2 assumes supply of the internal system voltage.

Ordering details

Type	Order No.
AC module	40071346311

Mains distribution board



Mains distribution board

The mains supply to a AT-S⁺ C30 or AT-S⁺ C16 system comes via a modular mains distribution board. This includes a size 00C load disconnect (1) with a maximum conductor size of 50 mm² and allows the connection of up to 6 distribution terminals for slave stations to modular size D02-E18 outgoing mains circuits (2) with the necessary terminals for neutral and ground (3). The same mains distribution boards must also be used three-phase for feeders to powerful slave-stations (accommodates up to 2 slave stations in this case). The components are simply plugged on from the front and securely contacted.

Mains distribution module D02-E18



Current rating	63 A
Rated operating voltage	400 V
Box terminal for circulator conductor	to 16 mm ²
Material	Polyamide (PA 6.6), 30 % glass-fibre-reinforced
Scope of supply	incl. 3 pcs. screw caps E18 and 3 pcs. D02-fuse inserts 25 A

Ordering details

Type	Scope of supply	Order No.
Mains distribution module for track mounting	incl. 3 pcs. screw caps E18 and 3 pcs. D02-fuse inserts 25 A	40071347160

SU S⁺ 2 x 6 A



Switching unit SU S⁺ 2 x 6 A

Hybrid operation of maintained light, non-maintained light and switched maintained light per module can be programmed with no additional data cable.

- Up to 20 luminaires can be monitored individually
- Easy access to fuses
- LED indicates fault and Run/ON for each circuit
- Supplies ballast and LED luminaires
- Service-friendly modular units are wired up and ready to connect to 3-tier 4 mm² disconnect neutral terminals

Fusing	10 AT/250 V, 5 x 20
Continuous current rating	6 A per circuit
Max. inrush current	250 A/ms per circuit
Switching time	450 ms
Own consumption	10.5 W (max.)
Module width	6 subunits (H x W x D = 107 x 90 x 58 mm)

Ordering details

Type	Scope of supply	Order No.
SU S ⁺ 2 x 6 A	Switching unit SU S ⁺ 2 x 6 A	40071360350
Spare part	Fuse 10 AT (5 x 20) 250 V (PU 10 pcs.)	40071360483

SOU S⁺ 2 x 4 A



Switching over unit SOU S⁺ 2 x 4 A

Hybrid operation of maintained light, non-maintained light and switched maintained light in a single circuit can be programmed with no additional data cable.

- Up to 20 luminaires can be monitored individually
- Separate AV-feed for rental current
- Easy access to fuses
- LED indicates fault and Run/ON for each circuit
- Supplies ballast and LED luminaires
- Service-friendly modular units are wired up and ready to connect to 3-tier 4 mm² disconnect neutral terminals inside the distribution box

Fusing	8 AT/250 V, 6.3 x 32
Continuous current rating	4 A per circuit
Max. inrush current	250 A/ms per circuit
Switching time	450 ms
Own consumption	9 W (max.)
Module width	10 subunits (H x W x D = 178 x 108 x 60 mm)

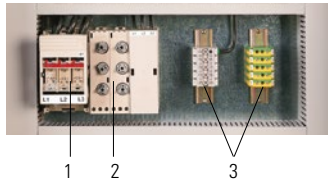
Ordering details

Type	Scope of supply	Order No.
SOU S ⁺ 2 x 4 A	Switching over unit SOU S ⁺ 2 x 4 A	40071360461
Spare part	Fuse 8 AT (6.3 x 32) 250 V (PU 10 pcs.)	40071360484

Automatic Test System AT-S⁺ with STAR⁺ Technology

Components and options

Mains distribution board



Mains distribution board

The mains supply to a ZB-S/26 or ZB-S/18 system comes via a modular mains distribution board. This includes a size 00C load disconnecter (1) with a maximum conductor size of 50 mm² and allows the connection of up to 6 slave stations to modular size D02-E18 outgoing mains circuits (2) with the necessary terminals for neutral and ground (3).

The same mains distribution boards must also be used three-phase for feeders to powerful slave-stations (accommodates up to 2 slave stations in this case). The components are simply plugged on from the front and securely contacted.

Mains distribution module D02-E18

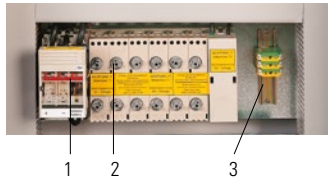


Current rating	63 A
Rated operating voltage	400 V
Box terminal for circulator conductor	to 16 mm ²
Material	Polyamide (PA 6.6), 30 % glass-fibre-reinforced
Scope of supply	incl. 3 pcs. screw caps E18 and 3 pcs. D02-fuse inserts 25 A

Ordering details

Type	Scope of supply	Order No.
Mains distribution module for track mounting	incl. 3 pcs. screw caps E18 and 3 pcs. D02-fuse inserts 25 A	40071347160

Battery distribution board



Battery distribution board

The battery supply to a ZB-S/26 or ZB-S/18 system comes via a modular battery distribution board. This includes a size 00C load disconnecter (1) with a maximum conductor size of 50 mm² and allows the connection of up to 6 slave stations to modular size D02-E18 outgoing battery circuits (2) with related terminals for ground (3). The components are simply plugged on from the front and securely contacted.

Battery distribution module D02-E18



Current rating	63 A
Rated operating voltage	400 V
Box terminal for circulator conductor	to 16 mm ²
Material	Polyamide (PA 6.6), 30 % glass-fibre-reinforced
Scope of supply	incl. 2 pcs. screw caps E18 and 2 pcs. D02-fuse inserts 25 A

Ordering details

Type	Scope of supply	Order No.
Battery distribution module for track mounting	incl. 2 pcs. screw caps E18 and 2 pcs. D02-fuse inserts 25 A	40071347161

Cover strip

Busbar guard: Cover strip for clip-mounting to the trunking section. Ready-cut to module width. Material: Hard PVC.

Ordering details

Type	Scope of supply	Order No.
Busbar cover strip	Cover strip in module width for clip mounting at the trunking section	40071347192

F3 remote indication



F3 remote indication for flush-mounting



F3 remote indication

The F3 remote indication ensures display of the most important installation functions. Blocking of emergency lighting operation is possible via a key switch during idle operation times.

Differential loop monitoring leads to operational readiness of the system with short circuits or wirebreak detection.

LED displays: system readiness, source for safety services, failure. As such the F3 remote indication fulfills the requirement that remote switching is only permissible when operation by unauthorized persons is not possible.

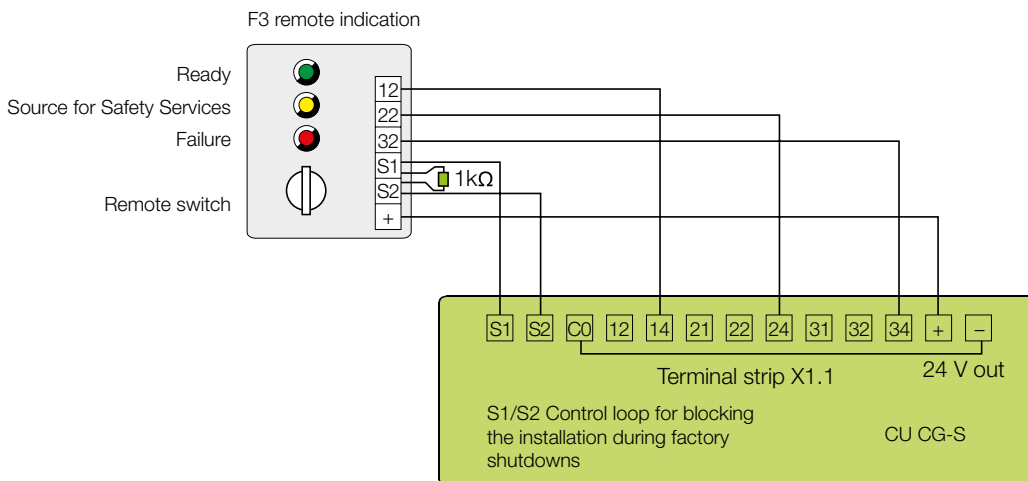
Connection terminals wall surface-mounting	2.5 mm ² rigid and flexible
Dimensions mm (H x W x D)	160 x 80 x 55
Connection terminals for flush-mounting	1.5 mm ² rigid or 1 mm ² flexible
Dimensions mm (H x W x D)	80 x 80 x 55
Colour enclosure	sim. RAL 7035 Light grey

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 acc. to DIN VDE 0606	40071347490

Remote switch

Control loop for blocking the installation during factory shutdowns with differential loop monitoring for short-circuit and open circuit detection.



Differential monitoring:
F3 switch closed:
F3 switch open (1 k Ω):

A short-circuit or open circuit causes the system to be enabled.
System ready
System blocked

Automatic Test System AT-S+ with STAR+ Technology

Components and options

External DLS/3PH-Bus Module

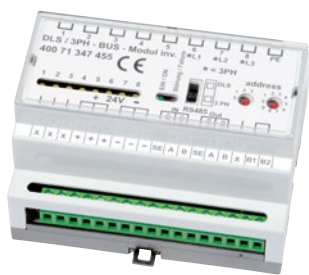


External DLS/3PH-Bus Module

The DLS/3PH bus module can be used as a phase monitor and for light switch polling for the common switching of safety and general lighting systems. Switch cables to the safety luminaires are not required. The housing is suitable for DIN rail mounting. The module has a service button, an RS 485 bus port (integral 120 Ohm bus load resistor) with 24 V module supply, and is addressed with encoding switches. Coloured LEDs indicate fault, ON status and operation. Freely programmable assignment of independent DLS inputs per emergency light circuit or luminaire and individual name per bus module in control unit. With use a 3-phase monitor, detailed phase failure display with location of failed sub-distribution for general lighting via clear text display in control unit.

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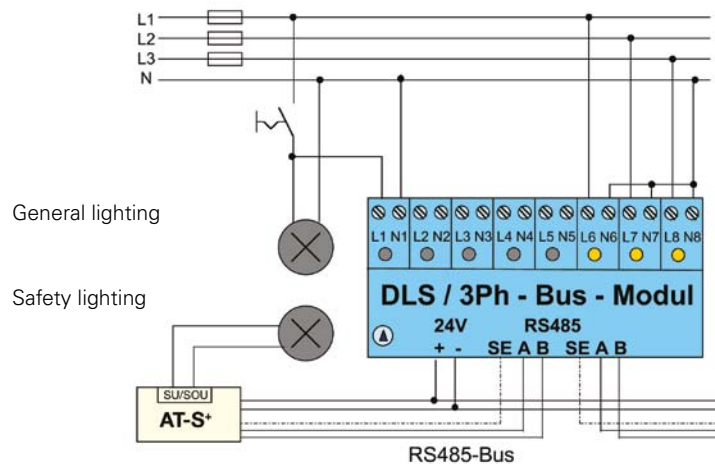
External DLS/3Ph-Bus-Module inverse



Supply voltage device	24 V DC (min. 19 V, max. 30 V)
Current consumption (all 8 channel connected)	20 mA ± 5 mA
Degree of protection	IP 20
Insulation class	I
Ambient temperature	- 10 ° to + 40 °C
Input channels 8	$U_N = 230 V$
DLS (channel 1-8) or	> 195 V-> ON < 138 V-> OFF
DLS (channel 1-5) and 3Ph (channel 6-8)	> 195 V-> ON < 138 V-> OFF
Number of light switch inputs	8 pcs. with LED display or 5 pcs. with 3-phase-monitor (selector)
Monitoring threshold	60- 85 % U_{Nom} (meets DIN VDE 0100-718)
Data bus	RS 485
Address range	1-25
Weight	0.2 kg
Dimensions (L x W x H) mm	105 x 85 x 60
Mounting	DIN-rail
Connection terminals/Clamp terminals	2.5 mm ² rigid and flexible

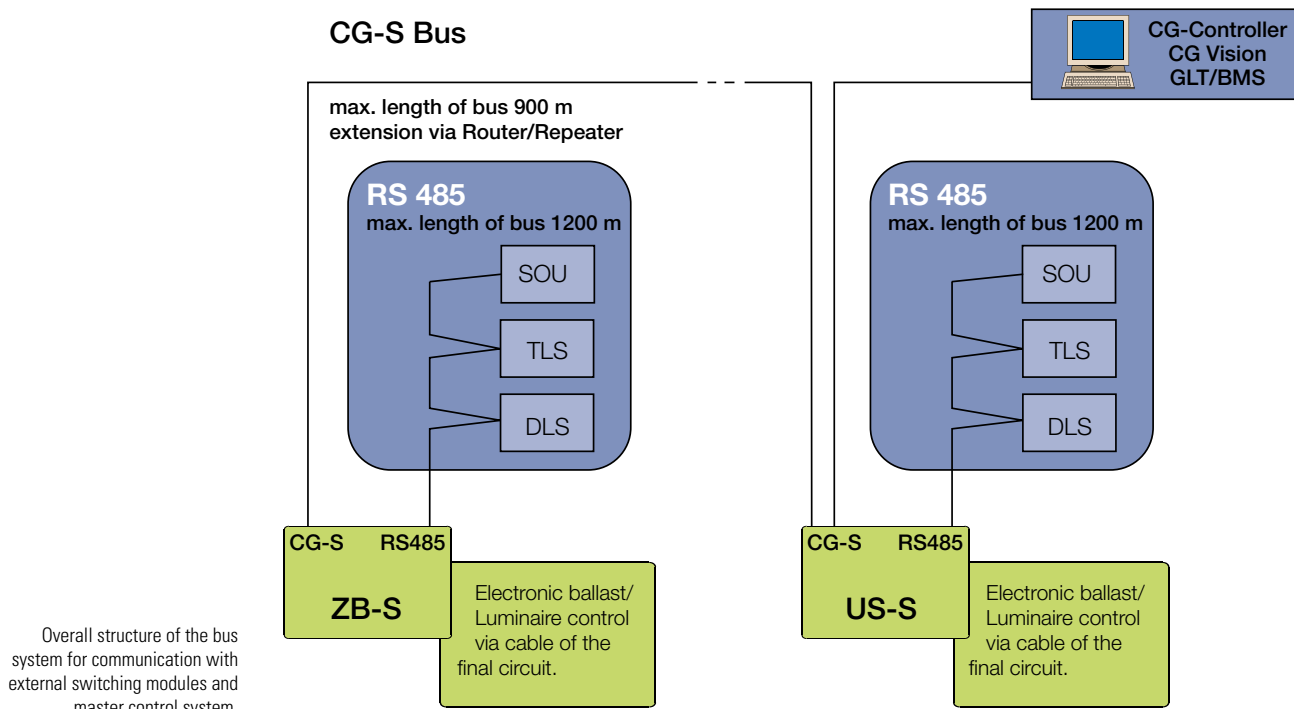
Ordering details

Type	Scope of supply	Order No.
DLS/3Ph-Bus-Module	Module for DIN rail mounting	40071346955
DLS/3Ph-Bus-Module inverse	Module for DIN rail mounting with inverse switching logic	40071347455
DIN mounting rail	4 pcs. DIN-rails for mounting external modules in the cabinet incl. mounting accessories	40071347125

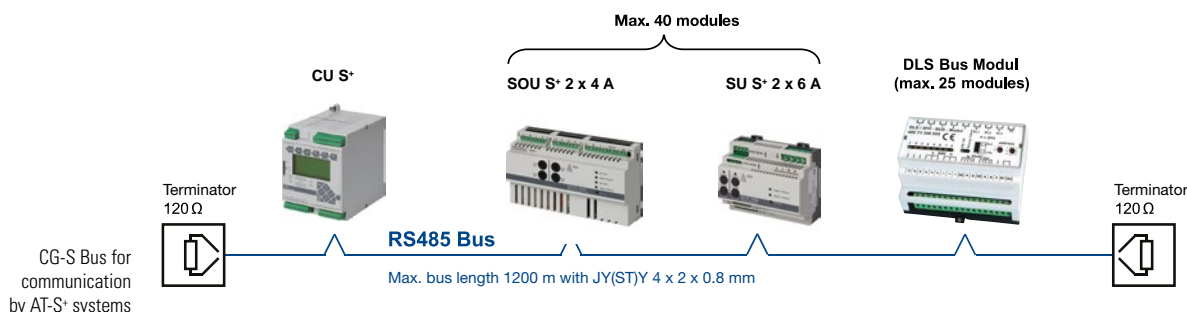


Bus technology according to RS 485

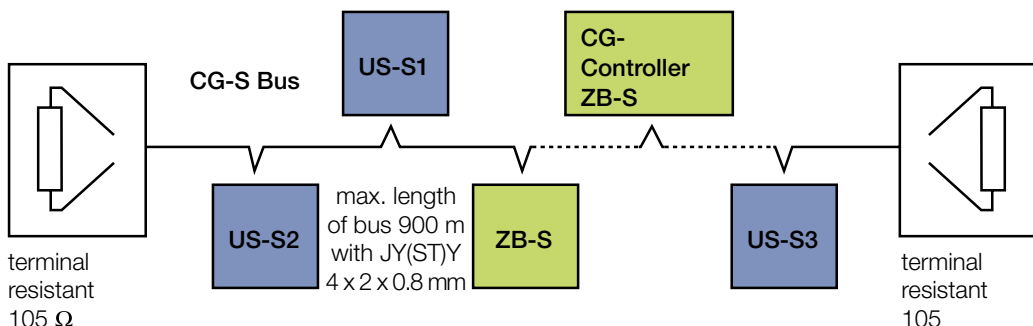
An RS 485 bus is used for data communication with external bus modules (DLS/3PH). A connection to a central building services management system (BMS) can be made with the CG-S bus. An isolated 24V/0.5 A power supply (SELV) is available for the external modules. The maximum line length depends on the required power and the conductor size.



Overall structure of the bus system for communication with external switching modules and master control system.



RS485 bus for communication with external AT-S⁺ modules (DLS/3PH bus module). The terminating resistor (120, 0.5 W) can be connected in the modules. The AT-S⁺ control cabinet also includes a resistor. This must be mounted in the AT-S⁺ system if only one cable is laid.



Notes:

Bus topology: linear, double terminated (no spur lines allowed)

The absolutely essential terminating resistors are supplied in a plastic pack in the control cabinet. Cable type (minimum requirement): JY(ST)Y 4 x 2 x 0.8 mm (twisted pair, screened). The conductor size required for the 24 V bus voltage will depend on the line length and the number of bus modules ($U_{min} = 19 V DC$).

DLS = external maintained light switching module (DLS/3PH bus module)

SOU S⁺ = switching over unit

SU S⁺ = switching over unit

CGVision = visualisation software

Automatic Test System AT-S+ with STAR+ Technology

Components and options



PC programming software AT-S+

Programming software for preset memory cards of the AT-S+ for the quick pre-programming via PC and simple reading and editing of the logbook. For documentation on all files are saveable on memory card and hard disk.

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

- individual name of the device
- the date and time of automatic function tests, incl. distance
- manual reset: yes/no
- delay on mains return: 0-15 min
- selective emergency light: yes/no
- Lon switch: yes/no
- assignments of the 5 relays
- assignments of the 3 function keys
- assignments of the 4 option inputs
- number, type and individual name of the bus modules



Detailed print of the programmed electrical circuits (line diagram) with the following details per electrical circuit:

- electrical circuit / module number and type
- individual electrical circuit name
- type of monitoring
- switching mode of the electrical circuit
- number of luminaires
- address and individual name per luminaire
- switching mode of each luminaire

Logbook prints with the following options:

- fault event (35 different fault events, separate or completely generic)
- time period of the logbook (date and time)
- individual comment per print
- luminaire failure: Detail of the individual luminaire and electrical circuit names

Ordering details

Type	Scope of supply	Order No.
Software	PC-Software for AT-S+, for alternative programming of the system configuration on PC	40071610233

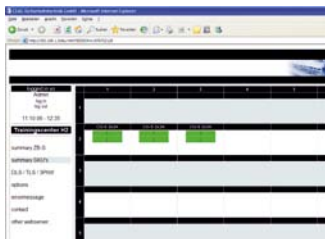
Webmodule ZB-S/AT-S⁺



Example: ZB-S-Device status



Example: SKU-Status



Webmodule ZB-S/AT-S⁺

Webmodule ZB-S/AT-S⁺ for visualisation and monitoring of a central battery system, type ZB-S/US-S via a local ethernet (LAN) or internet (WWW) with a conventional WEB browser. Access to the web-module via internet (WWW) must be administrated from an IT department on-site. Integrated mail-client for comfortable, event orientated failure information, for up to 5 E-mail recipients. Access via administrator account or guest account, with password protection.

- Easy menu structure
- Full visualisation and monitoring of a ZB-S (central battery system) via ethernet (LAN) with conventional WEB browser (e.g. Internet Explorer, Firefox etc.)
- Display of all actual operation modes
- Local failure information of each emergency circuit and luminaires with destination information in plain text
- Permanent actual information of the charging unit and battery
- Parallel access to the web module from different workstations possible (max. 8)
- Integrated mail client for comfortable failure notification via mail
- Type of different failures for the mail transmission is selectable
- Up to 5 mail recipients programmable
- Actualisation cycle of the web browser via the web module is adjustable
- Authenticated access via administrator account with password protection
- Adjustable guest account with restricted access with password protection
- Static or dynamic (DHCP) IP-addressing possible
- Any number of modules can be operated in parallel
- Overview display of all active web modules in local ethernet with status display and hyperlink function

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

Ordering details

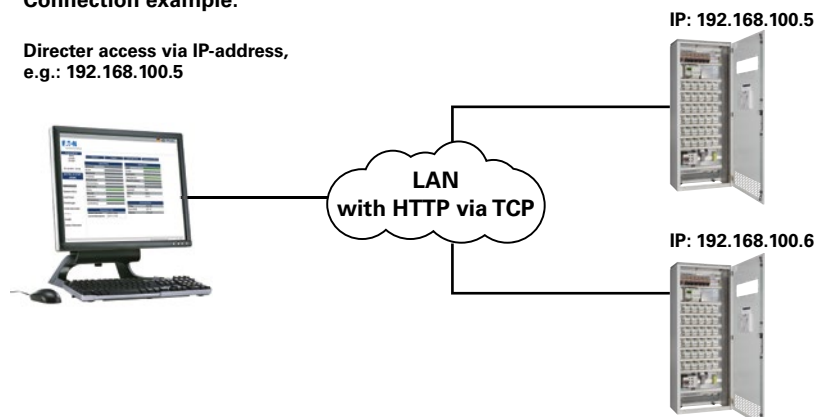
Type	Scope of supply	Order No.
Webmodule ZB-S/AT-S ⁺	Module for DIN-rail mounting, incl. connection without patch line RJ45	40071347990

Notes:

If a webmodule integrated in the ZB-S is supplied by the DC/DC.2 converter (external 24 V), a maximum of 20 DLS/3-phase modules or TLS bus modules can be connected.

Connection example:

Directer access via IP-address, e.g.: 192.168.100.5



Automatic Test System AT-S⁺ with STAR⁺ Technology

Ordering overview of wall and floor-standing cabinets

AT-S⁺ C30



Ordering details

Type	Scope of supply	Order No.
Automatic Test System AT-S ⁺ C30	Automatic Test System type AT-S ⁺ C30 incl. CU-S ⁺ , DC/DC.2 and AC module 30 free module slots	40071360500
Automatic Test System AT-S ⁺ C16	Automatic Test System type AT-S ⁺ C16 incl. CU-S ⁺ , DC/DC.2 and AC module 16 free module slots	40071360501
Automatic Test System AT-S ⁺ C4	Automatic Test System type AT-S ⁺ C4 incl. CU-S ⁺ , DC/DC.2 and AC module 4 free module slots	40071360502
Automatic Test System AT-S ⁺ C0	Automatic Test System type AT-S ⁺ C0 incl. CU-S ⁺ , DC/DC.2 und AC module no free module slot	40071360503
Distribution box AT-S ⁺ SU4	Distribution box type AT-S ⁺ SU4 incl. 4 switching units SU S ⁺ 2 x 6 A	40071360504
Distribution box AT-S ⁺ SU2	Distribution box type AT-S ⁺ SU2 incl. 2 switching units SU S ⁺ 2 x 6 A	40071360505
Distribution box AT-S ⁺ SU1	Distribution box type AT-S ⁺ SU1 incl. 1 switching unit SU S ⁺ 2 x 6 A	40071360506
Distribution box AT-S ⁺ SOU2	Distribution box type AT-S ⁺ SOU2 incl. 2 switching over units SOU S ⁺ 2 x 4 A	40071360508
Distribution box AT-S ⁺ SOU1	Distribution box type AT-S ⁺ SOU1 incl. 1 switching over unit SOU S ⁺ 2 x 4 A	40071360509
Distribution box AT-S ⁺ RV30	Distribution box type AT-S ⁺ RV30	40071360507

4

Automatic Test System AT-S⁺ with STAR⁺ Technology

Ordering overview of wall and floor-standing cabinets with functional integrity

AT-S⁺ ESF30 C10-P



Ordering details

Type	Scope of supply	Order No.
Automatic Test System AT-S ⁺ ESF30 C30-P	Cabinet for automatic test system with 30 minutes functionality, incl. CU S ⁺ control unit, DC/DC.2 converter, AC supply with space reserve for expansion to max. 60 end circuits, but maximum of 30 SU-S ⁺ 2 x 6 A circuit assemblies	40071360723
Automatic Test System AT-S ⁺ ESF30 C10-P	Cabinet for automatic test system with 30 minutes functionality, incl. CU S ⁺ control unit, DC/DC.2 converter, AC supply with space reserve for expansion to max. 20 end circuits, but maximum of 10 SU-S ⁺ 2 x 6 A circuit assemblies	40071360722
Automatic Test System AT-S ⁺ ESF30 SU5	Distribution box for automatic test system with 30 minutes functionality, incl. 5 SU-S ⁺ 2 x 6 A circuit assemblies	40071360730
Automatic Test System AT-S ⁺ ESF30 SU4	Distribution box for automatic test system with 30 minutes functionality, incl. 4 SU-S ⁺ 2 x 6 A circuit assemblies	40071360727
Automatic Test System AT-S ⁺ ESF30 SU2	Distribution box for automatic test system with 30 minutes functionality, incl. 2 SU-S ⁺ 2 x 6 A circuit assemblies	40071360724
Automatic Test System AT-S ⁺ ESF30 SOU5	Distribution box for automatic test system with 30 minutes functionality, incl. 5 SOU-S ⁺ 2 x 4 A circuit assemblies	40071360733
Automatic Test System AT-S ⁺ ESF30 SOU3	Distribution box for automatic test system with 30 minutes functionality, incl. 3 SOU-S ⁺ 2 x 4 A circuit assemblies	40071360731
Automatic Test System AT-S ⁺ ESF30 SOU2	Distribution box for automatic test system with 30 minutes functionality, incl. 2 SOU-S ⁺ 2 x 4 A circuit assemblies	40071360728
Automatic Test System AT-S ⁺ ESF30 SOU1	Distribution box for automatic test system with 30 minutes functionality, incl. 1 SOU-S ⁺ 2 x 4 A circuit assemblies	40071360725

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Automatic Test System AT-S⁺ with STAR⁺ Technology

Technical data

Type	AT-S ⁺ C30	AT-S ⁺ C16	AT-S ⁺ C4	AT-S ⁺ C0
Modules:				
Control module: CU-S ⁺	1	1	1	1
DC/DC.2-converter	1	1	1	1
AC module	1	1	1	1
Switching unit SU S ⁺ 2 x 6 A	0-30	0-16	0-4	–
Switching over unit SOU S ⁺ 2 x 4 A	–	–	–	–
Safety load disconnecter mains feed	yes	yes	yes	–
Load disconnecter mains feed	–	–	–	yes
No. of branching distributors	6	6	4	–
Electrical cabinet construction:				
Rated voltage	400/230 V	400/230 V	400/230 V	230 V
Rated frequency	50 or 60 Hz	50 or 60 Hz	50 or 60 Hz	50 or 60 Hz
AC network	TN-C-S	TN-C-S	TN-C-S	TN-C-S
Insulation class	1	1	1	1
Degree of protection	IP21	IP21	IP54	IP54
Max. current rating mains [Σ L1, L2, L3] [A]	90	74	48	–
Max. rated power mains [KVA]	20.7	17	11	–
Three-phase distribution	yes	yes	yes	no
Connection cross-section for mains supply	50 mm ²	50 mm ²	50 mm ²	4 mm ²
Connection cross-section for branching distributors	16 mm ²	16 mm ²	16 mm ²	–
Max. conductor size final circuits	4 mm ²	4 mm ²	4 mm ²	4 mm ²
Max. number of final circuit terminals	60	32	8	–
Mechanical cabinet construction:				
Cabinet height (max.)	2050	1800	800	600
Cabinet width (max.)	800	600	600	400
Cabinet depth (max.)	400	400	250	250
Material	Sheet steel	Sheet steel	Sheet steel	Sheet steel
Design	Cabinet	Cabinet	Wall cabinet / surface mounted	Wall cabinet / surface mounted
Door stop	right	right	right	right
Outer coating	Textured powder paint	Textured powder paint	Textured powder paint	Textured powder paint
Colour	RAL 7035	RAL 7035	RAL 7035	RAL 7035
Partial viewing door	yes	yes	yes	yes
Lock	3 mm two-way	3 mm two-way	3 mm two-way	3 mm two-way
Cable entry from above	yes	yes	yes	yes
Cable entry from below	yes	yes	no	no
Base (optional)	100/200	100/200	–	–

*1 housing has insulation class II. The earth conductor must however be routed in the housing.

