

# Efficient and reliable solutions for emergency lighting systems



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



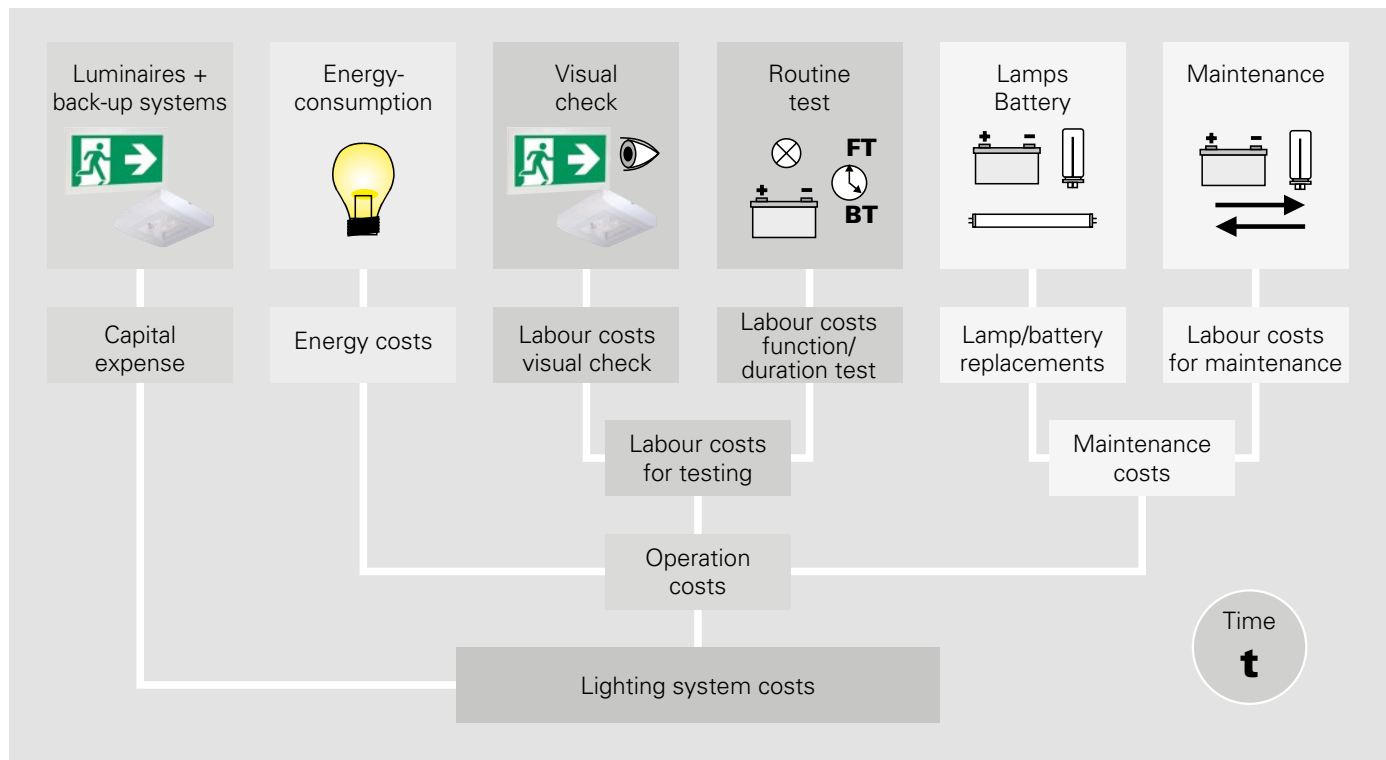
# Safety luminaires and escape sign luminaires

## 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.



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](http://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

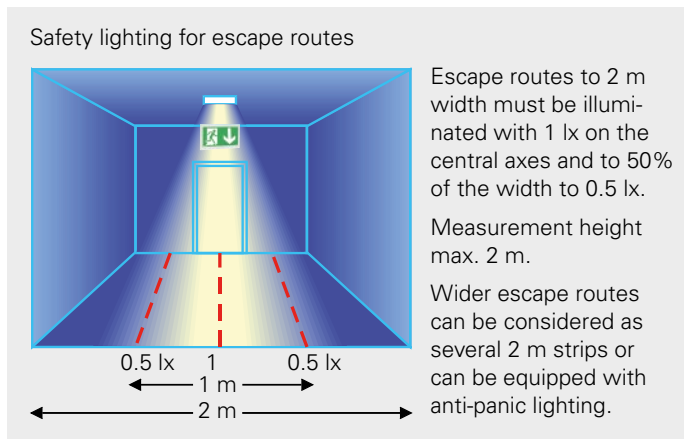
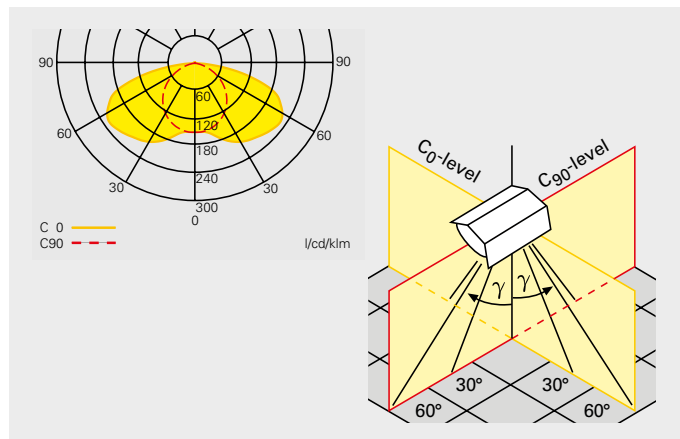
- CentrO, Germany
- Limbecker Platz, Germany
- Potsdamer Platz Arkaden, Germany
- Montedoro Freetime, Italy
- Dubai Mall, Dubai

## 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:



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

$\Phi_E$  = Luminous flux of the lamp in lm at the end of the rated duration

$\gamma$  = 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

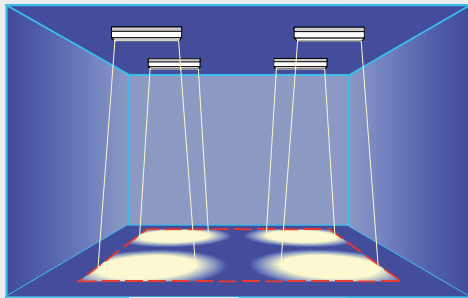
The EN 1838 standard requires a minimum value for illuminance of 0.5 lx or 1 lx. Because a lighting installation grows old over the course of time and the light emitted becomes less as a result, the initial value must be greater, meaning that a maintenance factor must be applied for planning. A common 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

1

## Anti-panic lighting

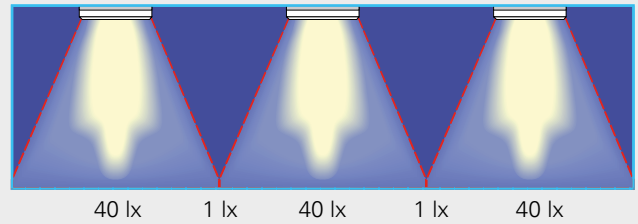


The horizontal illuminance must not fall below 0.5 lx on the free floor surfaces.



German LBO stipulates 1 lux

## Safety lighting for escape routes



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  $\Phi_E$  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

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

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

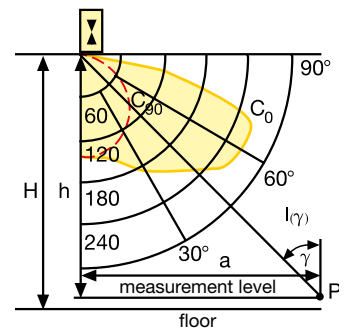
$$\underline{E_{(5.2m)} = 1.26 \text{ lx}}$$

#### E for example at 6.9 m distance

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

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

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



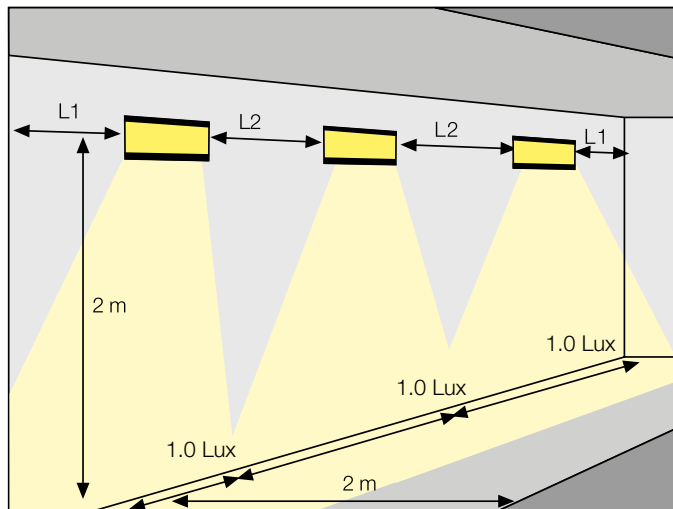
### Results:

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.

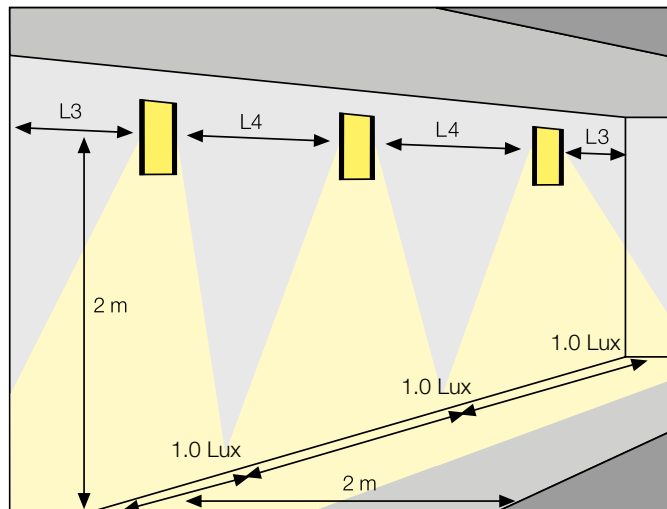
The uniformity ratio is approx. 1:5.

# 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:

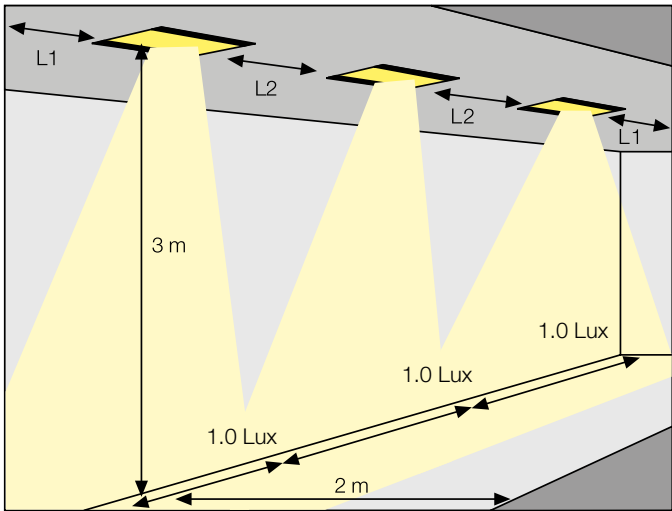
1 lx for escape route centre, 0.5 lx on both sides, at distance of 0.5 m, distance of wall to escape route centre 1 m

- Calculation for anti-panic lighting | Room illumination  
Calculation basis:

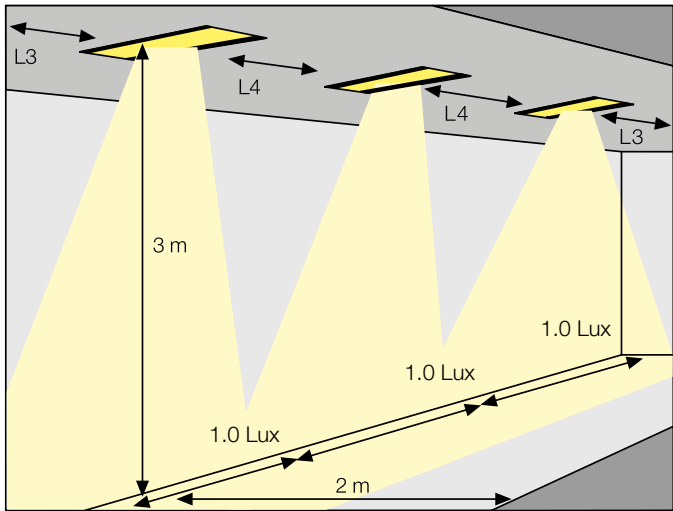
1 lx (0.5 lx) minimum value on the complete surface, with consideration of a peripheral area of 0.5 m

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



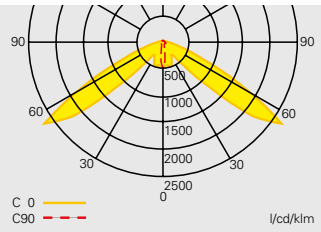
Luminaires arranged crosswise





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 = 3.5 m  
Selected luminaire type: GuideLed SL 13012 CG-S with asymmetric LED optic, 2 x 1.6 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	L1 	L2 	L3 	L4 
2.5	Ceiling mounting	1.6 (3.0)	5.8 (7.4)	5.9 (6.6)	13.2 (14.8)
3.0	Escape route centre	1.4 (3.0)	6.0 (7.9)	6.6 (7.5)	15.0 (16.7)
3.5		1.3 (2.3)	4.5 (8.2)	7.4 (8.3)	16.6 (18.6)
4.0		1.2 (2.0)	3.9 (8.4)	8.1 (9.1)	18.0 (20.4)
4.5		1.2 (1.8)	3.4 (7.4)	8.8 (9.7)	19.4 (22.1)

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) 16.6 m in order to maintain the required illuminance of 1 lx.

$2 \times L3 + 1 \times L4 = 2 \times 7.4 \text{ m} + 1 \times 16.6 \text{ m} = 31.4 \text{ m}$  ✓

Therefore for this area only 2 GuideLed SL 13012 CG-S are required.

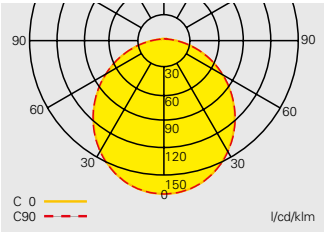
Example calculation No. 2 – escape route illumination with wall luminaires

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	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.

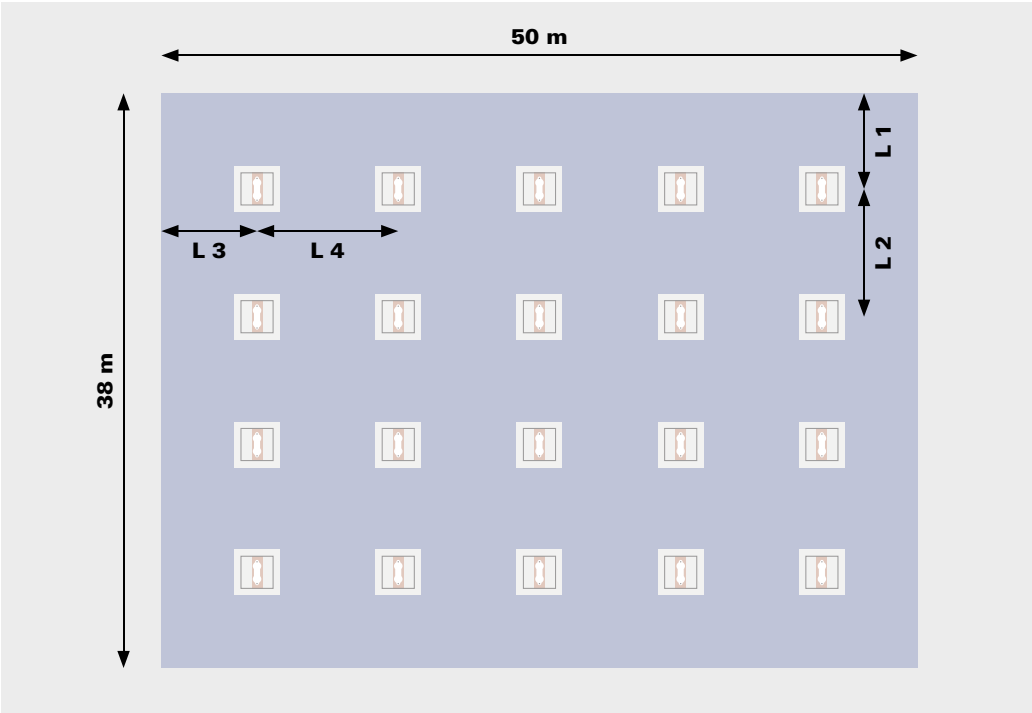
$2 \times L1 + 3 \times L2 = 2 \times 3.1 \text{ m} + 3 \times 8.1 \text{ m} = 30.5 \text{ m}$  ✓

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

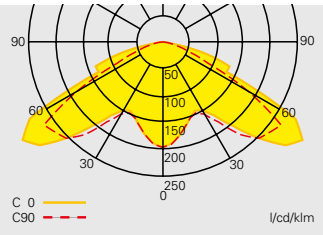
Example calculation No. 3 – wide area illumination





Specification data:

A sales area with 1900 m² surface area (50 m x 38 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 CG-S, symmetric LED optic, 2 x 1.6 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	3.5 (4.4)	8.2 ( 9.6)	3.4 (4.5)	8.2 ( 9.0)
3.0	Escape route centre	3.4 (4.4)	9.2 (11.0)	4.5 (4.5)	9.0 (10.0)
3.5		3.4 (4.4)	10.0 (11.6)	4.5 (5.5)	9.8 (11.4)
4.0		3.4 (4.4)	10.6 (12.4)	4.5 (5.5)	10.6 (12.9)
4.5		1.4 (5.4)	11.4 (13.4)	2.5 (5.5)	11.2 (13.4)
5.0		1.5 (5.4)	11.4 (14.2)	1.4 (5.5)	12.4 (14.2)

Result:

The planning aid shows that the first luminaire in the x-direction must be mounted at a distance of 4.5 m (L3) from the corridor end, and the distance between the luminaires must be a maximum of (L4) 10.6 m in order to achieve the required 1 lx.

$2 \times L3 + 4 \times L4 = 2 \times 4.5 \text{ m} + 4 \times 10.6 \text{ m} = 51.4 \text{ m}$  ✓

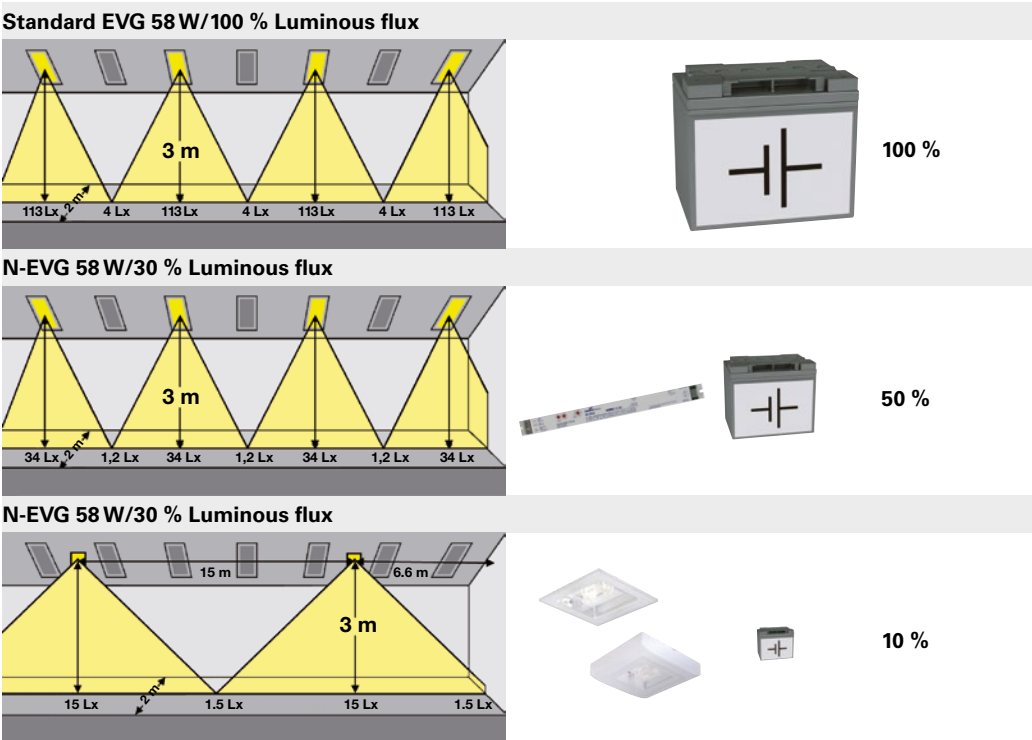
Therefore 5 luminaires in the x-direction are required.

In the y-direction the first luminaire can be mounted up to 3.4 m from the wall.

The distance between the luminaires must be a maximum of 10.6 m.

$2 \times L1 + 3 \times L2 = 2 \times 3.4 \text{ m} + 3 \times 10.6 \text{ m} = 38.6 \text{ m}$  ✓

Therefore 4 luminaires in the y-direction are required.



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 90%, 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%

Emergency operation											
Version	Luminaire	Ballast	Number of luminaires mains operation	Number of luminaires emergency operation	Dimming level	$E_{min}$ [lx]	$E_{max}$ [lx]	$g_2 = \frac{E_{min}}{E_{max}}$	Battery current input per luminaire in A	Total battery current input in A	Energy requirement
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-SLS500	0	3	100 %	1.5	15	01:10	0.022	0.065	8.6 %

## 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<sup>2</sup> 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<sup>2</sup> 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.

1

### 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.



# 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/m<sup>2</sup> 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 3-chip LEDs used in this process ensure with their redundancy 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 3-Chip 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 28 m

## Three-chip 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.

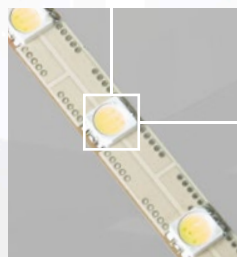
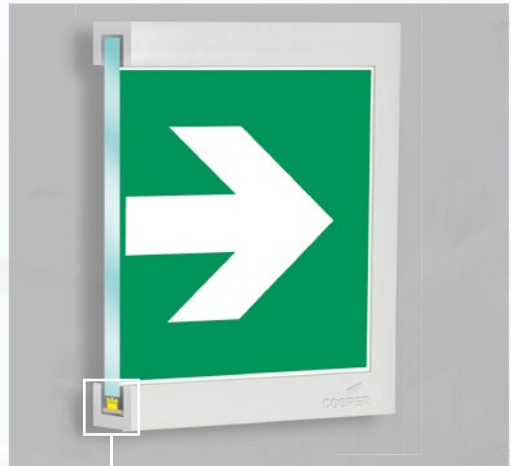
Up to 48 LEDs optimally illuminate the pictogram of GuideLed. Three LEDs each are located in a joint encapsulated housing and form a point of light.

If one of the three LEDs fails, the intact LEDs shine correspondingly brighter. This ensures excellent lighting for an especially long time.