AT-S ⁺ SU4	AT-S ⁺ SU2	AT-S ⁺ SU1	AT-S ⁺ SOU2	AT-S ⁺ SOU1
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
4	2	1	-	-
-	-	-	2	1
-	-	-	-	-
yes	yes	yes	yes	yes
-	-	-	-	-
<hr/>				
230 V	230 V	230 V	230 V	230 V
50 or 60 Hz	50 or 60 Hz	50 or 60 Hz	50 or 60 Hz	50 or 60 Hz
TN-C-S	TN-C-S	TN-C-S	TN-C-S	TN-C-S
2*1	2*1	2*1	2*1	2*1
IP65	IP65	IP65	IP65	IP65
25	16	10	25	10
5,7	3,7	2,3	5,7	2,3
no	no	no	no	no
10 mm ²	10 mm ²	10 mm ²	10 mm ²	10 mm ²
-	-	-	-	-
<hr/>				
4 mm ²	4 mm ²	4 mm ²	4 mm ²	4 mm ²
8	4	2	4	2
<hr/>				
583	458	458	583	458
295	295	295	295	295
129	129	129	129	129
Plastic	Plastic	Plastic	Plastic	Plastic
Wall cabinet / surface mounted	Wall cabinet / surface mounted	Wall cabinet / surface mounted	Wall cabinet / surface mounted	Wall cabinet / surface mounted
right	right	right	right	right
-	-	-	-	-
RAL 7035	RAL 7035	RAL 7035	RAL 7035	RAL 7035
yes	yes	yes	yes	yes
on request	on request	on request	on request	on request
yes	yes	yes	yes	yes
yes	yes	yes	yes	yes
-	-	-	-	-

Automatic Test System AT-S⁺ with STAR⁺ Technology

Technical data

Type	AT-S ⁺ ESF30 C30-P	AT-S ⁺ ESF30 C10-P	AT-S ⁺ ESF30 SU5
Modules:			
Control module: CU-S ⁺	1	1	-
DC/DC.2-converter	1	1	-
AC module	1	1	-
Switching unit SU S ⁺ 2 x 6 A	30	10	5
Switching over unit SOU S ⁺ 2 x 4 A	-	-	-
No. of branching distributors	0	0	0
Electrical cabinet construction:			
Rated voltage	400/230 V	230 V	230 V
Rated frequency	50 or 60 Hz	50 or 60 Hz	50 or 60 Hz
AC network	TN-C-S ^{*1}	TN-C-S ^{*1}	TN-C-S ^{*1}
Insulation class	I ^{*2}	I ^{*2}	I ^{*2}
Degree of protection	IP42	IP42	IP65
Max. total rated current [A] depends on ambient temperature at 230 V, 50 or 60 Hz:			
+25 °C	50	35	26
+30 °C	50	27	20
+35 °C	40	20	14
Max. rated power mains [KVA] depends on ambient temperature at 230 V, 50 or 60 Hz:			
+25 °C	11.50	8.05	5.98
+30 °C	11.50	6.20	4.60
+35 °C	9.20	4.60	3.22
Three-phase distribution	Yes	Yes	No
Max. connection cross-section for mains supply [qmm]	35	35	10
Max. conductor size final circuits [qmm]	4	4	4
Max. number of final circuit terminals	60	20	10
Mechanical cabinet construction:			
Dimensions [mm]:			
height (max.),	2253 (incl. fan)	1253 (incl. fan)	835
width (max.),	918	918	396
depth (max.)	596	496	230
Weight [kg] approx.	330	169	61
Material / version:	Coated gypsum fibre-board / floor-standing cabinet	Coated gypsum fibre-board / floor-standing cabinet	Coated gypsum fibre-board / wall cabinet
Type of mounting	Wall mounting ^{*3}	Wall mounting ^{*3}	Wall mounting ^{*3}
Door stop	Right	Right	Left
Colour RAL	7035	7035	7035
Cable entry	From above ^{*4}	From above ^{*4}	From above
Base (optional)	Yes	-	-
Approvals / Verifications			
ABZ housing incl. components Z-86.2 ...	Applied for	Applied for	Applied for
ABZ empty housing Z-86.1 ...	Yes	Yes	Applied for
Fire test for functional integrity, short report MPA NRW	Yes	Yes	Yes
VDE certificate	-	-	Yes
Specialised company declaration	Yes	Yes	Yes

***1: Further networks on request**

***2: Protective insulation acc. to VDE 0106**

***3: Housings must be adapted to the masonry so that the housing is horizontal.
The masonry must be designed for functional integrity of at least 30 minutes.
The functional integrity of the masonry must not be impaired by the installation.**

***4: Cable infeed from below on request**

Automatic Test System AT-S⁺ with STAR⁺ Technology

Technical data

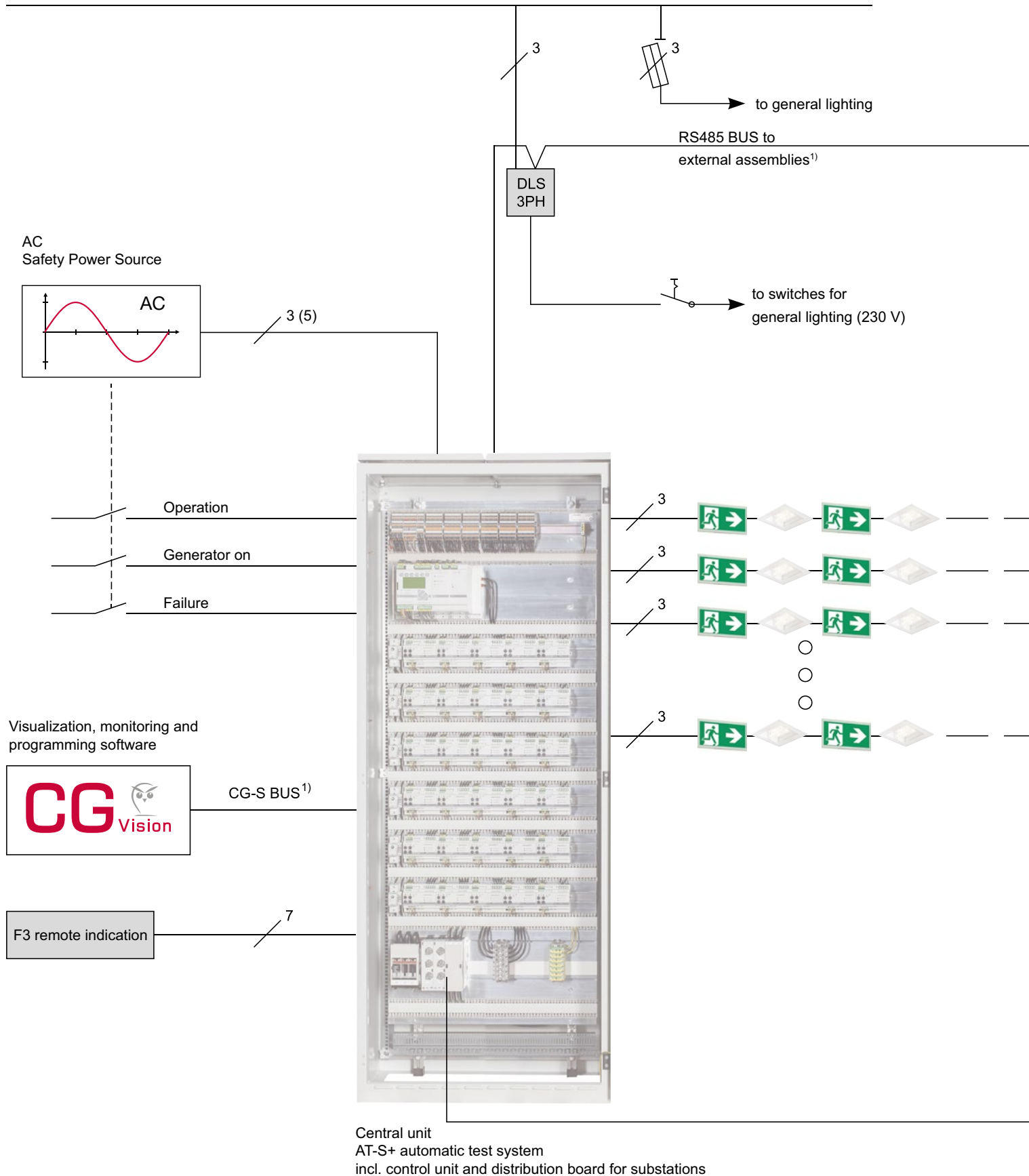
AT-S ⁺ ESF30 SU4	AT-S ⁺ ESF30 SU2	AT-S ⁺ ESF30 SOU5	AT-S ⁺ ESF30 SOU3	AT-S ⁺ ESF30 SOU2	AT-S ⁺ ESF30 SOU1
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
4	2	-	-	-	-
-	-	5	3	2	1
0	0	0	0	0	0
<hr/>					
230 V	230 V	230 V	230 V	230 V	230 V
50 or 60 Hz	50 or 60 Hz	50 or 60 Hz	50 or 60 Hz	50 or 60 Hz	50 or 60 Hz
TN-C-S ^{*1}	TN-C-S ^{*1}	TN-C-S ^{*1}	TN-C-S ^{*1}	TN-C-S ^{*1}	TN-C-S ^{*1}
I ^{*2}	I ^{*2}	I ^{*2}	I ^{*2}	I ^{*2}	I ^{*2}
IP65	IP65	IP65	IP65	IP65	IP65
<hr/>					
21	18	33	20	15	8
16	14	28	17	12	6
11	11	16	10	9	5
<hr/>					
4.83	4.14	7.59	4.60	3.45	1.725
3.68	3.22	6.44	3.91	2.76	1.380
2.53	2.53	3.68	2.30	1.53	1.150
No	No	No	No	No	No
10	10	10	10	10	10
4	4	4	4	4	4
8	4	10	6	4	4
<hr/>					
685	535	1135	835	685	535
396	396	396	396	396	396
230	230	230	230	230	230
51	32.7	81	61	51	34
Coated gypsum fibre-board / wall cabinet	Coated gypsum fibre-board / wall cabinet	Coated gypsum fibre-board / wall cabinet	Coated gypsum fibre-board / wall cabinet	Coated gypsum fibre-board / wall cabinet	Coated gypsum fibre-board / wall cabinet
Wall mounting ^{*3}	Wall mounting ^{*3}	Wall mounting ^{*3}	Wall mounting ^{*3}	Wall mounting ^{*3}	Wall mounting ^{*3}
Left	Left	Left	Left	Left	Left
7035	7035	7035	7035	7035	7035
From above	From above	From above	From above	From above	From above
-	-	-	-	-	-
<hr/>					
Applied for	Applied for	Applied for	Applied for	Applied for	Applied for
Applied for	Applied for	Applied for	Applied for	Applied for	Applied for
Yes	Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes	Yes

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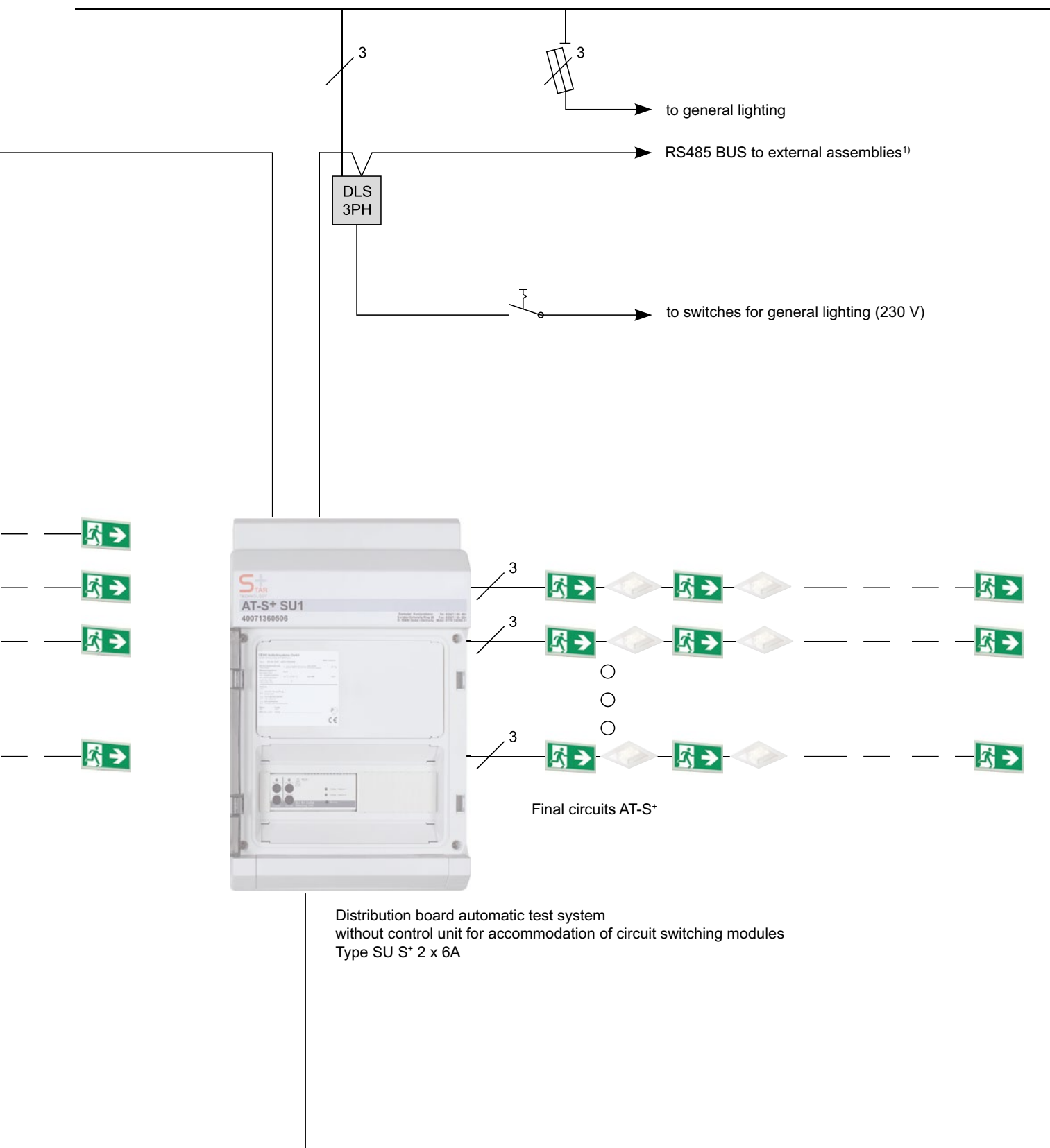
Automatic Test System AT-S+ with STAR+ Technology

Installation example

Main distributor general lighting



Sub-distributor for general lighting



4

¹⁾ bus specifications see page AT-S⁺ bus technology

Automatic Test System AT-S⁺ with STAR⁺ Technology

Specifications

Automatic Test System AT-S⁺



Automatic Test System AT-S⁺

AT-S⁺ automatic test system for 230V / AC safety and escape sign luminaires.

Suitable for safety lighting systems with an AC power source for safety purposes according to DIN VDE 0100-718, DIN VDE 0100-560, DIN EN 50172 and V DIN VDE 0108. With automatic testing device and single luminaire monitoring with individual display of state and name per luminaire in connection with system-connected ECG including monitoring module without supplementary data line.

Developed, manufactured and tested according to ISO 9001.

The switching mode of each safety and escape sign luminaire with system-connected ECG or monitoring module is freely programmed in the control unit of the test system without a supplementary control line.

The CEAG STAR⁺ technology enables the number of end circuits to be strongly reduced as the mixed operation of maintained light, switched maintained light and non-maintained light is implemented in a common circuit.

Assignment of all operating modes is via the control unit without encroaching in the luminaire installation. Selection of the non-maintained light or maintained light operating modes via possibly slide switch, coding switch or jumpers on the monitoring module or ECG is not permitted. Surplus costs to installation lines caused by use of devices from other manufacturers or additional components cannot be made valid.

Electronic assemblies in service-compatible module design wired ready for connection to triple deck installation terminals with N isolating terminal and PE connection.

Connection compartments from above or below on touch-protected connection terminals. With optionally installed mains distribution box for mains cable feed to the substations including fusing. Design with modular plug technology.

Bus technologies

CG-S bus technology based on LONWorks[®] technology.

For data communication of the test system with the connected substations or monitoring facilities such as CGVision (visualisation software), the 2-pole bidirectional CG-S data bus is used, integrated as standard in the AT-S⁺ control unit.

Via an optionally available interface box, all types of building management technology based on LONWorks[®] can communicate with the systems via the CG-S bus.

Alternatively, all OPC-compatible building management technologies can be connected via the CG-S bus with an optionally available OPC server and the interface box.

As such the CG-S bus enables direct calling up of extensive status messages and control commands without supplementary modules.

16 virtual switching inputs via external LON sensors enable circuits or even single luminaires to be independently switched directly.

Networking of all AT-S⁺ distributors control unit also possible via differing media such as optical waveguide, ethernet and LAN via optionally available components.

Status and error messages can be called up per single luminaire.

External assemblies such DLS/3PH bus module, DLS/3PH inverted bus module and TLS bus module are connected via the RS485 bus.

Communication with the system-connected luminaires is exclusively via the connected energy line.

The central system automatically detects the assemblies addressed during installation and the system-connected luminaires via a search function.

Control unit

A freely programmable control unit with non-volatile program memory and graphic display monitors and controls the test system. All functions such as mains/emergency switching

of the devices and connected emergency luminaires are tested automatically. Errors occurring are reported immediately.

An interface enables connection of a central monitoring facility.

Differential monitoring with short circuiting or interruption of control current loops leads to immediate switching on (maintained light) of the system or operational readiness of the system.

Display:

128 x 64 pixel, backlit, contrast and brightness settable via program

Displays:

Power source for safety purposes ready for operation, infeed of safety lighting from power source for safety purposes, power source for safety purposes faulty, manual resetting, follow-on emergency light (residual time in mins.), test operation, date / time, uV-AV failure with location specification in plain text, error information, programming information, inspection book.

LED displays: Ready for operation, power source feed for safety purposes, error

Foil keyboard:

- separate keys for system test, function test.
- 3 freely programmable function buttons for e.g.: Block/release system, manual resetting, switch on / off maintained light, display fault list, switch on / off corridor lighting, mains failure UV simulation
- 7 control buttons for user-friendly navigation in querying and programming mode.

Furthermore, each assembly has a separate service button for directly showing the current assembly status in the display (immediate analysis).

Programming options:

Single luminaire monitoring, individual name (20 characters) per device, circuit, luminaire and bus module, device address, selective manual resetting, follow-on emergency light (1-60 mins.) selective emergency light, LON switch, timer function

ction, automatic function test, menu language selection

Connection for blocking switch: Control loop for blocking system during idle operating times with differential loop monitoring for short circuit and wirebreak detection.

Differential monitoring: Short circuit or interruption lead to operational readiness of the system.

Connection for phase monitor: 24V current loop for emergency light request with differential loop monitoring for short circuit and wirebreak detection.

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

Connection for zero-potential signal contacts, buzzers:

5 potentialfree relais contacts, each 3 x changeover contact, 2 x normally open contact. 30V DC/AC, 0,5A, buzzer

One or several from 11 different messages can be assigned to each contact. Freely programmable, DIN VDE specification as presetting can be called up at any time.

Connection for 24 inputs:

4 freely assignable 24V inputs, can be programmed either inverted or non-inverted for e.g.: Power source for safety purposes ready for operation, infeed of safety lighting from power source for safety purposes, power source for safety purposes faulty, start/abort function test, block/release system, manual resetting, switch on/off maintained light, switch on safety lighting as corridor lighting, external AC isolation fault, external fan fault.

Memory card:

Memory card for archiving of device configuration and specified inspection book information over at least 4 years.

Saving of:

- 300,000 inspection book entries
- Target location texts of luminaires (20 characters per luminaire)

- Target location texts of external modules such as phase monitors, DLS, TLS (20 characters per module)
- Circuit names (20 characters per luminaire)
- System name (20 characters)

With optional CEAG software, programming is possible offline via PC.

Circuit modules

The circuit modules monitored emergency luminaires with electronic ballasts for AC operation. The STAR⁺ monitoring tests functionality of the connected luminaires.

- Monitoring of up to 20 luminaires per circuit with individual status display via the control unit
- Mixed operation within one circuit for maintained light, switched maintained light and non-maintained light (A supplementary data line to the luminaires is not required).
- Typical switching over time mains/safety source: 450ms
- Free programming for maintained light, switched maintained light or non-maintained operation
- Fuses on the front of the assembly are easily accessible
- Permanent monitoring of fuses
- LED displays for fault and operation/ON per circuit
- Service button for configuration
- Housing for DIN rail mounting
- Automatic luminaire search function

External DLS/3PH bus module

The external DLS/3PH bus module for installation into the sub-distribution of the general lighting can be used as phase monitor and light switch query (DLS) for the general switching of safety and general lighting.

8 DLS inputs (2.5 sq.mm) with LED display or 5 DLS inputs in combination with 3 phase monitor inputs can be activated via selector switch.

Monitoring thresholds acc. to DIN EN 60598-2-22: 60-85% U_{NOM} .

Connection of RS485 bus and 24V module supply.

Addressable via coding switch, LED displays for fault, switching state on, operation.

Housing for DIN rail mounting

Freely programmable assignment of independent DLS inputs per emergency light circuit or luminaire and individual name per bus module in control unit.

With use a 3-phase monitor, detailed phase failure display with location of failed sub-distribution for general lighting via clear text display in control unit.

External DLS/3PH bus module inverted

The external DLS/3PH bus module inverted for installation into the sub-distribution of the general lighting can be used as phase monitor and light switch query (DLS) with inverted switching logic for the common switching of safety and general lighting or for monitoring of automatic cutouts.

8 inverted DLS inputs (2.5 sq.mm) with LED display or 5 inverted DLS inputs in combination with 3 phase monitor inputs can be activated via selector switch.

Monitoring thresholds acc. to DIN EN 60598-2-22: 60-85% U_{NOM} .

Connection of RS485 bus and 24V module supply.

Addressable via coding switch, LED displays for fault, switching state on, operation.

Housing for DIN rail mounting.

Freely programmable assignment of independent inverted DLS inputs per emergency light circuit or luminaire and individual name per bus module in control unit.

With use a 3-phase monitor, detailed phase failure display with location of failed sub-distribution for general lighting via clear text display in control unit.

Supplier information:

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

DIN EN ISO 9001:4500 certification must also be verified.

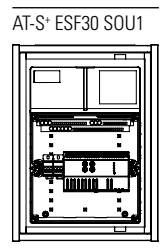
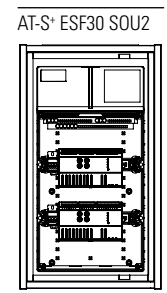
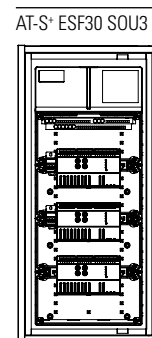
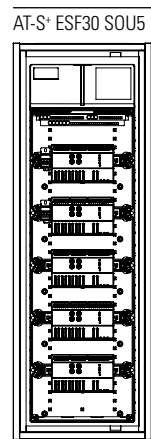
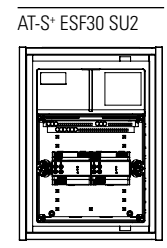
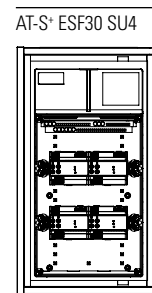
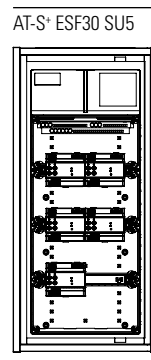
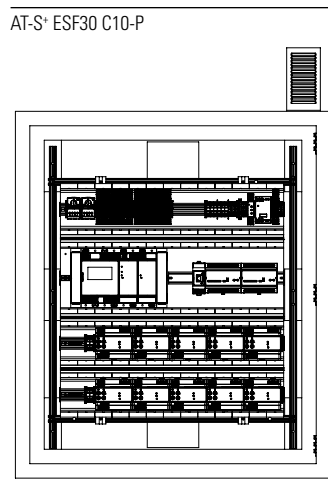
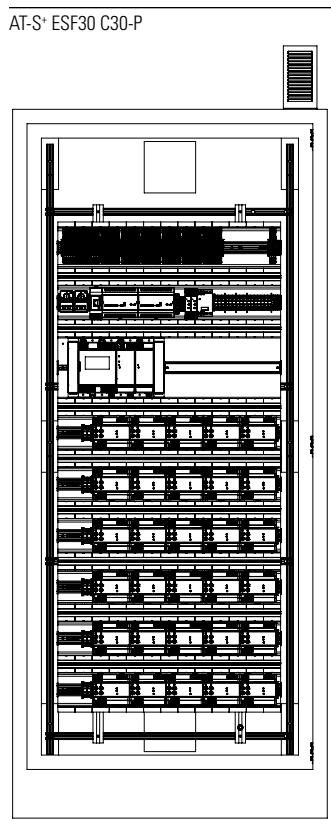
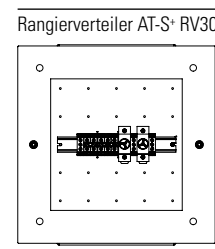
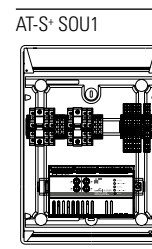
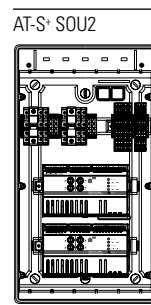
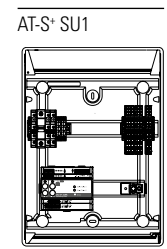
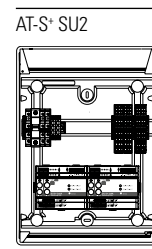
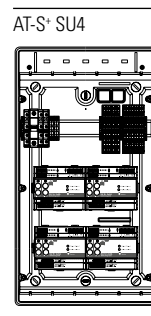
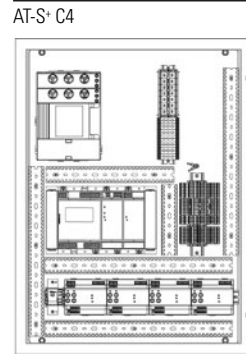
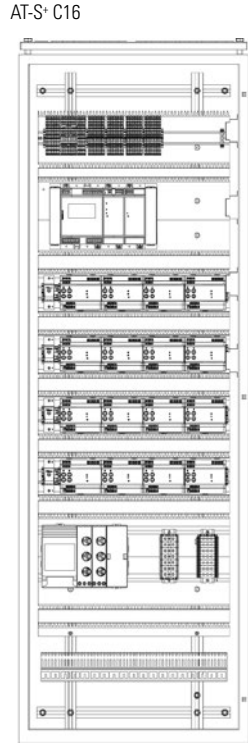
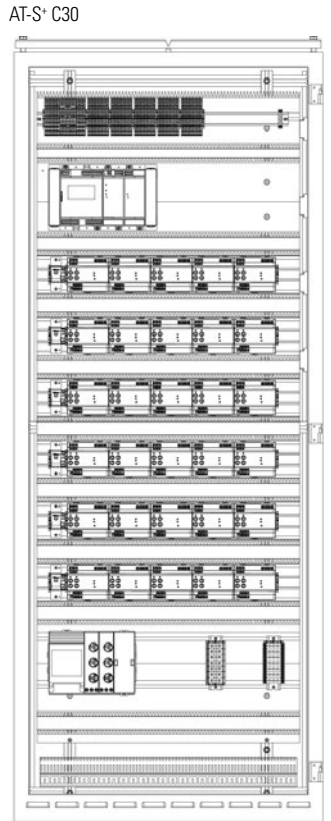
Manufacturers without DIN EN ISO 9001:4500 certification are not permitted.

LONWorks®: registered trademark of Echelon Corporation

Automatic Test System AT-S+ with STAR+ Technology

Technical drawings

4





Simply the most flexible, reliable monitoring for peace of mind



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 luminaires 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.



Self-contained luminaire system CGLine+



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.

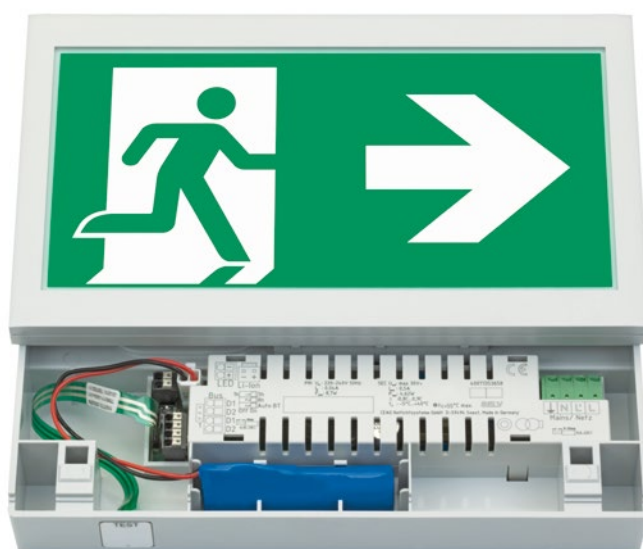
Even if a single safety luminaire or exit sign luminaire fails, depending on the particular local conditions, there is a significant risk of accidents, for example in a stairway. For this very reason legislation requires continuous testing of the emergency lighting. The operation of the luminaires in 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+ self-contained luminaire system

Enhanced safety by providing reliable and efficient monitoring

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

**CG+
Line**

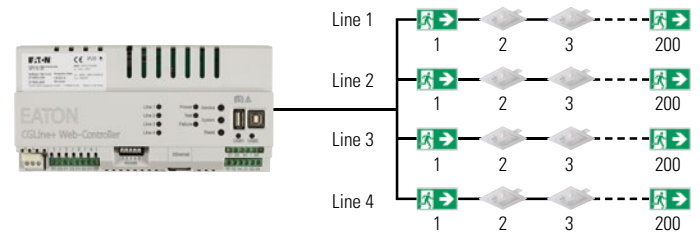


The new CGLine+ Web-Controller

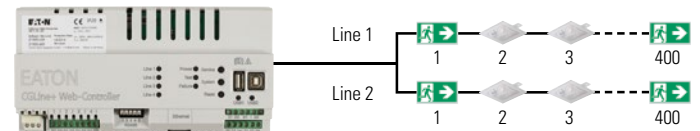
The tried and tested self-contained luminaire system CGLine 400 has been used since 2004 for the safe monitoring of self-contained luminaires. The new CGLine+ system is a more powerful system to make the operation of self-contained luminaire systems safer and even more convenient.