## 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/m<sup>2</sup> 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):

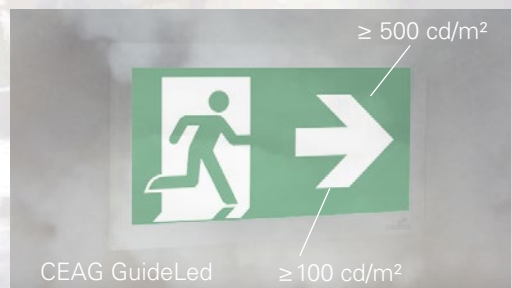
**$L_{min} = 10 \text{ cd/m}^2$  (green surface)**

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





**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.



Rope suspension



Pendant mounting



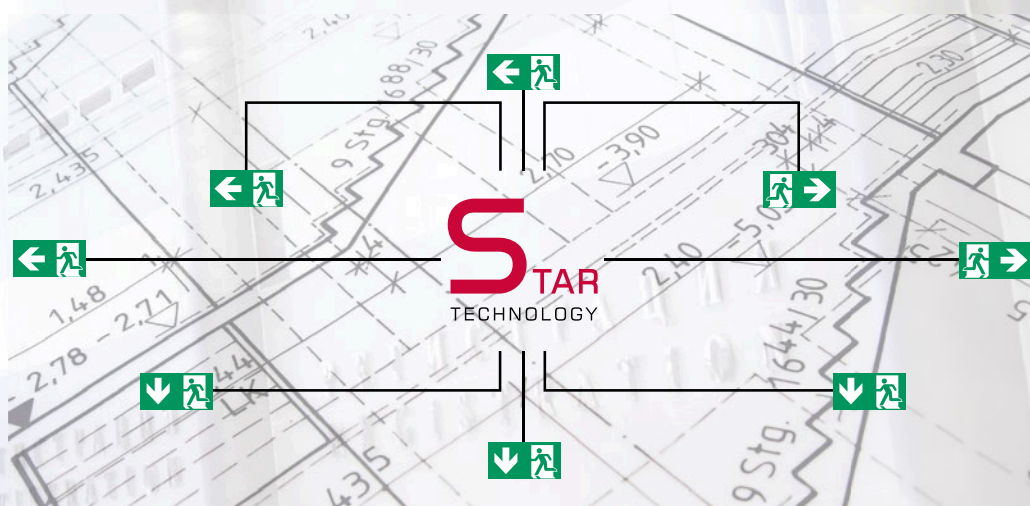
Recessed mounting



## 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.



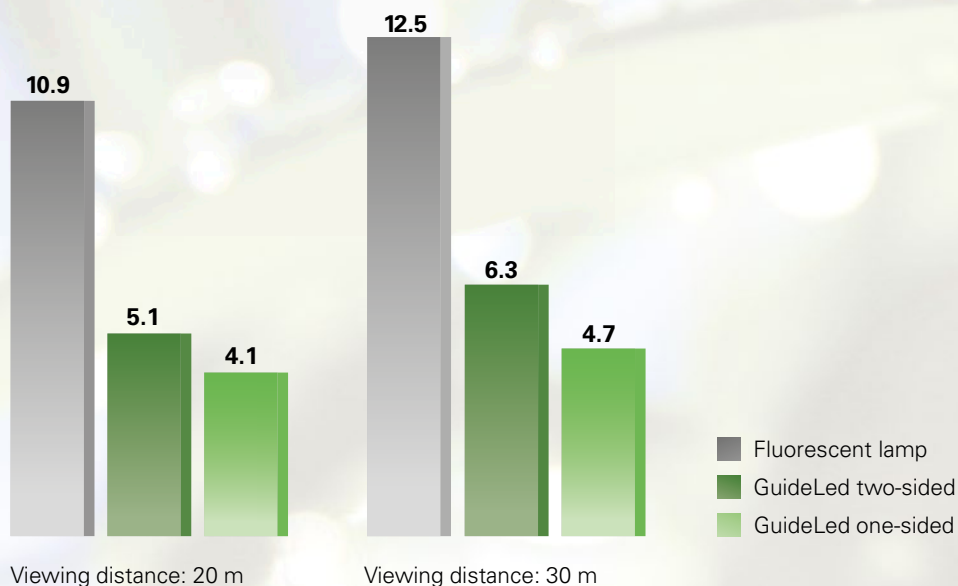
## Servicing costs definitely saved

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 (50,000 hours).



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



### Exemplary calculation – power consumption cost savings

Daily operating time	8W lamp $P_{\text{sys}} = 12.5 \text{ W}$	GuideLed 30m one-sided $P_{\text{sys}} = 4.7 \text{ W}$	GuideLed 30m two-sided $P_{\text{sys}} = 6.3 \text{ W}$	
16 h	73 kWh 10.95 €	27 kWh 4.12 €	37 kWh 5.52 €	per year
	Annual savings per luminaire	6.83 €	5.43 €	
24 h	110 kWh 16.50 €	41 kWh 6.18 €	55 kWh 8.28 €	per year
	Annual savings per luminaire	10.32 €	8.22 €	
	in case of an electricity 0.15 €/kWh			

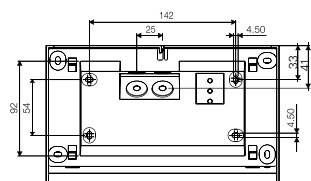
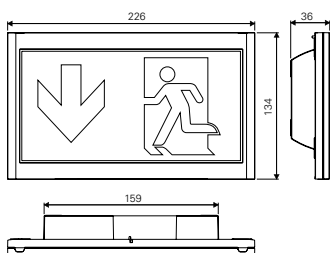
+ the lamp replacement costs (material, working hours, travelling time) saved

# GuideLed 10011, 10012, 10013 CG-S

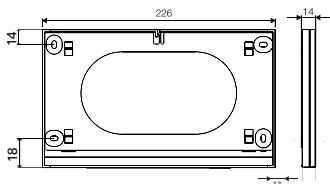
## Wall mounting



GuideLed 10011 CG-S



10011 CG-S



10012/10013 CG-S

Please observe a distance of 10 mm above for 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/m<sup>2</sup> in keeping with standard ISO 3864-1 and high uniformity  $L_{\min}/L_{\max} > 0.8$
- Increased safety by use of 3-chip LEDs
- 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 (50,000 hours)
- Installation of the LED pictogram without tools on the mounting set

Viewing distance	20 m
Luminous $\Phi_e/\Phi_N$ 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 <sup>2</sup> 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 with 3-chip LEDs

### Ordering details - fastening set

Scope of supply	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)	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	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

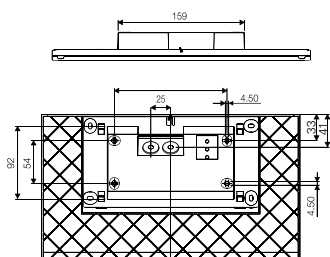
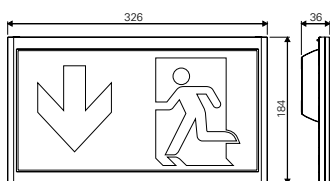
### Ordering details - accessories

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

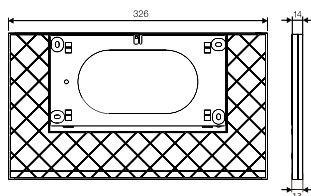
\* Installation of the LED supply in a not included device, for further information about the LED supply see page 1.159 (SLS28) und 1.165 (SLR28).



GuideLed 11011 CG-S



11011 CG-S



11012/11013 CG-S

Please observe a distance of 10 mm above for mounting!

## GuideLed 11011, 11012, 11013 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/m<sup>2</sup> in keeping with standard ISO 3864-1 and high uniformity  $L_{min}/L_{max} > 0.8$
- Increased safety by use of 3-chip LEDs
- Reduced battery costs on account of especially low power consumption
- Low operating costs on account of low effective power of 2.6 W only
- Minimum service requirement due to high service life of the LEDs (50,000 hours)
- Installation of the LED pictogram without tools on the mounting set

Viewing distance	30 m
Luminous flux $\Phi_E/\Phi_N$ at the end of rated operating time	100 %
Housing material	PC, PMMA
Housing colour	Light grey RAL 7035
Weight	0.60 kg (11011 LED CG-S) 0.56 kg (11012/11013 LED CG-S)
Type of mounting	Wall mounting
Connection terminal	Clamp terminal 2.5 mm <sup>2</sup> reverse-polarity protected
Connection voltage	220 - 240 V AC, 50/60 Hz 176 V - 275 V DC
Current consumption - battery operation (220 V)	11 mA
Power consumption mains operation (apparent power / effective power)	5.0 VA / 2.6 W
Permissible ambient temperature	-20 °C to +40 °C
Light source	LED batten with 3-chip LEDs

## Ordering details - fastening set

Scope of supply	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)	40071353641
Wall mounting set for GuideLed 10012 CG-S and 11012 CG-S, flush-mounted installation of the included 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 included V-CG-SLR28* (round) and CG-S technology (20 addresses)	40071353644

## Ordering details - LED pictograms (fastening set required)

Scope of supply	Order No.
LED pictogram PL for GuideLed 11011/11012/11013 CG-S, ISO 7010, 30 m	40071354530
LED pictogram PR for GuideLed 11011/11012/11013 CG-S, ISO 7010, 30 m	40071354531
LED pictogram PU for GuideLed 11011/11012/11013 CG-S, ISO 7010, 30 m	40071354532

## Ordering details - accessories

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 1.159 (SLS28) und 1.165 (SLR28).

# GuideLed 10021, 10022, 10023, 10024 CG-S

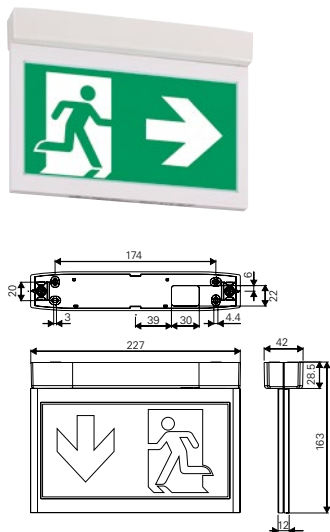
Ceiling mounting



## GuideLed 10021, 10022, 10023, 10024 CG-S

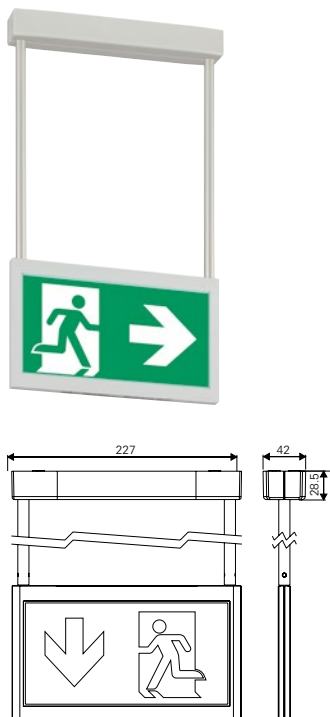
- Escape sign panel luminaire in LED technology for ceiling installation
- Slender design with pictogram width of only 12 mm
- Very good perceptibility on account of high luminance of the white contrasting colour  $> 500 \text{ cd/m}^2$  in keeping with standard ISO 3864-1 and high uniformity  $L_{\min}/L_{\max} > 0.8$
- Increased safety by use of 3-chip LEDs
- 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 (50,000 hours)

GuideLed 10021 CG-S



Viewing distance	20 m
Luminous flux $\Phi_E/\Phi_N$ 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 <sup>2</sup> 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 with 3-chip LEDs

GuideLed 10022 CG-S



## Ordering details - fastening set

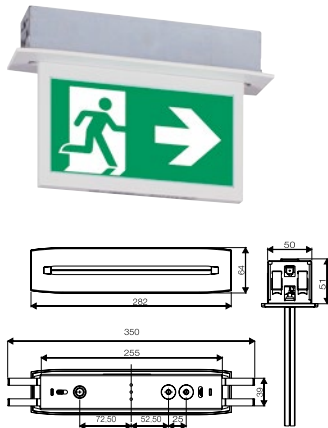
Scope of supply	Order No.
Ceiling installation set for GuideLed 10021 CG-S with canopy incl. LED supply and CG-S technology (20 addresses)	40071353610
Ceiling installation set for GuideLed 10022 CG-S with canopy and tube suspension 0.5 m incl. LED supply and CG-S technology (20 addresses)	40071353611
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



## Ordering details - LED pictograms\*

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

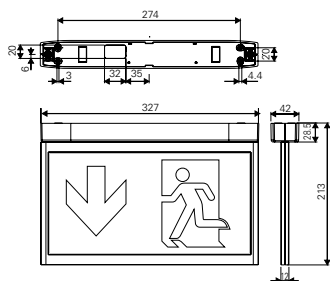
Ceiling mounting



## GuideLed 11021, 11022, 11023, 11024 CG-S

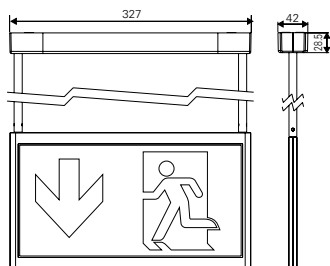
- Escape sign panel luminaire in LED technology for ceiling installation
- Slender design with pictogram width of only 12 mm
- Very good perceptibility on account of high luminance of the white contrasting colour > 500 cd/m<sup>2</sup> in keeping with standard ISO 3864-1 and high uniformity  $L_{\min}/L_{\max} > 0.8$
- Increased safety by use of 3-chip LEDs
- 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 (50,000 hours)

GuideLed 11021 CG-S



Viewing distance	30 m
Luminous flux $\Phi_E/\Phi_N$ 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 <sup>2</sup> 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 up +40 °C
Light source	LED batten with 3-chip LEDs

GuideLed 11022 / 11023 CG-S



## Ordering details - fastening set

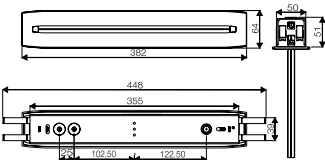
Scope of supply	Order No.
Ceiling installation set for GuideLed 11021 CG-S with canopy incl. LED supply and CG-S technology (20 addresses)	40071353620
Ceiling installation set for GuideLed 11022 CG-S with canopy and tube suspension 0.5 m, incl. LED supply and CG-S technology (20 addresses)	40071353621
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



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

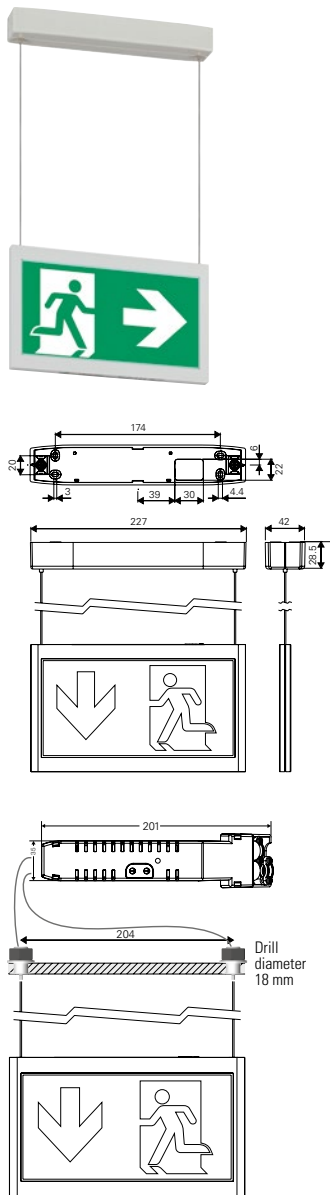
\*\* R = Arrow from mounting wall  
W = Arrow to mounting wall

# GuideLed 10025, 10026 CG-S

Ceiling mounting with rope



GuideLed 10025 CG-S



GuideLed 10026 CG-S

## 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/m<sup>2</sup> in keeping with standard ISO 3864-1 and high uniformity  $L_{\min}/L_{\max} > 0.8$
- Increased safety by use of 3-chip LEDs
- 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 (50,000 hours)

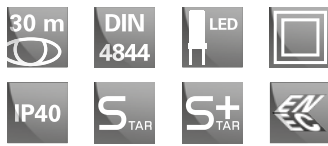
Viewing distance	20 m
Luminous flux $\Phi_E/\Phi_N$ at the end of rated operating time	100 %
Housing material	PC, PMMA
Housing colour	Light grey RAL 7035
Weight	0.40 kg (10025 LED CG-S) 0.52 kg (10026 LED CG-S)
Type of mounting	Suspended installation (max. 1.5 m)
Connection terminal	Clamp terminal 2.5 mm <sup>2</sup>
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 with 3-chip LEDs

## Ordering details - fastening set

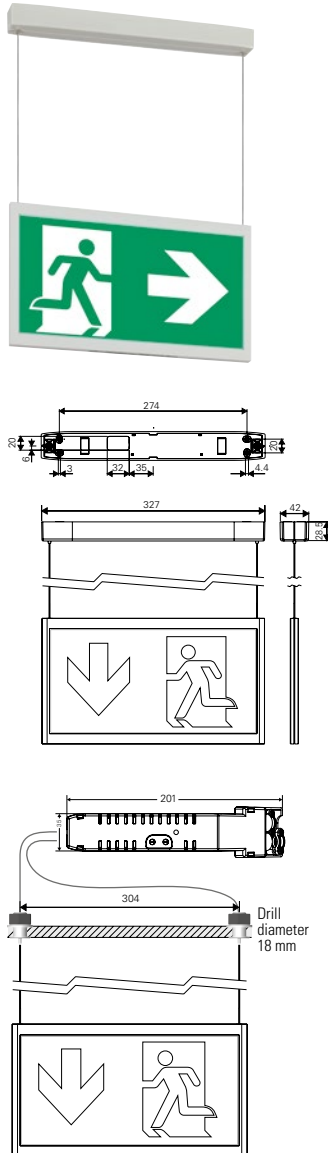
Scope of supply	Order No.
Rope installation set for GuideLed 10025 CG-S with LED supply and CG-S technology (20 addresses) integrated in the canopy	40071353609
Rope installation set for GuideLed 10026/10026 CG-S with ceiling rope holder LED supply and CG-S technology (20 addresses) integrated in a housing 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 (rope installation), ISO 7010, 20 m	40071354510
LED pictogram PU/PU for GuideLed 10025/10026 CG-S (rope installation), ISO 7010, 20 m	40071354511
LED pictogram PL/BL for GuideLed 10025/10026 CG-S (rope installation), ISO 7010, 20 m	40071354512
LED pictogram PR/BL for GuideLed 10025/10026 CG-S (rope installation), ISO 7010, 20 m	40071354513
LED pictogram PU/BL for GuideLed 10025/10026 CG-S (rope installation), ISO 7010, 20 m	40071354514



GuideLed 11025 CG-S



GuideLed 11026 CG-S

## 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/m<sup>2</sup> in keeping with standard ISO 3864-1 and high uniformity  $L_{min}/L_{max} > 0.8$
- Increased safety by use of 3-chip LEDs
- 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, radiating)
- Minimum service requirement due to high service life of the LEDs (50,000 hours)

Viewing distance	30 m
Luminous flux $\Phi_E/\Phi_N$ 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 <sup>2</sup>
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 with 3-chip LEDs

## Ordering details - fastening set

Scope of supply	Order No.
Rope installation set for 11025 CG-S with LED supply and CG-S technology (20 addresses) integrated in the canopy	40071353619
Rope installation set for GuideLed 11026/11026 CG-S with ceiling rope 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 (rope installation), ISO 7010, 30 m	40071354540
LED pictogram PU/PU for GuideLed 11025/11026 CG-S (rope installation), ISO 7010, 30 m	40071354541
LED pictogram PL/BL for GuideLed 11025/11026 CG-S (rope installation), ISO 7010, 30 m	40071354542
LED pictogram PR/BL for GuideLed 11025/11026 CG-S (rope installation), ISO 7010, 30 m	40071354543
LED pictogram PU/BL for GuideLed 11025/11026 CG-S (rope installation), ISO 7010, 30 m	40071354544



## 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 of the radii oriented to the main direction, the surface mounted variant GuideLed SL is inconspicuous with its 30 mm in height.

The refractive optics and reflectors have been integrated in the luminaires unobtrusively in both variants.

Both the recessed and the surface mounted version are available with especially narrow beam optics. They allow mounting heights of up to 28 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 15 m and/or maximum mounting heights up to 9 m can be realised.



**GuideLed SL 13021 CG-S**



**GuideLed SL 13031 CG-S**



**GuideLed SL 13012 CG-S**

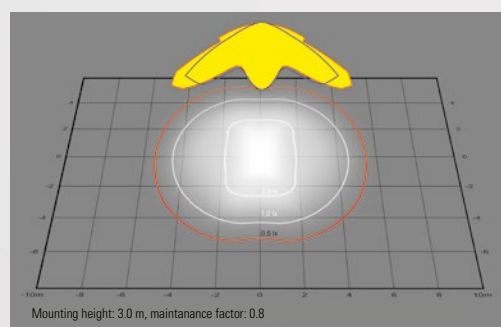


**GuideLed SL 13032 CG-S**

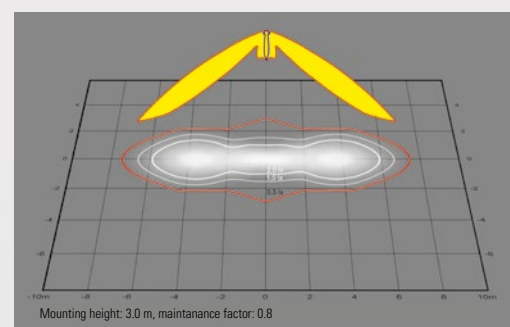


**GuideLed FSL CG-S**

## Light distribution for open area illumination



## Light distribution for escape route illumination

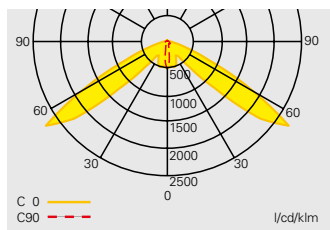


# GuideLed SL 13011, 13021 CG-S

## Recessed mounting

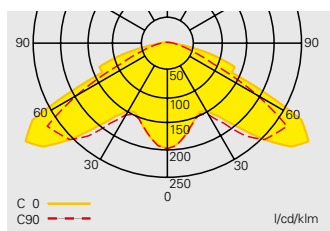


GuideLed SL 13011 CG-S



Light distribution curve  
GuideLed SL 13011 CG-S recessed  
installation with asymmetric optics

GuideLed SL 13021 CG-S



Light distribution curve  
GuideLed SL 13021 CG-S recessed  
installation with symmetric optics

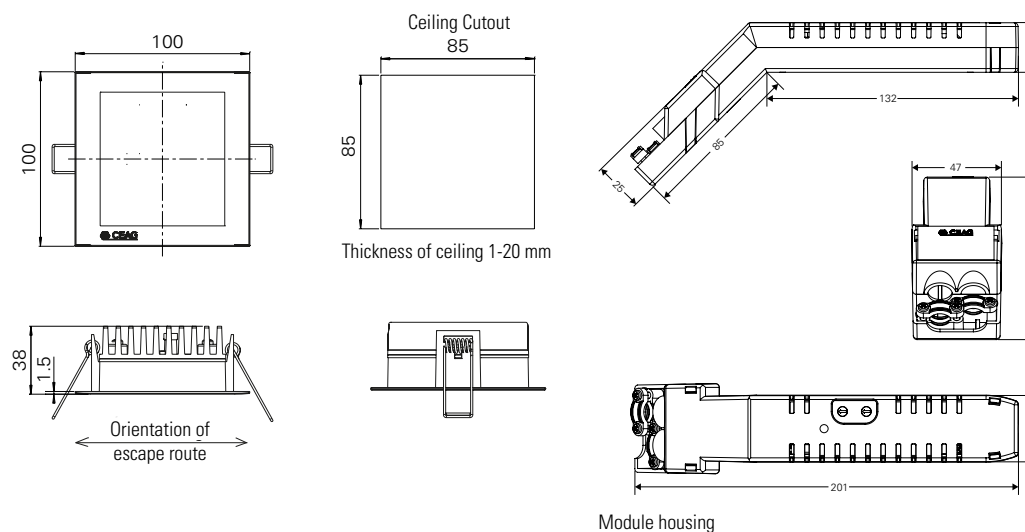
### GuideLed SL 13011, 13021 CG-S

- Safety luminaire in LED technology for recessed mounting
- Low installation depth of only 36 mm
- Almost flush appearance on the ceiling ensured by optics integrated in the luminaire
- 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
- Up to 13 m from luminaire to luminaire with optics for open area illumination
- Minimum service requirement due to high service life of the LEDs (50,000 hours)

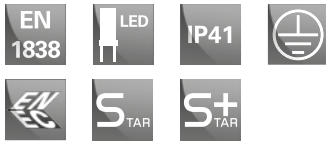
Luminous flux $\Phi_N$	Asymmetric optics 210 lm Symmetric optics 204 lm
Luminous flux $\Phi_E/\Phi_N$ at the end of rated operating time	100%
Housing material	PC, PMMA, aluminium
Housing colour	White RAL 9010
Weight	0.44 kg
Type of mounting	Recessed mounting
Connection terminal	Clamp terminal 2.5 mm <sup>2</sup>
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 1.6 W

### Ordering details

Scope of supply	Order No.
GuideLed SL 13011 CG-S recessed mounting with asymmetric optics for escape route illumination, LED supply and CG-S technology (20 addresses) in housing* with strain relief	40071353570
GuideLed SL 13021 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	40071353571



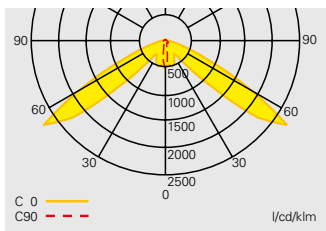
\* Degree of protection of the luminaire: IP41  
Degree of protection of the housing: IP20



## GuideLed SL 13012, 13022 CG-S

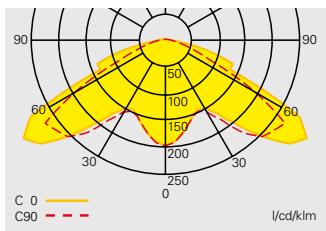
- Safety luminaire in LED technology for surface mounting
- Low profile of only 30 mm
- Unobtrusive appearance ensured by optics integrated in the luminaire
- High spacing by double optics technology and highly efficient HighPower LEDs
- Up to 29 m from luminaire to luminaire with optics for escape route illumination
- Up to 13 m from luminaire to luminaire with optics for open area illumination
- Minimum service requirement due to high service life of the LEDs (50,000 hours)

GuideLed SL 13012 CG-S



Light distribution curve  
GuideLed SL 13012 CG-S surface  
mounting with asymmetric optics

GuideLed SL 13022 CG-S

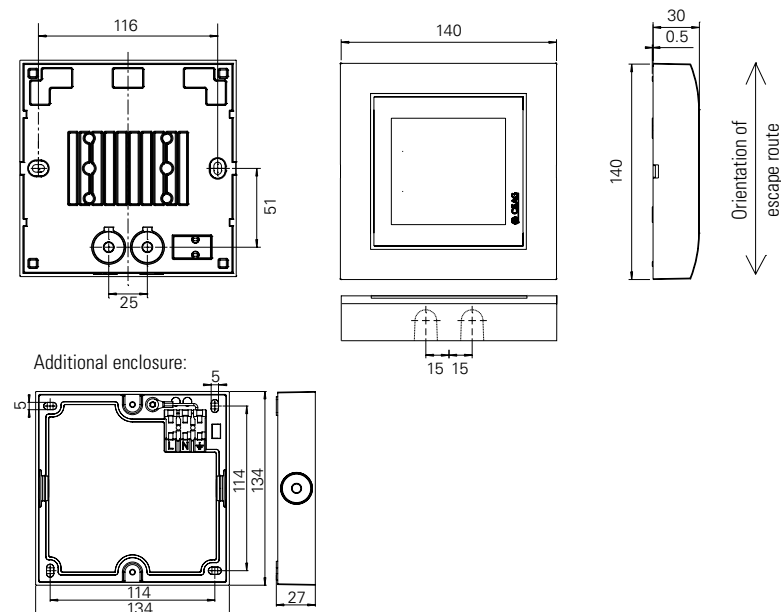


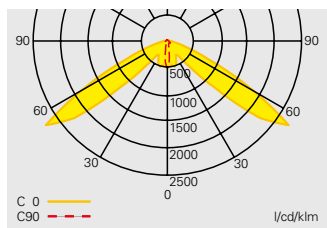
Light distribution curve  
GuideLed SL 13022 CG-S surface  
mounting with symmetric optics

Luminous flux $\Phi_N$	Asymmetric optics 210 lm Symmetric optics 204 lm
Luminous flux $\Phi_E/\Phi_N$ 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 <sup>2</sup>
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 1.6 W

## Ordering details

Scope of supply	Order No.
GuideLed SL 13012 CG-S surface mounting with asymmetric optics for escape route illumination incl. LED supply and CG-S technology (20 addresses)	40071353580
GuideLed SL 13022 CG-S surface mounting with symmetric optics for anti-panic / open area illumination incl. LED supply and CG-S technology (20 addresses)	40071353581
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

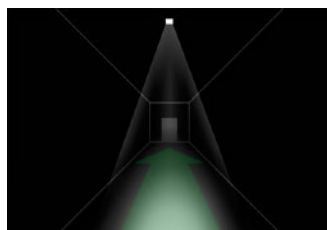




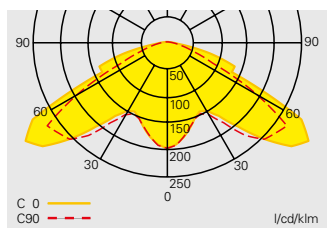
## Planning assistance for GuideLed SL CG-S with asymmetric optics

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

Mounting height [m]	Types of mounting	L1	L2	L3	L4
2.50	Escape route illumination	1.60 (3.00)	5.80 (7.40)	5.90 (6.60)	13.20 (14.80)
3.00		1.40 (3.00)	6.00 (7.90)	6.60 (7.50)	15.00 (16.70)
3.50		1.30 (2.30)	4.50 (8.20)	7.40 (8.30)	16.60 (18.60)
4.00		1.20 (2.00)	3.90 (8.40)	8.10 (9.10)	18.00 (20.40)
4.50		1.20 (1.80)	3.40 (7.40)	8.80 (9.70)	19.40 (22.10)
5.00		1.20 (1.80)	3.20 (6.30)	9.40 (10.50)	20.90 (23.60)
5.50		1.20 (1.80)	3.00 (5.70)	10.00 (11.20)	22.40 (25.10)
6.00		1.20 (1.70)	3.10 (5.20)	10.60 (11.90)	23.80 (26.50)
6.50		1.10 (1.70)	3.10 (4.70)	3.60 (12.60)	25.10 (27.80)
7.00		1.10 (1.80)	3.10 (4.60)	3.50 (13.20)	26.40 (29.40)
7.50		1.10 (1.70)	3.00 (4.40)	3.40 (13.80)	27.60 (30.90)
8.00		1.00 (1.70)	2.90 (4.30)	3.30 (14.40)	28.70 (32.30)
8.50		1.00 (1.60)	2.90 (4.30)	3.20 (15.50)	29.80 (33.70)



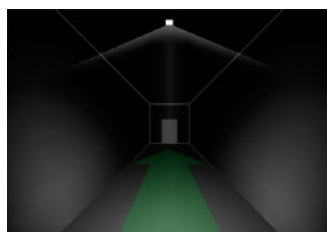
Escape route illumination with asymmetric optics



## Planning assistance for GuideLed SL CG-S with symmetric optics

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

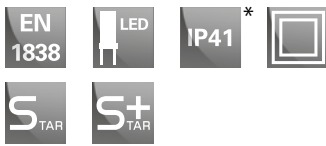
Mounting height [m]	Types of mounting	L1	L2	L3	L4
2.50	Escape route illumination	3.80 (4.40)	8.80 (10.00)	4.20 (4.90)	9.80 (11.30)
3.00		4.10 (4.90)	9.90 (11.30)	4.60 (5.50)	10.90 (12.50)
3.50		4.10 (5.40)	10.70 (12.30)	4.70 (5.90)	11.80 (13.80)
4.00		3.70 (5.80)	11.50 (13.40)	4.30 (6.30)	12.50 (14.90)
4.50		2.00 (5.80)	11.50 (14.30)	1.90 (6.60)	13.10 (15.90)
5.00		1.40 (5.70)	11.30 (15.20)	1.50 (6.60)	13.10 (16.80)
5.50		0.90 (5.40)	10.70 (16.00)	0.90 (6.30)	12.50 (17.50)
6.00		1.30 (4.20)	6.80 (16.30)	1.90 (3.20)	6.20 (18.10)
6.50		1.40 (2.60)	5.00 (16.30)	1.60 (2.60)	5.00 (18.60)
7.00		0.70 (2.10)	3.90 (16.10)	0.40 (2.10)	4.10 (18.50)
2.50	Room illumination	3.50 (4.40)	8.20 (9.60)	3.40 (4.50)	8.20 (9.00)
3.00		3.40 (4.40)	9.20 (11.00)	4.50 (4.50)	9.00 (10.00)
3.50		3.40 (4.40)	10.00 (11.60)	4.50 (5.50)	9.80 (11.40)
4.00		3.40 (4.40)	10.60 (12.40)	4.50 (5.50)	10.60 (12.60)
4.50		1.40 (5.40)	11.40 (13.40)	2.50 (5.50)	11.20 (13.40)
5.00		1.50 (5.40)	11.40 (14.20)	1.40 (5.50)	12.40 (14.20)
5.50		1.00 (5.40)	11.00 (15.00)	1.00 (5.50)	13.60 (14.80)
6.00		0.70 (2.40)	10.40 (15.40)	0.70 (3.50)	13.40 (15.60)
6.50		0.70 (2.40)	10.40 (16.20)	0.70 (2.50)	11.40 (16.20)
7.00		0.70 (1.90)	9.40 (16.60)	0.70 (1.90)	10.60 (16.80)



Escape route illumination with symmetric optics



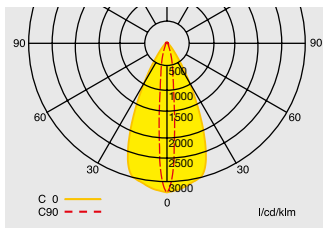
Open area illumination with symmetric optics



## GuideLed SL 13031, 13041 CG-S

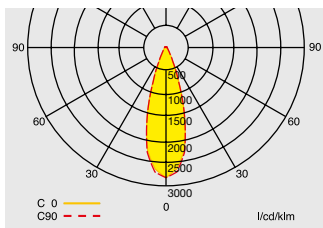
- Safety luminaire in LED technology for recessed mounting
- Low installation depth of only 38 mm
- Almost flush appearance on the ceiling ensured by optics integrated in the luminaire
- Suitable for mounting heights up to 28 m by narrow beam optics and exceptionally efficient HighPower LEDs
- Spacing up to 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 (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

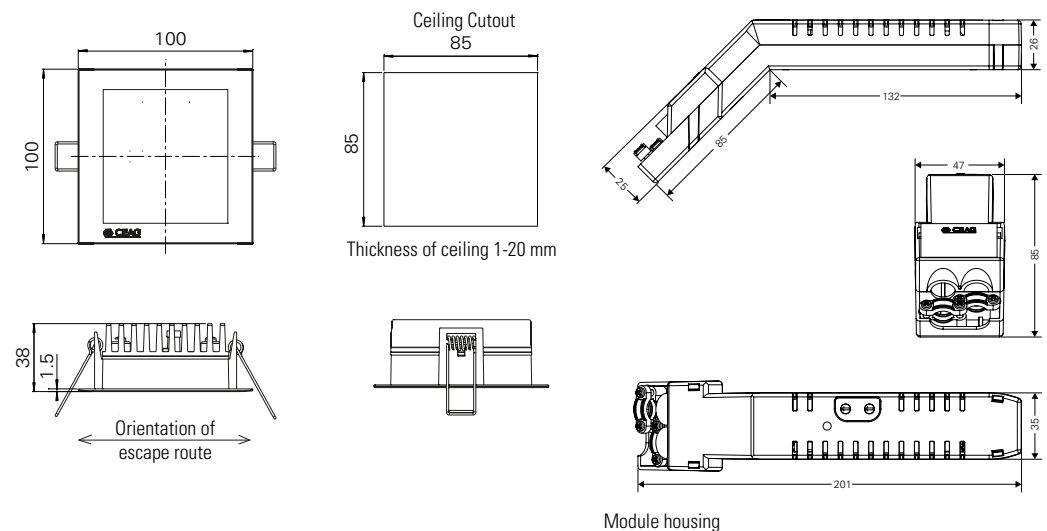
Luminous flux $\Phi_N$	335 lm
Luminous flux $\Phi_E/\Phi_N$ at the end of rated operating time	100%
Housing material	PC, aluminium
Housing colour	White RAL 9010
Weight	0.44 kg
Type of mounting	Recessed mounting
Connection terminal	Clamp terminal 2.5 mm <sup>2</sup>
Voltage ranges	220 - 240 V AC, 50/60 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



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

# GuideLed SL 13032, 13042 CG-S

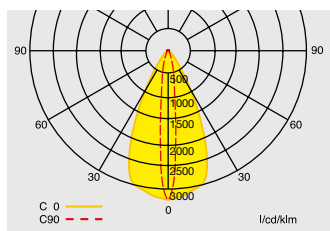
Surface mounting with narrow beam optics



## 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 28 m by narrow beam optics and exceptionally efficient HighPower 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 (50,000 hours)

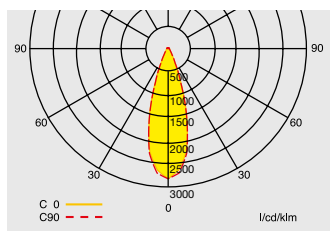
GuideLed SL 13032 CG-S



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

Luminous flux $\Phi_N$	335 lm
Luminous flux $\Phi_E/\Phi_N$ 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 <sup>2</sup>
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

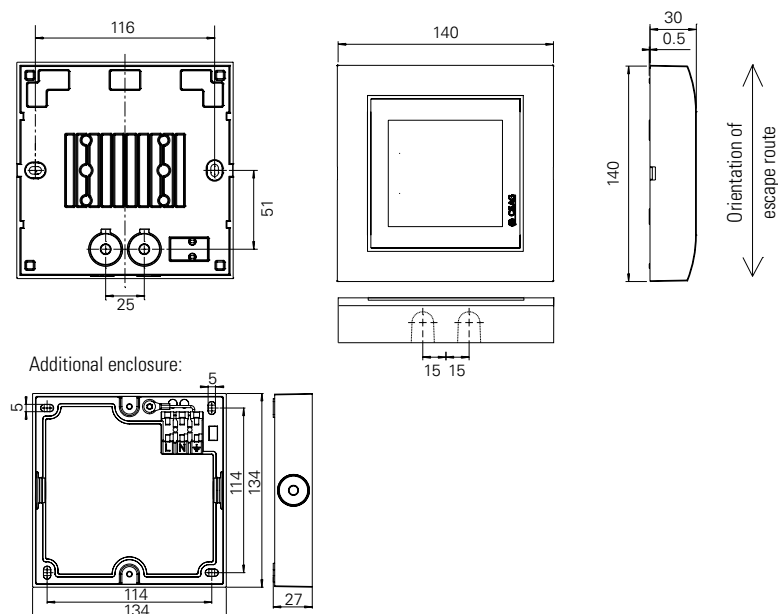
GuideLed SL 13042 CG-S

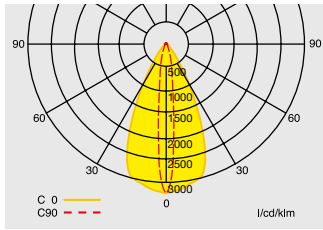


Light distribution curve  
GuideLed SL 13042 CG-S surface  
mounting with symmetric optics

## 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

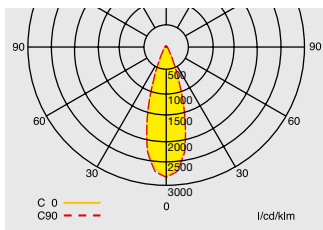




## Planning assistance for GuideLed SL CG-S with asymmetric optics

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

Mounting height [m]	Types of mounting	L1	L2	L3	L4
8	Escape route illumination	2.6 (3.2)	6.7 (9.1)	5.7 (6.5)	13.2 (15.0)
10		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)



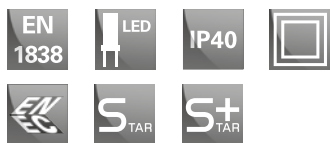
## Planning assistance for GuideLed SL CG-S with symmetric optics

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

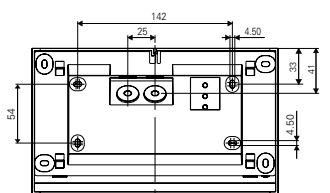
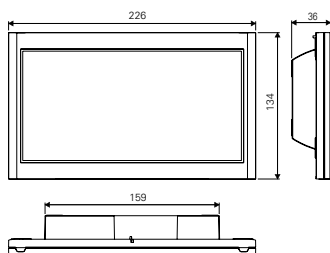
Mounting height [m]	Types of mounting	L1	L2	L3	L4
8	Escape route illumination	3.8 (4.8)	9.5 (11.5)	3.8 (4.6)	9.2 (11.1)
10		4.2 (5.2)	10.4 (12.6)	4.3 (5.2)	10.3 (12.2)
12		4.6 (5.6)	11.1 (13.7)	4.7 (5.7)	11.3 (13.4)
14		4.9 (6.0)	11.9 (14.7)	5.0 (6.1)	12.2 (14.4)
16		5.1 (6.4)	12.7 (15.3)	5.2 (6.5)	12.9 (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	Room illumination	3.5 (4.5)	7.8 (9.6)	3.4 (3.4)	7.8 (9.8)
10		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)

# GuideLed FSL 10011, 10012, 10013 CG-S

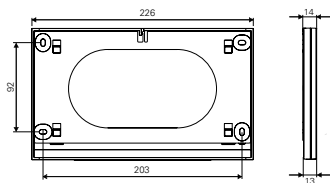
Surface mounting or semi-recessed mounting



GuideLed FSL CG-S



FSL 10011 CG-S



FSL 10012/10013 CG-S

## GuideLed FSL 10011, 10012, 10013 CG-S

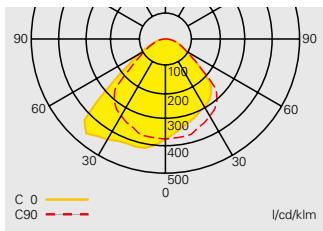
- Safety luminaire in LED technology for surface mounting or semi-recessed mounting
- Low height of only 36 mm or 14 mm
- Anti-glare illumination ensured by precise micro-prism optics
- Increased safety by use of 3-chip LEDs
- Reduced battery costs on account of especially low power consumption
- Low 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 (50,000 hours)
- Installation of safety luminaire without the use of tools at the mounting set

Luminous flux $\Phi_N$	125 lm
Luminous flux $\Phi_E/\Phi_N$ 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 FSL CG-S)
Type of mounting	Ceiling installation / semi-recessed installation
Connection terminal	Clamp terminal 2.5 mm <sup>2</sup>
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 with 3-chip LEDs

## 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

\* Installation of the LED supply in a not included device, for further information about the LED supply please visit [www.ceag.de](http://www.ceag.de).



Light distribution curve  
GuideLed FSL CG-S

## Planning assistance for GuideLed FSL

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

Mounting height [m]	Types of mounting	L1	L2	L3	L4
2.50	Escape route illumination	2.70 (3.20)	6.40 (7.60)	2.80 (3.40)	6.60 (8.00)
3.00		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)
4.50		2.60 (4.20)	8.30 (10.20)	2.90 (4.30)	9.10 (10.80)
5.00		2.30 (4.20)	8.30 (10.80)	2.40 (4.70)	9.30 (11.40)
2.50	Room illumination	2.30 (3.30)	5.40 (6.40)	2.40 (3.40)	5.40 (6.60)
3.00		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)
4.50		2.30 (3.30)	7.20 (8.80)	2.40 (4.40)	7.20 (8.60)
5.00		1.30 (3.30)	7.80 (9.20)	3.40 (4.40)	7.60 (9.20)



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.

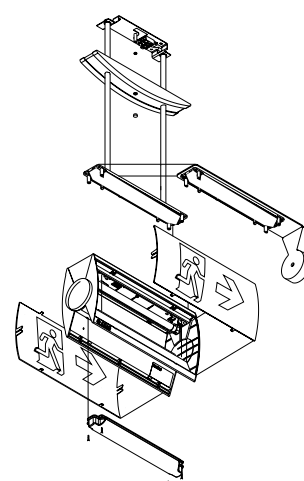
Mounting of the pictogram covers is also quick and easy thanks to snap mounting.

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

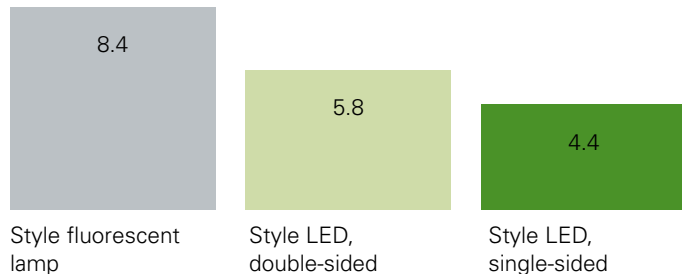




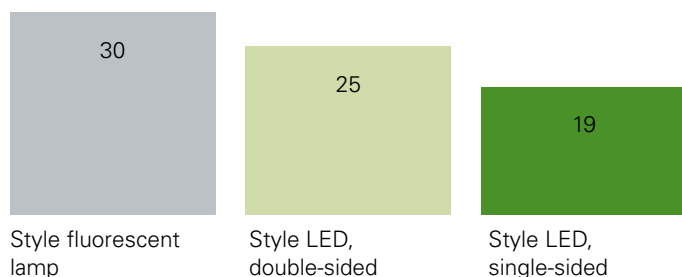
# Up to 48% energy savings with efficient LED technology

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 $P_{\text{sys}}$ 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 DIN EN ISO 7010 international standard, so that display in accordance with DIN 4844-2 is no longer valid.



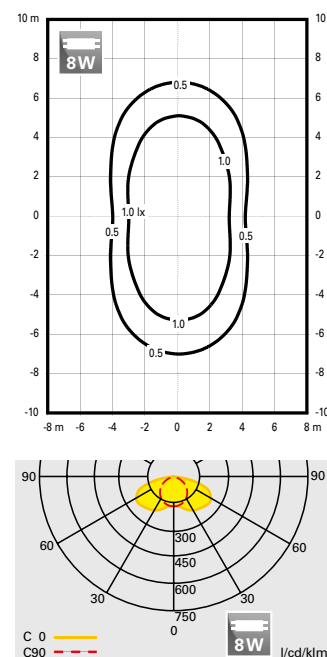
DIN 4844-2



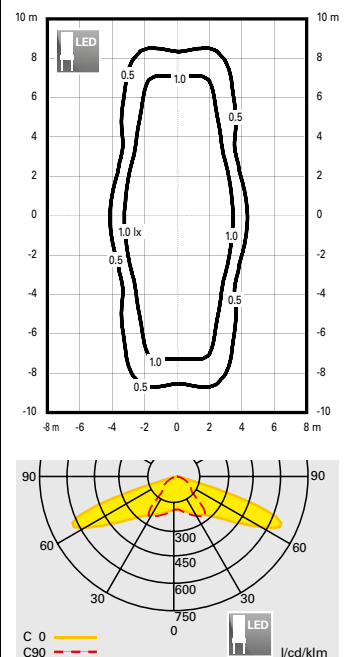
DIN EN ISO 7010

**22011 CG-S**  
(transparent cover)

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 LED Upgrade Kit 1 CG-S



Style LED Upgrade Kit 2 CG-S



Style LED Upgrade Kit SL CG-S



## Style Upgrade Kits

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

Luminous flux $\Phi_E/\Phi_N$ 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 <sup>2</sup>
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, optimized for LED, incl. replacement gasket for quick mounting set to refit existing Style IP54 luminaires.	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/m<sup>2</sup> (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 (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

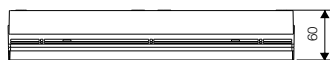
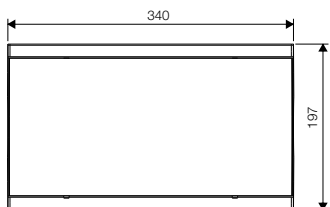
22011 LED SL CG-S with transparent cover



22011 LED CG-S with cover PR



Dimensions in mm



Viewing distance	32 m
Luminous flux $\Phi_N$ 22011 LED SL CG-S	320 lm
Luminous flux $\Phi_E/\Phi_N$ 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 <sup>2</sup>
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

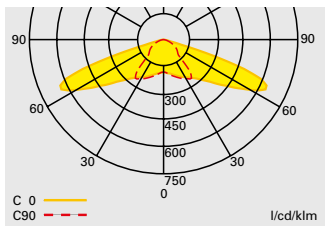
## Ordering details

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.