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.



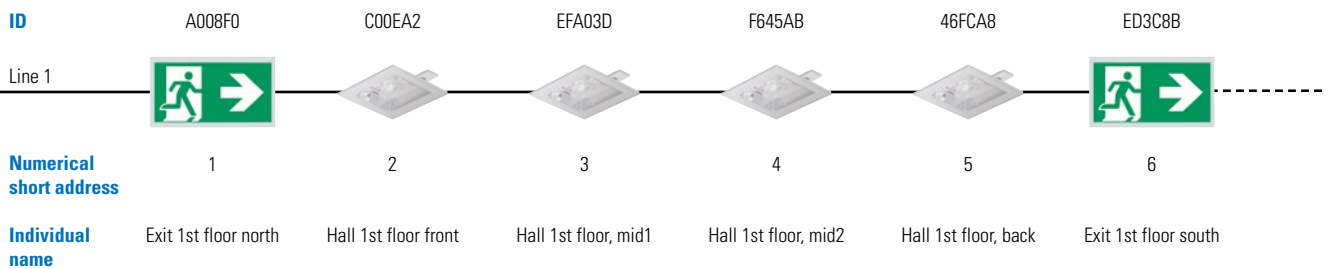
Typical installation with max. 4 lines of 200 luminaires each (above) or 2 lines of 400 luminaires each (below).



Addressing CGLine+ luminaires

Luminaires do not need to be manually 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.

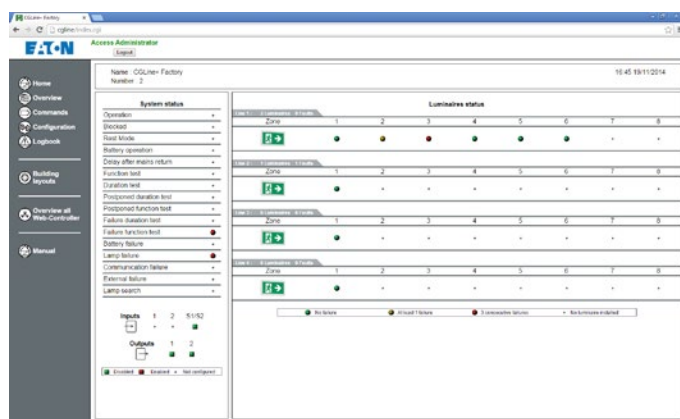
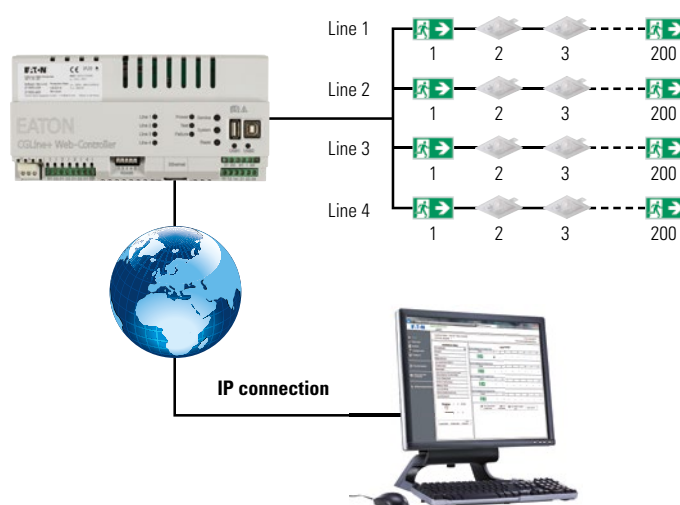




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Safety under control worldwide

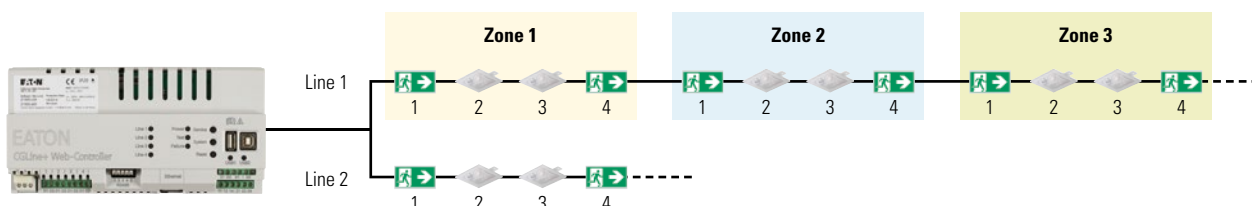
An integrated web server is available for convenient visualization, control and monitoring of all connected CGLine+ luminaires. The controller can be accessed from any PC with an IP connection and a regular web browser without requiring any special software. The controller provides an overview of faulty 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.

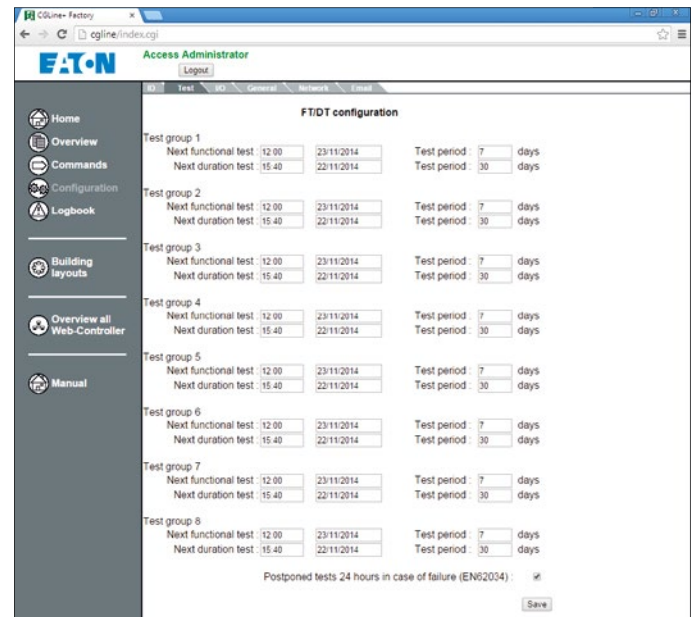


CGLine+ self-contained luminaire system

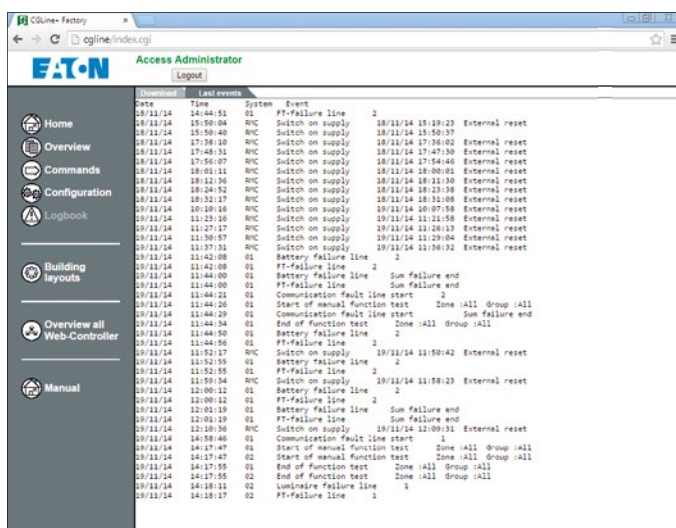
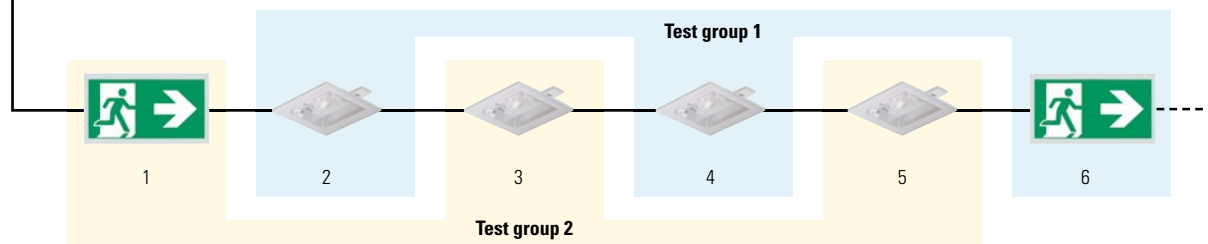
Enhanced safety by providing reliable and efficient monitoring

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.

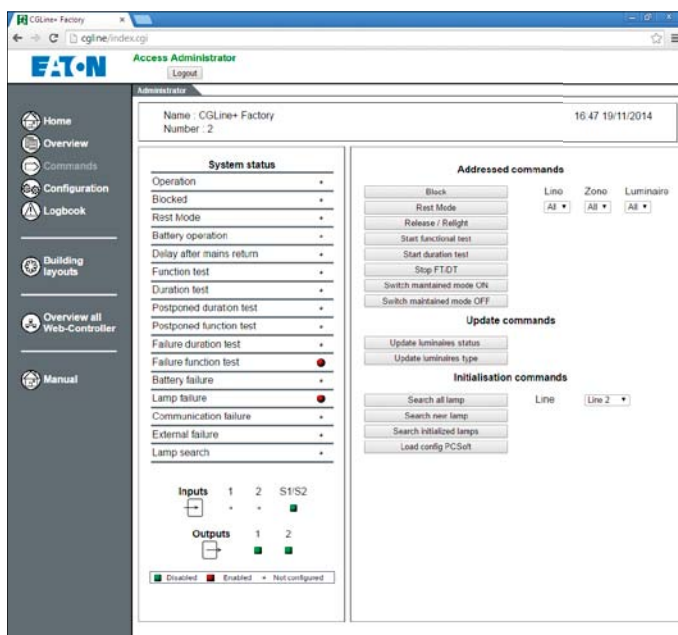
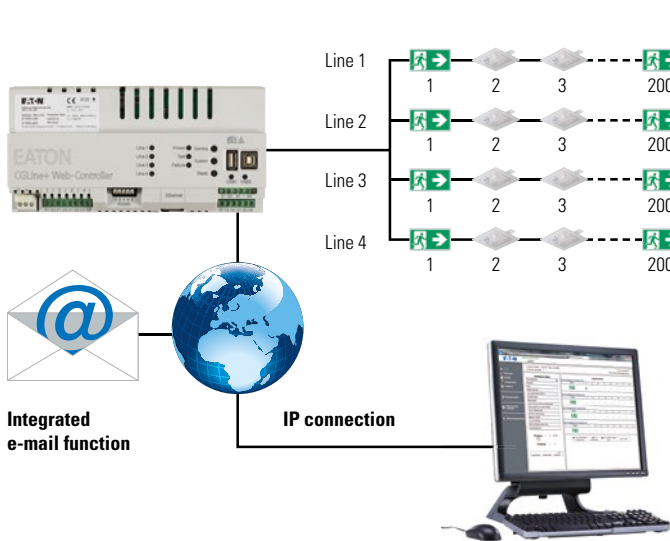
CGLine+ self-contained luminaire system

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

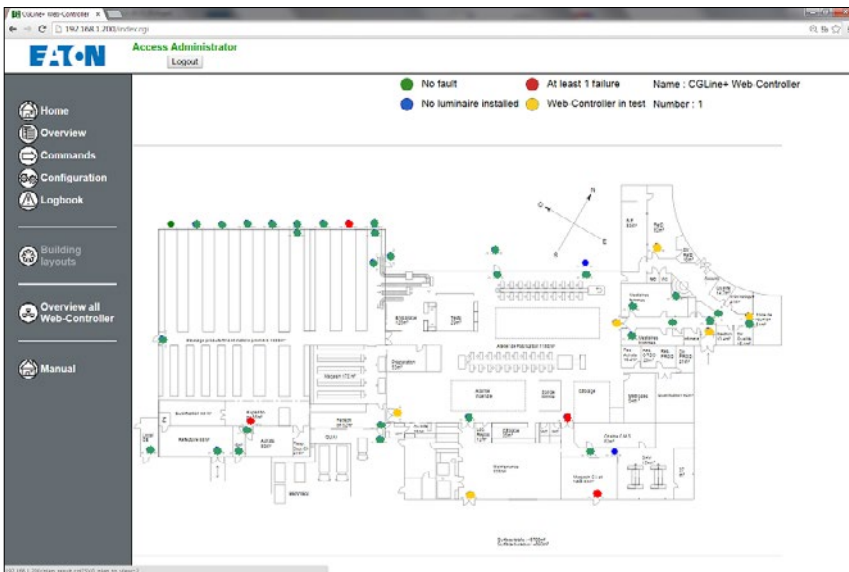
- Blocking/unblocking instructions
- Manual starting/stopping the function test and duration tests
- Switching on/off maintained light

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.

CGLine+ self-contained luminaire system

Enhanced safety by providing reliable and efficient monitoring



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.

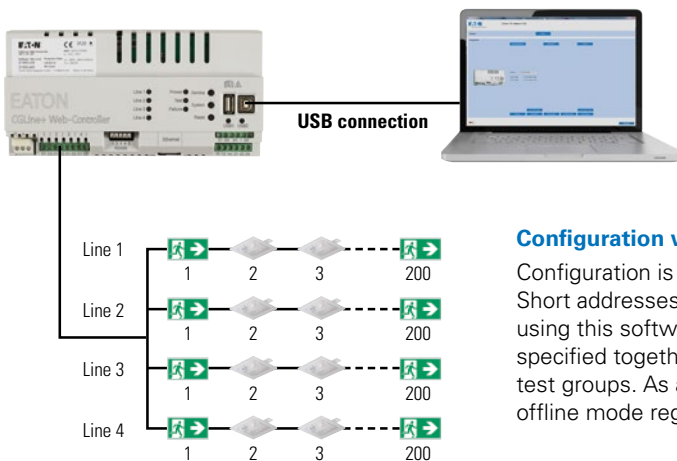
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Compatibility with the CGLine 400 System

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.

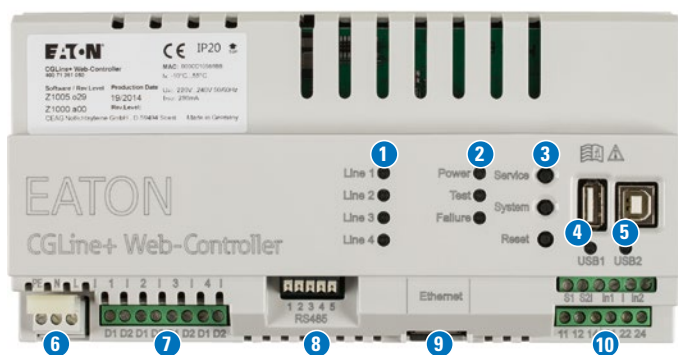
Cable length of a line

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

Electrical data per line/bus

Supply voltage Bus	Max. allowable voltage drop	Bus current
25 VDC	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

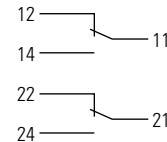
- Yellow blinking LED = Sending data to the luminaires
- 2 Power LED:**
The green light is lit as soon as the controller is connected to the 230V/AC supply voltage.

- 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 a duration test

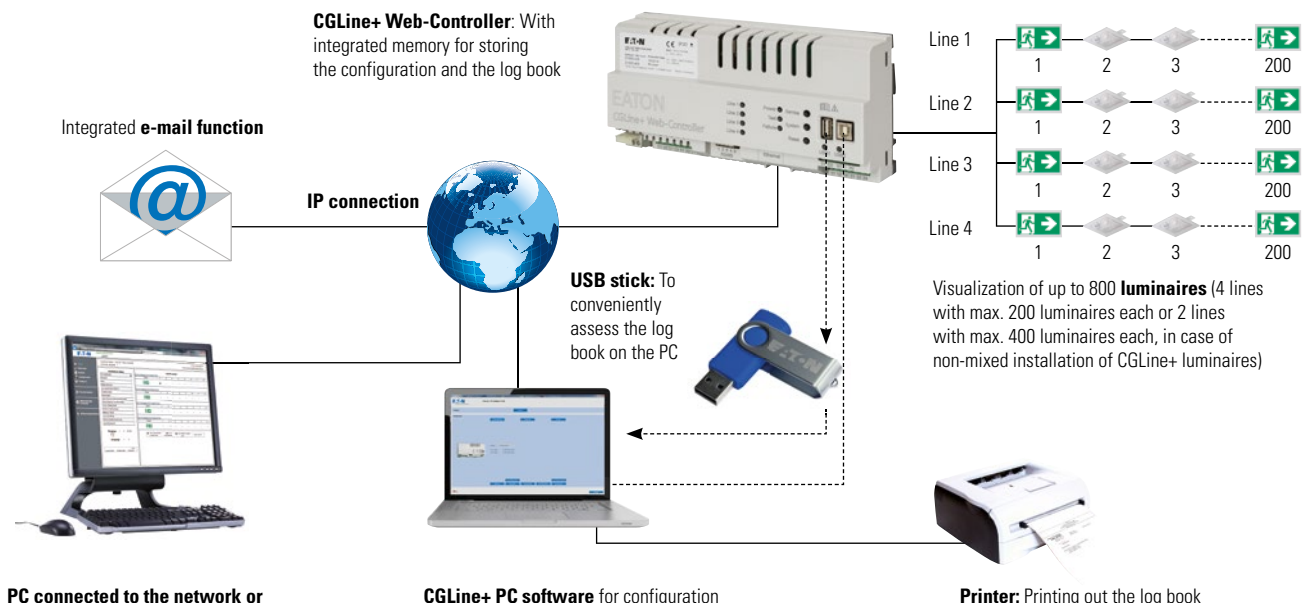
LED failure:
Showing a sum failure. Red LED light is lit if at least 1 luminaire is faulty, for example the battery has failed

- 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



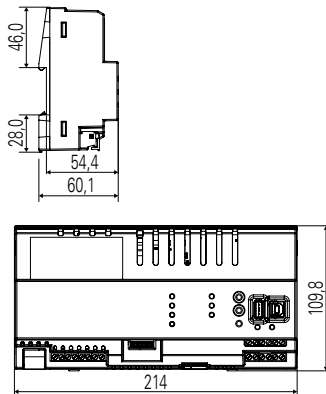
CGLine+ in operation



CGLine+ Web-Controller with integrated web server



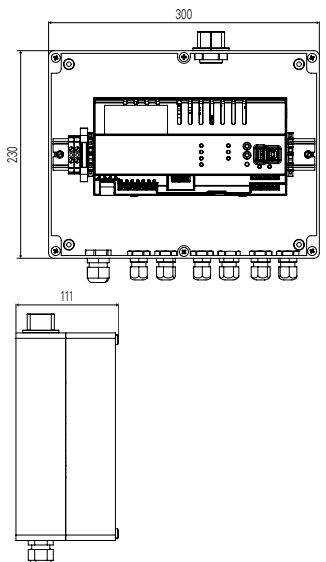
Dimensional drawings, data in mm



CGLine+ Web-Controller connection box, IP54



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, test interval can be individually defined
- 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	230 V AC, 50/60 Hz
Power consumption	< 4W in standby, < 21W at full load
Connection terminals	max. 2.5 mm ²
Permissible ambient temperature	0 °C ... 35 °C
Storage temperature	-20°C ... 70°C
Degree of protection Controller	IP20
Degree of protection Connection box	IP54

Ordering details

Type	Scope of supply	Order No.
CGLine+ Web-Controller	Module in installation housing for DIN rails	40071361055
CGLine+ Web-Controller connection box	CGLine+ Web-Controller in wall-mounted housing IP54	40071361184

Accessories

Type	Scope of supply	Order No.
CGLine+ PC software	on CD-ROM	40071361178

Mobile visualization

CGLine+ Wireless Monitoring Set

CGLine+ Wireless Monitoring Set

5

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.



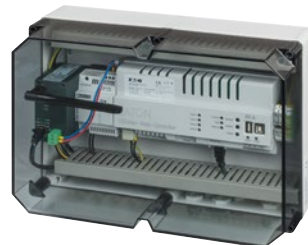
Installation example



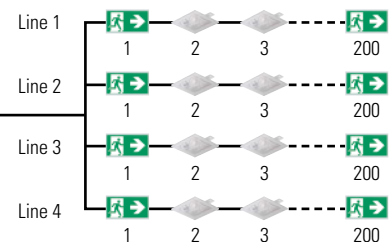
Current status indicator of all CGLine+ luminaires at all times in the web browser of a tablet or smartphone



WiFi (wireless network connection)



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



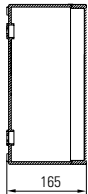
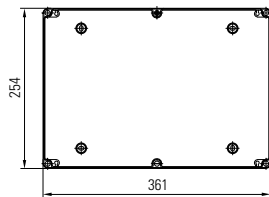
CGLine+ WiFi connection box + iPad* Air



+



Dimensional drawing connection box, data in mm



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 mm ²
Permissible Ambient temperature	0 °C ... 35 °C
Storage temperature	-20 °C ... 70 °C
Degree of protection	IP54

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.

CGLine+ self-contained luminaire system

CGVision in the CGLine+ Web-Controller



CGVision in the CGLine+ Web-Controller

5

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.

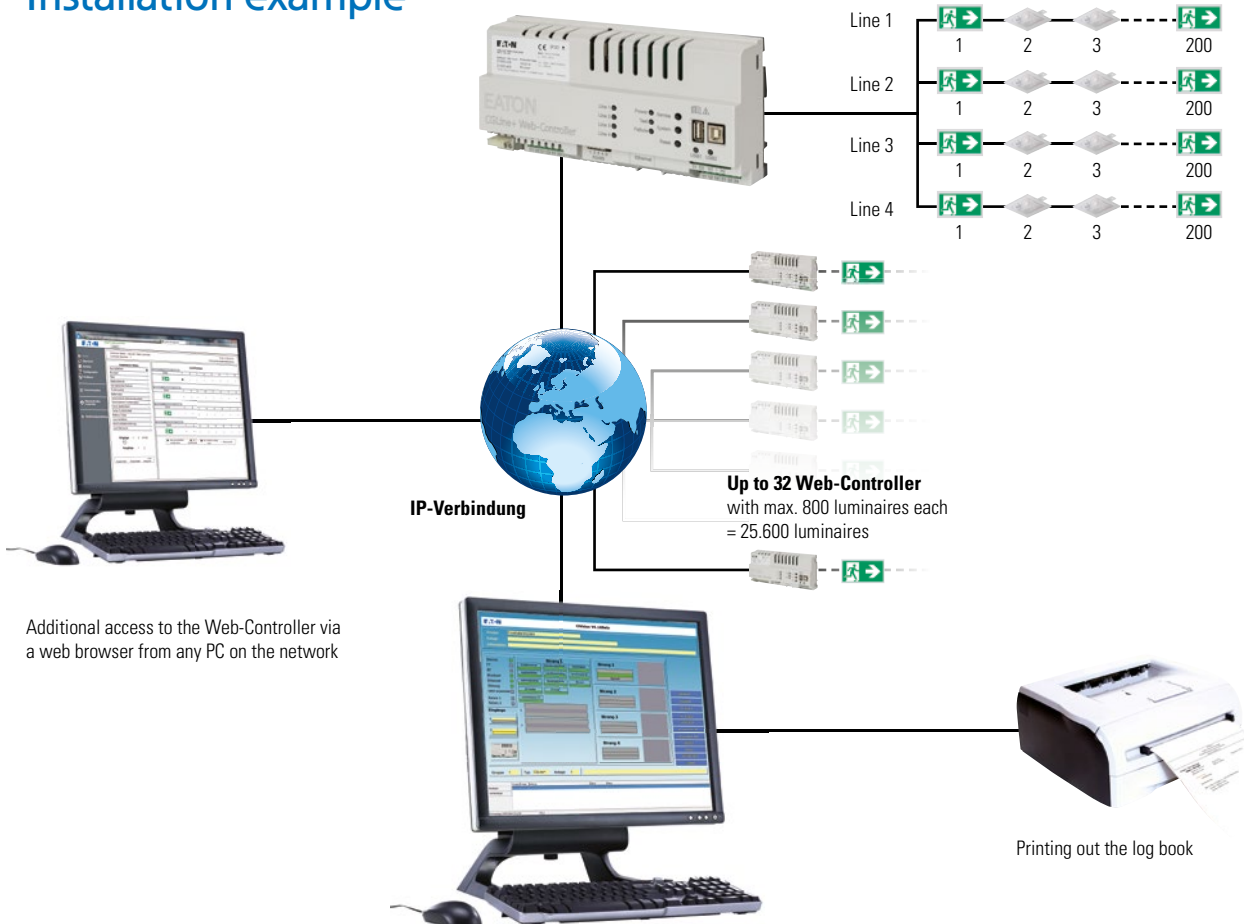
CGVision takes over all the control and test functions, and it generates a comprehensive electronic log book for all connected systems- and does so completely automatically.

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

CGLine+ Web-Controller with integrated memory for storing the configuration and the log book



Additional access to the Web-Controller via a web browser from any PC on the network

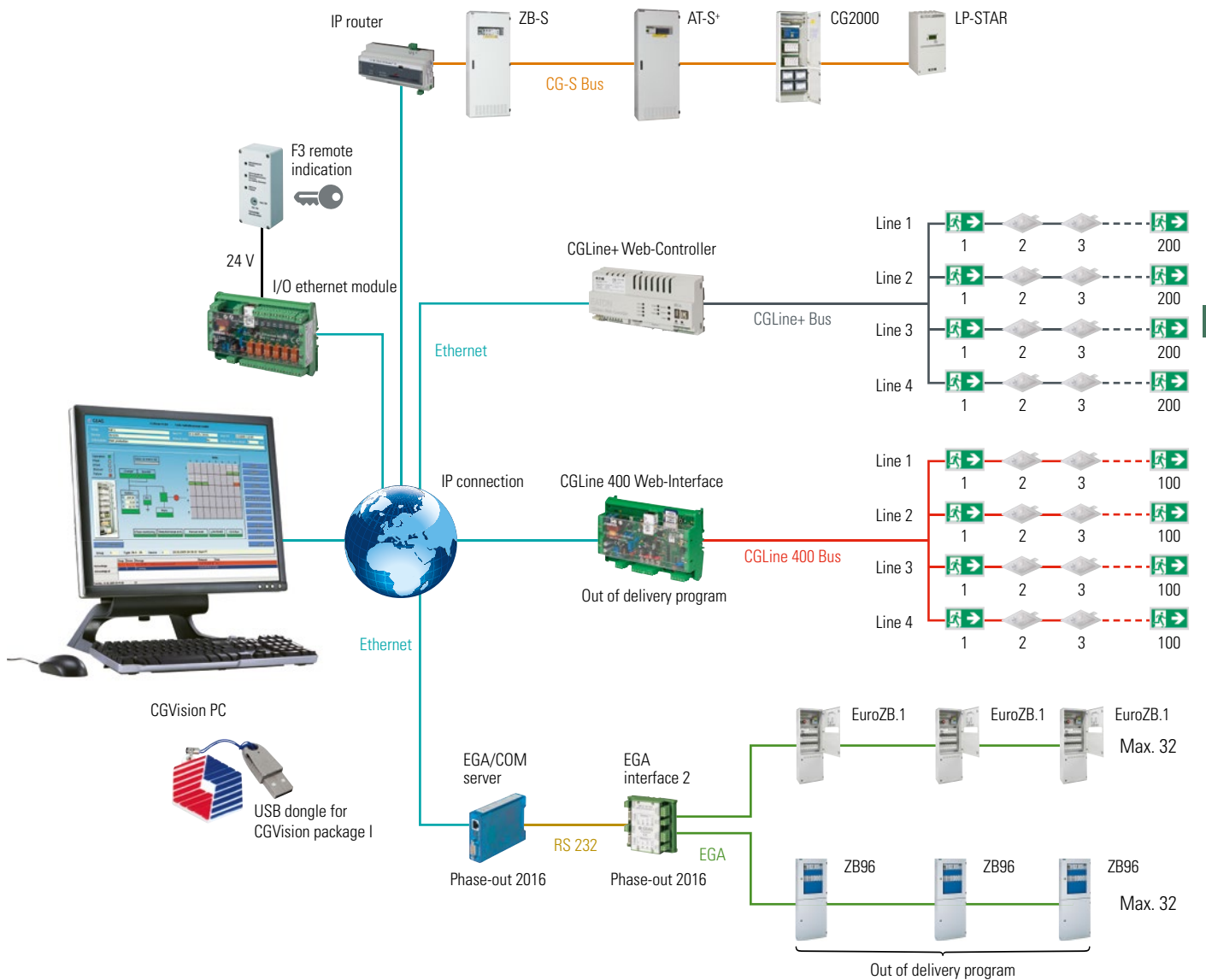
Printing out the log book

CGVision: Configuration und complete visualization of all luminaires

CGLine+ self-contained luminaire system

CGVision in the CGLine+ Web-Controller

Example for use of CGVision Package I



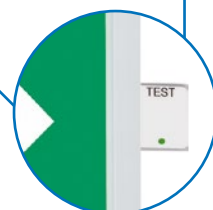
CGVision ordering details

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	Icon	Definition
	Viewing distance, here: 20 m		Suitable for outdoor use
	Light output, here: single-sided		According to DIN 4844
	LED light source		According to EN 1838
	Protection class 1		For use in food processing industry
	Protection class 2		ENEC certified
	Degree of protection, here: IP20		With Lithium-ion battery
	Degree of mechanical impact resistance, here: IK10		With CGLine+ technology
	Luminaire with limited surface temperature		





1 LED Lightguide technology

- Perfect, standard-compliant illumination
- Low energy requirements
- LEDs for increased safety with 50,000 h service life

2 CGLine+ LED electronics

- Can be used for maintained mode and non-maintained mode
- Fully automatic function test (weekly) or duration test (every 6 months)
- 1 minute switch-back delay to normal operation after mains return
- Blocking function prevents unintentional discharge during idle operating times (via CGLine+ Web-Controller or CGVision visualisation software)
- Convenient and concise central monitoring in combination with CGLine+ Web-Controller or CG Vision visualisation software

3 Optimised connection technology

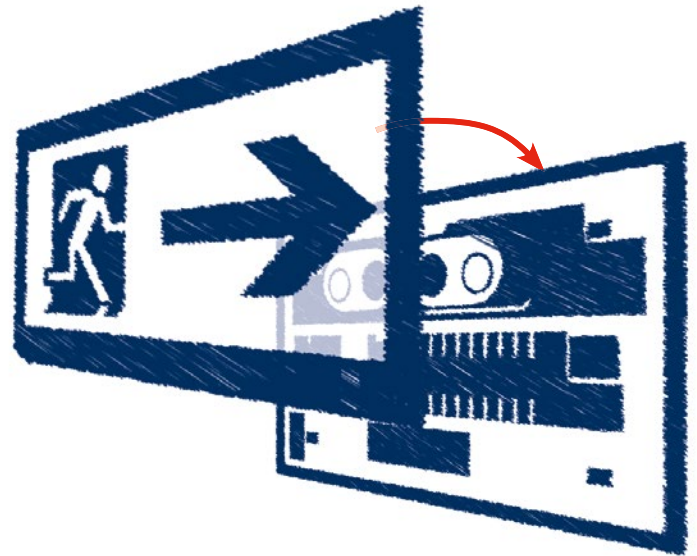
- Spacious insertion areas
- Equipped for through-wiring of mains cable and CGLine+ bus line via double terminals and 4 cable infeeds

4 Display and test unit

- Testing button for manual triggering of function test and duration test
- Simple fault analysis via display with bicolor LED (light source, charging or battery circuit fault) and status displays (operation, function test, duration test)
- Setting of dimming level in mains operation (100 %, 30 %, 10 %)

5 Innovative Lilon-technology

- Large capacity with small construction size for compact luminaire design
- 1 version for 1 h, 3 h and 8 h emergency lighting operation
- No memory effect
- Environmentally friendly: no heavy metals and energy-optimised charging process due to low self-discharge
- Simple replacement via polarity reversal-protected plug-in contacts and snap mounting



5

Simple mounting

- Pictogram cover is simply clipped on with wall mounting
- Several snap connections



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, with luminance of over 500 cd/m² on the white surface. As such the escape sign always remains easily recognisable even with poor visibility conditions or in bright surroundings.