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

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

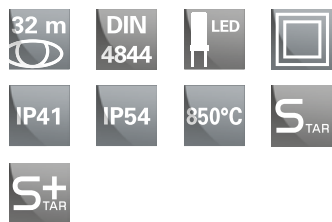


Light distribution curve 22011 LED CG-S  
with transparent cover

1

# Style 22021 LED CG-S

Escape sign luminaire



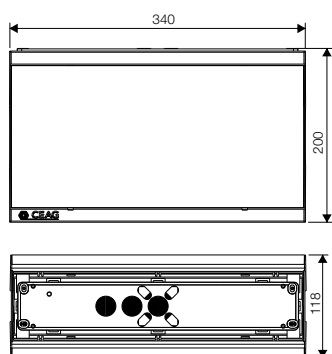
## Style 22021 LED CG-S

- 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/m<sup>2</sup> (white area) and good uniformity, in accordance with standards (silk-screened pictograms)
- Minimum service requirement due to high service life of the LEDs (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

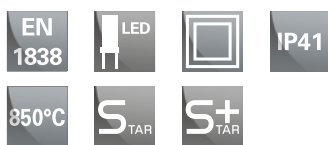


Viewing distance	32 m
Luminous flux $\Phi_E/\Phi_N$ at the end of rated operating time	100 %
Housing material	Polycarbonate
Housing colour	Light grey RAL 7035
Weight	1.14 kg
Type of mounting	Wall or ceiling mounting
Connection terminals	2 x 3 x 2.5 mm <sup>2</sup>
Connection voltage	220 - 240 V AC, 50/60 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

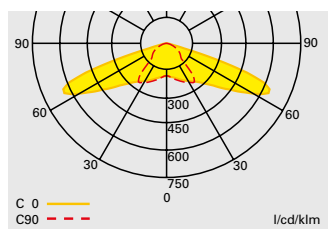
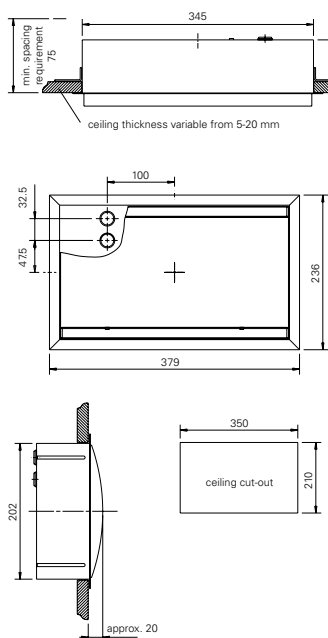
\*) IP54 for electronic and lamp. For increased tightness requirements indoors or in canopied outdoor areas.



23011 LED SL CG-S with transparent cover



Dimensions in mm



Light distribution curve 23011 LED CG-S

## Style 23011 LED CG-S

- Safety luminaire for recessed ceiling mounting
- 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 (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

Luminous flux $\Phi_N$	320 lm
Luminous flux $\Phi_E/\Phi_N$ 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 <sup>2</sup>
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

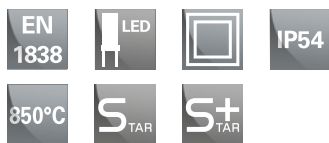
## Planning help for 23011 LED SL CG-S for E = 1.0 lx (0.5 lx) with transparent cover

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

Mounting height [m]	Types of mounting	L1	L2	L3	L4
2.5	Ceiling mounting	3.1 (3.9)	7.9 ( 9.6)	6.5 ( 7.4)	14.7 (16.0)
3.0	Escape route centre	3.2 (4.2)	8.5 (10.5)	7.2 ( 8.4)	16.7 (18.4)
4.0		3.6 (4.5)	9.0 (11.7)	7.6 ( 9.9)	19.8 (22.7)
5.0		4.2 (4.8)	9.6 (12.5)	6.4 (10.7)	21.3 (26.1)
6.0		4.4 (5.4)	10.8 (12.8)	4.3 (10.5)	20.9 (28.6)
7.0		0.9 (6.0)	11.9 (13.4)	0.9 ( 9.1)	18.1 (30.0)
2.0	Wall mounting	1.6 (2.2)	4.4 (5.7)	1.5 (2.2)	4.4 (5.7)
2.5		1.3 (1.9)	3.8 (5.2)	- (1.8)	3.7 (5.2)
3.0		- (1.6)	3.2 (4.6)	- ( - )	- (4.6)
2.5	Ceiling mounting	2.4 (2.9)	6.6 ( 7.4)	7.5 ( 7.6)	13.6 (14.2)
3.0	Room illumination	2.4 (3.6)	7.6 ( 8.4)	8.5 ( 8.0)	15.4 (16.6)
4.0		2.4 (3.4)	8.8 (10.2)	6.5 (10.5)	19.6 (21.2)
5.0		3.4 (3.4)	9.4 (11.6)	4.5 ( 8.5)	21.6 (25.6)
6.0		3.4 (3.4)	9.2 (12.8)	4.5 ( 8.5)	22.2 (28.4)
7.0		0.7 (4.4)	9.4 (13.2)	0.7 ( 6.5)	19.2 (30.4)

# Style 21011 LED CG-S

Safety luminaire



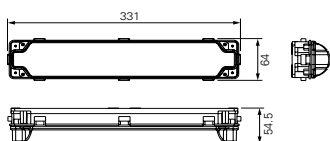
Style 21011 LED SL R CG-S



Style 21011 LED SL O CG-S



Dimensions in mm



## Style 21011 LED CG-S

- Compact safety luminaire from high quality, UV-resistant, halogen-free plastic with LED-technology
- Modular constructed luminaire series permits combination with various fixing modules
- Available in two different optical variants:
  - Asymmetric light distribution for escape route illumination up to 9 m mounting height
  - Symmetrical light distribution for mounting heights up to 10 m
- Minimum service requirement due to high service life of the LEDs (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

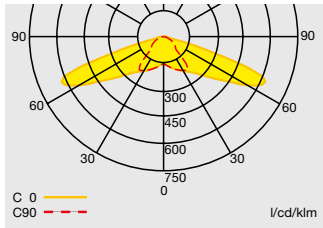
Luminous flux $\Phi_N$	21011 SL R: 305 lm 21011 SL O: 410 lm
Luminous flux $\Phi_E/\Phi_N$ at the end of rated operating time	100 %
Housing material	Polycarbonate
Housing colour	Light grey RAL 7035
Weight	0.39 kg
Type of mounting	Wall or ceiling mounting
Connection terminals	2 x 3 x 2.5 mm <sup>2</sup>
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 IP41, including LED-supply with CG-S technology and LED-circuit board 3 x 1 W, with asymmetric light distribution and quick mounting set	40071350155
Style 21011 LED SL O CG-S	Luminaire housing IP41, including LED-supply with CG-S technology and LED-circuit board 3 x 1 W, with symmetric light distribution and quick mounting set	40071350156

## 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

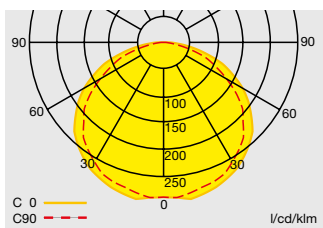


Light distribution curve 21011 LED SL R CG-S

Mounting height [m]	Types of mounting	L1	L2	L3	L4
2.5	Ceiling mounting	2.9 (3.7)	7.5 (9.2)	6.6 (7.4)	14.7 (16.2)
3.0	Escape route centre	3.0 (4.0)	8.0 (9.9)	7.2 (8.4)	16.7 (18.4)
3.5		3.2 (4.1)	8.2 (10.5)	7.4 (9.2)	18.4 (20.6)
4.0		3.6 (4.2)	8.4 (11.0)	7.4 (9.9)	19.8 (22.7)
4.5		3.8 (4.3)	8.6 (11.4)	6.7 (10.3)	20.6 (24.6)
5.0		4.0 (4.6)	9.3 (11.6)	5.8 (10.5)	21.0 (26.1)
5.5		4.0 (5.0)	9.9 (11.8)	4.6 (10.5)	20.9 (27.6)
6.0		3.5 (5.3)	10.5 (11.9)	3.6 (10.1)	20.2 (28.6)
6.5		- (5.6)	11.1 (12.4)	- (9.2)	18.4 (29.3)
2.0	Wall mounting	1.9 (2.5)	5.0 (6.5)	1.8 (2.8)	5.6 (7.1)
2.5		1.7 (2.4)	4.8 (6.4)	1.2 (2.3)	4.6 (6.7)
3.0		1.6 (2.3)	4.6 (6.1)	- (1.8)	3.7 (6.1)
2.5	Ceiling mounting	2.6 (2.8)	6.6 (7.2)	6.9 (7.6)	13.4 (14.6)
3.0	Room illumination	2.4 (3.6)	7.4 (8.2)	8.5 (8.1)	15.8 (16.8)
3.5		2.4 (3.5)	8.2 (9.2)	6.5 (9.4)	17.8 (19.0)
4.0		2.4 (3.4)	8.2 (10.2)	6.5 (10.5)	19.8 (21.0)
4.5		3.4 (3.4)	8.6 (11.0)	4.5 (8.5)	20.8 (23.2)
5.0		3.4 (3.4)	9.2 (11.6)	4.5 (8.5)	21.4 (25.6)
5.5		3.4 (3.7)	9.4 (11.8)	4.5 (7.0)	21.4 (27.6)
6.0		3.4 (4.4)	9.0 (11.8)	3.5 (6.5)	21.4 (28.8)
6.5		0.7 (4.4)	8.2 (12.2)	0.7 (6.5)	21.8 (29.6)
7.0		0.7 (4.4)	9.4 (13.0)	0.7 (6.5)	18.2 (30.2)
7.5		0.7 (4.6)	9.8 (13.4)	0.7 (5.3)	16.6 (30.4)

## 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 (5.2)	10.3 (12.5)	4.5 (5.6)	11.2 (13.7)
3.0	Escape route centre	4.5 (5.6)	11.1 (13.6)	4.8 (6.0)	12.0 (14.8)
3.5		4.7 (5.9)	11.8 (14.5)	5.0 (6.4)	12.7 (15.7)
4.0		4.9 (6.2)	12.4 (15.3)	5.1 (6.7)	13.3 (16.6)
5.0		5.0 (6.7)	13.4 (16.8)	5.3 (7.1)	14.1 (18.0)
6.0		4.9 (7.0)	13.9 (17.9)	5.2 (7.3)	14.6 (19.1)
7.0		4.5 (7.0)	14.0 (18.8)	4.8 (7.4)	14.8 (19.9)
8.0		3.9 (7.0)	14.0 (19.5)	4.1 (7.4)	14.7 (20.4)
9.0		2.7 (6.8)	13.6 (19.8)	3.1 (7.1)	14.2 (20.8)
2.0	Wall mounting	3.0 (3.8)	7.6 (9.2)	3.1 (4.0)	8.0 (9.8)
2.5		2.9 (3.8)	7.7 (9.5)	3.0 (4.0)	8.0 (10.0)
3.0		2.7 (3.7)	7.5 (9.7)	2.7 (3.8)	7.7 (10.1)
2.5	Ceiling mounting	3.4 (4.4)	8.4 (11.2)	4.5 (4.5)	10.6 (11.6)
3.0	Room illumination	3.4 (4.4)	9.8 (12.2)	4.5 (5.5)	10.8 (12.6)
3.5		3.4 (5.0)	11.0 (13.2)	5.5 (4.9)	11.0 (13.4)
4.0		4.4 (5.4)	11.6 (13.4)	4.5 (5.5)	11.6 (15.0)
5.0		4.4 (5.4)	12.8 (15.6)	4.5 (6.5)	12.6 (15.6)
6.0		4.4 (5.4)	13.4 (16.8)	4.5 (6.5)	13.6 (17.0)
7.0		3.4 (5.4)	14.2 (18.0)	4.5 (6.5)	14.0 (17.8)
8.0		3.4 (5.4)	14.4 (18.8)	3.5 (6.5)	14.6 (18.8)
9.0		2.4 (5.4)	14.4 (19.4)	3.5 (6.5)	15.0 (19.6)

# Style 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/m<sup>2</sup> (white area) and good uniformity, in accordance with standards
- Minimum service requirement due to high service life of the LEDs (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




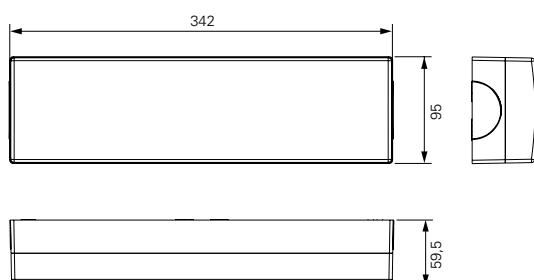
51011 LED CG-S with pictogram foil PR



Luminous flux $\Phi_N$	390 lm (without pictogram foil)
Viewing distance	17 m
Luminous flux $\Phi_E/\Phi_N$ 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 <sup>2</sup>
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

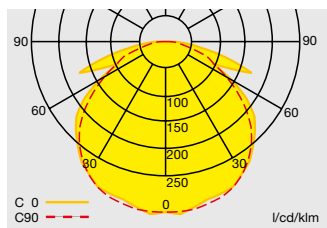
Type	Scope of supply	Order No.
Style 51011 LED CG-S	Luminaire housing, including LED-supply with CG-S technology and LED-circuit board 4 x 1 W, with opaque cap and pictogram set (arrow left, right, down), without quick mounting set 	40071350171
Quick-mounting set	With terminals and optional distance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

**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

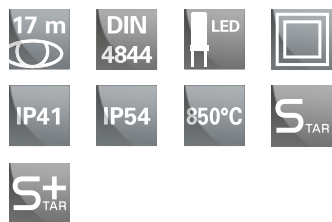


Light distribution curve 51011 LED CG-S  
with transparent cover

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	3.4 (4.4)	7.8 (10.6)	3.5 (4.5)	10.2 (13.8)
3.0	Room illumination	3.4 (4.4)	9.4 (10.2)	4.5 (4.5)	9.2 (15.6)
3.5		3.4 (4.4)	10.0 (11.2)	4.5 (5.5)	10.0 (14.2)
4.0		3.4 (4.4)	10.8 (11.0)	4.5 (5.5)	10.6 (15.4)
4.5		4.0 (5.4)	11.4 (13.6)	4.0 (5.5)	11.2 (13.6)
5.0		3.4 (5.4)	11.8 (14.4)	5.5 (5.5)	11.8 (14.2)
5.5		3.4 (5.4)	12.2 (15.0)	5.5 (5.5)	12.2 (14.8)
6.0		4.0 (5.4)	12.6 (15.4)	3.9 (5.5)	12.6 (15.6)
6.5		3.4 (5.5)	12.8 (16.2)	4.5 (5.4)	13.2 (16.0)
7.0		3.4 (5.5)	13.2 (16.6)	4.5 (5.4)	13.2 (16.6)
7.5		3.4 (5.5)	13.4 (17.0)	4.5 (5.4)	13.6 (17.0)
8.0		3.4 (5.5)	13.8 (17.6)	3.5 (5.4)	13.6 (17.4)
8.5		2.7 (5.4)	13.8 (17.8)	3.3 (5.5)	13.8 (18.0)
9.0		2.4 (5.4)	14.0 (18.2)	3.5 (5.5)	14.0 (18.2)
9.5		1.6 (5.4)	14.0 (18.6)	2.2 (5.5)	14.0 (18.4)
10.0		0.7 (5.4)	14.2 (18.8)	0.7 (5.5)	14.0 (18.8)

# 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/m<sup>2</sup> (white area) and good uniformity, in accordance with standards
- Minimum service requirement due to high service life of the LEDs (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

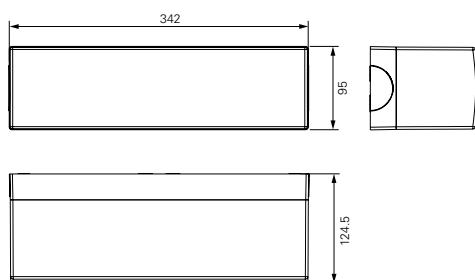
51021 LED CG-S with pictogram foil PR



Viewing distance	17 m
Luminous flux $\Phi_E/\Phi_N$ 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 <sup>2</sup>
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

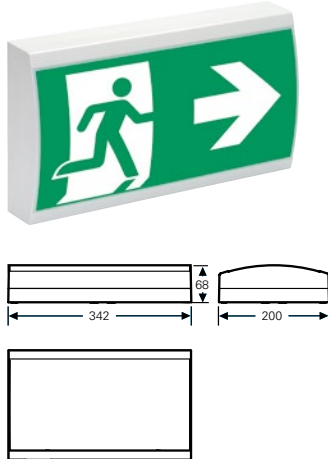


Dimensions in mm

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



29011 LED with cover PR



## 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 (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	32 m
Luminous flux $\Phi_E/\Phi_N$ 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 <sup>2</sup>
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 AP	40071348370

# Style Variant 29021 LED CG-S

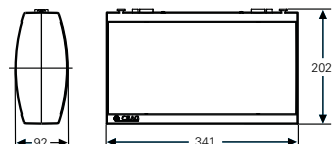
Escape sign luminaire



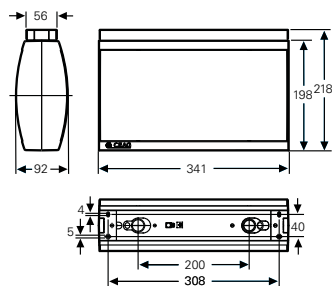
## Style Variant 29021 LED CG-S

- 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 (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

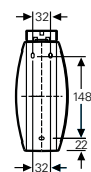
29021 LED with cover PR



29021



29021 with ceiling mounting



29021 with wall bracket

Viewing distance	32 m
Luminous flux $\Phi_E/\Phi_N$ 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 <sup>2</sup>
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

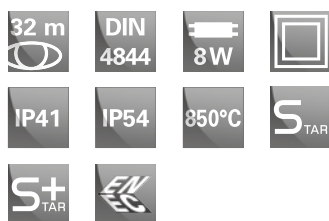
## Ordering details

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

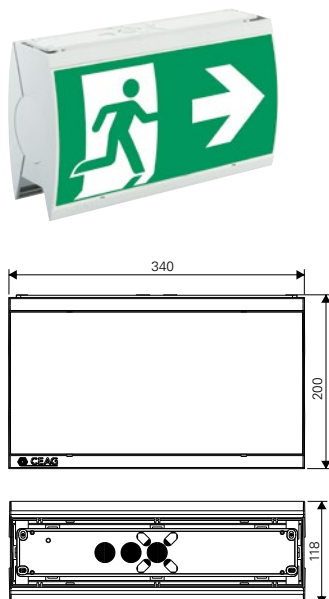
## Accessories

Type	Scope of supply	Order No.
Ceiling mounting		40071350432
Suspension set 0.5 m	with canopy, curved	40071350394
Chain fastening <sup>1)</sup>		40071351158
Wall bracket		40071350418

<sup>1)</sup> 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 $\Phi_e/\Phi_N$ 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 <sup>2</sup>
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

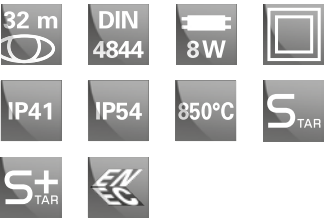
### Accessories

Optionally available silkscreened pictograms: see page 1.69

For accessories see page 1.68

# Style 22011 CG-S

Safety luminaire and escape sign luminaire



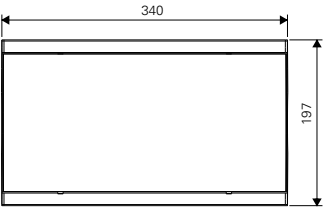
## Style 22011 CG-S

- 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



Viewing distance	32 m
Luminous flux $\Phi_E/\Phi_N$ 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 <sup>2</sup>
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	8 W/T16, 450 lm

## Ordering details

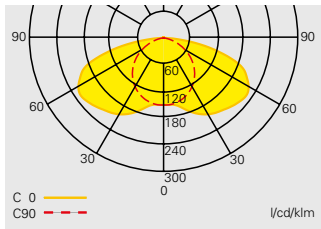
Type	Scope of supply	Order No.
22011 CG-S set acc. to ISO 7010	Luminaire housing with quick-mounting set and cover, with CEWA GUARD monitoring and 20-digit address switch incl. 3 pictogram foils PL, PR and PU 	40071354550
22011 CG-S IP54 set acc. to ISO 7010	Luminaire housing with quick-mounting set, 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 1.68

### 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

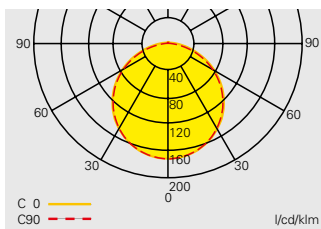


Light distribution curve 22011 CG-S with transparent cover

Mounting height [m]	Types of mounting	L1	L2	L3	L4
2.5	Ceiling mounting	3.0 (3.7)	7.4 ( 9.0)	4.6 (5.9)	11.8 (14.4)
3.0	Escape route centre	3.1 (4.0)	8.0 ( 9.8)	4.9 (6.3)	12.6 (15.6)
4.0		3.2 (4.4)	8.6 (11.2)	5.0 (6.8)	13.6 (17.4)
5.0		2.9 (4.5)	8.8 (12.0)	4.7 (7.0)	14.0 (18.6)
6.0		2.2 (4.4)	8.6 (12.4)	4.0 (6.9)	13.8 (19.4)
7.0		0.8 (4.0)	7.8 (12.6)	0.9 (6.6)	12.8 (19.8)
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)
3.0	Ceiling mounting	2.4 (3.4)	8.0 ( 9.8)	5.5 (6.5)	12.0 (14.8)
4.0	Room illumination	2.4 (4.4)	8.6 (11.0)	5.5 (5.5)	13.8 (17.0)
5.0		2.4 (4.4)	9.2 (12.2)	4.5 (5.5)	14.6 (18.2)
6.0		1.8 (4.4)	9.2 (12.8)	3.6 (5.5)	15.2 (19.4)
7.0		0.7 (3.7)	8.8 (12.8)	0.7 (5.2)	15.2 (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

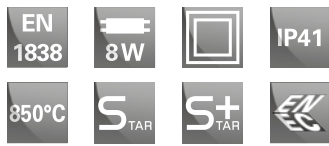


Light distribution curve 22011 CG-S with opaque cover

Mounting height [m]	Types of mounting	L1	L2	L3	L4
2.5	Ceiling mounting	3.1 (3.9)	7.8 ( 9.6)	3.1 (4.0)	7.8 ( 9.8)
3.0	Escape route centre	3.2 (4.2)	8.4 (10.4)	3.3 (4.2)	8.4 (10.6)
4.0		3.3 (4.5)	9.0 (11.6)	3.3 (4.6)	9.0 (11.8)
5.0		3.0 (4.6)	9.2 (12.4)	3.0 (4.7)	9.2 (12.6)
6.0		2.4 (4.5)	9.0 (12.8)	2.4 (4.6)	9.0 (13.0)
7.0		1.1 (4.2)	8.2 (13.0)	1.2 (4.3)	8.2 (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)
3.0	Ceiling mounting	2.4 (3.4)	7.2 ( 9.0)	3.5 (3.5)	7.4 ( 8.8)
4.0	Room illumination	2.4 (3.4)	8.2 (10.2)	3.5 (4.5)	8.0 (10.2)
5.0		2.4 (3.4)	8.8 (11.2)	3.5 (4.5)	8.6 (11.0)
6.0		2.0 (3.4)	9.0 (11.8)	2.0 (4.5)	9.0 (11.8)
7.0		0.7 (3.4)	9.2 (12.4)	0.7 (3.5)	9.0 (12.2)

# Style 23011 CG-S

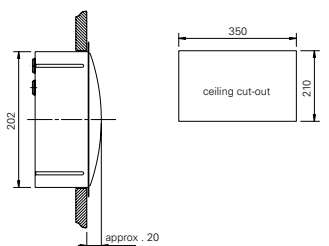
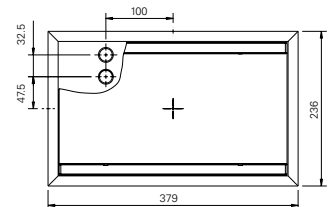
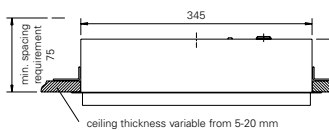
Safety luminaire for recessed ceiling or wall mounting



## 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



Luminous flux $\Phi_E/\Phi_N$ 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 <sup>2</sup>
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

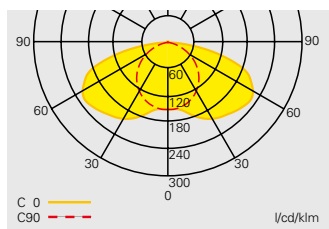
For further covers see page 1.69

## Zubehör

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

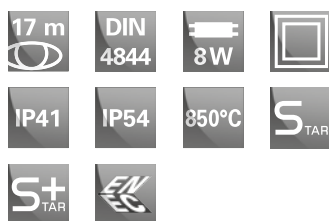
## Planning help for 23011 CG-S for E = 1.0 lx (0.5 lx) with transparent cover

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	L1	L2	L3	L4
2.5	Ceiling mounting	3.0 (3.7)	7.4 ( 9.0)	4.6 (5.9)	11.8 (14.4)
3.0	Escape route centre	3.1 (4.0)	8.0 ( 9.8)	4.9 (6.3)	12.6 (15.6)
4.0		3.2 (4.4)	8.6 (11.2)	5.0 (6.8)	13.6 (17.4)
5.0		2.9 (4.5)	8.8 (12.0)	4.7 (7.0)	14.0 (18.6)
6.0		2.2 (4.4)	8.6 (12.4)	4.0 (6.9)	13.8 (19.4)
7.0		0.8 (4.0)	7.8 (12.6)	0.9 (6.6)	12.8 (19.8)
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)
3.0	Ceiling mounting	2.4 (3.4)	8.0 ( 9.8)	5.5 (6.5)	12.0 (14.8)
4.0	Open area illumination	2.4 (4.4)	8.6 (11.0)	5.5 (5.5)	13.8 (17.0)
5.0		2.4 (4.4)	9.2 (12.2)	4.5 (5.5)	14.6 (18.2)
6.0		1.8 (4.4)	9.2 (12.8)	3.6 (5.5)	15.2 (19.4)
7.0		0.7 (3.7)	8.8 (12.8)	0.7 (5.2)	15.2 (21.0)



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

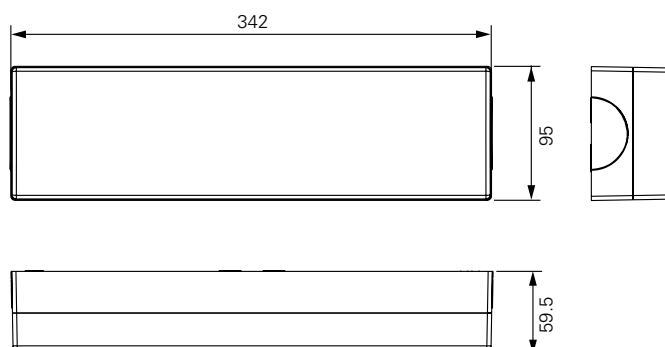
Viewing distance	17 m
Luminous flux $\Phi_E/\Phi_N$ at the end of rated operating time	75 %
Housing material	Polycarbonate (850 °C glow wire resistant)
Weight incl. cover	0.6 kg
Housing colour	Grey
Type of mounting	Ceiling mounting
Connection terminals	Loop terminals 3 x 2.5 mm <sup>2</sup>
Connection 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.
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

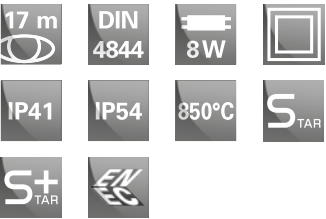
### Accessories

For accessories see page 1.68



# 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 $\Phi_E/\Phi_N$ 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 <sup>2</sup>
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

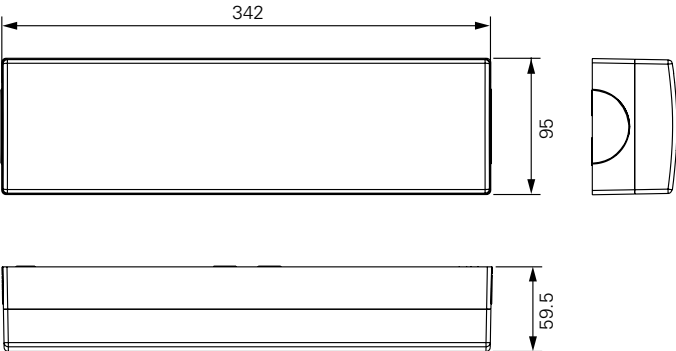
## Ordering details

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



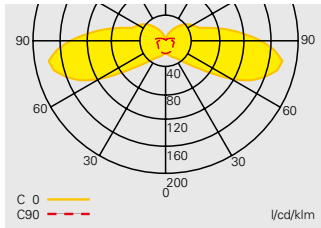
## Accessories

For accessories see page 1.68



## 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



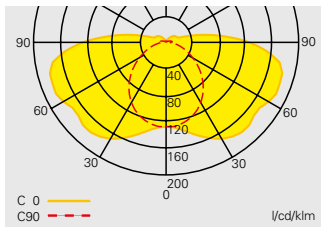
Light distribution curve  
51011 CG-S with pictogram cover

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 (3.4)	6.8 ( 8.6)	4.4 (5.8)	11.4 (14.8)
3.0	Escape route centre	2.8 (3.7)	7.4 ( 9.2)	4.4 (6.0)	12.0 (15.6)
4.0		2.8 (3.9)	7.8 (10.2)	4.3 (6.2)	12.2 (16.6)
5.0		2.3 (4.0)	7.8 (10.8)	4.1 (6.2)	12.0 (17.2)
6.0		1.4 (3.8)	7.4 (11.0)	3.1 (6.1)	11.8 (17.2)
7.0		– (3.3)	6.2 (11.0)	– (5.7)	10.8 (17.0)
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)
3.0	Ceiling mounting	2.4 (3.4)	7.4 ( 9.4)	4.5 (5.5)	12.2 (16.0)
4.0	Room illumination	2.4 (3.4)	8.0 (10.4)	4.5 (5.5)	12.6 (17.0)
5.0		2.4 (3.4)	8.4 (11.0)	3.5 (5.5)	12.6 (17.8)
6.0		0.7 (3.4)	8.2 (11.8)	2.7 (5.5)	13.0 (17.4)
7.0		0.7 (3.4)	7.6 (11.8)	0.7 (4.5)	13.2 (18.0)

# 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



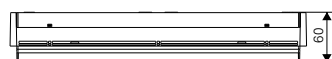
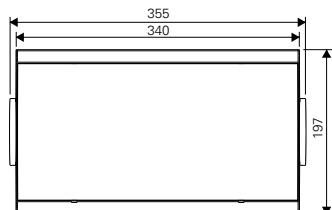
55011 CG-S with cover PR



55011 CG-S with structured cover



55011 CG-S with opaque cover



Viewing distance	32 m
Luminous flux $\Phi_E/\Phi_N$ 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 <sup>2</sup>
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

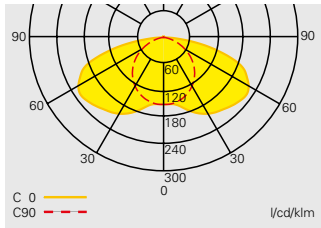
Type	Scope of supply	Order No.
55011 CG-S	Luminaire housing without cover, without quick-mounting set, with CEWA GUARD monitoring and 20-digit address switch	40071345953
Cover SL	Transparent cover	40071345985
Opaque cover	Opaque cover	40071345986
Structured cover	Cover with silkscreening	40071348223
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 1.68

## 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

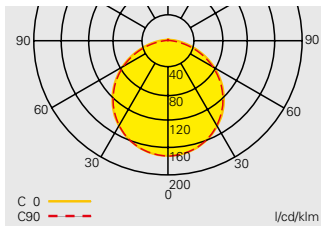


Light distribution curve 55011 CG-S with transparent cover





Mounting height [m]	Types of mounting	L1 	L2 	L3 	L4 
2.5	Ceiling mounting	3.0 (3.7)	7.4 ( 9.0)	4.6 (5.9)	11.8 (14.4)
3.0	Escape route centre	3.1 (4.0)	8.0 ( 9.8)	4.9 (6.3)	12.6 (15.6)
4.0		3.2 (4.4)	8.6 (11.2)	5.0 (6.8)	13.6 (17.4)
5.0		2.9 (4.5)	8.8 (12.0)	4.7 (7.0)	14.0 (18.6)
6.0		2.2 (4.4)	8.6 (12.4)	4.0 (6.9)	13.8 (19.4)
7.0		0.8 (4.0)	7.8 (12.6)	0.9 (6.6)	12.8 (19.8)
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)
3.0	Ceiling mounting	2.4 (3.4)	8.0 ( 9.8)	5.5 (6.5)	12.0 (14.8)
4.0	Room illumination	2.4 (4.4)	8.6 (11.0)	5.5 (5.5)	13.8 (17.0)
5.0		2.4 (4.4)	9.2 (12.2)	4.5 (5.5)	14.6 (18.2)
6.0		1.8 (4.4)	9.2 (12.8)	3.6 (5.5)	15.2 (19.4)
7.0		0.7 (3.7)	8.8 (12.8)	0.7 (5.2)	15.2 (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 (3.9)	7.8 ( 9.6)	3.1 (4.0)	7.8 ( 9.8)
3.0	Escape route centre	3.2 (4.2)	8.4 (10.4)	3.3 (4.2)	8.4 (10.6)
4.0		3.3 (4.5)	9.0 (11.6)	3.3 (4.6)	9.0 (11.8)
5.0		3.0 (4.6)	9.2 (12.4)	3.0 (4.7)	9.2 (12.6)
6.0		2.4 (4.5)	9.0 (12.8)	2.4 (4.6)	9.0 (13.0)
7.0		1.1 (4.2)	8.2 (13.0)	1.2 (4.3)	8.2 (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)
3.0	Ceiling mounting	2.4 (3.4)	7.2 ( 9.0)	3.5 (3.5)	7.4 ( 8.8)
4.0	Room illumination	2.4 (3.4)	8.2 (10.2)	3.5 (4.5)	8.0 (10.2)
5.0		2.4 (3.4)	8.8 (11.2)	3.5 (4.5)	8.6 (11.0)
6.0		2.0 (3.4)	9.0 (11.8)	2.0 (4.5)	9.0 (11.8)
7.0		0.7 (3.4)	9.2 (12.4)	0.7 (3.5)	9.0 (12.2)

# Style 55021 CG-S

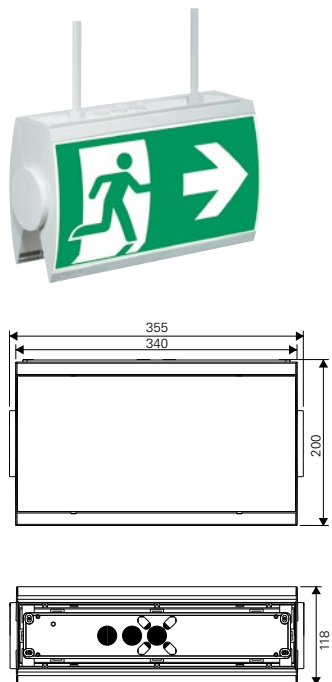
Escape sign luminaire



## 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



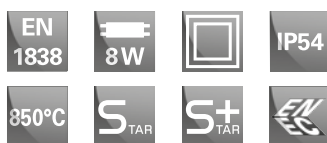
Viewing distance	32 m
Luminous flux $\Phi_E/\Phi_N$ at the end of rated operating time	75 %
Housing material	Polycarbonate (850 °C glow wire resistant)
Weight incl. cover	1.15 kg
Housing colour	Grey
Type of mounting	Ceiling mounting
Connection terminals	Loop terminals 3 x 2.5 mm <sup>2</sup>
Connection 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

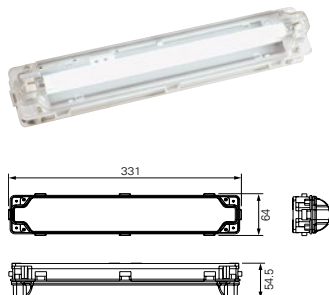
Type	Scope of supply	Order No.
55021 CG-S	Luminaire housing without covers, without quick-mounting set, with CEWA GUARD monitoring and 20-digit address switch	40071345954
Cover SL	Transparent cover	40071345985
Opaque cover	Opaque cover	40071345986
Blind cover	Blind cover	40071345987
Structured cover	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 1.68



21011 CG-S with transparent IP54 cover



## 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 $\Phi_E/\Phi_N$ 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 <sup>2</sup>
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

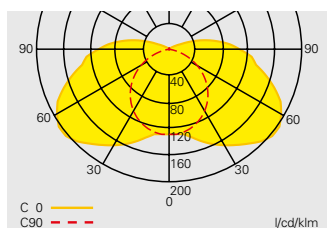
Type	Scope of supply	Order No.
21011 CG-S	Luminaire housing with IP54 cover, with quick-mounting set, with CEWA GUARD monitoring and 20-digit address switch	40071348160

## Zubehör

For accessories see page 1.68

## 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	L1	L2	L3	L4
2.5	Ceiling mounting	2.7 (3.4)	6.8 ( 8.4)	3.8 (5.0)	10.0 (12.4)
3.0	Escape route centre	2.7 (3.6)	7.2 ( 9.2)	3.9 (5.2)	10.4 (13.2)
4.0		2.6 (3.8)	7.6 (10.0)	3.8 (5.5)	11.0 (14.6)
5.0		2.0 (3.8)	7.4 (10.6)	3.2 (5.5)	10.8 (15.4)
6.0		0.6 (3.5)	6.8 (10.8)	0.8 (5.1)	10.0 (15.6)
7.0		0.1 (2.8)	5.2 (10.6)	0.1 (4.5)	8.6 (15.2)
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)
3.0	Ceiling mounting	2.6 (3.4)	7.4 ( 9.2)	3.3 (4.5)	9.8 (12.2)
4.0	Room illumination	2.4 (3.6)	7.8 (10.2)	3.5 (4.3)	11.0 (13.8)
5.0		1.9 (3.4)	8.0 (10.8)	2.6 (4.5)	11.6 (15.0)
6.0		0.7 (2.4)	7.6 (11.2)	0.7 (5.5)	11.6 (15.8)
7.0		0.7 (2.5)	7.4 (11.2)	0.7 (3.4)	10.0 (16.4)

# Accessories Style CG-S

Suspension set



Suspension set with 90° angle



Wall bracket



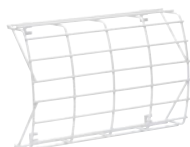
Chain fastening



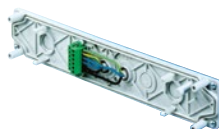
Luminaire with IP54 cover



Wire guard



Quick-mounting 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

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

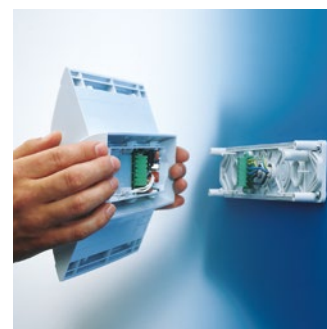
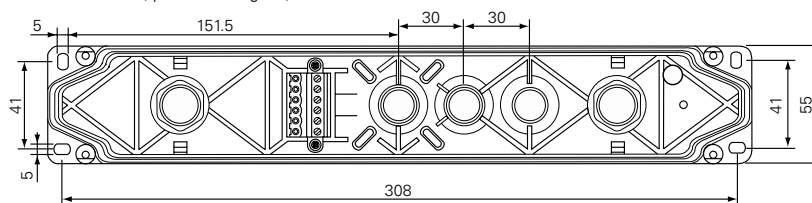
Type	Order No.
Chain fastening bracket incl. quick-mounting set	40071352205

Type	Order No.
IP54 supplement* incl. quick-mounting set and mounting accessories	40071345975
*) IP54 for electronic and lamp. For increased tightness requirements indoors or in canopied outdoor areas	

Type	Order No.
Wire guard incl. mounting clamps	40071348370

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

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

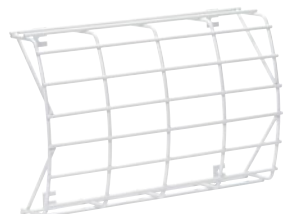


40011 CG-S with cover PR



Viewing distance	32 m
Luminous flux $\Phi_E/\Phi_N$ 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 <sup>2</sup>
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

Wire guard

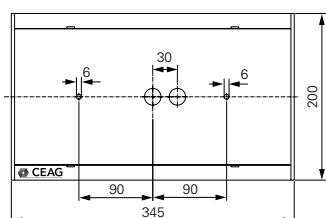


## Ordering details

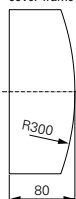
Type	Scope of supply	Order No.
40011 CG-S	Luminaire without cover with CG monitoring and 20-digit address switch	40071348401
Cover SL	Transparent cover	40071345985
Cover PL acc. to ISO 7010	Cover with silkscreened pictogram	40071354130
Cover PR acc. to ISO 7010	Cover with silkscreened pictogram	40071354131
Cover PU acc. to ISO 7010	Cover with silkscreened pictogram	40071354132

## Accessories

Type	Scope of supply	Order No.
IP54 supplement	Protective cover IP54 with mounting accessories	40071345975
Wire guard		40071348370
Ceiling mounting angle		40071348588
2 x M20 cable glands		40071348422

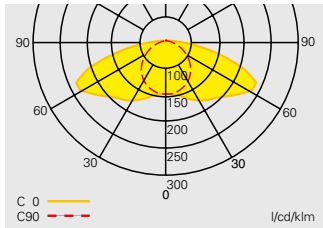


without cover frame



## 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

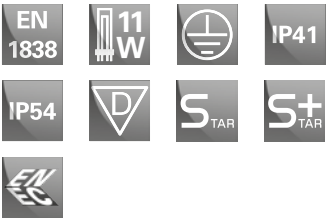


Light distribution curve 40011 CG-S  
with transparent cover

Mounting height [m]	Types of mounting	L1	L2	L3	L4
2.5	Ceiling mounting	2.9 (3.7)	7.4 ( 9.0)	5.1 (6.3)	12.4 (15.0)
3.0	Escape route centre	3.0 (3.9)	7.8 ( 9.8)	5.3 (6.8)	13.4 (16.4)
4.0		3.1 (4.3)	8.4 (11.0)	5.2 (7.4)	14.8 (18.8)
5.0		2.7 (4.3)	8.6 (11.6)	4.5 (7.4)	14.6 (20.4)
6.0		2.0 (4.2)	8.4 (12.0)	3.7 (7.1)	14.0 (21.0)
7.0		0.3 (3.9)	7.6 (12.2)	0.8 (6.4)	12.9 (20.8)
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)
3.0	Ceiling mounting	2.4 (3.4)	7.8 ( 9.6)	5.5 (6.5)	13.6 (16.2)
4.0	Room illumination	2.4 (3.4)	8.6 (10.8)	5.5 (7.5)	15.2 (19.0)
5.0		2.4 (4.4)	8.8 (11.8)	4.5 (5.5)	16.2 (20.8)
6.0		1.8 (3.4)	8.8 (12.2)	3.0 (6.5)	16.0 (22.4)
7.0		0.7 (3.4)	8.8 (12.6)	0.7 (5.5)	15.2 (23.0)

# Style Industry 40031 CG-S

Safety luminaire



1

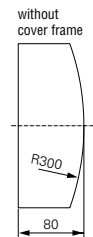
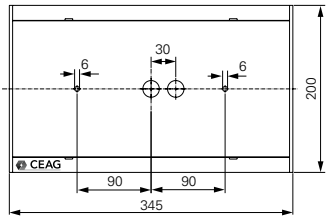
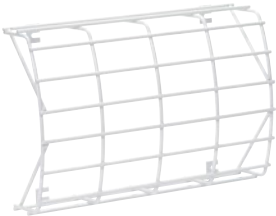
40031 CG-S IP41 with transparent cover



40031 CG-S IP54 with transparent cover



Wire guard



## Style Industry 40031 CG-S

- Safety luminaire with robust diecast aluminium housing
- Especially suitable for high mounting heights up to 14 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

Luminous flux $\Phi_E/\Phi_N$ 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 <sup>2</sup>
Connection voltage	220 - 240 V, 50/60 Hz 176 - 275 V DC
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

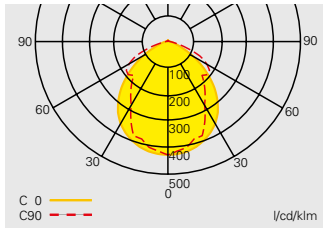
Type	Scope of supply	Order No.
40031 CG-S IP41	Luminaire housing with transparent cover and CG monitoring with 20-digit address switch, without light source	40071348403
40031 CG-S IP54	Luminaire housing with transparent cover and CG monitoring with 20-digit address switch and IP54 cover frame, without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

## Accessories

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

## 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	L1	L2	L3	L4
8	Ceiling mounting	6.5 (8.6)	17.2 (21.4)	5.6 (7.7)	15.4 (23.0)
9	Escape route centre	6.4 (8.9)	17.8 (22.4)	5.5 (7.9)	15.6 (23.2)
10		6.2 (9.1)	18.2 (23.4)	5.3 (7.9)	15.8 (23.0)
11		5.7 (9.2)	18.4 (24.2)	5.1 (7.9)	15.6 (21.6)
12		5.1 (9.2)	18.2 (24.8)	4.8 (7.8)	15.2 (22.0)
13		4.1 (9.0)	18.0 (25.4)	4.1 (7.6)	14.8 (22.2)
14		2.8 (8.7)	17.4 (25.6)	2.9 (7.5)	14.6 (22.2)
15		0.7 (8.4)	16.4 (25.8)	0.8 (7.3)	14.0 (22.2)
8	Ceiling mounting	4.4 (6.4)	13.4 (18.2)	5.5 (6.5)	16.2 (21.0)
9	Room illumination	4.4 (6.4)	15.4 (18.4)	5.5 (6.5)	14.8 (22.0)
10		4.4 (6.4)	16.2 (18.0)	5.5 (6.5)	15.0 (23.4)
11		4.4 (7.4)	16.6 (18.0)	4.5 (6.5)	15.4 (24.0)
12		3.4 (6.4)	17.0 (20.4)	4.5 (6.5)	15.6 (21.8)
13		2.4 (6.4)	18.0 (21.6)	3.5 (6.5)	15.2 (21.4)
14		0.7 (6.4)	18.6 (22.4)	0.7 (6.5)	15.0 (21.6)
15		0.7 (5.4)	18.8 (24.0)	0.7 (6.5)	15.0 (21.0)



Escape sign panel  
luminaires



## 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 with 3-chip technology 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 3-chip technology, with especially low current consumption and low maintenance effort with a long service life

# 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/m<sup>2</sup> 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
- Increased safety with use of 3-chip LEDs
- 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 expenditures by STAR technology
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