Despite the very good photometric values, the new Lightguide technology with particularly



efficient LEDs requires up to 60 % less energy compared to previous escape sign luminaires with fluorescent lamps.

Photometric requirements for escape sign

DIN 4844-1 (2005-05) und ISO 3864-1 (2002):

$L_m \geq 500 \text{ cd/m}^2$ (white surface)

for applications in bright ambient conditions (mains operation).

ISO 30061 (2007):

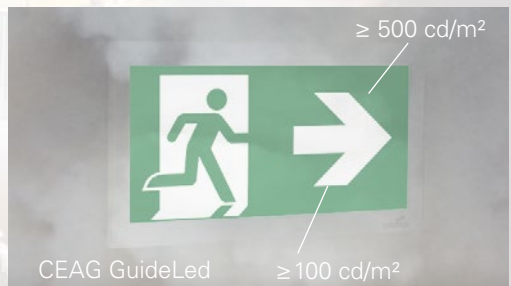
$L_{min} = 10 \text{ cd/m}^2$ (green surface)

in smoky conditions. The luminaires should be suspended by at least 0.5 m.

EN 1838 (1999):

$L_{min} = 2 \text{ cd/m}^2$ (green surface)

Emergency lighting operation



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.

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 new GuideLed luminaires, saving additional energy costs.



- Low spacial requirement
- No memory effect
- Environmentally friendly

Diverse types of mounting make GuideLed a real all-rounder

GuideLed represents the optimal solution for all applications with an extensive product spectrum and a wide selection of pictograms. GuideLed is supplied as standard in a discreet light grey.

Further colours matched to specific architecture as well custom pictograms can be ordered on request.

All versions are available in two viewing distances



Wall mounting with recessing of the LED supply



Wall surface-mounting



Ceiling surface-mounting



Exemplary design via revolutionary technology.

Escape signs must be conspicuous enough to give clear orientation in emergencies. And discreet enough to blend unobtrusively in with the architecture. Whether installed as a wall luminaire or freely suspended, both GuideLed versions impress with clear functionality, an especially flat construction design and no visible screw connections.



Wall mounting has a highly discreet appearance with only 14 mm construction height



Rope suspension



Pendant suspension



Ceiling recessing



Equipped for all situations

With all GuideLed CGLine+ luminaires, selection can be made between maintained mode and non-maintained mode as well as 1 h, 3 h and 8 h emergency light duration as standard. As such, all accommodation establishments and homes can be equipped with self-contained luminaires according to DIN V VDE V 0108-100.

If the escape sign luminaires are operated in surroundings with low background brightness, these can be adapted to such conditions by dimming to 30 % or 10 % brightness via the testing button.

Rated duration of emergency operation and its application

1 h

e.g. escape routes in places of work

3 h

e.g. places of assembly, sales areas, restaurants, schools, exhibition halls

8 h

e.g. accommodation establishments, homes

Despite variable rated operating time, in the complete GuideLed CGLine+ product spectrum only two battery versions are used, one for escape signs and one for safety luminaires. This significantly simplifies spare parts management.

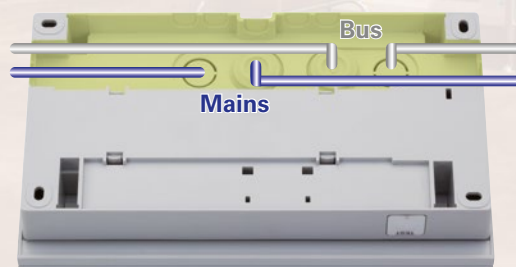
The batteries are equipped with a short-circuit and reverse-polarity protected plug for simple, rapid battery replacement, and they can be snapped simply into corresponding holders.





All GuideLed CGLine+ luminaires are equipped for the through-wiring of mains and bus lines, having infeeds for up to 4 cables and with double connection terminals.

Spacing for cable through-wiring with surface-mounted luminaires has been generously designed in order to optimally compensate for any imprecision occurring on-site. Surface-mounted luminaires have additional infeed possibilities for surface-mounted cables.



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 escape sign is up to 60 % less than comparable self-contained luminaires with fluorescent lamps.



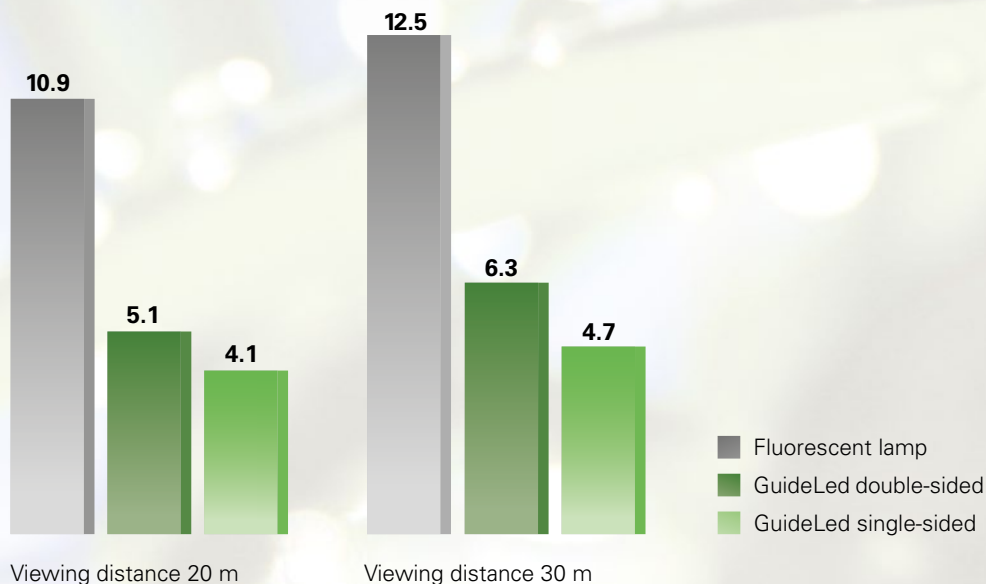
Safely saving on maintenance costs

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



Comparative calculation for electricity cost savings

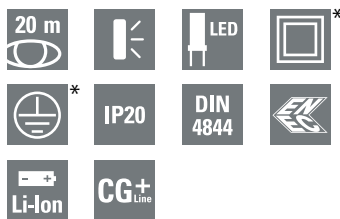
Daily operational time	8W lamp $P_{\text{sys}} = 12.5 \text{ W}$	GuideLed 30 m single sided $P_{\text{sys}} = 4.7 \text{ W}$	GuideLed 30m double-sided $P_{\text{sys}} = 6.3 \text{ W}$
16 h	73 kWh 10.95 €	27 kWh 4.12 €	37 kWh 5.52 €
		per annum	
	Yearly saving/ luminaire	6.83 €	5.43 €
24 h	110 kWh 16,50 €	41 kWh 6,18 €	55 kWh 8,28 €
		per annum	
	Yearly saving/ luminaire	10.32 €	8.22 €

Presumed electricity price 0.15 €/kWh

+ saved relamping costs (material, work, journey)

GuideLed 10811, 10812 CGLine+

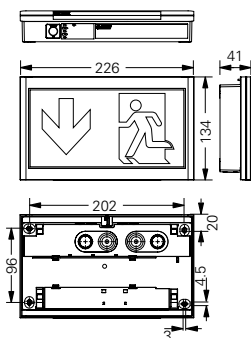
Exit sign luminaire, wall mounting



GuideLed 10811, 10812 CGLine+

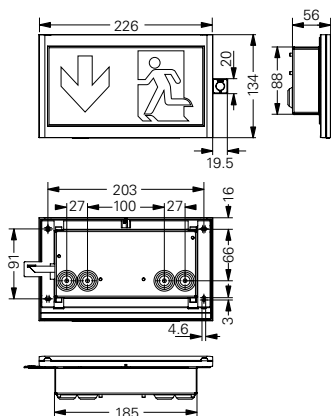
- LED self contained luminaire with automatic test for reduced inspection effort
- Universal use for maintained and non-maintained operation and for 1 h, 3 h or 8 h operation
- For autonomous installation or connection to the CGLine+ monitoring system
- Environmentally-friendly due to modern lithium ion technology
- Low operating costs via low connected load
- Minimum maintenance effort and increased safety via use of LEDs with high service life (up to 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)

10811 CGLine+ with LED pictogram PR



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 mm ² CGLine+ bus through-wiring to 1.5 mm ²
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

10812 CGLine+ with LED pictogram PR



Ordering details – mounting set (LED pictograms must ordered separate)

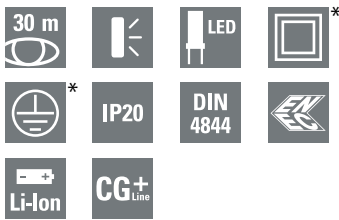
Scope of delivery	Order No.
Wall mounting set for GuideLed 10811 1-8 h/D CGLine+ and 11811 1-8 h/D CGLine+, surface mounted, incl. LED supply and CGLine+ technology, 20 m and 30 m	40071353260
Wall mounting set for GuideLed 10812 1-8h/D CGLine+, recessed mounting of LED supply and CGLine+ technology,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

Please ensure clearance of 10 mm above the luminaire.

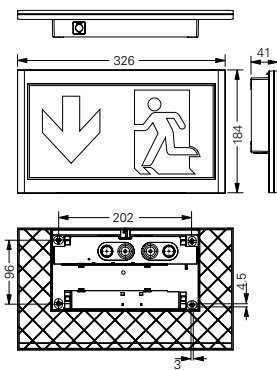
* 10811: Protection class 2
10812: Protection class 1



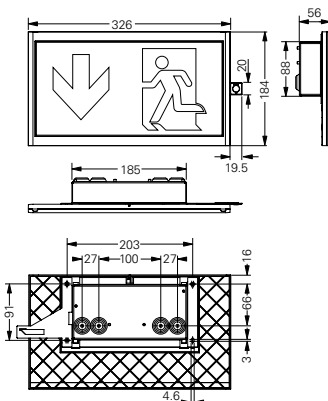
GuideLed 11811, 11812 CGLine+

- 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 (up to 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.

*11811: Protection class 2
11812: Protection class 1

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) up to 2.5 mm ² CGLine+ bus through-wiring up to 1.5 mm ²
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 (LED pictograms must ordered separate)

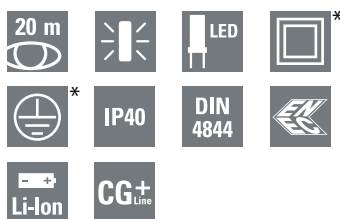
Scope of delivery	Order No.
Wall mounting set for GuideLed 10811 1-8 h/D CGLine+ and 11811 1-8 h/D CGLine+, surface mounted, incl. LED supply and CGLine+ technology, 20 m and 30 m	40071353260
Wall mounting set for GuideLed 11812 1-8h/D CGLine+, recessed mounting of LED supply and CGLine+ technology,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

GuideLed 10821, 10822, 10823, 10824 CGLine+

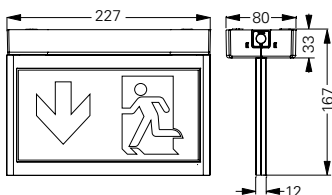
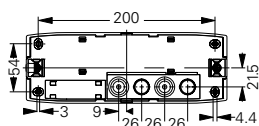
Exit sign luminaire, ceiling mounting



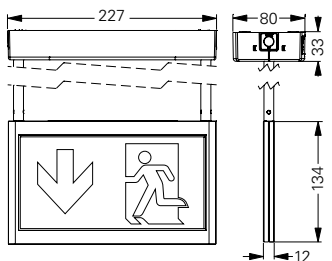
GuideLed 10821, 10822, 10823, 10824 CGLine+

- 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 (up to 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 mm ² CGLine+ bus through-wiring to 1.5 mm ²	
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 (LED pictograms must ordered separate)

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

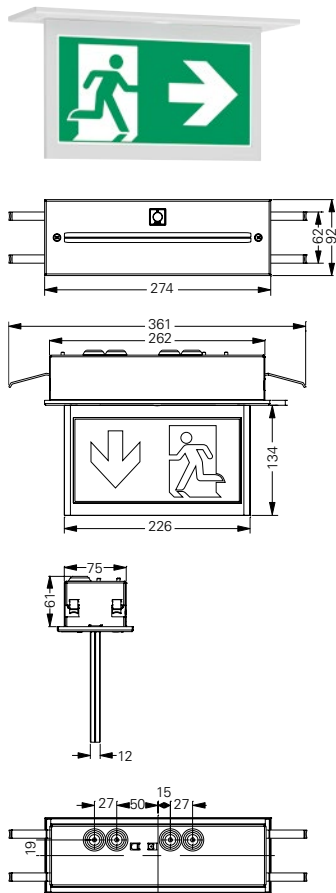
Scope of delivery	Order No.
Add-on housing for GuideLed ceiling surface-mounted 1082x, for expanded accommodation for wiring and cable entry, incl. through-wiring terminal and wiring to luminaire	40071353639
Chain suspension for GuideLed 10821/11821 1-8 h/D CGLine+	40071353624
Recessing housing for concrete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

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

GuideLed 10821, 10822, 10823, 10824 CGLine+

Exit sign luminaire, ceiling mounting

10824 CGLine+ with LED pictogram PL/PR

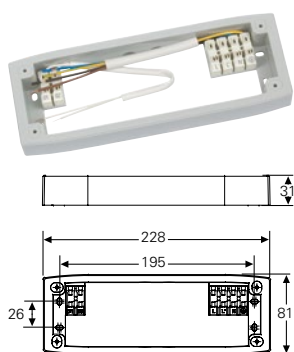


Ordering details – LED pictograms (fastening set required)

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

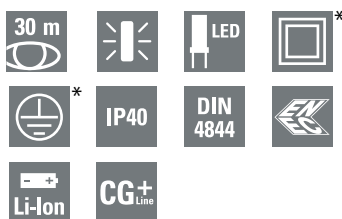
* R = arrow direction room
W = arrow direction wall

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



GuideLed 11821, 11822, 11823, 11824 CGLine+

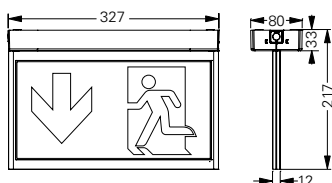
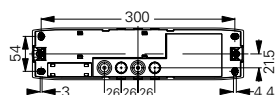
Exit sign luminaire, ceiling mounting



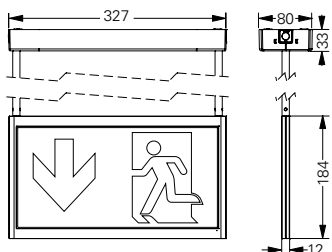
GuideLed 11821, 11822, 11823, 11824 CGLine+

- 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 (up to 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 mm ² CGLine+ bus through-wiring to 1.5 mm ²	
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 (LED pictograms must ordered separate)

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

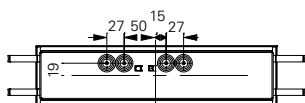
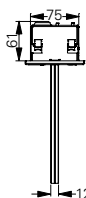
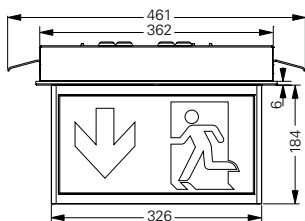
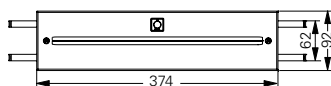
Scope of delivery	Order No.
Chain suspension for GuideLed 10821/11821 1-8 h/D CGLine+	40071353624
Recessing housing for concrete GuideLed 11824 1-8 h/D CGLine+	40071353530

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

GuideLed 11821, 11822, 11823, 11824 CGLine+

Exit sign luminaire, ceiling mounting

11824 CGLine+ with LED pictogram PL/PR



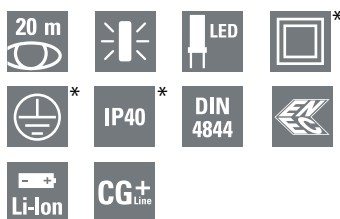
Ordering details – LED pictograms (fastening set required)

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+

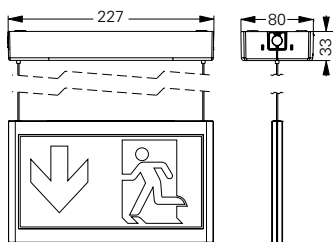
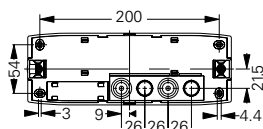
Exit sign luminaire, ceiling mounting with cable



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 (up to 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)

10825 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 (10826)	
Housing colour	Light grey RAL 7035	
Weight	0.71 kg (10825 CGLine+) 1.24 kg (10826 CGLine+)	
Type of mounting	10825	Cable suspension (drop height max. 1.5 m); insulation class II (protective earth required)
	10826	Cable suspension (drop height max. 1.5 m); insulation class I
Terminals	Through-wiring from mains (L, L', N, PE) to 2.5 mm ² CGLine+ bus through-wiring to 1.5 mm ²	
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	

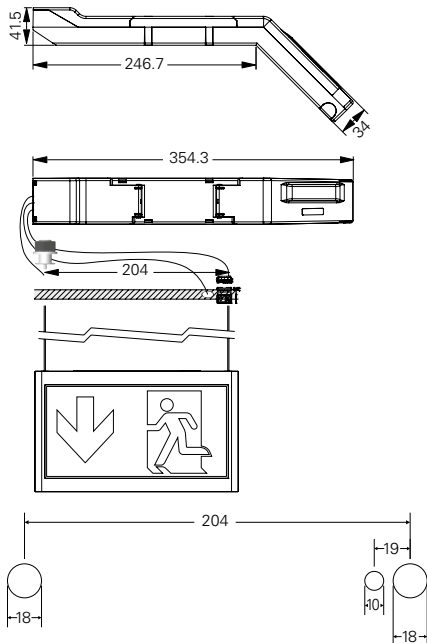
Ordering details – mounting set (LED pictograms must ordered separate)

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



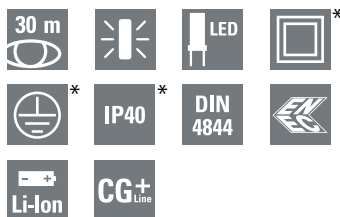
Hole pattern ceiling 10826 CGLine+

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+

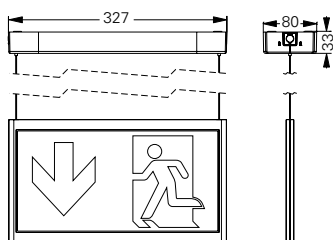
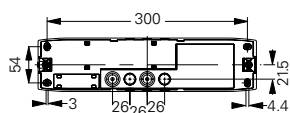
Exit sign luminaire, ceiling mounting with cable



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 (up to 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)

11825 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 (11826)	
Housing colour	Light grey RAL 7035	
Weight	1.06 kg (11825 CGLine+) 1.57 kg (11826 CGLine+)	
Type of mounting	10825	Cable suspension (drop height max. 1.5 m); insulation class II (protective earth required)
	10826	Cable suspension (drop height max. 1.5 m); insulation class I
Terminals	Through-wiring from mains (L, L', N, PE) to 2.5 mm ² CGLine+ bus through-wiring to 1.5 mm ²	
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 (LED pictograms must ordered separate)

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

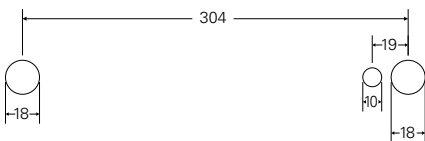
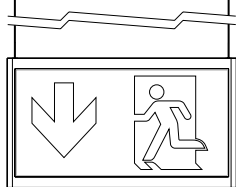
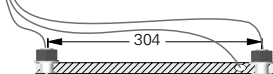
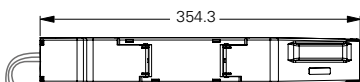
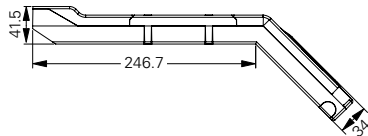
11826 CGLine+ with LED pictogram PL/PR

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



Hole pattern ceiling 11826 CGLine+

GuideLed SL 13811, 13821 CGLine+

Safety luminaire, ceiling recessed mounting



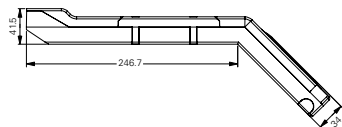
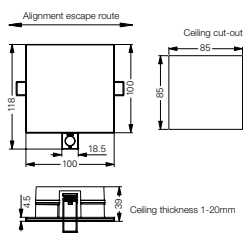
GuideLed SL 13811, 13821 CGLine+

- 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 (up to 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)

13811 CGLine+ with asymmetric optics



5 13821 CGLine+ with symmetric optics



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

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 mm ² CGLine+ bus through-wiring to 1.5 mm ²
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



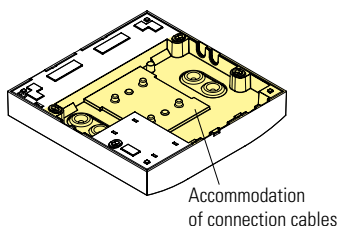
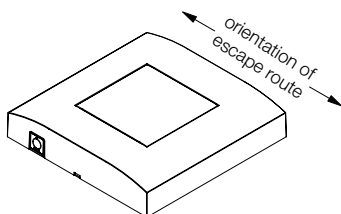
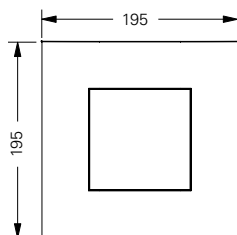
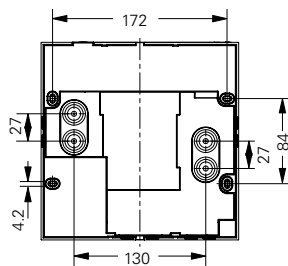
GuideLed SL 13812, 13822 CGLine+

- 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 (up to 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)

13812 CGLine+ with asymmetric optics



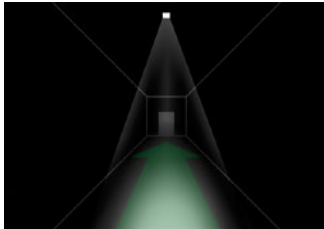
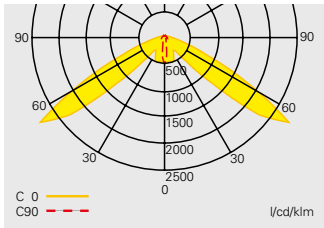
13822 CGLine+ with symmetric optics



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 mm ² CGLine+ bus through-wiring to 1.5 mm ²
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

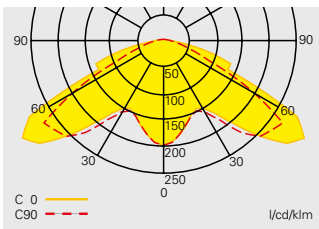


Escape route illumination with asymmetric optics

Planning help for GuideLed SL CGLine+ with asymmetric optics for E = 1.0 lx (0.5 lx)

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

Emergency light operating duration	Mounting height in metres	Mounting types	Mounting types				
			L1	L2	L3	L4	
1 h	2.5	Ceiling mounting	1.6 (2.9)	5.8 (7.4)	5.9 (6.6)	13.2 (14.7)	
	3.0	Escape route centre	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)	
	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)	
	3 h	2.5	Ceiling mounting	1.0 (2.3)	4.5 (6.4)	5.4 (6.2)	12.3 (13.7)
		3.0	Escape route centre	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)	
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)	
8 h	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 centre	0.5 (0.8)	1.5 (2.6)	5.3 (5.9)	11.9 (13.2)	
	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)	

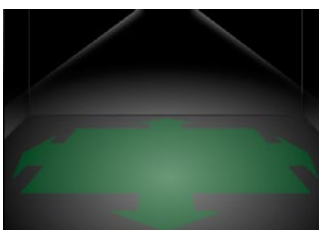
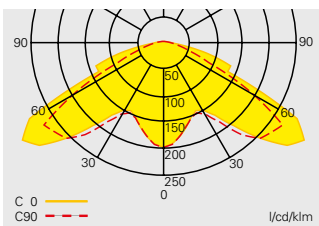


Escape route illumination with symmetric optics

Planning help for GuideLed SL CGLine+ with symmetric optics for E = 1.0 lx (0.5 lx)

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

Emergency light operating duration	Mounting height in metres	Mounting types	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 centre	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 centre	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 centre	0.6 (2.8)	5.5 (7.7)	0.7 (3.1)	5.2 (8.4)



Room illumination with symmetric optics

Planning help for GuideLed SL CGLine+ with symmetric optics for E = 1.0 lx (0.5 lx)

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

Emergency light operating duration	Mounting height in metres	Mounting types	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)
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)

GuideLed SL 13851, 13852 CGLine+

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

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

5 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.

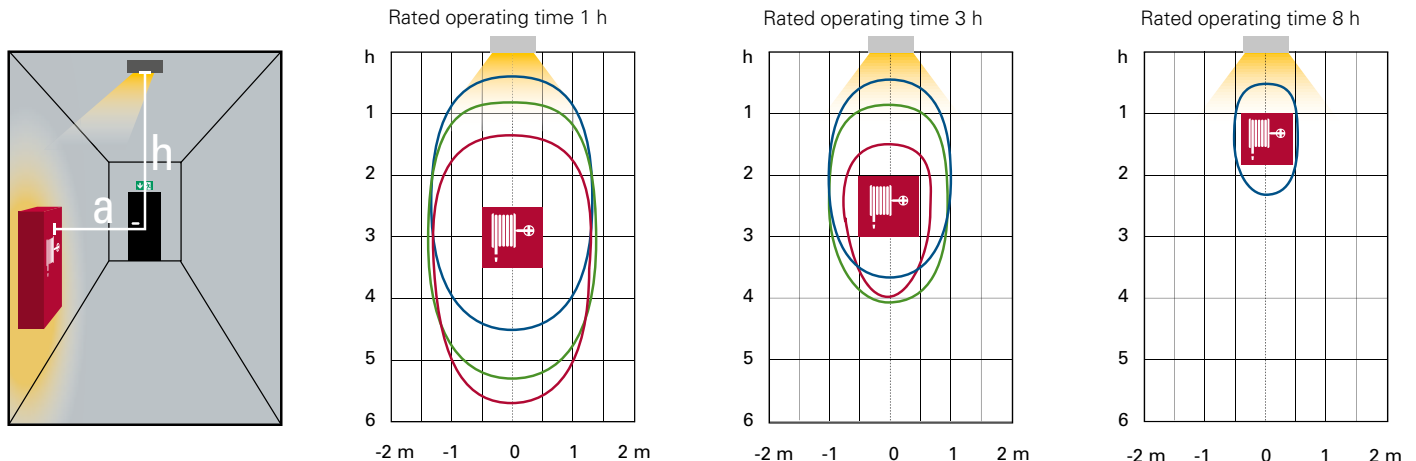
In comparison to the escape route requirement for 1 lx horizontally, different requirements apply in this situation for the light distribution from the safety luminaires, due to the flatter light angle of incidence.

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:

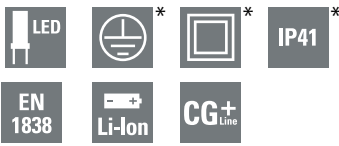
a = 1.0 m

a = 1.5 m

a = 2.0 m

GuideLed SL 13851, 13852 CGLine+

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



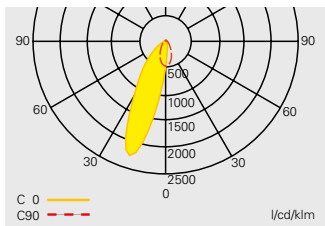
GuideLed SL 13851, 13852 CGLine+

- 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 (up to 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)

GuideLed SL 13851 CGLine+



GuideLed SL 13852 CGLine+



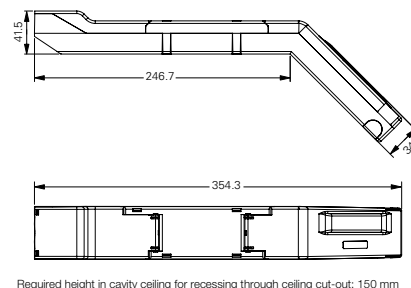
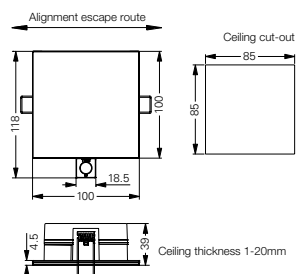
Light distribution curve
GuideLed SL 13851, 13852 CGLine+

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 mm ² CGLine+ Bus through wiring to 1.5 mm ²
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

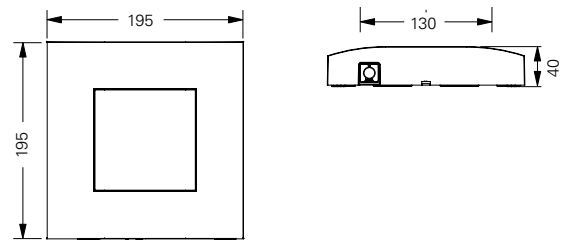
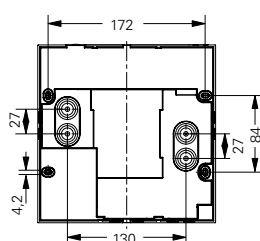
Ordering details

Scope of 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+



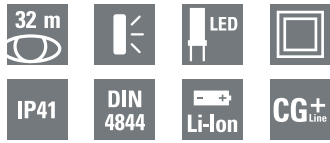
GuideLed SL 13852 CGLine+



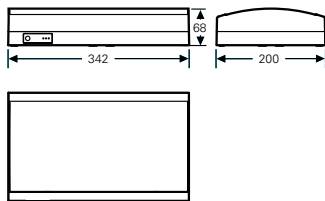
* 13851: Protection class 2
13852: Protection class 1
Degree of protection of the luminaire
13851: IP41
Degree of protection of the housing: IP20

Style Variant 28011 LED CGLine+

Exit sign luminaire



28011 LED CGLine+ with cover PR



Style Variant 28011 LED CGLine+

- Self-monitoring LED self-contained luminaire for stand-alone operation or for connection to the self-contained luminaire monitoring system CGLine+
- Universal use for maintained and non-maintained operation and for 1 h, 3 h or 8 h operation
- Environmentally-friendly due to modern lithium ion technology
- Low operating costs via low connected load
- Minimum service requirement due to high service life of the LEDs (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)
- 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	32 m
Luminous flux Φ_E/Φ_N at end of rated operating time	100 % at 1 h; 70 % at 3 h; 25 % at 8 h
Housing material	Polycarbonate (850 °C glow wire resistant)
Housing colour	Light grey, sim. RAL 7035
Weight	1.1 kg
Type of mounting	Wall mounting
Terminals	Through-wiring from mains (L, L', N, PE) up to 2.5 mm ² CGLine+ bus through-wiring up to 1.5 mm ²
Connection voltage	220-240 V AC, 50/60 Hz
Power consumption mains operation (apparent power/effective power)	7 VA / 6.6 W
Permissible ambient temperature	+5 °C to +35 °C
Battery	Lithium-Ion 3.7 V/4000 mAh with multiple protective circuit
Light source	3 x HighPower LEDs

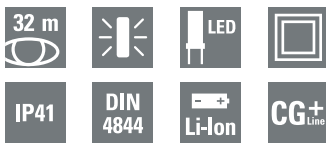
Ordering details

Type	Scope of delivery	Order No.
Exit sign luminaire 28011 1-8h/D LED CGLine+ (Set)	Luminaire, single-sided, inklusive transparent cover and 3 pictogram foils PL, PR, PU 	40071354817
Exit sign luminaire 28011 1-8h/D LED CGLine+	Luminaire, single-sided, without cover	40071354815
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

Accessories

Type	Order No.
Wire guard	40071348370
IP54 set* for 28011 LED CGLine+	40071354748

*) IP54 for electronic and lamp. For increased tightness requirements indoors or in canopied outdoor areas.



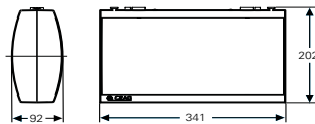
Style Variant 28021 LED CGLine+

- Self-monitoring LED self-contained luminaire for stand-alone operation or for connection to the self-contained luminaire monitoring system CGLine+
- Universal use for maintained and non-maintained operation and for 1 h, 3 h or 8 h operation
- Environmentally-friendly due to modern lithium ion technology
- Low operating costs via low connected load
- Minimum service requirement due to high service life of the LEDs (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)
- 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)

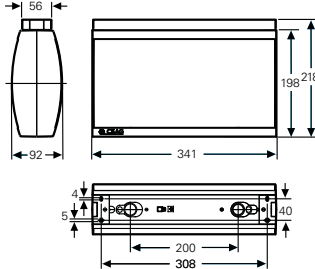
28021 LED CGLine+ with cover PR



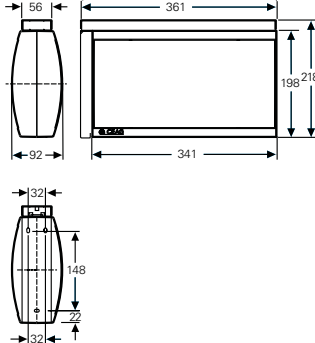
28021 LED CGLine+



28021 LED CGLine+ with ceiling mounting



28021 LED CGLine+ with wall bracket



Ceiling mounting



Chain fastening



Wall bracket



Viewing distance	32 m
Luminous flux Φ_p/Φ_N at end of rated operating time	87 % at 1 h; 45 % at 3 h; 15 % at 8 h
Housing material	Polycarbonate (850 °C glow wire resistant)
Housing colour	Light grey, sim. RAL 7035
Weight	1.1 kg
Type of mounting	Ceiling mounting
Terminals	Through-wiring from mains (L, L', N, PE) up to 2.5 mm ² CGLine+ bus through-wiring up to 1.5 mm ²
Connection voltage	220-240 V AC, 50/60 Hz
Power consumption mains operation (apparent power/effective power)	8.8 VA / 8.3 W
Permissible ambient temperature	+5 °C to +35 °C
Battery	Lithium-Ion 3.7 V/4000 mAh with multiple protective circuit
Light source	4 x HighPower LEDs

Ordering details

Type	Scope of delivery	Order No.
Exit sign luminaire 28021 1-8h/D LED CGLine+ (Set)	Luminaire, double-sided, inklusive transparent cover and 3 pictogram foils PL, PR, PU 	40071354818
Exit sign luminaire 28021 1-8h/D LED CGLine+	Luminaire, double-sided, without cover	40071354816
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

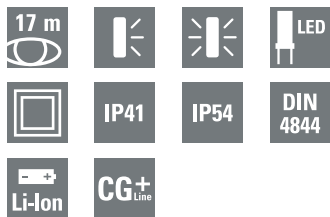
Accessories

Type	Scope of delivery	Order No.
Ceiling mounting	for ceiling mounting and chain fastening with chain link diameter < 5 mm	40071350432
Suspension set 0.5 m	with canopy	40071350400
Chain fastening ¹⁾	ring-eyelet	40071351158
Wall bracket		40071350418

¹⁾ for chain link diameter from 5 to 12 mm ceiling mounting 40071350432 required

Style Variant 58011 ... 58021 LED CGLine+

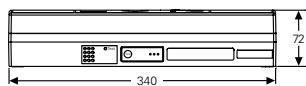
Safety luminaire and exit sign luminaire



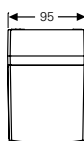
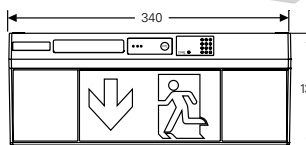
Style Variant 58011 ... 58021 LED CGLine+

- Self-monitoring LED self-contained luminaire for stand-alone operation or for connection to the self-contained luminaire monitoring system CGLine+
- Universal use for maintained and non-maintained operation and for 1 h, 3 h or 8 h operation
- Environmentally-friendly due to modern lithium ion technology
- Low operating costs via low connected load
- Minimum service requirement due to high service life of the LEDs (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)
- 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)

58011 LED CGLine+ with pictogramfoil PR



58021 LED CGLine+ with pictogramfoil PR



Viewing distance	17 m
Luminous flux Φ_N (mains operation) 58011 LED	306 lm
Luminous flux Φ_E/Φ_N at end of rated operating time	100 % at 1 h; 70 % at 3 h; 25 % at 8 h
Housing material	Polycarbonate (850 °C glow wire resistant)
Housing colour	Light grey, sim. RAL 7035
Weight	58011 1-8h/D LED 0.7 kg 58021 1-8h/D LED 0.8 kg
Type of mounting	Wall and ceiling mounting
Terminals	Through-wiring from mains (L, L', N, PE) up to 2.5 mm ² CGLine+ bus through-wiring up to 1.5 mm ²
Connection voltage	220-240 V AC, 50/60 Hz
Power consumption mains operation (apparent power/effective power)	7 VA / 6.6 W
Permissible ambient temperature	+5 °C to +35 °C
Battery	Lithium-Ion 3.7 V/4000 mAh with multiple protective circuit
Light source	3 x HighPower LEDs

Ordering details

Type	Scope of delivery	Order No.
58011 1-8h/D LED CGLine+ (SET) acc. to ISO 7010	Safety and exit sign luminaire inclusive cover and 3 pictogram foils PL, PR, PU	40071354820
58021 1-8h/D LED CGLine+ (SET) acc. to ISO 7010	Exit sign luminaire inclusive cover and 3 pictogram foils PL, PR, PU	40071354821

Accessories

Type	Order No.
Chain fastening	40071350669
Wall bracket	40071350668
IP54 set* for 58011/58021 LED CGLine+	40071354749

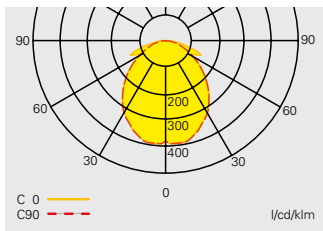
Chain fastening



Wall bracket



*) IP54 for electronic and lamp. For increased tightness requirements indoors or in canopied outdoor areas.



Light distribution curve
Style Variant 58011 LED CGLine+

Planning help for Style Variant 58011 CGLine+ for E = 1.0 lx (0.5 lx)

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

Emergency light operating duration	Mounting height in metres	Mounting types	Mounting types			
			L1	L2	L3	L4
1 h	2.5	Ceiling mounting	3.7 (4.5)	9.0 (10.9)	3.7 (4.6)	9.1 (13.0)
	3.0	Escape route centre	4.0 (4.9)	9.8 (11.9)	4.0 (4.9)	9.8 (13.2)
	4.0		4.3 (5.5)	11.0 (13.5)	4.3 (5.5)	11.0 (13.5)
	5.0		4.5 (5.9)	11.8 (14.8)	4.5 (5.9)	11.8 (14.8)
	6.0		4.4 (6.2)	12.3 (15.8)	4.4 (6.2)	12.3 (15.9)
	7.0		4.2 (6.3)	12.6 (16.6)	4.1 (6.3)	12.6 (16.7)
	8.0		3.6 (6.3)	12.6 (17.2)	3.6 (6.3)	12.6 (17.3)
	9.0		2.7 (6.2)	12.3 (17.6)	2.7 (6.2)	12.3 (17.6)
	3 h	2.5	Ceiling mounting	3.3 (4.1)	8.2 (9.9)	3.3 (4.1)
3.0		Escape route centre	3.5 (4.4)	8.8 (10.8)	3.5 (4.4)	8.8 (10.9)
4.0			3.7 (4.9)	9.7 (12.2)	3.7 (4.9)	9.8 (12.1)
5.0			3.7 (5.2)	10.3 (13.2)	3.7 (5.2)	10.3 (13.2)
6.0			3.4 (5.3)	10.5 (14.0)	3.4 (5.3)	10.5 (14.0)
7.0			2.8 (5.2)	10.5 (14.5)	2.8 (5.2)	10.5 (14.6)
8.0			1.6 (5.1)	10.1 (14.8)	1.6 (5.0)	10.0 (14.8)
8 h		2.5	Ceiling mounting	2.2 (2.9)	5.9 (7.4)	2.2 (2.9)
	3.0	Escape route centre	2.2 (3.1)	6.2 (7.9)	2.2 (3.1)	6.2 (7.9)
	3.5		2.1 (3.1)	6.3 (8.3)	2.1 (3.1)	6.3 (8.3)
	4.0		1.8 (3.1)	6.3 (8.6)	1.8 (3.1)	6.3 (8.6)
	4.5		1.4 (3.1)	6.2 (8.8)	1.4 (3.1)	6.2 (8.8)

5

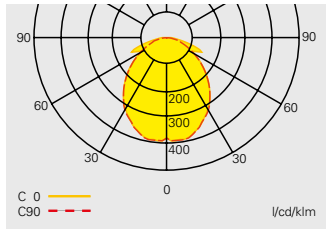
Planning help for Style Variant 58011 CGLine+ for E = 1.0 lx (0.5 lx)

Measurement plane 0.02 m, maintenance factor MF = 80 %, battery operation, distances in m

Emergency light operating duration	Mounting height in metres	Mounting types	Mounting types			
			L1	L2	L3	L4
1 h	2.5	Ceiling mounting	2.6 (2.2)	7.5 (8.4)	3.1 (4.1)	8.2 (12.5)
	3.0	Room illumination	3.1 (1.8)	8.5 (8.9)	3.1 (4.5)	8.4 (13.3)
	4.0		3.3 (4.1)	9.6 (11.7)	3.4 (4.1)	9.6 (11.6)
	5.0		3.5 (4.4)	10.5 (12.9)	3.5 (4.4)	10.4 (12.8)
	6.0		3.4 (4.5)	11.2 (13.9)	3.5 (4.6)	11.1 (13.9)
	7.0		3.2 (4.7)	11.7 (14.8)	3.3 (4.7)	11.7 (14.7)
	8.0		2.9 (4.6)	12.1 (15.5)	2.9 (4.8)	12.1 (15.5)
	9.0		2.3 (4.5)	12.4 (16.1)	2.4 (4.7)	12.4 (16.1)
	3 h	2.5	Ceiling mounting	2.7 (1.7)	7.1 (7.5)	2.7 (3.8)
3.0		Room illumination	2.8 (3.0)	7.7 (8.9)	2.8 (3.7)	7.6 (9.8)
4.0			2.9 (3.7)	8.6 (10.6)	3.0 (3.7)	8.6 (10.5)
5.0			2.9 (3.9)	9.3 (11.6)	3.0 (4.0)	9.3 (11.6)
6.0			2.8 (4.0)	9.9 (12.5)	2.8 (4.0)	9.8 (12.4)
7.0			2.4 (3.9)	10.2 (13.2)	2.4 (4.0)	10.2 (13.1)
8.0			1.8 (3.8)	10.4 (13.7)	1.9 (3.9)	10.4 (13.7)
8 h		2.5	Ceiling mounting	2.0 (2.4)	5.2 (6.4)	2.0 (2.5)
	3.0	Room illumination	2.0 (2.5)	5.6 (7.0)	2.0 (2.5)	5.5 (6.9)
	4.0		1.7 (2.5)	6.1 (7.7)	1.6 (2.7)	6.0 (7.8)
	5.0		1.1 (2.4)	6.2 (8.3)	1.2 (2.5)	6.3 (8.3)

Style Variant 58011 ... 58021 LED CGLine+

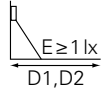
Safety luminaire and exit sign luminaire



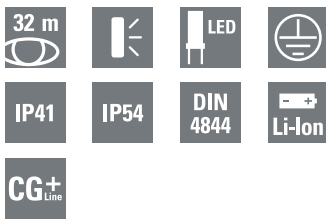
Light distribution curve
Style Variant 58011 LED CGLine+

Planning help for Style Variant 58011 CGLine+ for E = 1.0 lx

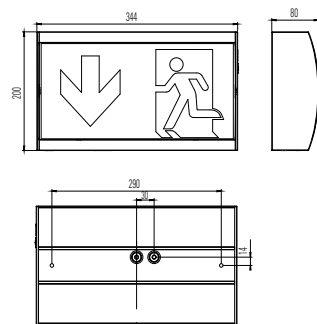
Measurement level 0.02 m, maintenance factor MF = 80 %, battery operation, distances in m



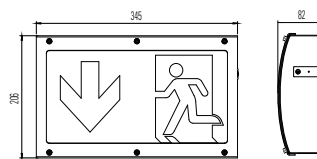
Emergency light operating duration	Mounting height in metres	Mounting types	L1	L2	D1	L3	L4	D2
1 h	2.2	Wall mounting	2.5	6.4	4.0	2.7	7.0	3.8
	2.5		2.5	6.5	4.1	2.5	6.8	4.3
	3.0		2.3	6.4	4.4	1.6	6.5	5.3
	3.5		1.8	6.0	5.0	0.5	3.4	6.1
3 h	2.2	Wall mounting	2.1	5.6	3.4	2.0	6.1	3.6
	2.5		2.1	5.6	3.3	1.5	5.9	4.2
	3.0		1.8	5.4	3.7	0.5	5.0	4.0
	3.5		-	-	-	-	-	-
8 h	2.2	Wall mounting	0.9	3.2	1.3	0.4	2.5	1.0
	2.5		0.6	3.1	1.0	-	-	-
	3.0		-	-	-	-	-	-
	3.5		-	-	-	-	-	-



48011 LED CGLine+ IP41 with cover PR



48011 LED CGLine+ IP54 with cover PR



STYLE Industry 48011 LED CGLine+

- Self-monitoring LED self-contained luminaire for stand-alone operation or for connection to the self-contained luminaire monitoring system CGLine+
- Robust aluminium housing with powder coating, IP54 as an option for increased tightness requirements indoors
- Universal use for maintained and non-maintained operation and for 1 h, 3 h or 8 h operation
- Environmentally-friendly due to modern lithium ion technology
- Low operating costs via low connected load
- Minimum service requirement due to high service life of the LEDs (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)
- 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	32 m
Luminous flux Φ_e/Φ_N at end of rated operating time	100 % at 1 h; 70 % at 3 h; 25 % at 8 h
Housing material	Aluminium
Housing colour	Light grey, sim. RAL 7035
Weight	IP41 2.1 kg IP54 2.9 kg
Type of mounting	Wall mounting
Terminals	Through-wiring from mains (L, L', N, PE) up to 2.5 mm ² CGLine+ bus through-wiring up to 1.5 mm ²
Connection voltage	220-240 V AC, 50/60 Hz
Power consumption mains operation (apparent power/effective power)	7 VA / 6.6 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	3 x HighPower LEDs

Ordering details

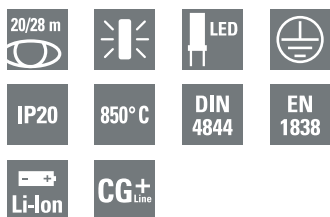
Type	Scope of delivery	Order No.
48011 1-8h/D LED CGLine+ IP41	Luminaire housing IP41, without cover	40071352822
48011 1-8h/D LED CGLine+ IP54	Luminaire housing IP54, without cover	40071352823
Cover PL acc. to ISO 7010	Cover with silkscreened pictogram	40071354130
Cover PR acc. to ISO 7010	Cover with silkscreened pictogram	40071354131
Cover PU acc. to ISO 7010	Cover with silkscreened pictogram	40071354132

Accessories

Type	Scope of delivery	Order No.
Wire guard		40071348370
2 x M20 cable glands		40071348422

Brillant 1883, 1884, 1984 LED CGLine+

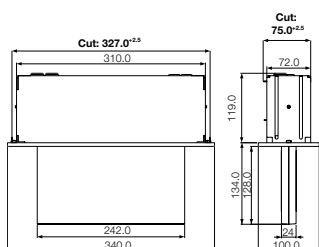
Escape sign panel luminaire



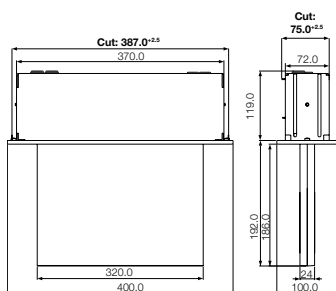
Brillant 1883, 1884, 1984 LED CGLine+

- Self-monitoring LED self-contained luminaire for stand-alone operation or for connection to the self-contained luminaire monitoring system CGLine+
- Universal use for maintained and non-maintained operation and for 1 h, 3 h or 8 h operation
- Environmentally-friendly due to modern lithium ion technology
- Low operating costs via low connected load
- Minimum service requirement due to high service life of the LEDs (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)
- 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)

1883 LED CGLine+



1884 LED CGLine+



Viewing distance	1883	20 m
	1884, 1984	28 m
Luminous flux Φ_E/Φ_N at end of rated operating time	1883	100 % at 1h; 46 % at 3h; 12 % at 8h
	1884, 1984	85 % at 1h; 22 % at 3h; 6 % at 8h
Housing material	1883, 1884	Sheet steel, bezel polycarbonate (850 °C glow wire resistant)
	1984	Aluminium
Housing colour	white, sim. RAL 9010	
Weight	1883	2.9 kg
	1884, 1984	3.9 kg
Type of mounting	1883, 1884	Recessed ceiling mounting
	1984	Ceiling surface mounting
Terminals	Through-wiring from mains (L, L', N, PE) up to 2.5 mm ² CGLine+ bus through-wiring up to 1.5 mm ²	
Connection voltage	220-240 V AC, 50/60 Hz	
Power consumption mains operation (apparent power/effective power)	1883	6.1 VA / 5.5 W
	1884, 1984	7.2 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 / 2000 mAh with multiple protective circuit	
Light source	LED strip	

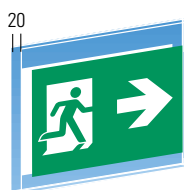
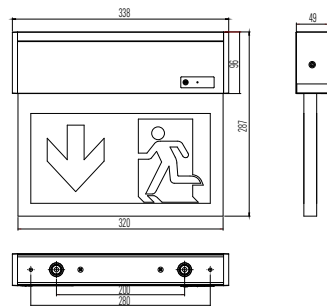
Ordering details

Type		Order No.
Panel luminaire 1883 1-8h/D LED CGLine+	for recessed ceiling mounting, without panel, plastic bezel white, sim. RAL 9010	40071354824
Panel luminaire 1884 1-8h/D LED CGLine+	for recessed ceiling mounting, without panel, plastic bezel white, sim. RAL 9010	40071354825
Panel luminaire 1984 1-8h/D LED CGLine+	for surface ceiling mounting, without panel, white, sim. RAL 9010	40071354826

Attention: Phase out of the product end of 2016!

1883 and 1884:
Required recess height: 120mm /
Clamping range of the fixing angles
for ceiling thickness up to 35 mm

1984 LED CGLine+



Panel PL/PR

Concrete mounting box



Ordering details for panel 1883

Type	Scope of delivery	Order No.
Panel PL/PR acc. to ISO 7010	Two-sided pictogram panel	40071354620
Panel PU/PU acc. to ISO 7010	Two-sided pictogram panel	40071354621
Panel PU/BL acc. to ISO 7010	Two-sided pictogram panel	40071354622

Ordering details for panel 1884, 1984

Type	Scope of delivery	Order No.
Panel PL/PR acc. to ISO 7010	Two-sided pictogram panel	40071354630
Panel PU/PU acc. to ISO 7010	Two-sided pictogram panel	40071354631
Panel PU/BL acc. to ISO 7010	Two-sided pictogram panel	40071354632

Accessories

Type	Scope of delivery	Order No.
Concrete mounting box for 1883	for installation in concrete ceilings	40071348725
Concrete mounting box for 1884	for installation in concrete ceilings	40071341710
Mounting kit for 1883/1884	for installation in concrete mounting box	40071341721
Suspension set 0.5 m for 1984	with canopy	40071350517
Wall bracket for 1984	RAL 9010	40071349910
Wall mounting parallel for 1984	RAL 9010	40071349852
Chain fastening for 1984		40071348723

Attention: Phase out of the product end of 2016!

3583 LED CGLine+

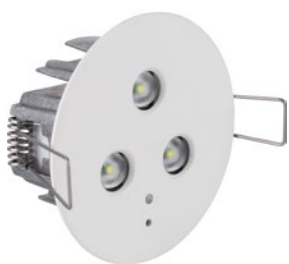
Safety luminaire, ceiling recessed mounting



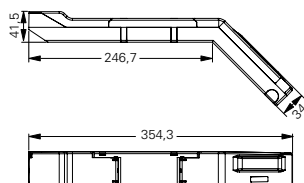
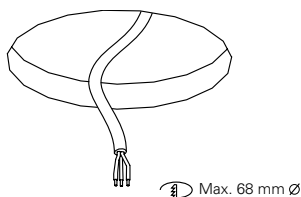
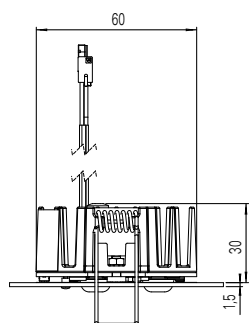
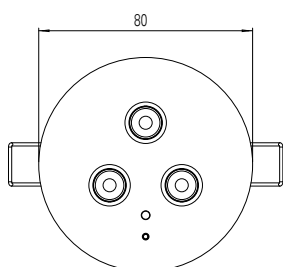
3583 1-8h/D LED CGLine+

- 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

3583 LED CGLine+



Dimensions in 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) up to 2.5 mm ² CGLine+ bus through-wiring up to 1.5 mm ²
Connection voltage	220-240 V AC, 50/60 Hz
Power consumption mains operation (apparent power / effective power)	7 VA / 6.6 W
Permissible 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

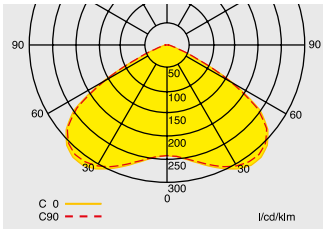
Scope of delivery

3583 1-8h/D LED CGLine+ recessed ceiling-mounted with 3 LEDs for escape route illumination, clamping range for ceiling thickness 0- 20 mm, white RAL 9010, supply electronics in housing with cable strain-relief

Order No.

40071353365

Attention: Phase out of the product end of 2016!