Viewing distance	16 m
Luminous flux $\Phi_E/\Phi_N$ 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 <sup>2</sup> 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 with 3-chip LEDs

## 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 in LED technology
- Frameless design with pictogram integrated in acrylic glass
- Very good perceptibility via high luminance of white contrast colour > 500 cd/m<sup>2</sup> 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
- Increased safety with use of 3-chip LEDs
- 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 expenditures by STAR technology
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

Viewing distance	28 m
Luminous flux $\Phi_E/\Phi_N$ 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 <sup>2</sup> 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 with 3-chip LEDs

### 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

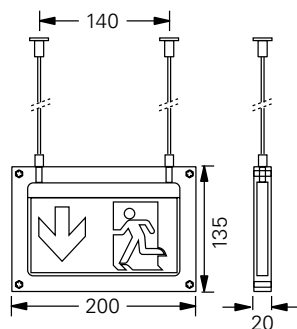
### Ordering details - LED pictograms

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

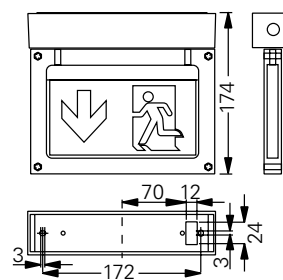
\* R = Arrow from mounting wall  
W = Arrow to mounting wall

\*\* Degree of protection recessed ceiling mounting kit IP20

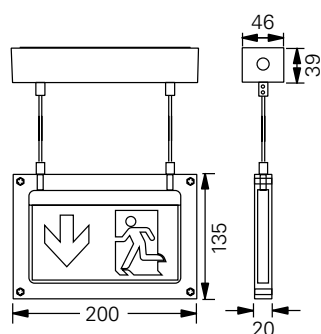
SpiritLED 16



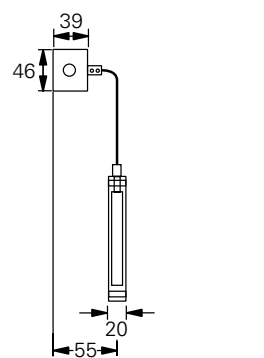
Recessed ceiling mounting  
with wire suspension



Surface mounting

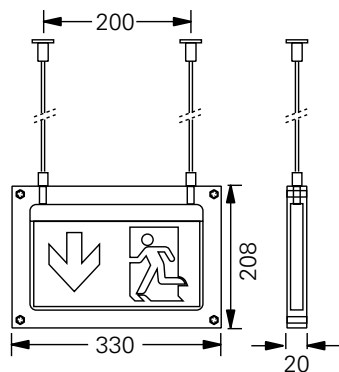


Surface mounting  
with wire suspension

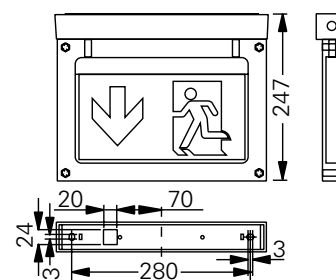


Wall parallel with wire suspension

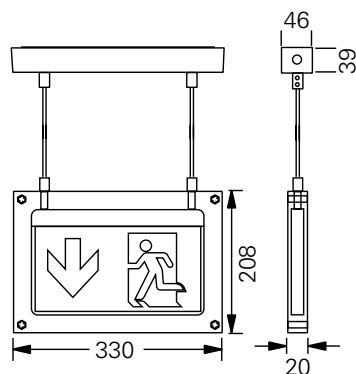
SpiritLED 28



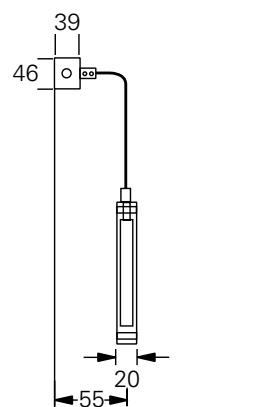
Recessed ceiling mounting  
with wire suspension



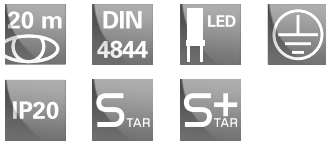
Surface mounting



Surface mounting  
with wire suspension



Wall parallel with wire suspension



1503 LED CG-S



1603 LED CG-S



1703 LED CG-S



1803 LED CG-S



### Brillant 1503 ... 1803 LED CG-S

- Escape sign panel luminaire in LED technology
- Special LED converter, with integrated monitoring module for single luminaire monitoring
- Increased safety with use of 3-chip LEDs
- 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 expenditures by STAR technology
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

Viewing distance	20 m
Luminous flux $\Phi_E/\Phi_N$ 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 <sup>2</sup>
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 with 3-chip LEDs

### 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 with accessories for chain suspension or for pendant mounting, 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

# Brillant 1503 ... 1803 LED CG-S

Escape sign panel luminaire

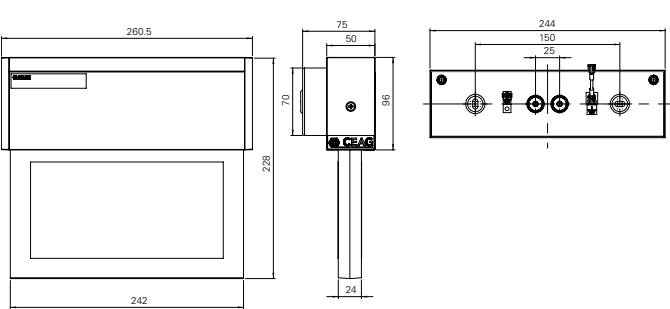


## Ordering details

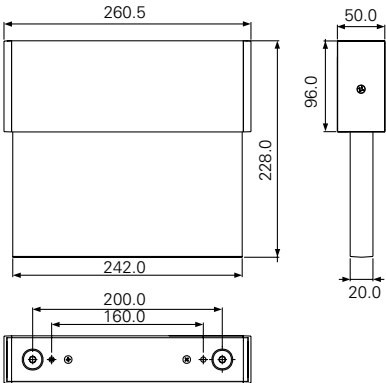
Type	Scope of supply		Order No.
Panel PL/PR acc. to ISO 7010	Two-sided pictogram panel		40071354620
Panel PU/PU acc. to ISO 7010	Two-sided pictogram panel		40071354621
Panel PU/BL acc. to ISO 7010	Two-sided pictogram panel		40071354622

## Ordering details

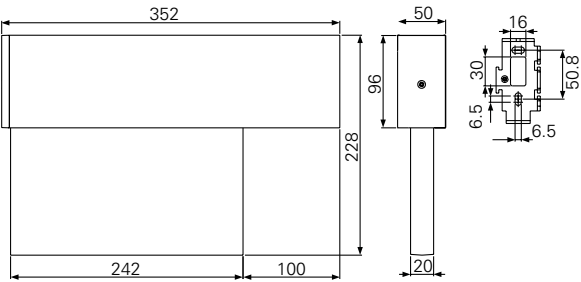
Type		Order No.
Bezel for 1803	metal shield white, RAL 9010	40071348860
Concrete mounting box for 1803 ...	for installation in concrete ceilings	40071348725
Mounting kit for 1803 ...	for installation in concrete recessing box	40071341720
Suspension set 0.5 m	white canopy and aluminium pendulum tube	40071348721
Suspension set 1.5 m	white canopy and aluminium pendulum tube	40071348722
Chain suspension metal	Chain fastening for 1703	40071348723



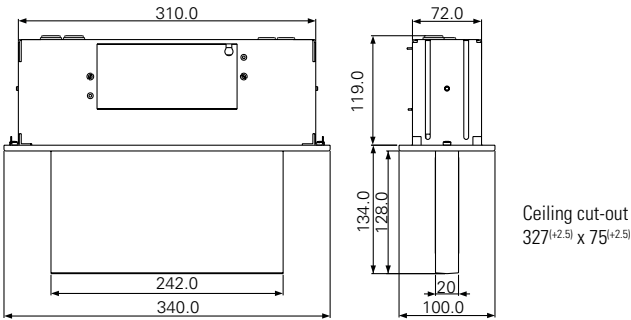
1503 LED CG-S



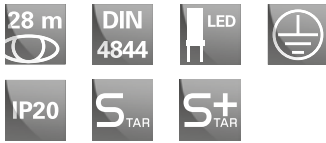
1703 LED CG-S



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
- Increased safety with use of 3-chip LEDs
- 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 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 $\Phi_E/\Phi_N$ 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 <sup>2</sup>
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 with 3-chip LEDs

### 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 with accessories for chain suspension and accessories for pendant mounting, 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

# Brillant 1504 ... 1804 LED CG-S

Escape sign panel luminaire

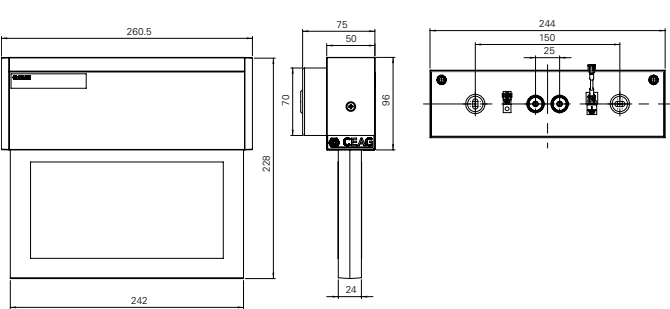


## Ordering details

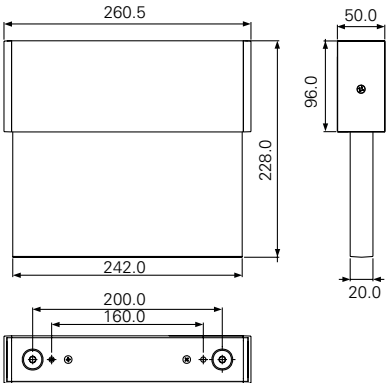
Type	Scope of supply	Order No.
Panel PL/PR acc. to ISO 7010	Two-sided pictogram panel	40071354630
Panel PU/PU acc. to ISO 7010	Two-sided pictogram panel	40071354631
Panel PU/BL acc. to ISO 7010	Two-sided pictogram panel	40071354632

## Ordering details

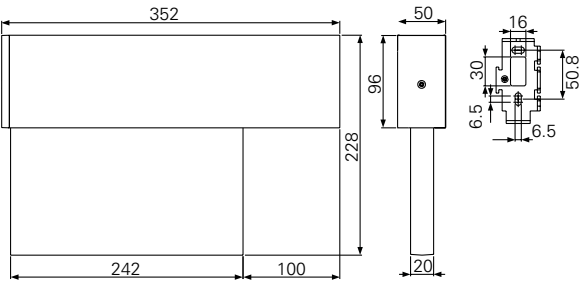
Type	Order No.
Bezel for 1804	metal shield white, RAL 9010
Concrete mounting box for 1804 ...	for installation in concrete ceilings
Mounting kit for 1804 ...	for installation in concrete recessing box
Suspension set 0.5 m	white canopy and aluminium pendulum tube
Suspension set 1.5 m	white canopy and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



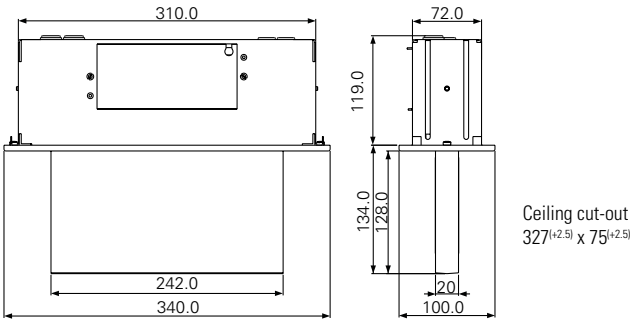
1503 LED CG-S



1703 LED CG-S



1603 LED CG-S



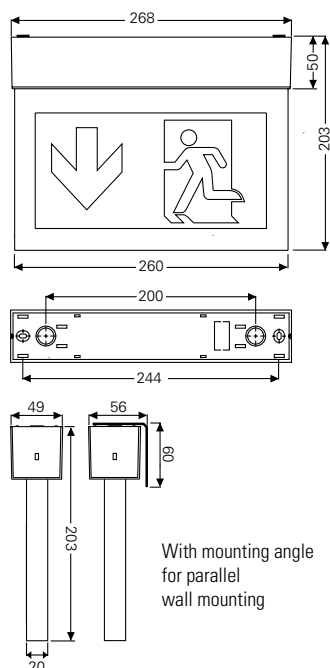
1803 LED CG-S



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
- Increased safety with use of 3-chip LEDs
- Minimum maintenance effort via high LED 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
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

Viewing distance	22 m
Luminous flux $\Phi_E/\Phi_N$ 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 <sup>2</sup>
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 with 3-chip LEDs


### 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
Suspension set 0.5 m	white canopy and aluminium pendulum tube
Suspension set 0.5 m	aluminium canopy and pendulum tube

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

A long, empty hallway with a red carpet and a green exit sign. The hallway is illuminated by recessed ceiling lights. The walls are a light beige color, and the carpet is a deep red. The exit sign is mounted on the ceiling, and the hallway leads to a bright light at the end.

Escape sign luminaire  
with three-sided light  
outlet



## Compact exit sign luminaire for low room heights

Special electronic ballasts meeting the requirements of emergency lighting which switch off in case of a fluorescent lamp failure ensure a safe, reliable and low-cost operation of this series of luminaires.

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.

### Features:

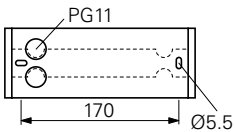
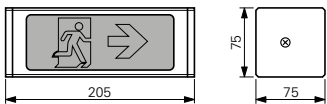
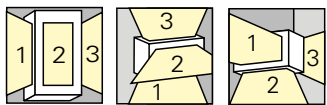
- Small enclosure dimensions – suitable especially for low ceiling-height
- Conforming to the requirements of EN 60598-2-22
- Variety of mounting possibilities due to three-sided light outlet
- Fitted with electronic ballast with enlarged monitoring tool confirming to the requirements of emergency lighting
- Low power consumption

# 134 CG-S

Escape sign luminaire Hotel



134 CG-S



## 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

Viewing distance	12 m
Luminous flux $\Phi_E/\Phi_N$ 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 <sup>2</sup>
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:

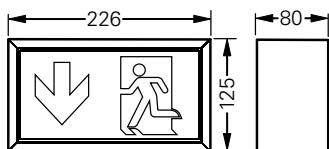
- 5 types of mounting for different mounting situations
- 3 sizes for viewing distances of 20 m up to 60 m
- Suitable as escape sign and safety luminaires
- Also available with especially efficient and long-life LED technology

# 70011 ... 70021 LED CG-S

Escape sign luminaire



70011 LED CG-S






## 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 (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

Viewing distance	20 m
Luminous flux $\Phi_E/\Phi_N$ 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 <sup>2</sup>
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).

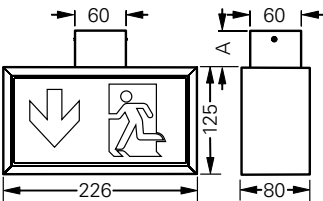
WM = Wall mounting, DM = Ceiling mounting, PM = Pendant mounting

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

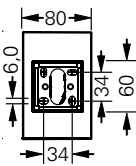
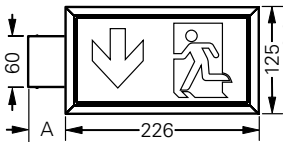


Accessories

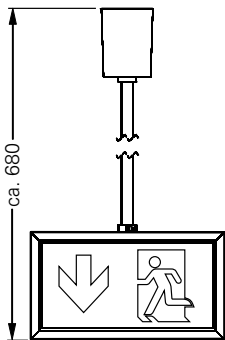
Type		Order No.
Wall/ceiling mounting kit	for WM / DM, A = 42 mm	40071351011
Wall/ceiling mounting kit	for WM / DM, A = 100 mm	40071351497
Single suspension	for PM	40071351157



70021 LED CG-S DM



70021 LED CG-S WM



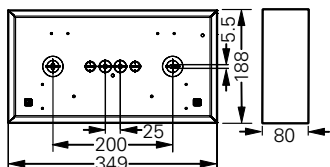
70021 LED CG-S PM

# 71011 ... 71021 LED CG-S

Escape sign luminaire



71011 LED CG-S



## 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 (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

Viewing distance	32 m
Luminous flux $\Phi_E/\Phi_N$ 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 mounting (71021 LED CG-S)
Connection terminals	3 x 2.5 mm <sup>2</sup>
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).

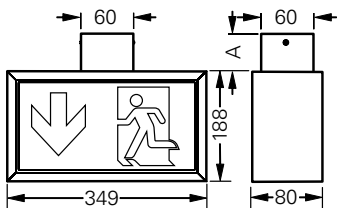
WM = Wall mounting, DM = Ceiling mounting, PM = Pendant mounting

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

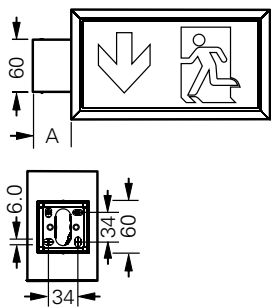


Accessories

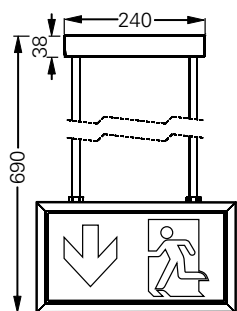
Type		Order No.
Wire guard	for 71011 LED CG-S	40071348370
Wall/ceiling mounting kit	for WM / DM, A = 42 mm	40071351011
Wall/ceiling mounting kit	for WM / DM, A = 100 mm	40071351497
Suspension set 0.5 m	with canopy, silver, square form, for PM	40071344599
Suspension set 1.0 m	with canopy, silver, square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



71021 LED CG-S DM



71021 LED CG-S WM



71021 LED CG-S PM

# 70011 ... 70021 CG-S

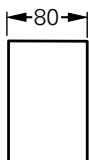
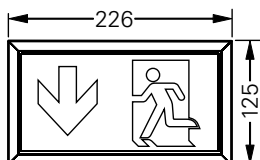
Safety luminaire and escape sign luminaire



## 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

70011 CG-S



Viewing distance	20 m
Luminous flux $\Phi_E/\Phi_N$ 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 <sup>2</sup>
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

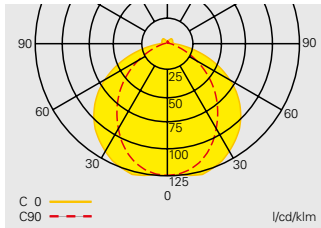
\* Each luminaire requires 2 covers.

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

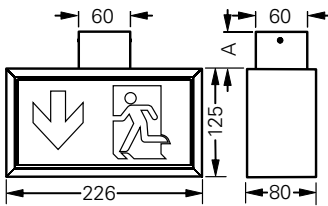
## Accessories

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

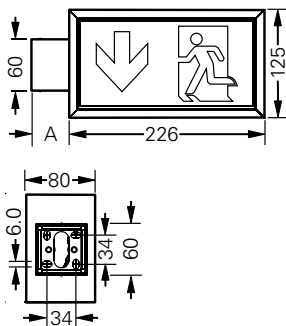


Light distribution curve 70011 CG-S

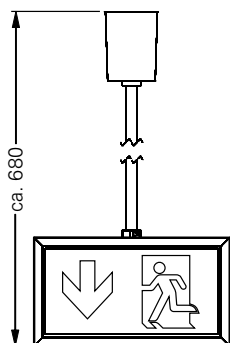
70021 CG-S DM  
with wall/ceiling mounting kit



70021 CG-S DM



70021 CG-S WM



70021 CG-S PM

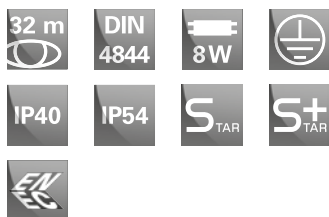
## Planning help for 70011 CG-S for $E = 1.0 \text{ lx}$ (0.5 lx) with transparent cover

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	1.3 (2.0)	4.0 (5.4)	1.7 (2.5)	5.0 (6.6)
3.0	Escape route centre	1.1 (2.0)	4.0 (5.6)	1.4 (2.4)	4.8 (6.8)
4.0		– (1.6)	3.2 (5.6)	– (2.0)	4.0 (6.8)
5.0		– (0.5)	2.0 (5.0)	– (0.7)	2.0 (6.2)
6.0		– (–)	2.0 (3.6)	– (–)	2.0 (4.6)
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)
3.0	Ceiling mounting	0.7 (1.4)	4.2 (5.6)	0.7 (3.5)	4.8 (6.2)
4.0	Room illumination	0.7 (1.4)	3.8 (5.8)	0.7 (2.5)	4.8 (6.8)
5.0		0.7 (0.7)	3.0 (5.6)	0.7 (0.7)	3.4 (7.2)
6.0		0.7 (0.7)	2.0 (5.6)	0.7 (0.7)	2.2 (5.6)

# 71011 ... 71021 CG-S

Safety luminaire and escape sign luminaire

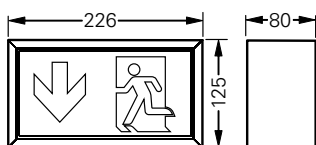


## 71011 ... 71021 CG-S

- 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 $\Phi_E/\Phi_N$ 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 <sup>2</sup>
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	8 W/T16, 450 lm

71011 CG-S



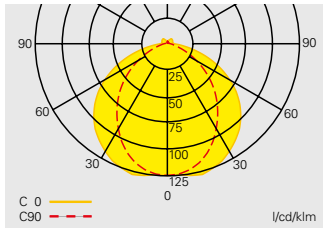
## Ordering details

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-S WM	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

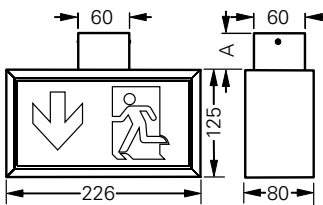


Light distribution curve 71011 CG-S

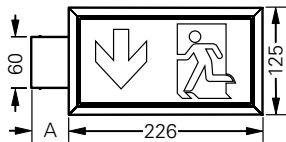
## Accessories

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

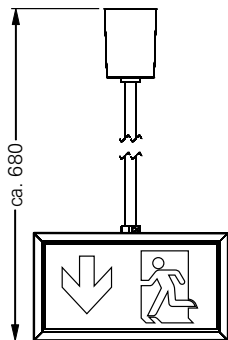
71021 CG-S WM  
with wall/ceiling mounting kit



70021 CG-S DM



70021 CG-S WM



70021 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 (7.8)	3.2 (4.1)	8.0 (10.0)
3.0	Escape route centre	2.6 (3.4)	6.8 (8.4)	3.3 (4.3)	8.6 (10.8)
4.0		2.5 (3.6)	7.2 (9.4)	3.2 (4.6)	9.0 (12.0)
5.0		2.1 (3.6)	7.2 (9.8)	2.7 (4.6)	9.0 (12.6)
6.0		1.2 (3.4)	6.8 (10.2)	1.8 (4.3)	8.4 (12.8)
7.0		– (3.0)	5.8 (10.0)	– (3.8)	7.2 (12.8)
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)
3.0	Ceiling mounting	2.4 (3.4)	6.8 (8.4)	3.5 (3.5)	7.4 (9.2)
4.0	Room illumination	2.4 (3.5)	7.4 (9.6)	3.5 (3.4)	8.4 (10.2)
5.0		1.4 (3.4)	7.6 (10.2)	3.5 (3.5)	9.0 (11.4)
6.0		0.7 (3.4)	7.4 (10.6)	0.7 (3.5)	9.4 (12.2)
7.0		0.7 (2.4)	7.0 (10.6)	0.7 (3.5)	9.2 (13.0)

# 79011 ... 79021 CG-S

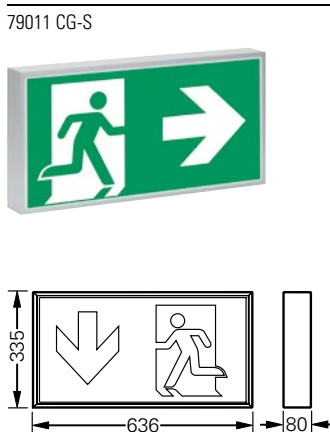
Safety luminaire and escape sign luminaire