Light distribution curve
3583 LED CGLine+

Escape route centre

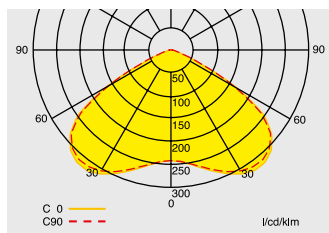
Planning help for 3583 1-8h/D LED CGLine+ for E = 1.0 lx (0.5 lx)

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

Duration of emergency operation	Mounting height in metres	Types of mounting	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



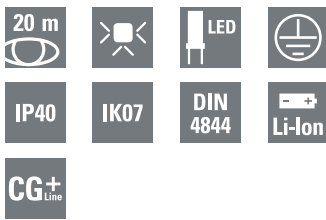
Light distribution curve
3583 LED CGLine+

Room illumination

Planning help for 3583 1-8h/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

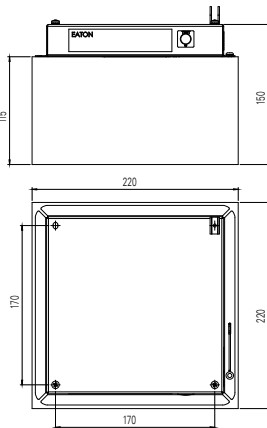
Duration of emergency operation	Mounting height in metres	Types of mounting	Types of mounting			
			L1	L2	L3	L4
1 h	2.5	Ceiling mounting	3.4 (3.9)	8.1 (9.1)	3.4 (3.9)	8.0 (9.1)
	3.0	Room illumination	3.4 (4.3)	9.0 (10.3)	3.8 (4.3)	9.0 (10.3)
	3.5		4.1 (4.4)	10.0 (11.4)	4.0 (4.6)	9.9 (11.3)
	4.0		4.2 (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)
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)



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



Dimensions in mm



Wall bracket



Chain mounting kit



Cable mounting kit



Replacement escape sign cube



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 (up to 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 L_{min}/L_{max} > 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)

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	Through-wiring from mains (L, L', N, PE) to 2.5 mm ² CGLine+ bus through-wiring to 1.5 mm ²
Power input	220 - 240 V AC, 50/60 Hz
Power consumption mains operation (apparent power / effective power)	8.8 VA / 8.3 W
Permissible 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 4 x 1 W

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 pictograms (arrow left, right, down) acc. to ISO 7010	40071353420



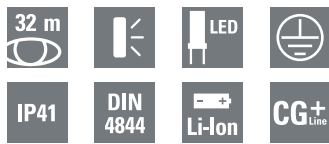
Ordering details accessories

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 pictograms (arrow left, right, down) acc. to ISO 7010	40071354450



71811 LED CGLine+

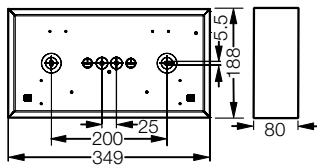
Exit sign luminaire



71811 LED CGLine+

- Self-monitoring LED self-contained luminaire for stand-alone operation or for connection to the self-contained luminaire monitoring system CGLine+
- Enclosure made of slim aluminium profile, anodised, with mitre cut
- No tools necessary for installation of silkscreen pictograms
- Universal use for maintained and non-maintained operation and for 1 h, 3 h or 8 h operation
- Environmentally-friendly due to modern lithium ion technology
- Low operating costs via low connected load
- Minimum service requirement due to high service life of the LEDs (up to 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)
- 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)

71811 LED CGLine+ with cover PR



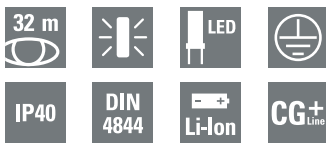
Viewing distance	32 m
Luminous flux Φ_E/Φ_N at end of rated operating time	100 % at 1 h; 70 % at 3 h; 25 % at 8 h
Housing material	Aluminium
Housing colour	Aluminium, anodized
Weight	1.1 kg
Type of mounting	Wall mounting
Terminals	Through-wiring from mains (L, L, N, PE) up to 2.5 mm ² CGLine+ bus through-wiring up to 1.5 mm ²
Connection voltage	220-240 V AC, 50/60 Hz
Power consumption mains operation (apparent power/effective power)	7 VA / 6.6 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	3 x HighPower LEDs

Ordering details

Type	Scope of delivery		Order No.
Exit sign luminaire 71811 1-8h/D LED CGLine+	single-sided, without cover		40071354827
Cover PL acc. ISO 7010	Cover with pictogram		40071354240
Cover PR acc. ISO 7010	Cover with pictogram		40071354241
Cover PU acc. ISO 7010	Cover with pictogram		40071354242

Accessories

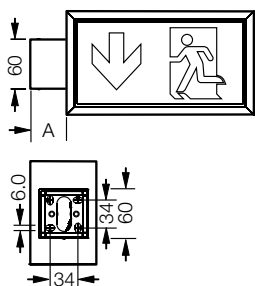
Type	Scope of delivery	Order No.
Wire guard		40071348370



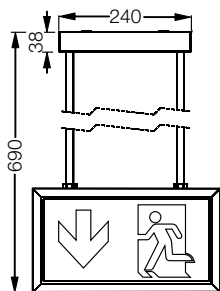
71821 LED CGLine+

- Self-monitoring LED self-contained luminaire for stand-alone operation or for connection to the self-contained luminaire monitoring system CGLine+
- Enclosure made of slim aluminium profile, anodised, with mitre cut
- No tools necessary for installation of silkscreen pictograms
- Universal use for maintained and non-maintained operation and for 1 h, 3 h or 8 h operation
- Environmentally-friendly due to modern lithium ion technology
- Low operating costs via low connected load
- Minimum service requirement due to high service life of the LEDs (up to 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)
- 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)

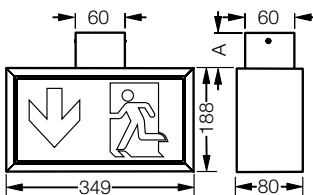
71821 CGLine+ WM with cover PR



71821 CGLine+ WM



71821 CGLine+ PM



71821 CGLine+ DM

Viewing distance	32 m
Luminous flux Φ_E/Φ_N at end of rated operating time	87 % at 1 h; 45 % at 3 h; 15 % at 8 h
Housing material	Aluminium
Housing colour	Aluminium, anodized
Weight	1.7 kg
Type of mounting	Ceiling, pendant, chain or wall bracket mounting
Terminals	Through-wiring from mains (L, L', N, PE) up to 2.5 mm ² CGLine+ bus through-wiring up to 1.5 mm ²
Connection voltage	220-240 V AC, 50/60 Hz
Power consumption mains operation (apparent power/effective power)	8.8 VA / 8.3 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/4000 mAh with multiple protective circuit
Light source	4 x HighPower LEDs

Ordering details

Type	Scope of delivery	Order No.
Exit sign luminaire 71821 1-8h/D LED CGLine+ WM	double-sided, without cover, wall mounting	40071354828
Exit sign luminaire 71821 1-8h/D LED CGLine+ DM	double-sided, without cover, ceiling mounting	40071354829
Exit sign luminaire 71821 1-8h/D LED CGLine+ PM	double-sided, without cover, pendant mounting	40071354830
Cover PL ISO 7010	Cover with pictogram	40071354240
Cover PR ISO 7010	Cover with pictogram	40071354241
Cover PU ISO 7010	Cover with pictogram	40071354242
Blind cover	Cover without pictogram	40071351197

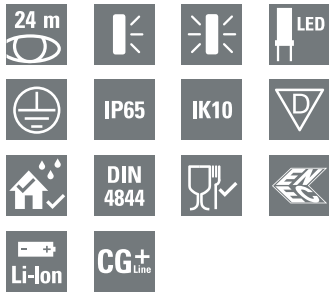
Accessories

Type	Scope of delivery	Order No.
Wall / ceiling mounting kit	for WM/DM, A = 42 mm	40071351011
Wall / ceiling mounting kit	for WM/DM, A = 100 mm	40071351497
Suspension set 0.5 m	with canopy, silver, square form for PM	40071350412
Suspension set 1.0 m	with canopy, silver, square form for PM	40071350414
Suspension set 1.5 m	with canopy, silver, square form for PM	40071350416
Chain fastening		40071351158

Each luminaire requires 2 covers. Installation material is not included in the scope of supply. Please order it separately depending on the type of mounting (see accessories).
WM = Wall mounting, DM = Ceiling mounting, PM = Pendant mounting

Atlantic LED CGLine+

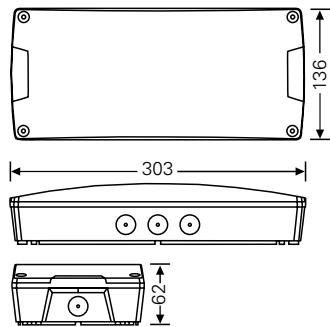
Exit sign luminaire, wall or ceiling mounting



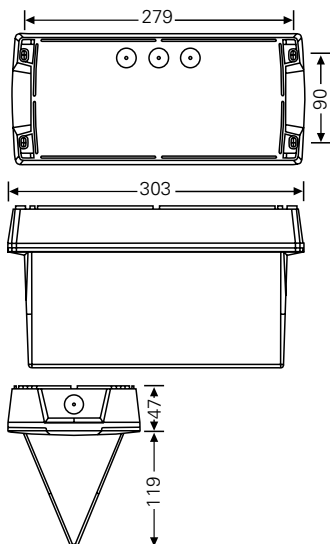
Atlantic LED CGLine+

- 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
- Acc. IFS suitable for use in food processing industry
- 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 (up to 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)

Atlantic LED S CGLine+



Atlantic LED D CGLine+



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) up to 2.5 mm ² CGLine+ bus through-wiring up to 1.5 mm ²
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 +5 °C to +35 °C with heater -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.
Exit sign luminaire Atlantic LED S 1-8h/D CGLine+, single sided, Including two cable glands, without pictogram	40071354870
Exit sign luminaire Atlantic LED D 1-8h/D CGLine+, double sided, Including two cable glands, without pictogram	40071354871
Exit 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
Exit 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

Accessories

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

Atlantic LED / Outdoor Wall CGLine+

Safety luminaire, wall or ceiling mounting



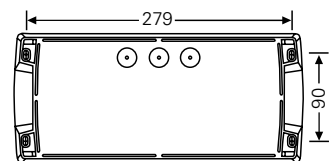
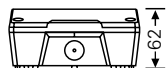
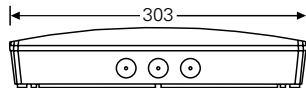
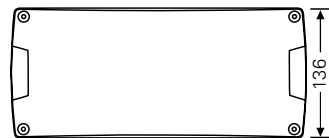
Atlantic LED / Outdoor Wall CGLine+

- 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
- Acc. IFS and HACCP suitable for use in food processing industry (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 (up to 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)

Atlantic LED R CGLine+



Atlantic LED O CGLine+

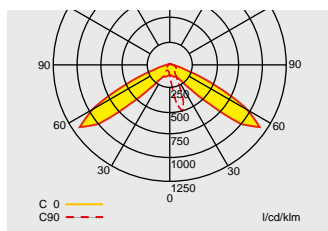
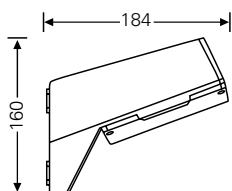
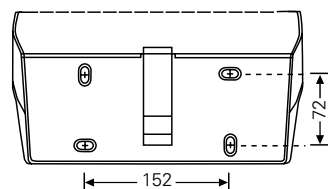
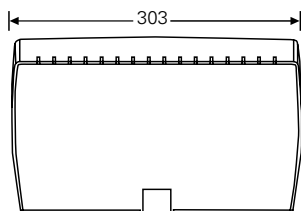


Luminous flux	Asymmetric optics	225 lm
	Symmetric optics	220 lm
Luminous flux Φ_E/Φ_N at end of rated operating time	100 % at 1h; 65% at 3 h; 25% at 8 h	
Housing material	Polycarbonate, Aluminium	
Housing colour	grey	
Weight	Atlantic LED	1.54 kg
	Outdoor Wall	3.00 kg
Type of mounting	Wall and ceiling mounting	
Connection terminals	Through-wiring from mains (L, L', N, PE) to 2.5 mm ² CGLine+ bus through-wiring to 1.5 mm ²	
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
	+5 °C to +35 °C	-20 °C to +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

Outdoor Wall CGLine+

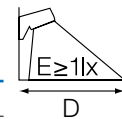


Outdoor Wall CGLine+ with asymmetric optics

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

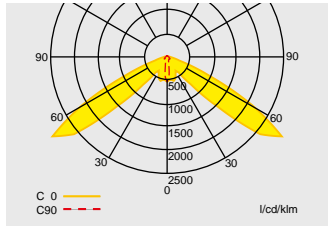
Duration of emergency operation	Mounting height in metres	Types of mounting	L1	L2	D
1 h	2.0	Wall mounting	4.5	11.4	0 - 2.0
	2.5		5.3	12.2	0 - 2.1
	3.0		5.8	13.8	0 - 2.1
	3.5		6.6	15.3	0 - 2.2
	4.0		7.0	16.7	0 - 2.3
	4.5		7.6	18.1	0 - 2.2
	5.0		8.3	19.2	0 - 2.1
	5.5		8.6	18.9	0.7 - 2.0
	6.0		3.0	16.9	1.0 - 1.9
3 h	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
	3.5		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
8 h	2.0	Wall mounting	3.5	8.0	0.2 - 1.2
	2.5		3.9	8.6	0.3 - 1.0
	2.8		1.4	8.3	0.5 - 1.0



Atlantic R CGLine+

Safety luminaire, wall or ceiling mounting

Atlantic LED R CGLine+



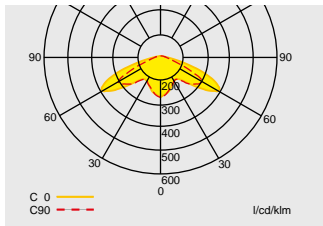
Atlantic R CGLine+ with asymmetric optics

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 height in metres	Types of mounting	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)
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)
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 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 level: 0.02 m, maintenance factor MF = 80 %, battery operation

Duration of emergency operation	Mounting height in metres	Types of mounting	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 centre	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)
3.0		Escape route centre	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 centre	0.6 (1.8)	3.6 (9.5)	0.6 (1.9)	3.7 (8.2)

5

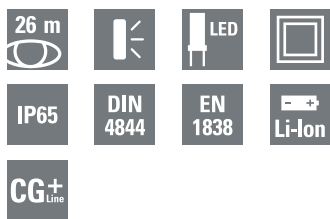
Planning help for Atlantic LED O – symmetric optics for E = 1.0 lx (0.5 lx)

Measurement level: 0.02 m, maintenance factor MF = 80 %, battery operation

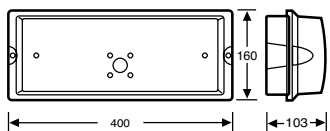
Duration of emergency operation	Mounting height in metres	Types of mounting	Types of mounting			
			L1	L2	L3	L4
1 h	2.5	Ceiling mounting	3.9 (4.3)	9.6 (10.6)	2.9 (3.6)	7.2 (8.5)
	3.0	Room illumination	3.4 (4.6)	10.6 (11.6)	3.1 (4.1)	8.1 (9.8)
	3.5		3.4 (4.4)	11.6 (13.2)	3.1 (4.2)	8.8 (10.4)
	4.0		3.4 (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)	

6811 LED CGLine+

Safety luminaire and exit sign luminaire



6811 LED CGLine+ with pictogram PR




6811 LED CGLine+

- Self-monitoring LED self-contained luminaire for stand-alone operation or for connection to the self-contained luminaire monitoring system CGLine+
- Housing made of polycarbonate with high degree of protection of IP65 for increased tightness requirements indoors
- Universal use for maintained and non-maintained operation and for 1 h, 3 h or 8 h operation
- Environmentally-friendly due to modern lithium ion technology
- Low operating costs via low connected load
- Minimum service requirement due to high service life of the LEDs (up to 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)
- 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)

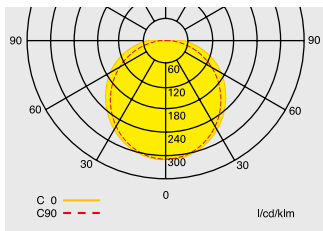
Viewing distance	26 m
Luminous flux Φ_N	260 lm
Luminous flux Φ_E/Φ_N at end of rated operating time	100 % at 1 h; 70 % at 3 h; 25 % at 8 h
Housing material	Polycarbonate (850 °C glow wire resistant)
Housing colour	White
Weight	1.6 kg
Type of mounting	Wall and ceiling mounting
Terminals	Through-wiring from mains (L, L', N, PE) up to 2.5 mm ² CGLine+ bus through-wiring up to 1.5 mm ²
Connection voltage	220-240 V AC, 50/60 Hz
Power consumption mains operation (apparent power/effective power)	7 VA / 6.6 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	3 x HighPower LEDs

Ordering details

Type	Scope of delivery	Order No.
Exit sign luminaire 6811 1-8h/D LED CGLine+ acc. to ISO 7010	Luminaire incl. cover and three pictogram foils: PL, PR, PU 	40071354831

Accessories

Type	Order No.
Wire guard	40071348370



Light distribution curve 6811 LED CGLine+ with transparent cover

Planning help for 6811 LED CGLine+ for E = 1,0 lx (0,5 lx)

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

Emergency light operating duration	Mounting height in metres	Mounting types	Mounting types			
			L1	L2	L3	L4
1 h	2.5	Ceiling mounting	3.6 (4.5)	9.0 (11.1)	3.8 (4.8)	9.6 (12.1)
	3.0	Escape route centre	3.7 (4.8)	9.6 (12.0)	3.9 (5.1)	10.2 (12.9)
	3.5		3.8 (5.0)	10.0 (12.7)	4.0 (5.3)	10.6 (13.6)
	4.0		3.8 (5.2)	10.4 (13.3)	4.0 (5.5)	10.9 (14.2)
	5.0		3.7 (5.4)	10.8 (14.2)	3.9 (5.6)	11.3 (15.1)
	6.0		3.3 (5.4)	10.8 (14.9)	3.4 (5.6)	11.3 (15.6)
	7.0		2.5 (5.3)	10.5 (15.2)	2.6 (5.5)	10.9 (15.9)
3 h	2.5	Ceiling mounting	3.1 (4.0)	8.0 (10.0)	3.3 (4.3)	8.5 (10.8)
	3.0	Escape route centre	3.2 (4.2)	8.5 (10.7)	3.3 (4.5)	8.9 (11.5)
	3.5		3.2 (4.4)	8.8 (11.3)	3.3 (4.6)	9.2 (12.0)
	4.0		3.1 (4.5)	9.0 (11.8)	3.3 (4.7)	9.4 (12.5)
	5.0		2.8 (4.5)	9.1 (12.4)	2.9 (4.7)	9.5 (13.1)
	6.0		1.9 (4.4)	8.7 (12.8)	2.0 (4.5)	9.1 (13.4)
8 h	2.5	Ceiling mounting	1.9 (2.7)	5.4 (7.1)	1.9 (2.8)	5.6 (7.5)
	3.0	Escape route centre	1.7 (2.7)	5.4 (7.4)	1.7 (2.8)	5.7 (7.8)
	3.5		1.3 (2.6)	5.3 (7.6)	1.3 (2.7)	5.5 (8.0)

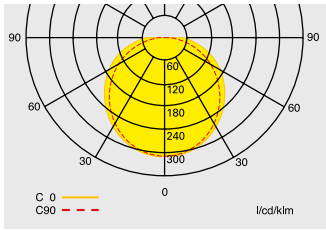
Planning help for 6811 LED CGLine+ for E = 1,0 lx (0,5 lx)

Measurement plane 0.02 m, maintenance factor MF = 80 %, battery operation, distances in m

Emergency light operating duration	Mounting height in metres	Mounting types	Mounting types			
			L1	L2	L3	L4
1 h	2.5	Ceiling mounting	2.9 (3.7)	8.3 (10.3)	2.7 (3.2)	8.3 (10.2)
	3.0	Room illumination	3.0 (3.8)	8.9 (11.0)	2.8 (3.5)	8.9 (11.1)
	4.0		3.1 (3.8)	9.4 (11.6)	2.8 (3.7)	9.4 (11.9)
	5.0		3.1 (4.0)	9.8 (12.3)	2.8 (3.7)	9.8 (12.4)
	6.0		3.0 (4.2)	10.5 (13.4)	2.6 (3.7)	10.4 (13.3)
	7.0		2.6 (4.1)	10.9 (14.2)	2.3 (3.7)	10.9 (14.1)
	8.0		2.2 (4.0)	11.1 (14.8)	1.9 (3.5)	11.1 (14.7)
	9.0		1.7 (3.6)	11.2 (15.1)	1.1 (3.4)	11.1 (15.4)
	3 h	2.5	Ceiling mounting	2.5 (3.3)	7.4 (9.2)	2.4 (3.0)
3.0		Room illumination	2.7 (3.4)	7.9 (9.9)	2.4 (3.1)	7.9 (9.9)
4.0			2.6 (3.5)	8.3 (10.5)	2.4 (3.2)	8.3 (10.5)
5.0			2.6 (3.5)	8.7 (11.0)	2.3 (3.2)	8.6 (11.0)
6.0			2.3 (3.5)	9.1 (11.8)	2.0 (3.2)	9.1 (11.8)
7.0			1.9 (3.0)	9.3 (12.1)	1.6 (3.4)	9.3 (12.8)
8.0			1.2 (3.1)	9.3 (12.9)	0.8 (2.7)	9.3 (12.8)
8 h	2.5	Ceiling mounting	1.7 (2.3)	5.2 (6.7)	1.6 (2.1)	5.2 (6.6)
	3.0	Room illumination	1.4 (2.3)	5.3 (7.1)	1.6 (2.1)	5.6 (7.0)
	4.0		1.4 (2.3)	5.6 (7.4)	1.1 (2.0)	5.5 (7.3)
	5.0		1.1 (2.1)	5.6 (7.6)	0.8 (1.9)	5.5 (7.6)

6811 LED CGLine+

Safety luminaire and exit sign luminaire

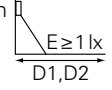


Light distribution curve 6811 LED CGLine+ with transparent cover

Planning help for 6811 LED CGLine+ for E = 1,0 lx

Measurement level 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	
			D1	D2	D1	D2	D1	D2	D1	D2
1 h	2.2	Wall mounting	2.5	7.1	3.3	2.6	7.1	3.2		
	2.5		2.4	7.0	3.4	2.4	7.0	3.5		
	3.0		2.0	6.6	4.0	2.0	6.7	3.8		
	3.5		1.2	3.0	4.4	1.1	6.0	4.5		
3 h	2.2	Wall mounting	2.0	5.8	2.8	2.1	6.0	2.7		
	2.5		1.9	5.7	2.9	1.8	5.8	3.0		
	3.0		1.6	5.4	3.2	1.1	5.3	3.5		
	3.5		-	-	-	-	-	-		
8 h	2.2	Wall mounting	0.8	3.4	1.7	0.3	3.1	2.0		
	2.5		0.2	2.9	2.0	-	-	-		
	3.0		-	-	-	-	-	-		
	3.5		-	-	-	-	-	-		







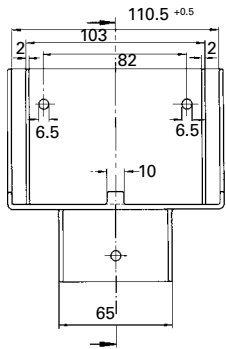
Portable emergency lights

W 276.3/4 LED, W 276.3/7 LED

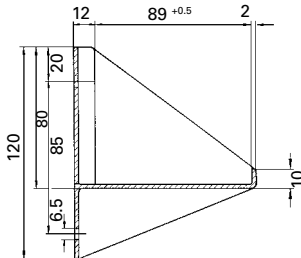
Portable emergency lights



W 276.3/4 LED with integrated charger



Wall bracket



W 276.3/4 LED, W 276.3/7 LED

- LED portable hand lamp with emergency light function: monitoring of the charging circuit and function display via green LED
- Robust construction of impact-resistant, non-abrasive plastic
- Integrated charger – connection via flexible spiral cable with EURO plug
- Main beam consists of 3 High Power LEDs with narrow distribution reflector optic
- Main beam output can be set: Eco mode for longer battery operation (3.0W) or boost mode for increased luminous flux (5.5W)
- Ancillary light with 6 x 3 chip LEDs (1.5W) and wide light distribution
- More than six times the light quantity compared to variant with incandescent lamp
- Includes three slip-on filters (red, orange, clear prismatic) for modification of light distribution and signalling
- Flashing light function
- Up to 14 h light (ancillary light) and 5.5 h (Eco main beam) with 4 Ah battery
- Up to 27.5 h light (ancillary light) and 9 h (Eco main beam) with 7 Ah battery
- Long range up to 50 m at 1.5 lx illuminance

Filters (incl.)	Red, orange, clear prismatic	
Photometric data (Main beam)	Irradiance I max = 3720 cd / Half value angle = 12.4° Beleuchtungsstärke: 150 lx @ 5 m, 6 lx @ 25 m, 1.5 lx @ 50 m	
Housing material	impact resistant, non-adhesive plastic	
Housing colour	grey	
Emergency duration	4 Ah battery	7 Ah Battery
	5.5 h Eco (main beam)	9.0 h Eco (main beam)
	3.5 h Boost (main beam)	6.0 h Boost (main beam)
	14.0 h (ancillary light)	27.5 h (ancillary light)
Battery	rechargeable, maintenance free and gas tight NC-Accu - 4.8 V / 4 Ah - 4.8 V / 7 Ah	
Light source	3 x HighPower-LED	
Main beam	3.0W- 240 lm (Eco) / 4.5W- 330 lm (Boost)	
Ancillary light	6 x MidPower-LED	
	1.5W- 65 lm	lm = luminaire flux
Connection voltage	230 V 50/60 Hz	
Mains power supply load	10 VA	
Insulation class	II	
Degree of protection	IP54	
Switch function	Flashlight, maintained light and ancillary light	
Monitoring function	Charging indication by green LED	

Ordering details

Type	Battery	Order No.
W 276.3/4 LED	4 Ah	40071352032
W 276.3/7 LED	7 Ah	40071352033

Accessories

Type	Order No.
Rechargeable NC-Accu 4.8 V/4 Ah	40071345248
Rechargeable NC-Accu 4.8 V/7 Ah	40071345253
Shock-power wall mounted holder	40071344274
Wall bracket	11145000492
Mains connection lead	40018031358
Slip-on filter set red, orange and clear prismatic	21145995000



W 270.3/4 LED with external charger
(to be ordered separately)



Charging unit Z 345.3
for portable emergency lights
W 270.3/4 and W 270.3/7



W 270.3/4 LED, W 270.3/7 LED

- LED portable hand lamp with emergency light function: monitoring of the charging circuit and function display via green LED
- Robust construction of impact-resistant, non-abrasive plastic
- External charger for low luminaire weight
- Main beam consists of 3 High Power LEDs with narrow distribution reflector optic
- Main beam output can be set: Eco mode for longer battery operation (3.0 W) or boost mode for increased luminous flux (5.5 W)
- Ancillary light with 6 x 3 chip LEDs (1.5 W) and wide light distribution
- More than six times the light quantity compared to variant with incandescent lamp
- Includes three slip-on filters (red, orange, clear prismatic) for modification of light distribution and signalling
- Flashing light function
- Up to 14 h light (ancillary light) and 5.5 h (Eco main beam) with 4 Ah battery
- Up to 27.5 h light (ancillary light) and 9 h (Eco main beam) with 7 Ah battery
- Long range up to 50 m at 1.5 lx illuminance

Filters (incl.)	Red, orange, clear prismatic	
Photometric data (Main beam)	Irradiance I max = 3720 cd / Half value angle = 12.4° Beleuchtungsstärke: 150 lx @ 5 m, 6 lx @ 25 m, 1.5 lx @ 50 m	
Housing material	impact resistant, non-adhesive plastic	
Housing colour	grey	
Emergency duration	4 Ah battery	7 Ah Battery
	5.5 h Eco (main beam)	9.0 h Eco (main beam)
	3.5 h Boost (main beam)	6.0 h Boost (main beam)
	14.0 h (ancillary light)	27.5 h (ancillary light)
Battery	rechargeable, maintenance free and gas tight NC-Accu - 4.8 V / 4 Ah - 4.8 V / 7 Ah	
Light source	3 x HighPower-LED	
Main beam	3.0 W- 240 lm (Eco) / 4.5 W- 330 lm (Boost)	
Ancillary light	6 x MidPower-LED	
	1.5 W- 65 lm	lm = luminaire flux
Connection voltage	230 V 50/60 Hz	
Mains power supply load	10 VA	
Insulation class	II	
Degree of protection	IP54	
Switch function	Flashlight, maintained light and ancillary light	
Monitoring function	Charging indication by green LED	

Ordering details

Type	Battery	Order No.
W 270.3/4 LED	4 Ah	40071352030
W 270.3/7 LED	7 Ah	40071352031

Accessories

Type	Order No.
Charging unit Z 345.3	40071341145
Rechargeable NC-Accu 4.8 V/4 Ah	40071345248
Rechargeable NC-Accu 4.8 V/7 Ah	40071345253
Slip-on filter set red, orange and clear prismatic	21145995000

*) valid for luminaire, charging unit IP44

LED upgrade kit for LED portable emergency lights

W 270.3 and W 276.3



IP54

LED upgrade kit for W 270.3 and W 276.3



LED upgrade kit for LED portable emergency lights W 270.3 and W 276.3

- For upgrading of existing incandescent portable hand lamps
- Suitable for luminaires of W 270.3 and W 276.3 type with 4 Ah or 7 Ah battery
- Existing accessories including chargers can still be used
- Main beam consists of 3 High Power LEDs with narrow distribution reflector optic
- Main beam output can be set: Eco mode for longer battery operation (3.0 W) or boost mode for increased luminous flux (5.5 W)
- Ancillary light with 6 x 3 chip LEDs (1.5 W) and wide light distribution
- More than six times the light quantity compared to variant with incandescent lamp
- Up to 14 h light (ancillary light) and 5.5 h (Eco main beam) with 4 Ah battery
- Up to 27.5 h light (ancillary light) and 9 h (Eco main light) with 7 Ah battery
- Long range up to 50 m at 1.5 lx illuminance

Ordering details

Type

Order No.

LED upgrade kit for W 270.3 and W 276.3

40071352024

Simple replacement in just a few minutes



Release the screw and open the reflector housing.



Disconnect the connection wires and connect to the new LED housing.



Attach the LED housing below and tip at the top ...



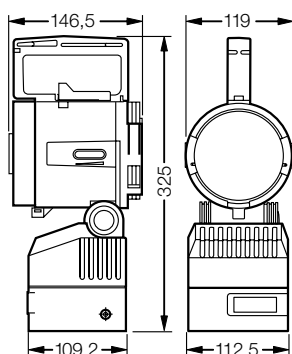
... and fasten again.



SEB 10



Dimensions in mm



SEB 10

- Luminaire series SEB 10/SEB 10 L with innovative LED technology
- Explosion-proof handheld torch with emergency light function
- Housing of impact-resistant, non-abrasive polyamide
- EC Type Examination Certificate for explosion protection in explosive gas and dust atmospheres (ATEX Certificate corresponding latest Ex-standards)
- DIN14642 (German Institute for Standardisation) for explosions protected hand lamps with motor vehicle charger, edition 7/2011, for equipping fire brigade vehicles
- EWG type approval of the Federal Office for Motor Vehicles for meeting the requirements of the EMC Directive 95/54/EC for use in motor vehicles (e1 certificate)
- Shock test report according to DIN EN 60068-2-27 for the use of the light fittings in fire brigade vehicles (DIN 1846-2:2001) with Vehicle holder 90
- Microprocessor-controlled operational duration display
- Capacity-dependent charging
- Flashing light and Emergency light function
- Emergency Light
- Filament break and reserve light switching
- internal recharger (SEB 10L)
- Function and capacity indication via LED chain
- Adjustable reflector: can be focused from point to wide light, including clear prismatic attachment disc

6

Type of protection	Ex II 2 G Ex e ib IIC T4 Gb
Marking accd. to 2014/34/EN	Ex II 2 D Ex tb IIIC T85 °C Db
EC-Type Examination Certificate	BVS 15 ATEX E 122
Marking	Ex II 2 G / Ex II 2 D
Housing material	Polyamid / black
Light emission	Ø 98 mm mineral glass
Protection class EN 60529	IP66
Light source	2 High Power-LED-Systems
Max. luminous intensity	12000 cd (search beam) 19000 cd (search beam boost function) 1000 cd (work light)
Luminous flux	230 lm (search beam) / 365 lm (search beam boost function)
Permissible ambient temperature	-20 °C to +40 °C, data kept 0-30 °C (battery)
Battery	9.6 V 3.0 Ah ladbare LiFePO ₄ battery
Rated operating time (main light)	5.5 h
Weight	1.6 kg
Connection voltage recharger LG 443	220-250 V, 50/60 Hz
Connection voltage vehicle holder 90	10-33 V DC
Connection voltage built-in charging module SEB 8 L / SEB 9 L / SEB 10 L	230 V, 50/60 Hz

Ordering details

Type	Battery	Order No.
SEB 10 L	with twin-lens high power LED system, Lithium-Iron-Phosphate battery (rechargeable directly about mains lead, with LG 443 or motor vehicle charger 90)	11147000810
SEB 10	with twin-lens high power LED system, Lithium-Iron-Phosphate battery (rechargeable with LG 443 or motor vehicle charger 90)	11147000820

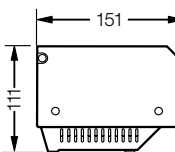
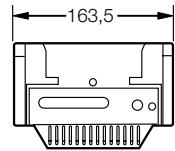
SEB 10

Ex-portable emergency light with emergency lighting function

Charging unit LG 443

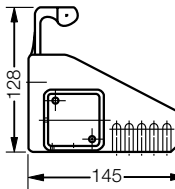
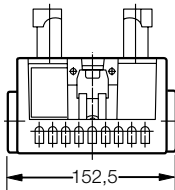


Dimensions in mm



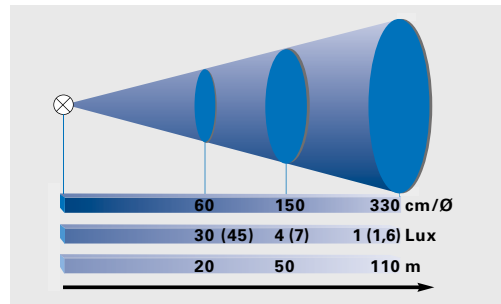
6

Vehicle holder 90



Ordering details

Type	Order-No.
Charging unit LG 443 SEB 8, 9, 10	11540000443
Vehicle holder 90 SEB 8, 9, 10	11145000792
all bracket SW without charging unit	11145000795
Slip-on filter set red, orange, green	21147300000
LiFe PO ₄ -Battery set 9.6 V / 3 Ah	21147904012







Visualisation software CGVision





A software for giant tasks

The high performance CGVision visualisation software controls and monitors even large-scale safety lighting systems with maximum reliability. This is backed up by CEAG, a company belonging to Cooper Industries, with over 40 years of expertise and experience. As market leader we are always aware of our special responsibility. Because where we are active, light means life!