## 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 $\Phi_E/\Phi_N$ 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 <sup>2</sup>
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



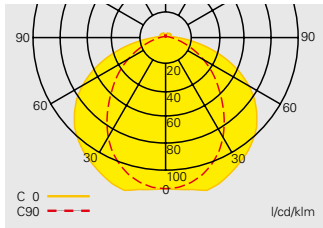
## Ordering details

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-SWM	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



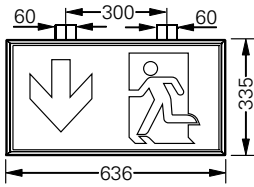
Light distribution curve 79011 CG-S

## Accessories

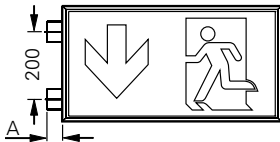
Type		Order No.
Wall/ceiling mounting kit	for WM / DM, A = 42 mm*	40071351011
Wall/ceiling mounting kit	for WM / DM, A = 100 mm*	40071351497
Suspension set 0.5 m	with canopy, silver, square form, for PM	40071344599
Suspension set 1.0 m	with canopy, silver, square form, for PM	40071350775
Suspension set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

\* for 79021 2 x required

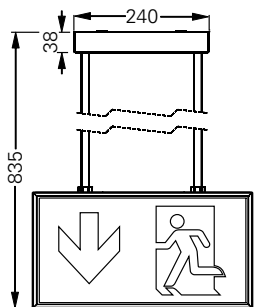
79021 CG-S  
with wall/ceiling mounting kit



79021 CG-S DM



79021 CG-S WM



79021 CG-S PM

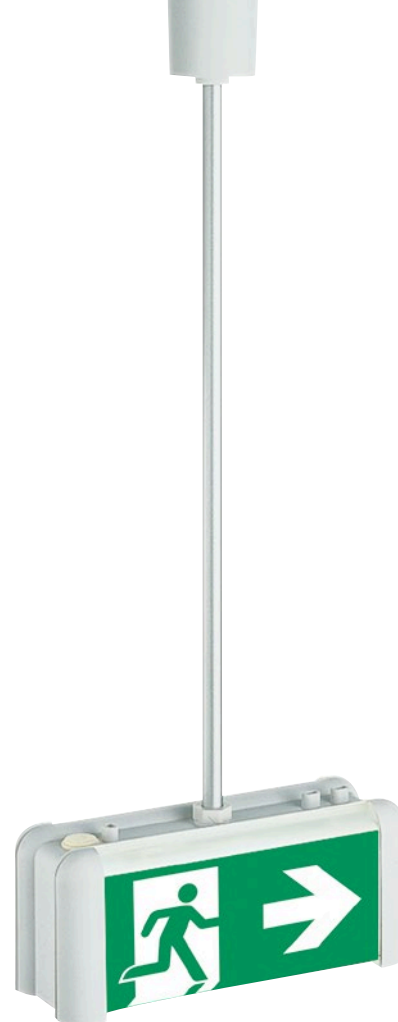
## Planning help for 79011 CG-S for E = 1.0 lx (0.5 lx) with transparent cover

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	3.7 (4.5)	9.0 (10.8)	4.7 (5.8)	11.6 (14.0)
3.0	Escape route centre	4.0 (4.9)	9.8 (12.0)	5.1 (6.3)	12.6 (15.2)
4.0		4.3 (5.5)	11.0 (13.6)	5.5 (7.0)	14.0 (17.4)
5.0		4.5 (6.0)	11.8 (15.0)	5.8 (7.6)	15.2 (19.0)
6.0		4.6 (6.2)	12.4 (16.0)	5.8 (7.9)	15.8 (20.4)
7.0		4.5 (6.4)	12.6 (16.8)	5.6 (8.1)	16.2 (21.4)
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)
3.0	Ceiling mounting	3.4 (4.4)	9.6 (10.8)	4.5 (5.5)	10.6 (13.6)
4.0	Room illumination	3.4 (4.4)	11.2 (13.4)	5.5 (6.5)	11.8 (14.6)
5.0		4.4 (4.4)	11.2 (14.2)	4.5 (7.5)	14.2 (17.0)
6.0		4.4 (5.4)	12.8 (15.0)	4.5 (6.5)	14.2 (18.8)
7.0		3.4 (5.4)	13.2 (17.0)	5.5 (6.5)	15.2 (18.8)



Escape sign  
luminaire Profile



## Compact luminaires with supplementary light emission

Optimised reflectors provide a uniform illumination of the escape routes in conformity with DIN standards with only few light sources. They are the basis for economical emergency lighting systems.

Special electronic ballasts for emergency lighting which switch off in case of a fluorescent lamp failure, ensure a safe, reliable and low-cost operation of this series of luminaires.

The attractively designed exit luminaire is available in single and double-sided design. Due to the variety of mounting accessories all standard types of mounting are possible without requiring additional material and installation.

### Features:

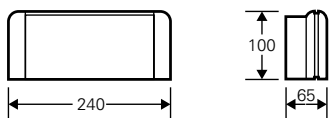
- Compact design
- Confirming to the requirements of EN 60598-2-22
- Variety of mounting accessories
- Low power consumption

# Profile 5004 CG-S

Escape sign luminaire



5004 CG-S



## Profile 5004 CG-S

- Compact safety luminaire with rounded enclosure outline
- Light emission with prismatic light control downwards
- 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	17 m
Luminous flux $\Phi_E/\Phi_N$ at the end of rated operating time	75 %
Housing material	Plastic
Weight incl. cover	5004 CG-S: 0.5 kg 5024 CG-S: 0.7 kg
Housing colour	White
Type of mounting	Wall mounting
Connection terminals	Loop terminals 2 x 2.5 mm <sup>2</sup>
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

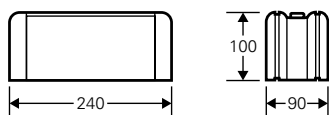
Type	Scope of supply	Order No.
5004 CG-S	Luminaire with CEWA GUARD monitoring and 20-digit address switch, without cover	40071341894
Cover PL acc. to ISO 7010	Cover with pictogram, silk screened	40071354330
Cover PR acc. to ISO 7010	Cover with pictogram, silk screened	40071354331
Cover PU acc. to ISO 7010	Cover with pictogram, silk screened	40071354332

## Accessories

Type	Order No.
Wire guard	40071348370



5024 CG-S



### Profile 5024 CG-S

- Compact safety luminaire with rounded enclosure outline
- Light emission with prismatic light control downwards
- 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	17 m
Luminous flux $\Phi_E/\Phi_N$ at the end of rated operating time	75 %
Housing material	Plastic
Weight incl. cover	5004 CG-S: 0.5 kg 5024 CG-S: 0.7 kg
Housing colour	White
Type of mounting	Ceiling mounting
Connection terminals	Loop terminals 2 x 2.5 mm <sup>2</sup>
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.
5024 CG-S	Luminaire with CEWA GUARD monitoring and 20-digit address switch, without cover	40071341896
Cover PL acc. to ISO 7010	Cover with pictogram	40071354401
Cover PR acc. to ISO 7010	Cover with pictogram	40071354400
Cover PU acc. to ISO 7010	Cover with pictogram	40071354402
Blind cover		40071345677
Each luminaire requires 2 covers.		

### Zubehör

Type	Order No.
Single suspension	0.5 m with canopy 40071342516
Wall bracket	40071342517
Chain suspension kit	Mounting kit for chain suspension, without chain 40071345830

A photograph of a modern interior hallway. On the left, a series of large, dark, cylindrical glass vases are arranged in a row, each containing a tall, dried, branching plant. The hallway is illuminated by recessed ceiling lights, creating a warm and modern atmosphere. The floor is a light-colored, textured material, and the walls are white. In the background, a dark-colored sofa is visible on the right side of the hallway.

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 21 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



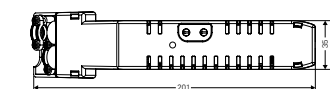
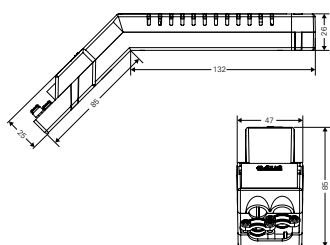
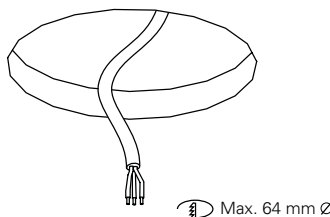
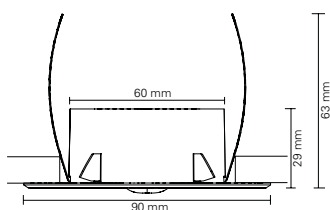
Micropoint 2 O CG-S recessed installation with symmetric optics



Luminous flux	142 lm
Luminous flux $\Phi_E/\Phi_N$ 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 <sup>2</sup>
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

## 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
icropoint 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

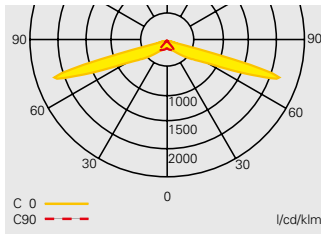


Deckeneinbaugehäuse

\* 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

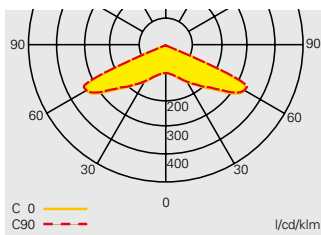


Light distribution curve  
Micropoint 2 E CG-S  
with asymmetric optics

Mounting height [m]	Types of mounting	L1	L2	L3	L4
2.5	Ceiling mounting	7.4 ( 8.2)	16.3 (17.3)	2.1 (2.2)	4.4 ( 4.6)
3.0	Escape route centre	7.5 ( 9.4)	18.7 (20.3)	2.4 (2.6)	5.2 ( 5.5)
3.5		4.6 ( 9.6)	19.6 (21.3)	2.3 (2.8)	5.6 ( 5.8)
4.0		– (10.1)	– (23.7)	– (3.0)	– ( 6.5)
2.5	Ceiling mounting	6.5 ( 8.3)	14.4 (16.3)	1.4 (1.6)	4.2 ( 4.6)
3.0	Room illumination	5.4 ( 8.2)	15.4 (18.2)	1.7 (2.3)	5.0 ( 5.6)
3.5		4.6 ( 8.2)	16.5 (20.0)	1.5 (2.3)	5.4 ( 6.3)
4.0		0.7 ( 8.2)	23.0 (21.1)	0.7 (2.3)	3.8 ( 7.1)

**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

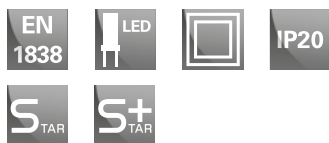


Light distribution curve  
Micropoint 2 O CG-S  
with symmetric optics

Mounting height [m]	Types of mounting	L1	L2	L3	L4
2.5	Ceiling mounting	3.5 (4.8)	9.6 (10.7)	3.4 (4.8)	9.7 (10.8)
3.0	Escape route centre	2.8 (5.0)	10.0 (12.3)	2.7 (5.0)	10.0 (12.4)
3.5		– (4.9)	– (13.5)	– (4.8)	– (13.7)
4.0		– (4.3)	– (14.1)	– (4.1)	– (14.1)
2.5	Ceiling mounting	3.3 (5.2)	8.4 ( 9.1)	3.2 (4.2)	8.6 ( 9.1)
3.0	Room illumination	2.4 (5.2)	9.7 (10.5)	2.3 (4.2)	9.9 (10.6)
3.5		0.7 (4.3)	9.6 (12.0)	0.7 (4.2)	9.5 (12.0)
4.0		0.7 (4.3)	8.6 (13.3)	0.7 (3.2)	8.6 (13.3)

# 3503.1 ... 3604.1 LED CG-S

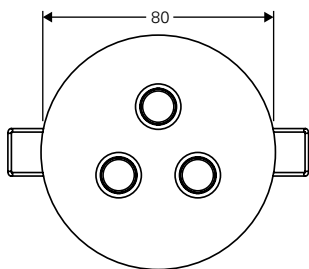
Safety luminaire



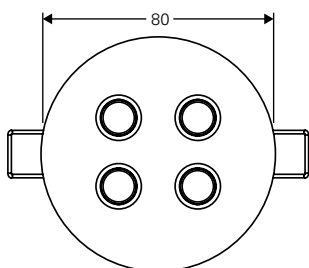
3503.1 LED CG-S stainless steel



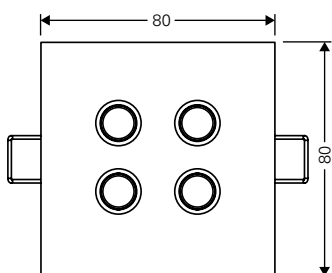
3503.1 LED CG-S white



3503.1 LED CG-S



3504.1 LED CG-S



3604.1 LED CG-S

## 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 15 m from luminaire to luminaire for escape route illumination
- Up to 14 m from luminaire to luminaire for wide area illumination
- Minimum service requirement due to high service life of the LEDs (50,000 hours)

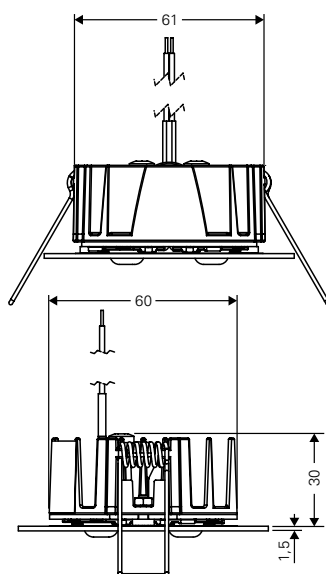
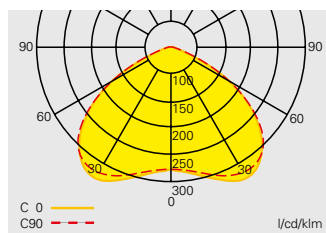
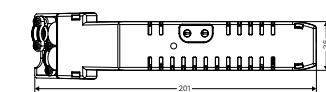
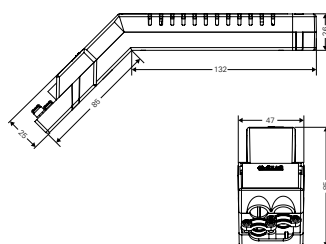
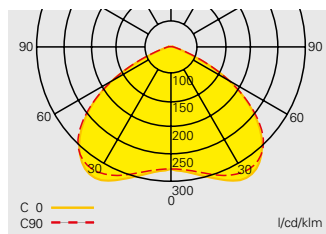
Luminous flux		3503.1: 260 lm 3x04.1: 315 lm
Luminous flux $\Phi_E/\Phi_N$ at the end of rated operating time		100%
Housing material	Bezel	Stainless steel brushed / sheet steel, white (sim. RAL 9010)
	Module	Polycarbonate
Weight	Luminaire	0.13 kg
	Module	0.12 kg (incl. enclosure)
Type of mounting		Recessed ceiling mounting
Connection terminals		Loop terminals 3 x 2.5 mm <sup>2</sup>
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

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

Module housing

Mounting height [m]	Types of mounting	L1	L2	L3	L4
2.5	Ceiling mounting	3.9 (4.6)	9.1 (10.4)	3.9 (4.6)	9.1 (10.5)
3.0	Escape route centre	4.2 (5.1)	10.1 (11.7)	4.2 (5.1)	10.1 (11.8)
3.5		4.4 (5.5)	10.9 (12.8)	4.5 (5.5)	10.9 (12.9)
4.0		4.6 (5.8)	11.5 (13.8)	4.6 (5.8)	11.5 (13.8)
4.5		4.7 (6.0)	12.0 (14.7)	4.7 (6.1)	12.1 (14.7)
5.0		4.7 (6.3)	12.4 (15.4)	4.7 (6.3)	12.5 (15.4)
5.5		4.6 (6.4)	12.8 (16.1)	4.6 (6.5)	12.9 (16.1)
6.0		4.5 (6.5)	13.0 (16.6)	4.5 (6.6)	13.1 (16.7)
6.5		4.3 (6.6)	13.1 (17.1)	4.1 (6.7)	13.3 (17.2)
7.0		3.9 (6.6)	13.2 (17.5)	3.6 (6.7)	13.3 (17.7)
7.5		2.9 (6.6)	13.1 (17.9)	2.6 (6.6)	13.1 (18.0)
2.5	Ceiling mounting	3.4 (3.4)	7.2 (8.4)	3.5 (4.5)	7.4 (8.2)
3.0	Room illumination	3.4 (4.4)	8.2 (9.4)	3.5 (4.5)	8.2 (9.4)
3.5		3.4 (4.4)	9.0 (10.4)	4.5 (4.5)	9.0 (10.2)
4.0		3.4 (4.4)	9.8 (11.4)	4.5 (5.5)	9.6 (11.2)
4.5		3.4 (4.4)	10.4 (12.2)	4.5 (5.5)	10.2 (12.0)
5.0		3.4 (4.4)	11.0 (13.0)	4.5 (5.5)	10.8 (12.8)
5.5		3.4 (4.4)	11.4 (13.6)	4.5 (6.5)	11.2 (13.6)
6.0		3.4 (5.4)	11.8 (14.2)	4.5 (5.5)	11.6 (14.2)
6.5		3.4 (5.4)	12.2 (14.8)	3.5 (5.5)	12.0 (14.8)
7.0		3.0 (5.4)	12.4 (15.4)	2.9 (5.5)	12.4 (15.2)
7.5		2.0 (5.4)	12.6 (15.8)	1.9 (5.5)	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	4.2 (4.9)	9.7 (11.0)	4.2 (4.9)	9.7 (11.1)
3.0	Escape route centre	4.6 (5.4)	10.8 (12.3)	4.6 (5.4)	10.8 (12.5)
3.5		4.8 (5.9)	11.7 (13.6)	4.9 (5.9)	11.7 (13.7)
4.0		5.1 (6.3)	12.5 (14.7)	5.1 (6.3)	12.5 (14.7)
4.5		5.2 (6.6)	13.1 (15.7)	5.3 (6.6)	13.1 (15.7)
5.0		5.3 (6.9)	13.7 (16.6)	5.4 (6.9)	13.7 (16.6)
5.5		5.4 (7.1)	14.1 (17.4)	5.4 (7.1)	14.2 (17.4)
6.0		5.4 (7.3)	14.5 (18.1)	5.4 (7.3)	14.6 (18.1)
6.5		5.3 (7.4)	14.8 (18.7)	5.3 (7.5)	14.9 (18.8)
7.0		5.2 (7.5)	15.0 (19.2)	5.1 (7.6)	15.1 (19.3)
7.5		4.9 (7.6)	15.1 (19.7)	4.7 (7.7)	15.3 (19.8)
8.0		4.5 (7.6)	15.2 (20.1)	4.2 (7.7)	15.3 (20.3)
8.5		3.7 (7.6)	15.1 (20.5)	3.3 (7.6)	15.2 (20.7)
2.5	Ceiling mounting	3.4 (3.4)	7.6 (8.8)	3.5 (4.5)	7.8 (8.6)
3.0	Room illumination	3.4 (4.4)	8.8 (9.8)	4.5 (4.5)	8.6 (9.8)
3.5		3.4 (4.4)	9.6 (11.0)	4.5 (5.5)	9.6 (10.8)
4.0		4.4 (4.4)	10.4 (12.0)	4.5 (5.5)	10.4 (11.8)
4.5		4.4 (5.4)	11.2 (12.8)	4.5 (5.5)	11.0 (12.8)
5.0		4.4 (5.4)	11.8 (13.8)	4.5 (5.5)	11.6 (13.6)
5.5		4.4 (5.4)	12.4 (14.4)	4.5 (6.5)	12.2 (14.4)
6.0		4.4 (5.4)	12.8 (15.2)	4.5 (6.5)	12.8 (15.2)
6.5		4.4 (5.4)	13.2 (16.0)	4.5 (6.5)	13.2 (15.8)
7.0		4.4 (5.4)	13.6 (16.6)	4.5 (6.5)	13.6 (16.4)
7.5		3.4 (5.4)	14.0 (17.2)	4.5 (6.5)	13.8 (17.0)
8.0		3.4 (5.4)	14.2 (17.6)	3.5 (6.5)	14.2 (17.6)
8.5		2.4 (5.4)	14.4 (18.2)	3.5 (6.5)	14.6 (18.0)

# 30011, 31011, 31011 T CG-S

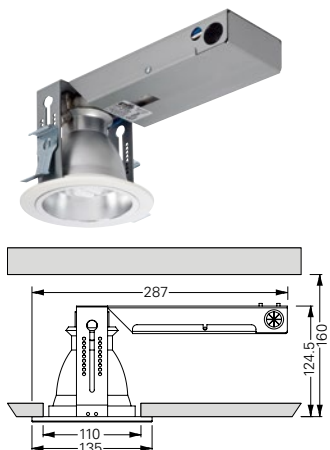
Safety luminaire recessed ceiling mounting



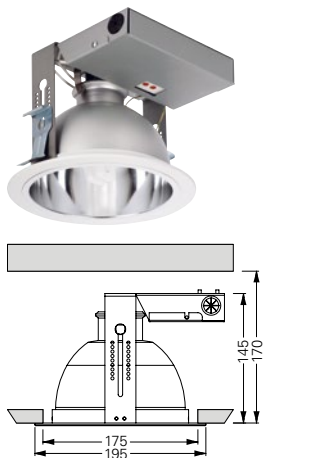
## 30011, 31011, 31011 T CG-S

- Safety luminaire for recessed ceiling mounting
- Enclosure made of sheet steel with mounting clips for clamping range 0-33 mm
- With polished aluminium reflector available for extremely wide light distribution or narrow beam distribution
- 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

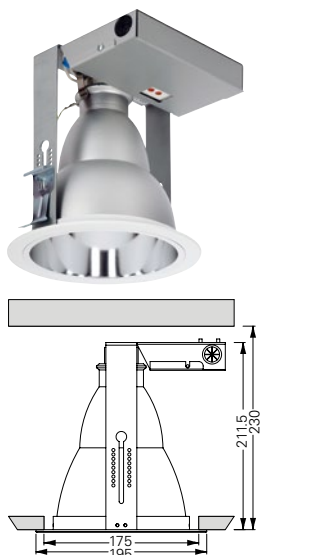
30011 CG-S



31011 CG-S



31011 T CG-S



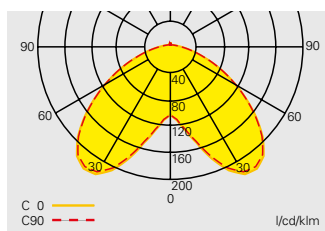
Luminous flux $\Phi_E/\Phi_N$ at the end of rated operating time	75 %
Housing material	Sheet steel
Weight	0.8 kg (30011 CG-S) 0.9 kg (31011 CG-S) 1.0 kg (31011 T CG-S)
Housing colour	White, matt RAL 9016
Type of mounting	Recessed ceiling mounting
Connection terminals	Loop terminals 3 x 2.5 mm <sup>2</sup>
Connection voltage	220 - 240 V, 50/60 Hz 176 V - 275 V DC
Current consumption - battery operation (220 V)	TC-DEL 10 W / 13 W 35/50 mA
Power consumption mains operation	TC-DEL 10 W / 13 W 16/23 VA
Permissible ambient temperature	-10 °C to +40 °C
Light source	TC-DEL 10 W/600 lm bei 31011 T CG-S auch TC-DEL 13 W/900 lm