The monitoring tool for really large-scale tasks: up to 480 individual emergency lighting systems with over one million light points can be kept in view on a monitor in the control room. With larger buildings in particular such as airports, universities, museums, sports centres and industrial facilities, the software is the ideal partner for optimal and therefore also economical operation of the complete safety lighting.

Web server solutions can only achieve a fraction of this compared to CGVision. Complexity and configurability are the strengths with which the CEAG software convinces. The management of the complete safety lighting is implemented with exemplary clarity and efficiency.

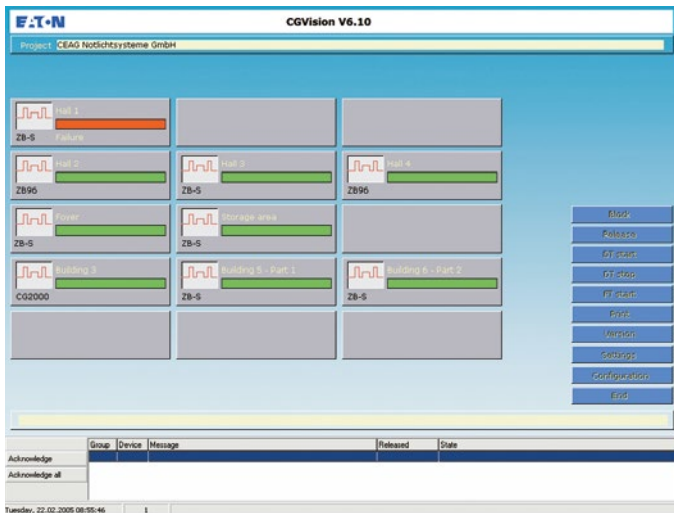
Every safety luminaire counts

Because when the worst comes to the worst, only 100 percent protection is enough. Every operator must document such cases. CGVision records all relevant details in an electronic inspection book. Status printouts can be implemented automatically and according to set times.

Control in its most cost-efficient form.



Clarity counts

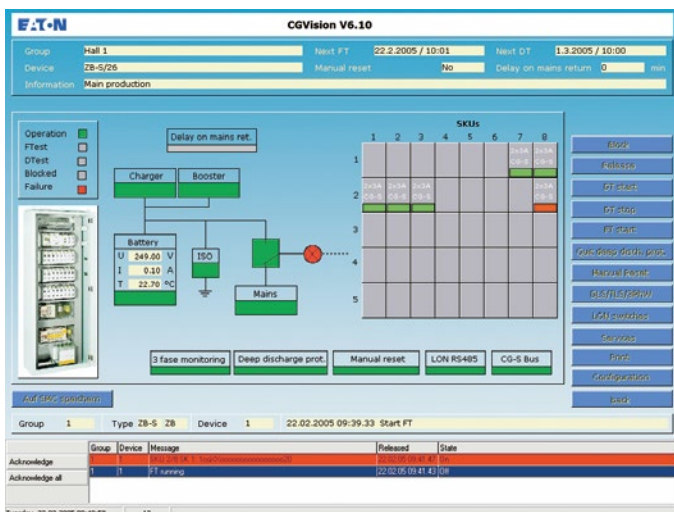


In the main group screen, up to 15 buildings (or other device groups) can be defined. With green everything is fine, red means that a defect has occurred.

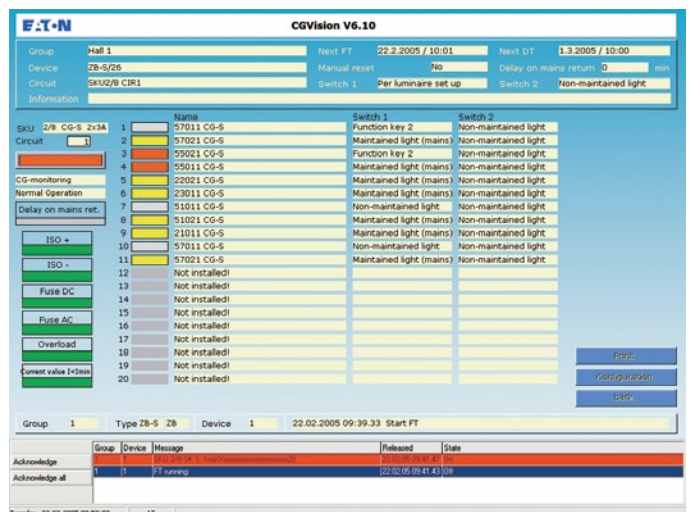


The device group affected by the defect can be opened as simply as that. A maximum of 480 emergency lighting systems with up to 32 devices per group can be visualised here.

Intuitive operating concept



Red signals a problem. The device image gives a quick overview and supplies detailed, highlighted status information.



The software recognises colours on the circuit level as well. What is the luminaire status? Are the maximum of 20 luminaires switched off or defective? One glance is enough.

Documenting, controlling, reacting

7 CGVision tests the complete system once weekly in automatic mode according to legislative requirements. Complex control rounds are a thing of the past.

CGVision tests the complete system once weekly in automatic mode according to legislative requirements. Complex control rounds are a thing of the past.

If an 'emergency light defect' is reported, the error can be localised conveniently and safely on the screen. The display shows in which subsystem the defect has occurred, which circuit module is affected, the position specification of the luminaire and how the switching type was programmed. The software interface is no cryptic intellectual challenge but can be operated highly intuitively.

It is also possible to integrate a detailed building plan into the software that precisely positions the safety luminaires with a coloured status display at their locations. Safety-relevant controls of the work of house technicians or external service providers can be implemented directly on the screen. If the display changes from red to yellow, the light point again functions perfectly.

But the graphical display possibilities do not end there: even the location-specific display as part of an aerial view is possible. You can't get an overview more quickly.



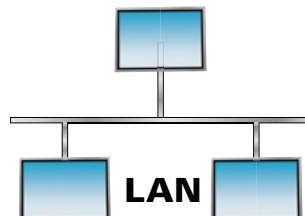
More comfort with an interface to building technology

CGVision and the emergency lighting systems can be connected without complex installations via existing LAN and telecommunication cables. The most common interfaces for building technology are offered. A connection to the building control systems is also simple: CGVision offers an OPC interface for this, or optionally a BACnet interface.

The software is also optimal for decentral solutions: various locations can be controlled via the company-internal intranet without limitations. In this way, efficiency and economy are united as one.

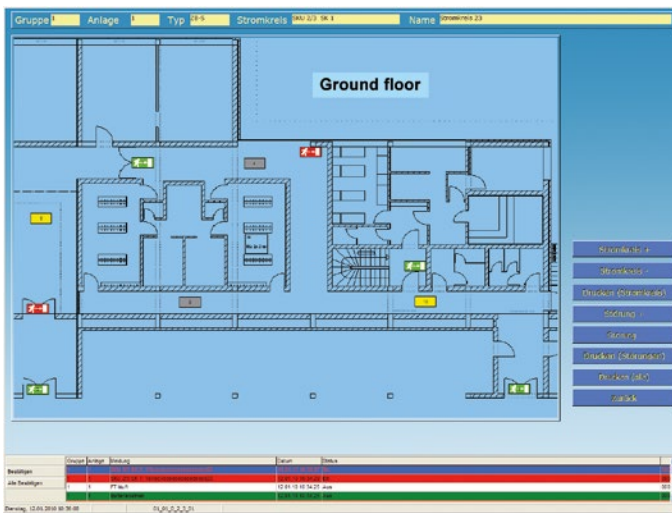


BMS



CGVision

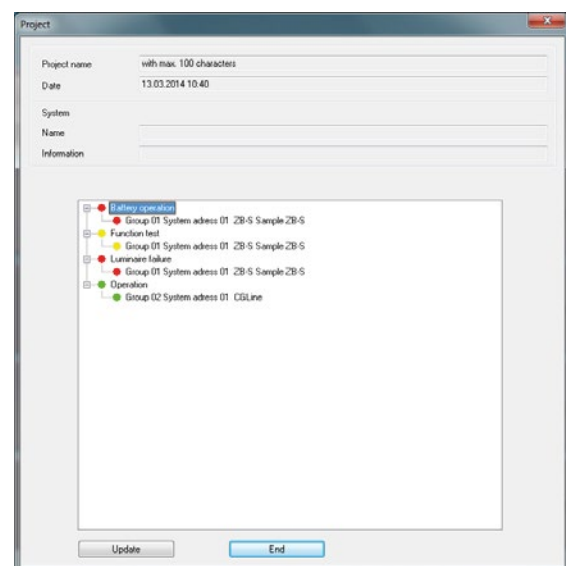
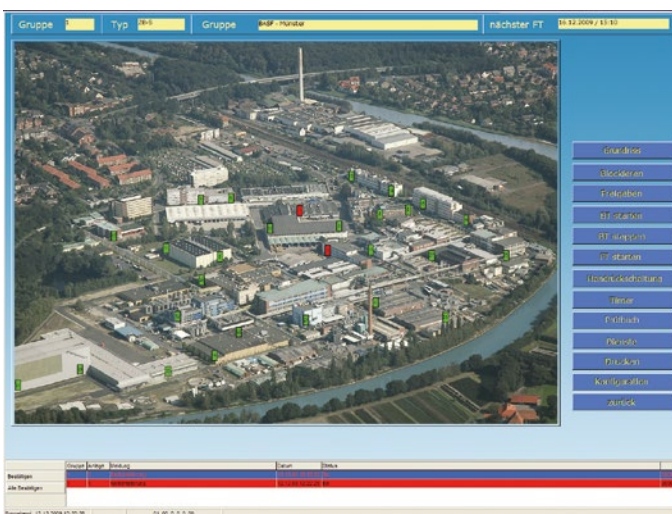
Graphical display possibilities



Clear and concise display of the luminaires in the layout plans is also optionally possible. A special graphics tool enables the simple import of CAD plans in .dwg or .dxf format.

The luminaires can be reprogrammed with respect to their switching types, e.g. from maintained light to standby light with only a few clicks of the mouse in the layout image.

Orientation becomes child's play



Display of the emergency lighting systems in an aerial view or area plan simplifies orientation enormously!

In addition, all systems can be displayed clearly within an Explorer structure along with detailed information.

Technology that always pays for itself ...

... and not only because our light saves lives.

CGVision is the ideal tool for the central monitoring and fully automated inspection of complex emergency lighting systems. The workload is reduced enormously because control rounds are no longer necessary. The team of technicians or external service providers are only then required when a defect is reported. Personnel-intensive resources are therefore spared.

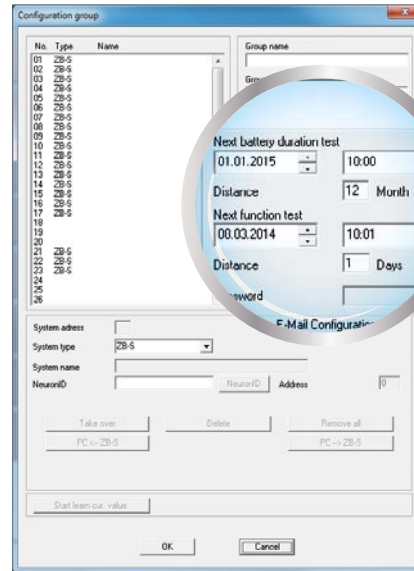
Decentral implementation in particular where several locations are interconnected via

intranet pays for itself rapidly. If for example the safety lighting systems of six locations are monitored centrally at one location, thanks to the powerfully functional CEAG software this is possible by only one person. The person responsible has all light points in view from one control room and also has their functional efficiency under control, even at a distance of 500 kilometres. In times past this task would have occupied more than half a dozen technicians.

Fully automatic functions optimise work and time invested

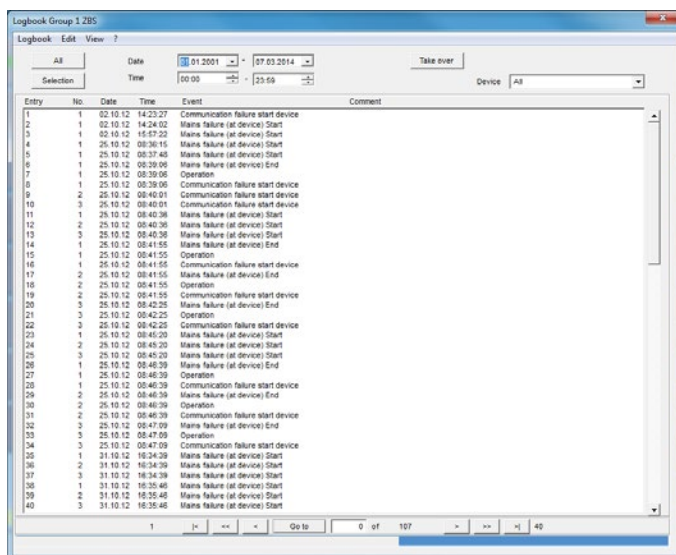


Time-controlled, automatic system status printouts

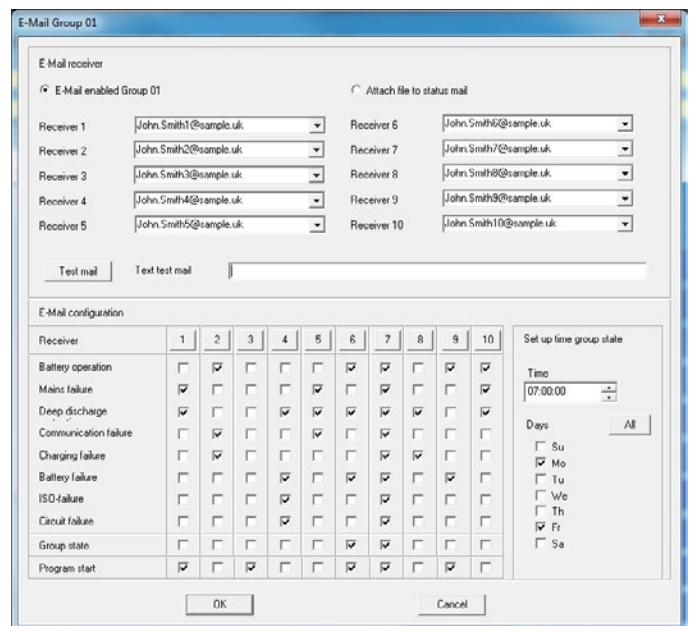


Self-executing tests

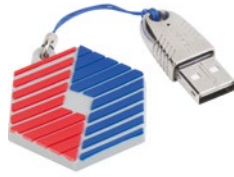
Professional functions for total convenience



Innovative inspection books with intuitive operation



Notification per e-mail



The correct license for your application

7

CGVision visualisation software is available in three different packages in the Basic or Pro versions.

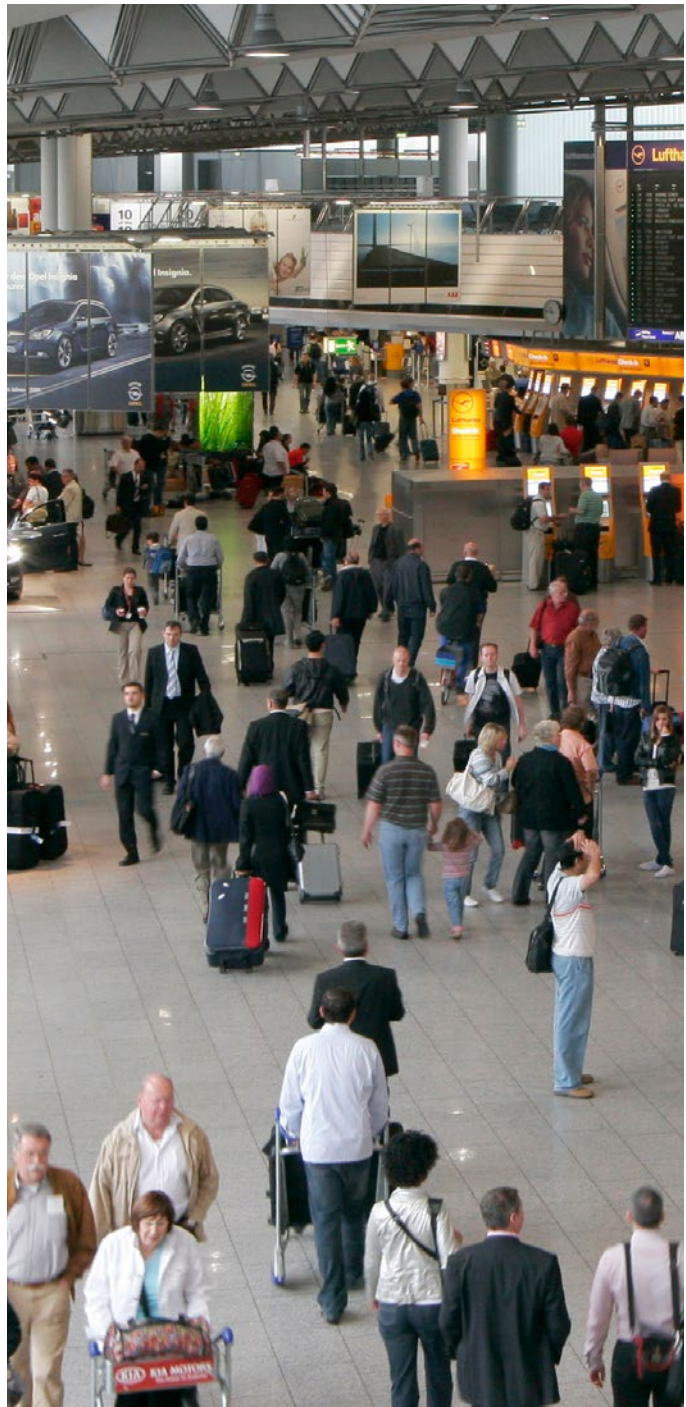
The packages essentially differ with the CG-S interface for connecting the existing emergency light systems to the CG-S bus. All packages have dongle licenses for all EGA devices that can be connected to CGVision (ZB96/Euro ZB.1/GVL24.1/CG48 or ZVL220, optionally available CG-S/IP router+ 1P required)

Package I contains a CG-S/IP interface, for connecting CG-S based systems such as ZB-S, AT-S+ or CG2000 via ethernet (IP network). For this purpose optional CG-S/IP-Router are necessary.

Package II does not contain a CG-S interface, e.g. only with use of a CGLine+ self-contained luminaire system via CGLine+ Web-Controller.

Package III contains a CG-S/USB interface for connecting CG-S based systems via a standard 2-wire bus line (CG-S bus).

All **Pro Packages** contain in addition to the Basic Packages convenient layout programming enabling the display of the systems in building plans or aerial views, or the display of emergency luminaires circuit-related in building layouts. The image format is typically .bmp format. Converting a .dwg based AutoCAD file is also possible. Positioning luminaires in the layout is via drag & drop.



Overview CGVision licences

	Basic Package I	Basic Package II	Basic Package III	Pro Package I	Pro Package II	Pro Package III
CG-S/IP interface	X	-	-	X	-	-
EGA licences	X	X	X	X	X	X
CGLine 400 licences	X	X	X	X	X	X
CGLine+ licences	X	X	X	X	X	X
Ethernet I/O licences	X	X	X	X	X	X
CG-S/USB interfacebox	-	-	X	-	-	X
Graphic visualisation of the devices	-	-	-	X	X	X
Visualisation in a building layout	-	-	-	X	X	X

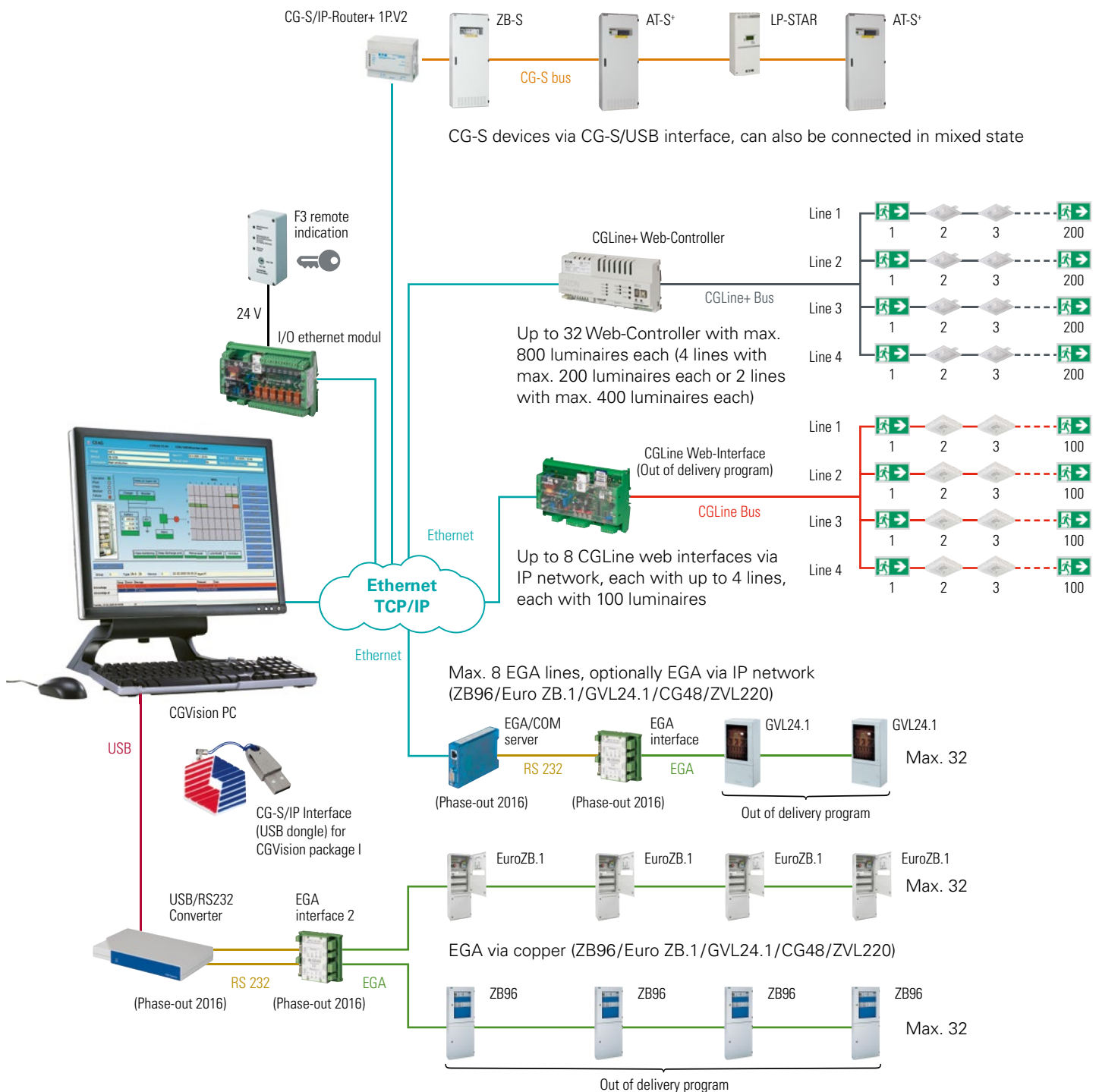
CGVision Package I

CGVision Package I (Basic or Pro) contains the CG-S/IP interface (USB dongle) enabling CG-S bus-based emergency light systems such as ZB-S, LP-STAR, AT-S+ and CG2000 to be connected to the CGVision visualisation software with the aid of CG-S/IP routers (optionally available) via an ethernet-based network (TCP/IP).

In addition, the CGVision Package I version contains all dongle licenses for EGA devices (ZB96, EuroZB.1, GVL24.1, CG48 or ZVL220), CGLine+, CGLine or Ethernet I/O modules on CGVision.

Any number of ZB-S, AT-S+ or CG2000 systems, also in mixed state, can be connected to a CG-S/IP router+ 1P.V2. In CGVision the systems must however be assigned own device groups.

CGVision Package I application example



CGVision Package II

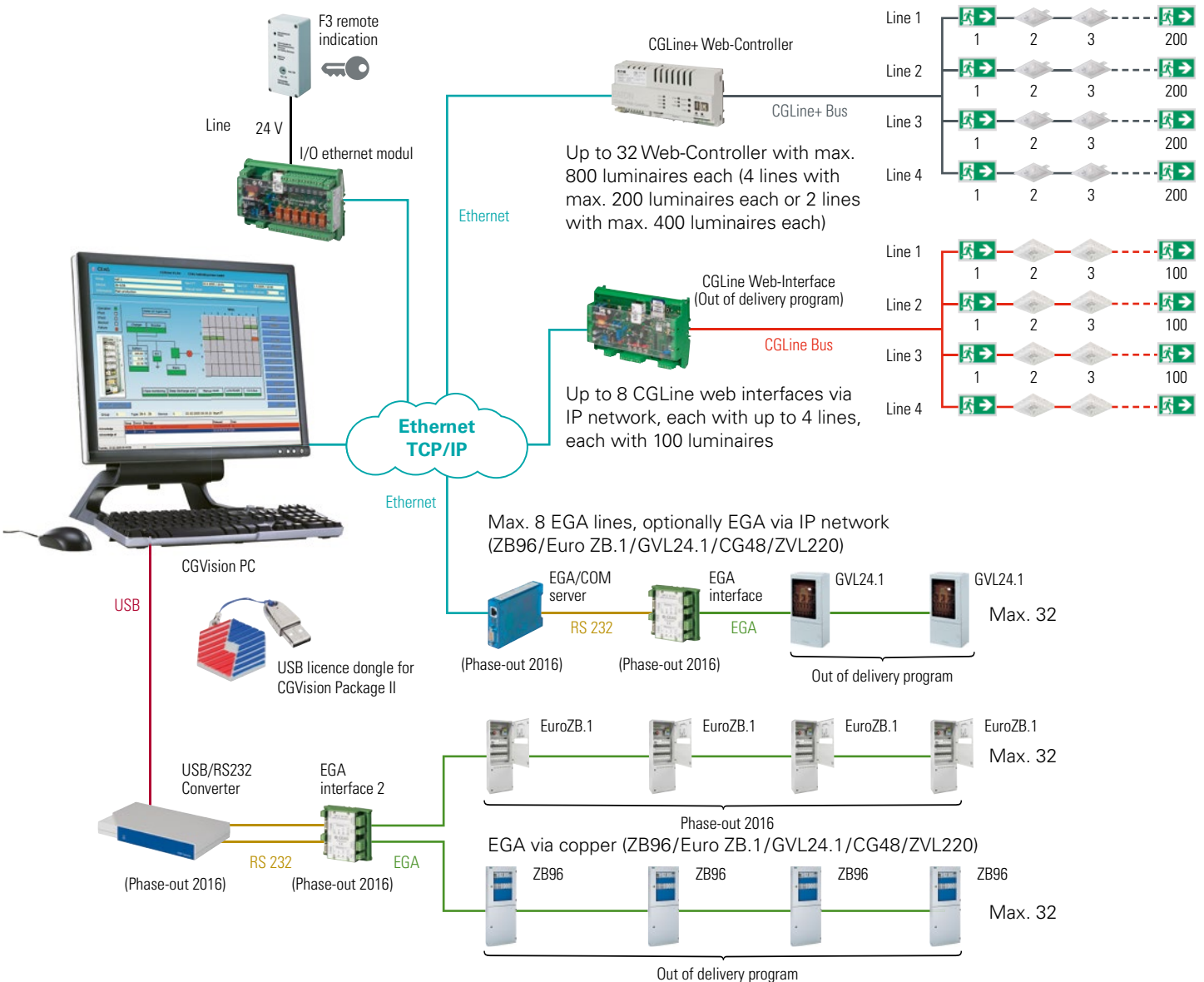
CGVision Package II (Basic or Pro) does not contain the CG-S interface.

The package contains all dongle licenses for EGA devices (ZB96, EuroZB.1, GVL24.1, CG48 or ZVL220), CGLine+, CGLine or Ethernet I/O modules on CGVision. Thus only visualisation of EGA devices or CGLine+ self-contained luminaires without CG-S bus-based devices is possible.

The license for the I/O Ethernet module is also provided, enabling visualisation of devices from other manufacturers via potential-free contacts.

7

CGVision Package II application example



CGVision Package III

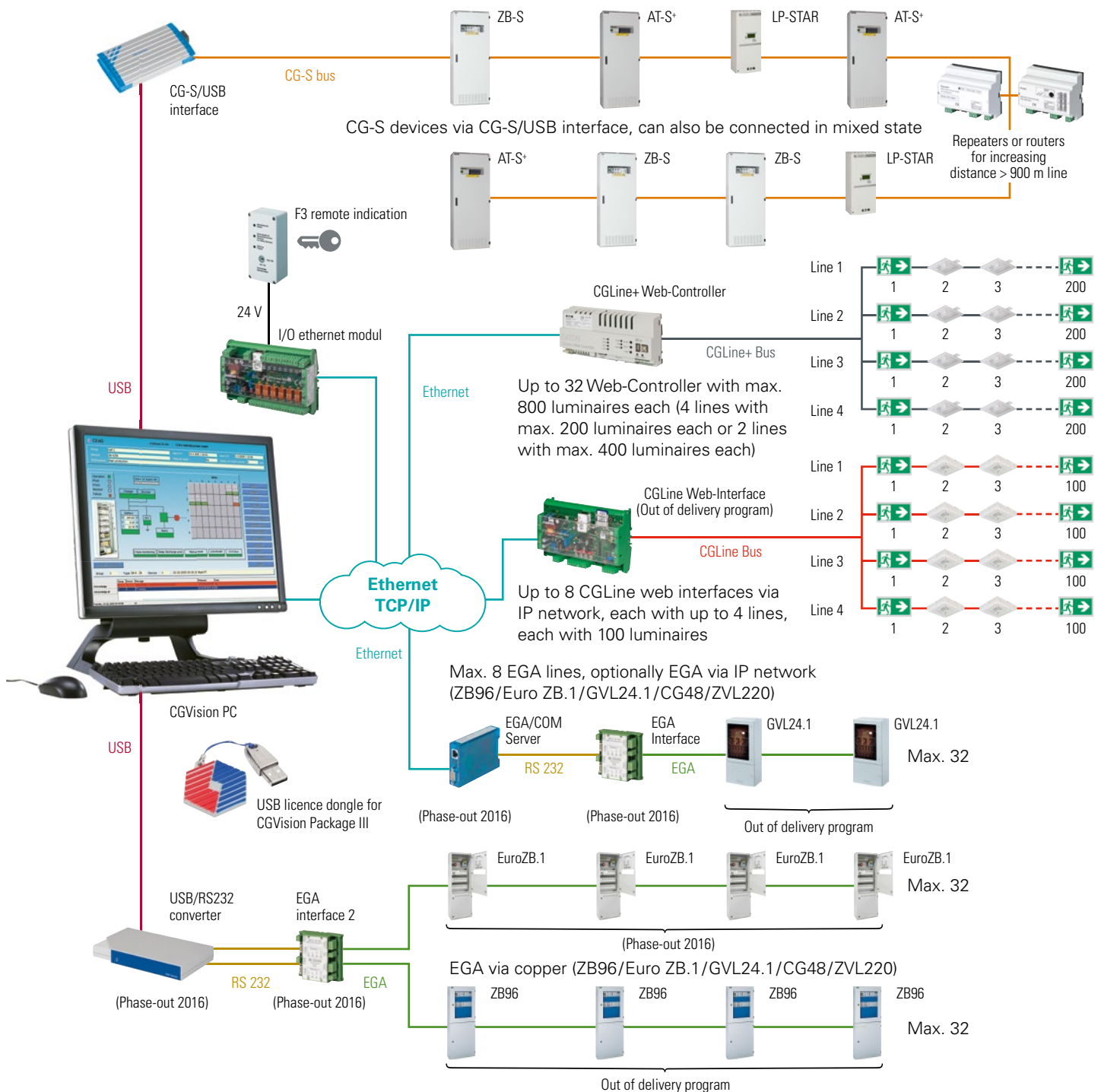
CGVision Package III (Basic or Pro) contains the CG-S/USB interface (USB box), enabling CG-S bus-based emergency light systems such as ZB-S, LP-STAR, AT-S+ and CG2000 to be connected to the CGVision visualisation software via a standard bus cable.

Any number of ZB-S, CGLine+, AT-S+ or CG2000 systems, also in mixed state, can be connected. In CGVision the systems must however be assigned own device groups.

Increasing the distance of the bus cable is possible via optionally available repeaters or routers.

In addition, the CGVision Package III version contains all dongle licenses for EGA devices (ZB96, EuroZB.1, GVL24.1, CG48 or ZVL220), CGLine+, CGLine or Ethernet I/O modules on CGVision.

CGVision Package III application example



Monitoring and programming software



Monitoring and programming software

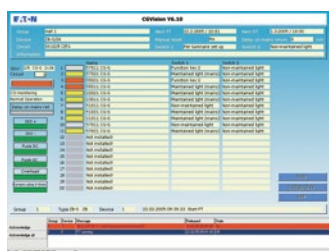
- Extremely diverse: complete visualisation, monitoring and programming of up to 480 emergency lighting systems with over 1,000,000 emergency luminaires
- Ideal orientation: luminaire texts and supplementary information fields for each luminaire as well as the display of emergency lighting systems and luminaires in aerial views or layouts makes orientation child's play
- Clear and user-friendly inspection books as well as extensive printing functions offer convenient information possibilities
- Automatic notification: an integrated e-mail function with many setting possibilities informs conveniently per e-mail. Thus control rounds are no longer necessary

Operating system	Windows® 7 (32 Bit) (64 Bit), Windows® Server 2008 (no server/client)
Processor	at least 2 GHz
RAM	at least 1 GB RAM, 3 GB recommended
Hard disk	2 GB free hard disk storage
Graphics board	at least 128 MB (no shared memory)
Drives	CD-ROM
Monitor	at least 17" (min. 1280 x 1024 dpi)
Mouse, keyboard	1 x each
USB port	1 x (CG-S interface/dongle license) 1 x USB for printer



CGVision

- Detailed system information are available at every time
- Simple menu guidance
- Up to 480 emergency lighting devices are monitor- and programmable, a segmentation in up to 15 groups of devices is possible (one device group per device family)
- Up to 32 pcs. CGLine+ WEB-Controller with up to 25,600 CGLine+ luminaires are monitor- and programmable
- Up to 8 pcs. CGLine WEB-Interfaces with up to 3,200 self contained luminaires are monitor- and programmable
- Free input of texts and additional information at each level (up to 100 signs) and cognition of destination for luminaires (ZB-S/CG 2000 up to 20 signs)
- Inquiry of the current working conditions of all mounted systems
- Clearly-presented display in explore structure (tree structure) possible
- Constant display of the 5 latest events in an alarm list
- Localised failure display about each emergency circuit and luminaries with destination data in plain text in connection with function tests
- Always current information on charging unit and battery
- Storage and retrieval possibility of all log book entries over a period of 4 years at least
- Free programmable function- and duration test
- Configurable automatic print functions
- Integrated e-mail client program with status information for each device group
- Up to 10 e-mail recipients each device group configuring
- Connection of a building management system (BMS) via integrated OPC-server possible
- Optional BACnet server (only for ZB-S / CG2000) for BACnet based BMS available



Overview CGVision licences

	Basic Package I	Basic Package II	Basic Package III	Pro Package I	Pro Package II	Pro Package III
CG-S/IP interface	X	-	-	X	-	-
EGA licences	X	X	X	X	X	X
CGLine 400 licences	X	X	X	X	X	X
CGLine+ licences	X	X	X	X	X	X
Ethernet I/O licences	X	X	X	X	X	X
CG-S/USB interfacebox	-	-	X	-	-	X
Graphic visualisation of the devices	-	-	-	X	X	X
Visualisation in a building layout	-	-	-	X	X	X

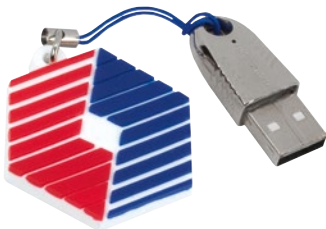
Features of all packages

- CGLine+ Licence (release via USB-dongle) for visualisation of CGLine+ self-contained luminaires via CGLine+ WEB-Controller on CGVision. Up to 32 pcs. CGLine PC-interfaces with up to 25,600 pcs. CGLine+ self-contained luminaires can be controlled and monitored.
- CGLine Licence (release via USB-dongle) for visualisation of CGLine self-contained luminaires via CGLine WEB-interface on CGVision. Up to 8 pcs. CGLine PC-interfaces with up to 3,200 pcs. CGLine self-contained luminaires can be controlled and monitored.
- Ethernet I/O-License (released via USB-dongle) for visualisation of devices via pot.-free In-/Outputs. 8 digital inputs for visualisation and 7 relay outputs 24V, to control of diverse functions, e.g. Start function test.

In addition all CGVision Software Pro Packages contain:

- Graphic visualisation of the devices in a .bmp graphic, e.g. area plan, aerial map
- Circuit orientated visualisation of luminaires in a building layout

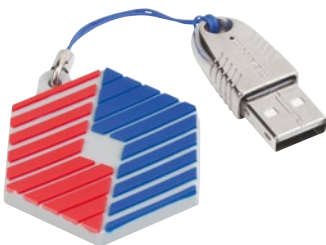
Licence (Dongle) Basic Package I



Special features of CGVision Software Basic Package I

- CG-S/IP-Interface (USB-dongle) for the connection of CEAG emergency lighting systems with STAR technology (AT-S+, ZB-S, LP-STAR, CG 2000) via an ethernet (TCP/IP), directly via the LAN-interface (RJ45) of the PC. For the connection of CEAG emergency lighting systems with STAR-Technology via an ethernet, CG-S/IP-Routers+ 1P are necessary, which are optionally available.
- EGA-Licences (release via USB-dongle) for the visualisation of EGA-devices on CGVision. Up to 8 EGA-lines of each device family (ZB96, Euro ZB.1, GVL 24.1, CG48, and ZVL220) possible. Max. 15 EGA-lines in total on CGVision connectable. For the connection of CEAG emergency lighting systems with EGA-technology at CGVision via EGA-Interface-Box (one box each line) or via EGA/PC-interface-2 (each interface up to two lines) on a PC.

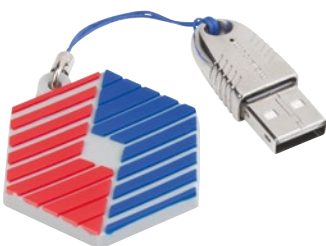
Licence (Dongle) Basic Package II



Special features of CGVision Software Basic Package II

- EGA-Licences (release via USB-dongle) for the visualisation of EGA-devices on CGVision. Up to 8 EGA-lines of each device family (ZB96, Euro ZB.1, GVL 24.1, CG48, and ZVL220) possible. Max. 15 EGA-lines in total on CGVision connectable. For the connection of CEAG emergency lighting systems with EGA-technology at CGVision via EGA-Interface-Box (one box each line) or via EGA/PC-interface-2 (each interface up to two lines) on a PC.

Licence (Dongle) Basic Package III

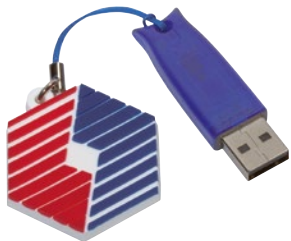


Special features of CGVision Software Basic Package III

- CG-S/USB-Interfacebox for the connection of CEAG emergency lighting systems with STAR technology (AT-S+, ZB-S, CG 2000) via a conventional two-conductor cable data bus.
- EGA-Licences (release via USB-dongle) for the visualisation of EGA-devices on CGVision. Up to 8 EGA-lines of each device family (ZB96, Euro ZB.1, GVL 24.1, CG48, and ZVL220) possible. Max. 15 EGA-lines in total on CGVision connectable. For the connection of CEAG emergency lighting systems with EGA-technology at CGVision via EGA-Interface-Box (one box each line) or via EGA/PC-interface-2 (each interface up to two lines) on a PC.

Monitoring and programming software

Licence BACnet-Server (Dongle)

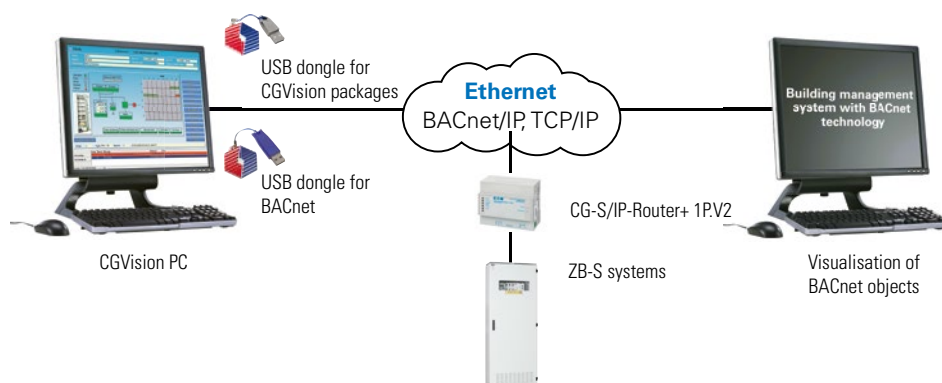


BACnet Server for CGVision

BACnet Server for CGVision to connect a BACnet based BMS to CGVision with ZB-S/CG2000 systems via BACnet/IP. The BACnet Server provides event-driven BACnet-objects with relevant status indications of ZB-S/CG2000 systems with STAR technology.

The BACnet interface provides following information each ZB-S/CG2000 system:

- 35 status information (e.g. mains failure, battery operation, luminaire sum failure etc.)
- 3 sum messages, mirroring of free programmable relay contacts
- 4 analogue battery values (Battery voltage, charge-/discharge current, temperature, capacity)
- 4 ZB-S control commands (e.g. start function test)
- 16 switch commands, to switch circuits or luminaires, which are programmed to LON-switch



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

F3 remote indication



F3 remote indication

The F3 remote indication ensures display of the most important installation functions via battery supply also with mains power failure. Blocking of emergency lighting operation is possible via a key switch during idle operation times. Blocking of emergency operation does not affect battery maintenance charging. Differential loop monitoring leads to operational readiness of the system with short circuits or wirebreak detection. LED displays: system readiness (green), source for safety services (yellow), failure (red). As such the F3 remote indication fulfills the requirement that remote switching is only permissible when operation by unauthorized persons is not possible.

F3 remote indication for flush-mounting



24" TFT screen

Generous TFT flat screen for display of CGVision visualisation, monitoring and programming software via a PC system.

PC miditower

High performance PC system for installation and operation of CGVision visualisation, monitoring and programming software, incl. WIN 7 Prof. (32 Bit), mouse and keyboard.

Ordering specifications software

Scope of delivery	Order No.
CGVision Basic Package I (including CG-S/IP-Interface)	40071361020
CGVision Basic Package II (EGA components to be ordered separately)	40071361022
CGVision Basic Package III (including CG-S/USB-Interface, EGA components to be ordered separately)	40071361024
CGVision Pro Package I (including CG-S/IP-Interface and visualisation in a building layout)	40071361021
CGVision Pro Package II (including visualisation in a building layout, EGA components to be ordered separately)	40071361023
CGVision Pro Package III (including CG-S/USB-Interface and visualisation in a building layout, EGA components to be ordered separately)	40071361025

Ordering specifications optional licenses

Scope of delivery	Order No.
CGVision CEAG BACnet-Server (dongle) with 1000 data points, version: USB-Port	40071360336

Ordering specifications I/O ethernet module

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

Ordering specifications F3 remote indication

Scope of delivery	Order No.
F3 remote indication, surface-mounting	40071338497
F3 remote indication recessed, performance for installation in the flush-mounted switch or empty space box acc. to DIN VDE 0606	40071347490

Ordering specifications Hardware

Scope of delivery	Order No.
PC Miditower with Intel-Prozessor, incl. keyboard, optical mouse and WIN 7 Prof. (32 Bit) (english), incl. installation	40071347144
24" TFT screen	40071347155
Ink jet printer (Laser printer black&white optional)	40071340753

CG-S bus components

CG-S bus components

- Powerful amplifier modules for expansion of bus structure
- Signal amplification and regeneration
- Generation of CG-S network segments
- Active interference suppression with logical filter function (router)
- Expansion of network capacity
- With diagnosis function
- Visualise without limits with transmission via TCP/IP
- Use existing ethernet-based corporate networks
- Any media possible (copper, LAN, WLAN, glass fibre)
- Convenient networking via standard network components

2-channel repeater for CG-S bus



CG-S bus repeater/router

- 2-channel or 4-channel repeater for connecting of CG-S bus networks and expansion of network capacity of a CG-S bus network via physical division into two or more CG-S bus network segments. With expansion of more than two CG-S network segments, repeaters and routers must be alternatively planned.
- Router for connection of CG-S bus networks and expansion of the network capacity of a CG-S bus network via logical and physical structuring with signal refreshing function of the CG-S bus.

Order specifications CG-S Bus (ZB-S, CG2000)

Scope of delivery	Order No.
2-channel repeater for CG-S bus	40071347143
4-channel repeater for CG-S bus	40071070583
2-channel router for CG-S bus	40071347142

4-channel repeater for CG-S bus



2-channel router for CG-S bus



CG-S/IP router+ 1PV2



CG-S/IP router+ 1PV2 connection box



CG-S/USB Interfacebox



CG-S/IP router+ 1PV2

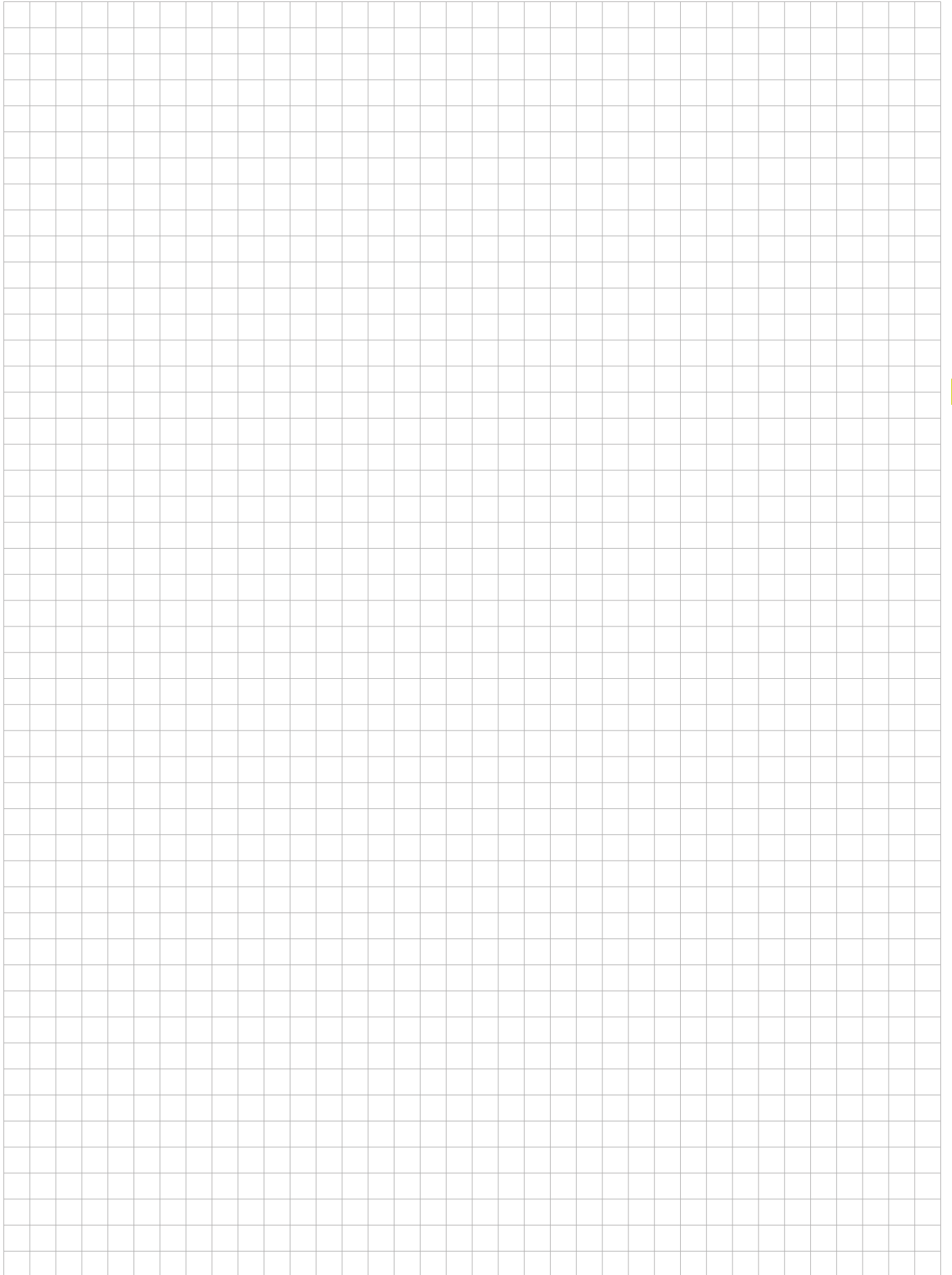
- CG-S/IP router+ 1PV2 for connection of CEAG emergency lighting systems with CG-S bus to CGVision via an existing on-site ethernet (with TCP/IP). Simple, building-wide connection of decentrally located emergency lighting systems with STAR technology with coupling of CG-S/IP routers+ 1PV2 configured as clients via ethernet. Connection to CGVision can either be implemented via a USB port with the CG-S/USB interface box and a CG-S/IP router+ 1PV2, or directly via the LAN interface of the PC. The CG-S/IP interface is required for this. Management of all CG-S network components is implemented via any CG-S/IP router+ 1PV2 in the network configured as a configuration server and administering all participants in a channel list with their IP addresses.
- CG-S/IP-router+ connection box incl. CG-S/IP router+ 1PV2 and 24V/1.25A DC power supply for external mounting.
- CG-S/IP interface for operation of CEAG emergency lighting systems with CG-S bus technology and CG-S/IP router+ 1PV2 via ethernet to CGVision visualisation, monitoring and programming software. The CG-S/IP interface enables connection of the emergency lighting systems via CG-S/IP router+ 1PV2 through the ethernet directly via the LAN interface of the PC.

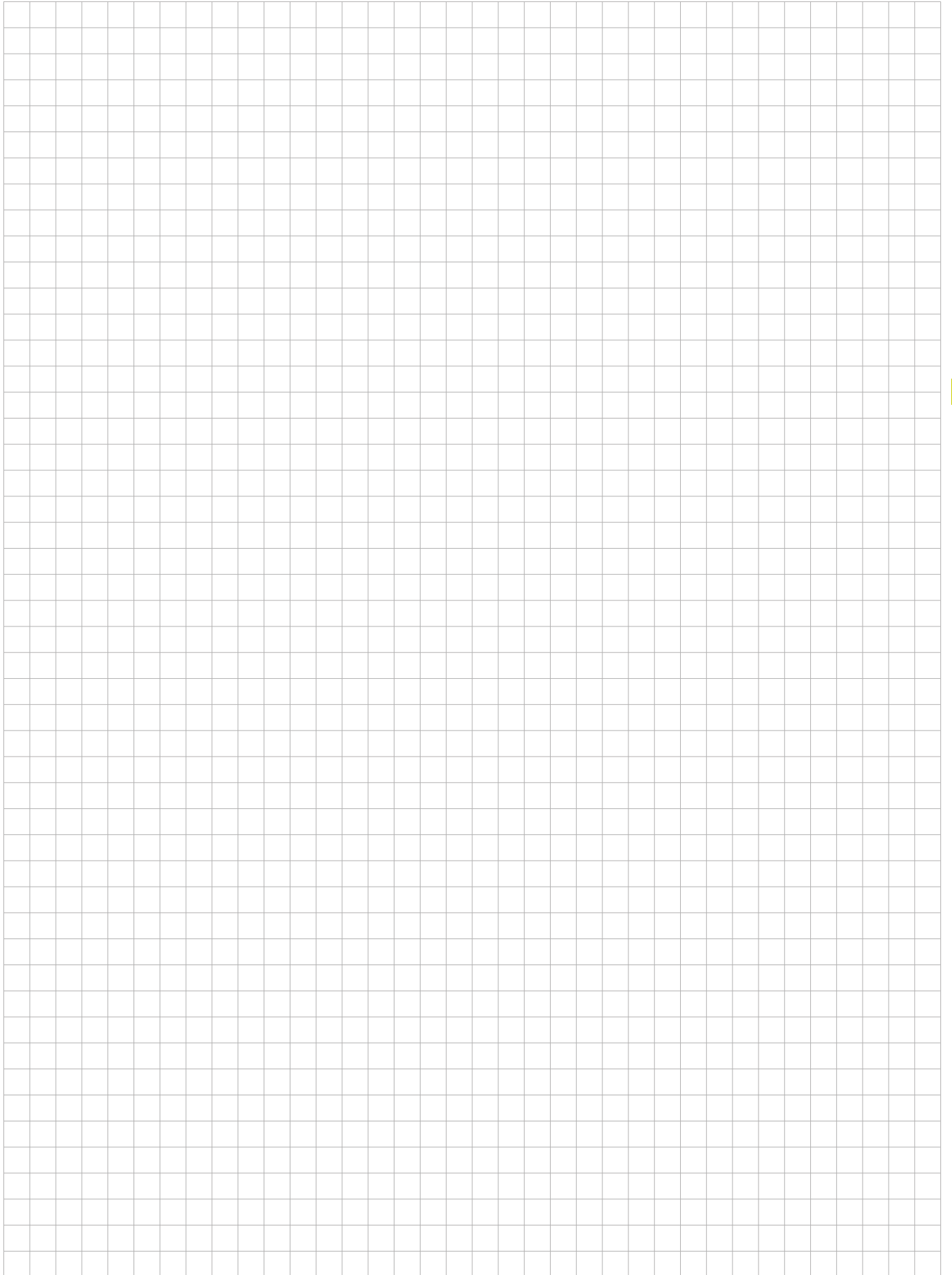
Order specifications CG-S Bus/Ethernet

Scope of delivery	Order No.
CG-S/IP router+ 1PV2 (Ethernet)	40071361090
CG-S/IP router+ 1PV2-connection box incl. CG-S/IP router+ 1PV2 (ethernet) and 24V/DC power supply	40071361092

Order specifications CG-S Bus (ZB-S, CG2000)

Scope of delivery	Order No.
CG-S/USB interface box, surface mounted housing, without license key, replacement part	40071347137





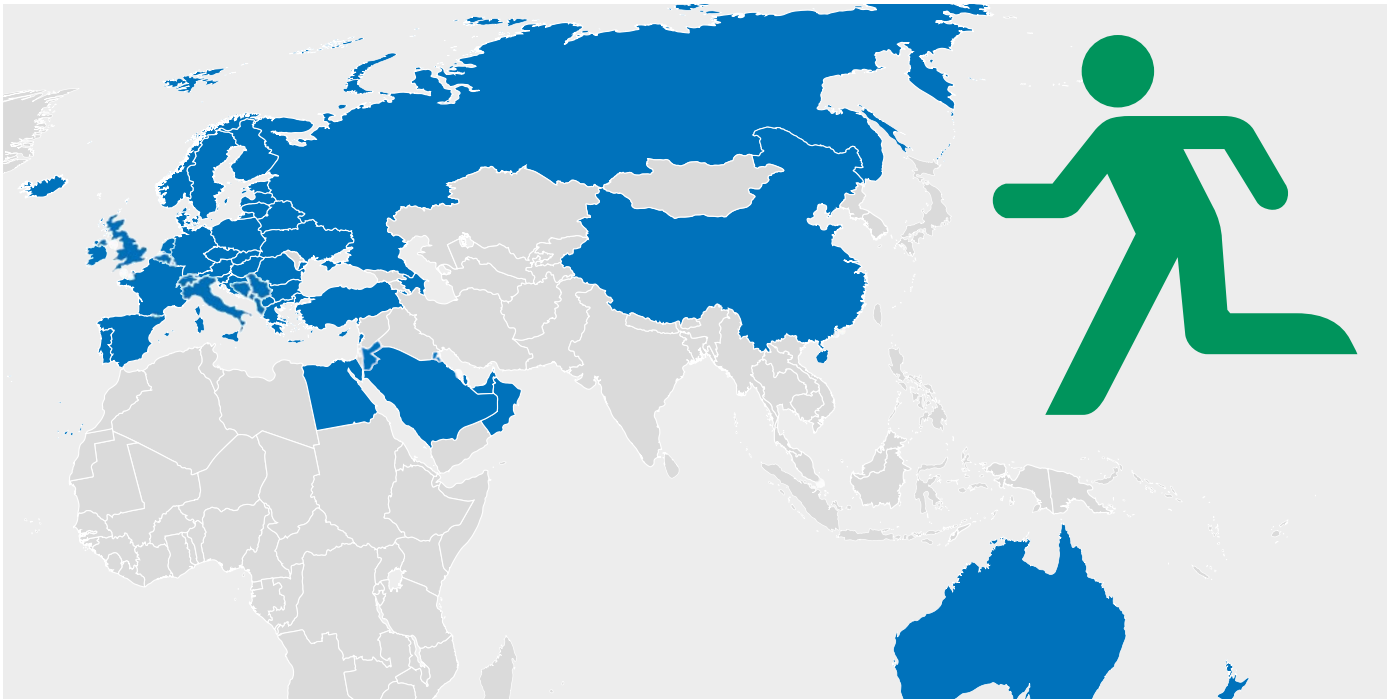


CEAG contact person

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.



CEAG representatives are located in the following countries:

Abu Dhabi	China	Germany	Latvia	Oman	Spain
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Australia	Cyprus	Hong Kong	Lithuania	Portugal	Switzerland
Austria	Czech Republic	Hungary	Luxembourg	Qatar	Turkey
Azerbaijan	Denmark	Iceland	Macedonia	Romania	Ukraine
Bahrain	Dubai	Ireland	Montenegro	Russia	United Kingdom
Belarus	Egypt	Italy	Netherlands	Saudi Arabia	
Belgium	Estonia	Jordan	New Zealand	Serbia	
Bosnia Herzegovina	Finland	Kosovo	Northern Ireland	Slovakia	
Bulgaria	France	Kuwait	Norway	Slovenia	

Please visit www.ceag.de to find the contact person responsible for your country.

At Eaton, we're energized by the challenge of powering a world that demands more. With over 100 years experience in electrical power management, we have the expertise to see beyond today. From groundbreaking products to turnkey design and engineering services, critical industries around the globe count on Eaton.

We power businesses with reliable, efficient and safe electrical power management solutions. Combined with our personal service, support and bold thinking, we are answering tomorrow's needs today. Follow the charge with Eaton. Visit eaton.eu/electrical.

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