## Ordering details

Type	Scope of supply	Order No.
30011 CG-S	Luminaire with CG-S (CEWA GUARD) monitoring, with 20-digit address switch, with wide light distribution for extended spacing, diameter 135 mm, without light source	40071352260
31011 CG-S	Luminaire with CG-S (CEWA GUARD) monitoring, with 20-digit address switch, with extremely wide light distribution for extended spacing, diameter 195 mm, without light source	40071352261
31011 T CG-S	Luminaire with CG-S (CEWA GUARD) monitoring, with 20-digit address switch, with narrow beam light distribution for extended mounting height, diameter 195 mm, without light source	40071352323

### Planning help for 30011 CG-S for E = 1.0 lx (0.5 lx)

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

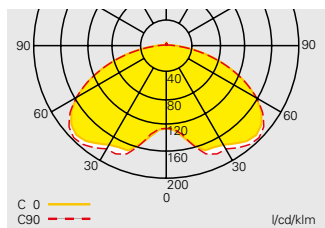


Light distribution curve  
30011 CG-S mit TC-DEL 10 W

Mounting height [m]	Types of mounting	L1	L2	L3	L4
2.5	Ceiling mounting	3.9 (4.7)	9.4 (11.2)	3.9 (4.7)	9.4 (11.2)
3.0	Escape route centre	4.3 (5.2)	10.4 (12.4)	4.3 (5.2)	10.4 (12.4)
4.0		4.7 (5.9)	11.8 (14.4)	4.7 (5.9)	11.8 (14.4)
5.0		5.0 (6.4)	12.8 (15.8)	5.0 (6.4)	12.8 (15.8)
6.0		5.0 (6.8)	13.6 (17.2)	5.0 (6.8)	13.6 (17.2)
3.0	Ceiling mounting	3.4 (4.4)	8.4 (10.0)	3.4 (4.4)	8.4 (10.0)
4.0	Room illumination	3.4 (5.4)	9.8 (11.6)	3.4 (5.4)	9.8 (11.6)
5.0		3.4 (5.4)	10.8 (13.2)	3.4 (5.4)	10.8 (13.2)
6.0		3.9 (5.4)	11.8 (14.4)	3.9 (5.4)	11.8 (14.4)
7.0		0.7 (5.4)	12.4 (15.4)	0.7 (5.4)	12.4 (15.4)

### Planning help for 31011 CG-S for E = 1.0 lx (0.5 lx)

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

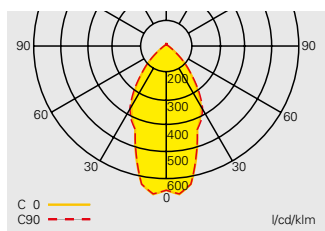


Light distribution curve  
31011 CG-S mit TC-DEL 10 W

Mounting height [m]	Types of mounting	L1	L2	L3	L4
2.5	Ceiling mounting	4.4 (5.4)	10.8 (13.0)	4.4 (5.4)	10.8 (13.0)
3.0	Escape route centre	4.7 (5.9)	11.6 (14.2)	4.7 (5.9)	11.6 (14.2)
4.0		5.1 (6.6)	13.0 (16.2)	5.1 (6.6)	13.0 (16.2)
5.0		5.1 (7.0)	14.0 (17.8)	5.1 (7.0)	14.0 (17.8)
6.0		4.6 (7.2)	14.4 (18.8)	4.6 (7.2)	14.4 (18.8)
7.0		3.3 (7.2)	14.2 (19.6)	3.3 (7.2)	14.2 (19.6)
3.0	Ceiling mounting	3.4 (4.4)	10.0 (12.0)	3.4 (4.4)	10.0 (12.0)
4.0	Room illumination	4.0 (5.4)	11.4 (14.0)	4.0 (5.4)	11.4 (14.0)
5.0		4.0 (5.4)	12.4 (15.4)	4.0 (5.4)	12.4 (15.4)
6.0		3.4 (5.4)	13.2 (16.6)	3.4 (5.4)	13.2 (16.6)
7.0		0.7 (5.4)	13.8 (17.6)	0.7 (5.4)	13.8 (17.6)

### Planning help for 31011 T CG-S for E = 1.0 lx (0.5 lx)

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

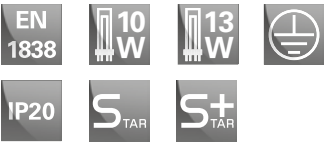


Light distribution curve  
31011 T CG-S mit TC-DEL 13 W

Mounting height [m]	Types of mounting	L1	L2	L3	L4
5.0	Ceiling mounting	4.8 (5.4)	10.8 (11.8)	4.8 (5.4)	10.8 (11.8)
7.0	Escape route centre	5.6 (6.7)	13.4 (15.2)	5.6 (6.7)	13.4 (15.2)
9.0		6.1 (7.6)	15.2 (18.0)	6.1 (7.6)	15.2 (18.0)
11.0		6.2 (8.2)	16.4 (20.2)	6.2 (8.2)	16.4 (20.2)
13.0		5.5 (8.5)	17.0 (21.6)	5.5 (8.5)	17.0 (21.6)
15.0		4.7 (8.6)	17.2 (23.0)	4.7 (8.6)	17.2 (23.0)
5.0	Ceiling mounting	3.4 (4.4)	8.2 ( 8.8)	3.4 (4.4)	8.2 ( 8.8)
7.0	Room illumination	4.4 (5.4)	10.6 (11.6)	4.4 (5.4)	10.6 (11.6)
9.0		4.4 (5.4)	12.6 (14.2)	4.4 (5.4)	12.6 (14.2)
11.0		4.4 (6.4)	14.0 (16.4)	4.4 (6.4)	14.0 (16.4)
13.0		4.4 (6.5)	15.0 (18.2)	4.4 (6.5)	15.0 (18.2)
15.0		3.4 (6.4)	16.0 (19.6)	3.4 (6.4)	16.0 (19.6)

# 31012, 31012 T CG-S

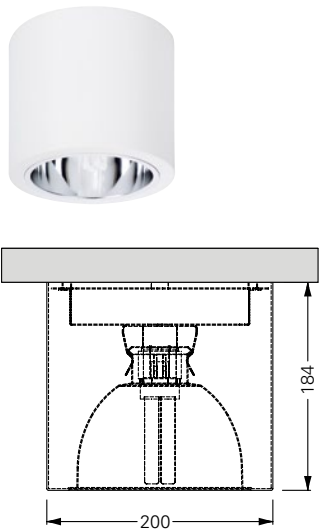
Safety luminaire recessed ceiling mounting



## 31012, 31012 T CG-S

- Safety luminaire for surface ceiling mounting
- Enclosure made of aluminium, matt varnished
- With polished aluminium reflector available for extremely wide light distribution or narrow beam distribution
- 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

31012 CG-S

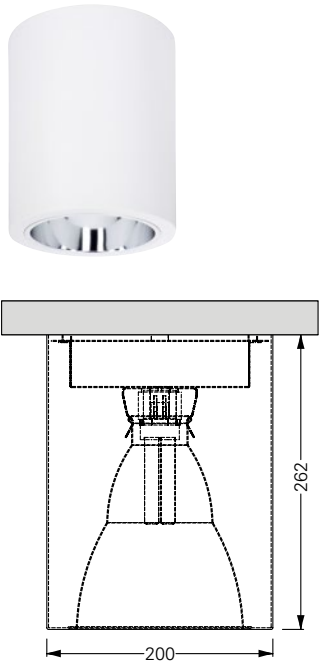


Luminous flux $\Phi_E/\Phi_N$ at the end of rated operating time	75 %
Housing material	Aluminium
Weight	1.1 kg
Housing colour	White, matt RAL 9016
Type of mounting	Surface ceiling mounting
Connection terminals	Loop terminals 3 x 2.5 mm <sup>2</sup>
Connection voltage	220 - 240 V, 50/60 Hz 176 V - 275 V DC
Current consumption - battery operation (220 V)	TC-DEL 10 W / 13 W 35/50 mA
Power consumption mains operation	TC-DEL 10 W / 13 W 16/23 VA
Permissible ambient temperature	-10 °C to +40 °C
Light source	TC-DEL 10 W/600 lm bei 31012 T CG-S auch TC-DEL 13 W/900 lm

## Ordering details

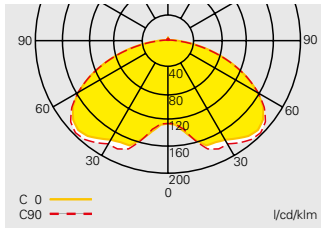
Type	Scope of supply	Order No.
31012 CG-S	Luminaire with CG-S (CEWA GUARD) monitoring, with 20-digit address switch, with extremely wide light distribution for extended spacing, diameter 200 mm, without light source	40071352262
31012 T CG-S	Luminaire with CG-S (CEWA GUARD) monitoring, with 20-digit address switch, with narrow beam light distribution for extended mounting height, diameter 200 mm, without light source	40071352263

31012 T CG-S



## Planning help for 31012 CG-S for E = 1.0 lx (0.5 lx)

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

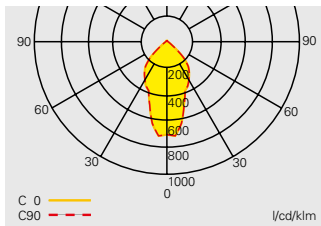


Light distribution curve  
31012 CG-S mit TC-DEL 10 W

Mounting height [m]	Types of mounting	L1	L2	L3	L4
2.5	Ceiling mounting	4.4 (5.4)	10.8 (13.0)	4.4 (5.4)	10.8 (13.0)
3.0	Escape route centre	4.7 (5.9)	11.6 (14.2)	4.7 (5.9)	11.6 (14.2)
4.0		5.1 (6.6)	13.0 (16.2)	5.1 (6.6)	13.0 (16.2)
5.0		5.1 (7.0)	14.0 (17.8)	5.1 (7.0)	14.0 (17.8)
6.0		4.6 (7.2)	14.4 (18.8)	4.6 (7.2)	14.4 (18.8)
7.0		3.3 (7.2)	14.2 (19.6)	3.3 (7.2)	14.2 (19.6)
3.0	Ceiling mounting	3.4 (4.4)	10.0 (12.0)	3.4 (4.4)	10.0 (12.0)
4.0	Room illumination	4.0 (5.4)	11.4 (14.0)	4.0 (5.4)	11.4 (14.0)
5.0		4.0 (5.4)	12.4 (15.4)	4.0 (5.4)	12.4 (15.4)
6.0		3.4 (5.4)	13.2 (16.6)	3.4 (5.4)	13.2 (16.6)
7.0		0.7 (5.4)	13.8 (17.6)	0.7 (5.4)	13.8 (17.6)

## Planning help for 31012 T CG-S mit 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

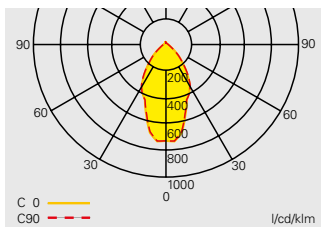


Light distribution curve  
31012 T CG-S mit TC-DEL 10 W

Mounting height [m]	Types of mounting	L1	L2	L3	L4
5.0	Ceiling mounting	4.5 (5.3)	10.6 (11.4)	4.5 (5.3)	10.6 (11.4)
7.0	Escape route centre	4.8 (6.6)	13.2 (15.0)	4.8 (6.6)	13.2 (15.0)
9.0		4.5 (6.9)	13.8 (17.8)	4.5 (6.9)	13.8 (17.8)
11.0		3.6 (6.7)	13.4 (19.0)	3.6 (6.7)	13.4 (19.0)
13.0		3.3 (6.2)	12.4 (19.4)	3.3 (6.2)	12.4 (19.4)
15.0		2.8 (5.2)	10.4 (19.2)	2.8 (5.2)	10.4 (19.2)
5.0	Ceiling mounting	3.4 (4.4)	8.0 ( 8.4)	3.4 (4.4)	8.0 ( 8.4)
7.0	Room illumination	3.4 (4.4)	10.4 (11.2)	3.4 (4.4)	10.4 (11.2)
9.0		3.4 (5.4)	12.2 (13.8)	3.4 (5.4)	12.2 (13.8)
11.0		3.4 (5.4)	13.0 (15.8)	3.4 (5.4)	13.0 (15.8)
13.0		2.4 (5.0)	13.4 (17.4)	2.4 (5.0)	13.4 (17.4)
15.0		2.1 (4.4)	12.8 (18.2)	2.1 (4.4)	12.8 (18.2)

## Planning help for 31012 T CG-S mit TC-DEL 13 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  
31012 T CG-S mit TC-DEL 13 W

Mounting height [m]	Types of mounting	L1	L2	L3	L4
5.0	Ceiling mounting	4.8 (5.4)	10.8 (11.8)	4.8 (5.4)	10.8 (11.8)
7.0	Escape route centre	5.6 (6.8)	13.6 (15.2)	5.6 (6.8)	13.6 (15.2)
9.0		6.1 (7.7)	15.4 (18.2)	6.1 (7.7)	15.4 (18.2)
11.0		6.2 (8.3)	16.6 (20.4)	6.2 (8.3)	16.6 (20.4)
13.0		5.6 (8.7)	17.4 (22.0)	5.6 (8.7)	17.4 (22.0)
15.0		4.7 (8.8)	17.6 (23.2)	4.7 (8.8)	17.6 (23.2)
5.0	Ceiling mounting	4.3 (4.4)	8.2 ( 8.8)	4.3 (4.4)	8.2 ( 8.8)
7.0	Room illumination	4.4 (5.4)	10.8 (11.6)	4.4 (5.4)	10.8 (11.6)
9.0		4.4 (5.4)	12.8 (14.2)	4.4 (5.4)	12.8 (14.2)
11.0		4.4 (6.4)	14.4 (16.6)	4.4 (6.4)	14.4 (16.6)
13.0		4.4 (6.4)	15.4 (18.4)	4.4 (6.4)	15.4 (18.4)
15.0		3.4 (6.4)	16.4 (20.0)	3.4 (6.4)	16.4 (20.0)

# 3301 CG-S

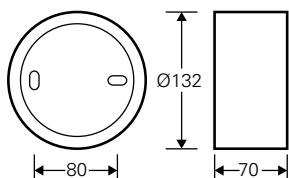
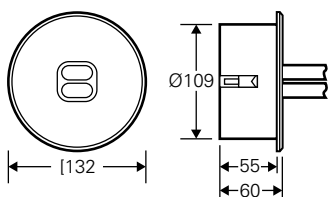
Safety luminaire and escape sign luminaire



3301 CG-S with ceiling-recessed housing



Escape sign cube for 3301 CG-S



Ceiling tube

## 3301 CG-S

- Safety luminaire for recessed or surface ceiling mounting
- Easy mounting and relamping
- Optional with exit cube incl. 3 pictogram covers and a blind 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 (mit RZ-Würfel)	20 m
Luminous flux $\Phi_E/\Phi_N$ 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 <sup>2</sup>
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

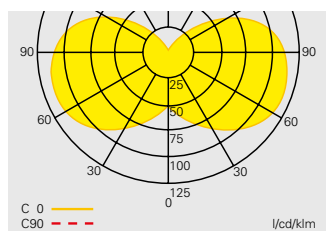
## Accessories

Type	Order No.
Cube	Escape sign cube (242 x 227 x 242) acc. to ISO 7010 40071354670
Ceiling tube AP <sup>1)</sup>	Additional enclosure for surface mounting 40071342916
Bezel metal RAL 9010	40071345779

<sup>1)</sup> not applicable for cube mounting

**Planning help for 3301 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 3301 CG-S

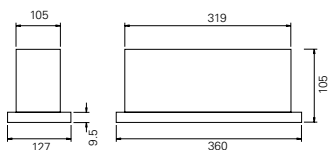
Mounting height [m]	Types of mounting	L1	L2	L3	L4
2.5	Ceiling mounting	4.0 (5.3)	10.6 (13.8)	4.8 (6.2)	12.4 (16.0)
3.0	Escape route centre	4.0 (5.5)	11.0 (14.4)	4.9 (6.5)	13.0 (16.8)
4.0		3.6 (5.6)	11.0 (15.4)	4.8 (6.8)	13.4 (18.0)
5.0		0.1 (5.4)	10.6 (15.6)	4.3 (6.9)	13.6 (18.8)
6.0		0.1 (4.8)	9.0 (15.6)	0.1 (6.7)	13.0 (19.2)
7.0		0.1 (0.1)	2.0 (14.8)	0.1 (6.1)	11.6 (19.0)
3.0	Ceiling mounting	3.4 (4.4)	10.2 (13.2)	3.4 (5.4)	11.8 (15.2)
4.0	Room illumination	2.9 (4.4)	10.8 (14.2)	3.4 (5.4)	12.8 (16.6)
5.0		0.7 (4.4)	11.0 (15.0)	3.4 (5.4)	13.2 (17.6)
6.0		0.7 (3.4)	7.0 (15.4)	0.7 (5.4)	13.4 (18.2)
7.0		0.7 (0.7)	7.6 (15.4)	0.7 (4.4)	9.4 (18.8)

# 8011 CG-S

Safety luminaire



8011 CG-S



## 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

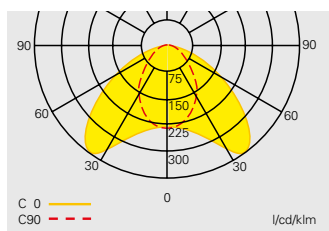
Luminous flux $\Phi_E/\Phi_N$ at the end of rated operating time	75 %
Housing material	Sheet steel
Weight incl. panel	1.5 kg
Housing colour	Bezel RAL 9010
Type of mounting	Recessed ceiling mounting
Ceiling cut-out (mm)	325 x 106
Max. recess depth (mm)	100
Connection terminals	Loop terminals 3 x 2.5 mm <sup>2</sup>
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	8 W/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

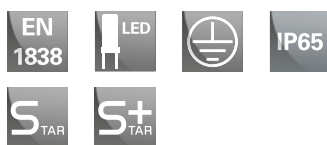
## Planning help for 8011 CG-S for E = 1.0 lx (0.5 lx)

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

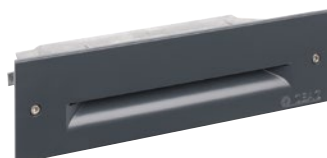


Light distribution curve 8011 CG-S

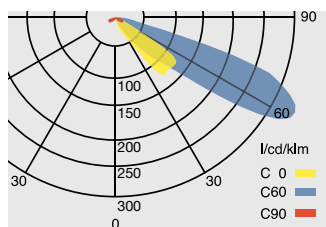
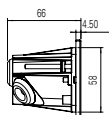
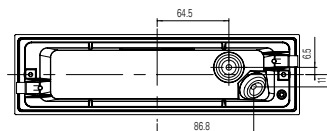
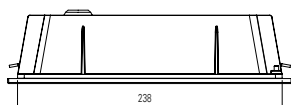
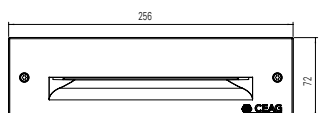
Mounting height [m]	Types of mounting	L1	L2	L3	L4
2.5	Ceiling mounting	2.7 (3.2)	6.4 ( 7.8)	4.2 (5.0)	10.0 (11.6)
3.0	Escape route centre	2.8 (3.5)	7.0 ( 8.4)	4.5 (5.5)	11.0 (13.0)
4.0		3.2 (3.9)	7.8 ( 9.8)	5.1 (6.3)	12.6 (15.2)
5.0		3.2 (4.4)	8.8 (10.8)	5.5 (6.9)	13.8 (16.8)
6.0		3.0 (4.6)	9.2 (11.4)	5.6 (7.3)	14.6 (18.2)
7.0		2.5 (4.5)	9.0 (12.4)	5.6 (7.7)	15.4 (19.4)
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)
3.0	Ceiling mounting	2.4 (3.4)	7.0 ( 8.2)	4.5 (4.5)	8.8 (10.6)
4.0	Room illumination	3.4 (3.4)	7.6 ( 9.2)	4.5 (5.5)	11.0 (12.8)
5.0		3.4 (4.4)	8.4 (10.6)	4.5 (5.5)	12.4 (14.2)
6.0		3.2 (3.4)	9.0 (11.4)	4.7 (7.5)	13.6 (15.8)
7.0		2.4 (4.4)	9.2 (12.2)	5.5 (6.5)	14.8 (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 $\Phi_E/\Phi_N$ 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 <sup>2</sup>
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).

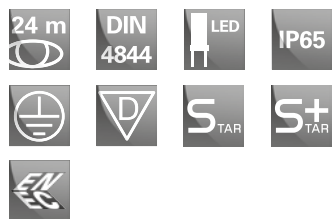
All luminaires in this chapter fulfill protection rating IP65, and with UV-resistant materials and an especially tough constructions offer excellent preconditions for use in outdoor areas and areas with high soiling.

### 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

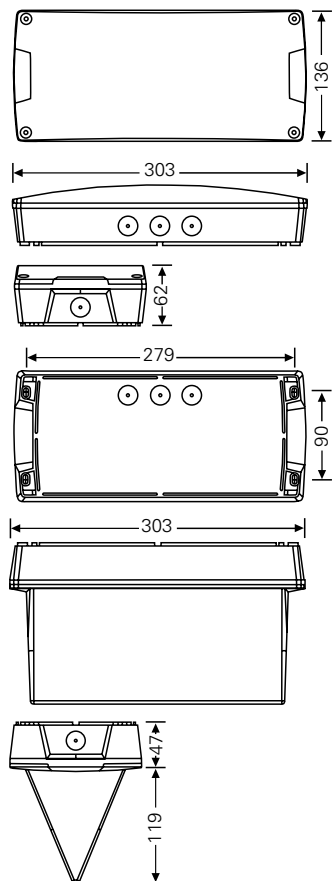


1

Atlantic LED S CG-S



Atlantic LED D CG-S



## 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
- Suitable for use in food processing industry acc. IFS
- 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 (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	24 m
Luminous flux $\Phi_E/\Phi_N$ 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 <sup>2</sup>
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.
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 R CG-S



Atlantic LED O CG-S



Outdoor Wall CG-S



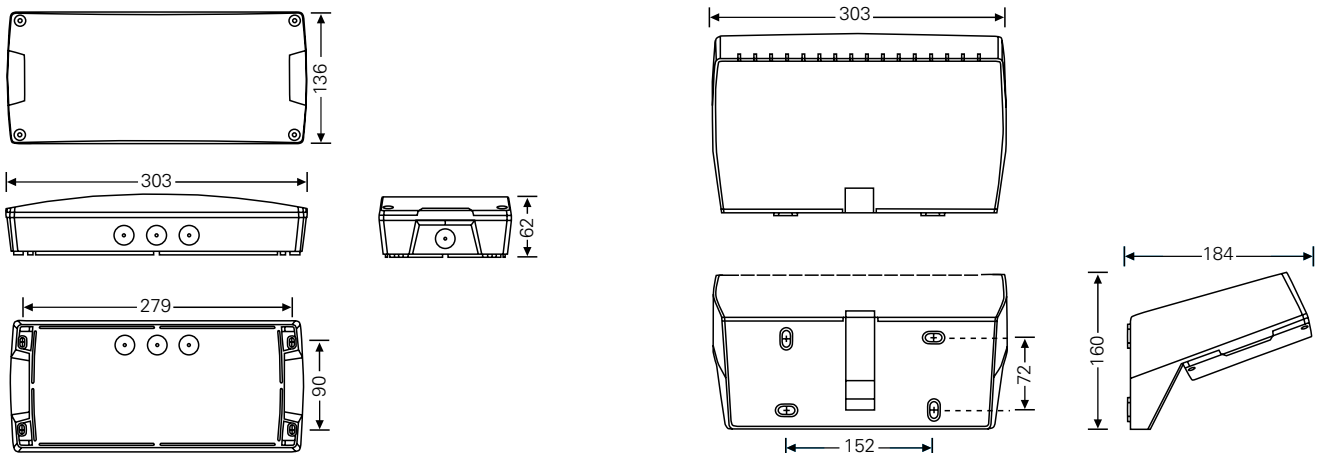
## Atlantic LED, Outdoor Wall CG-S

- 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
- Suitable for use in food processing industry acc. IFS (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 (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

Luminous flux	Atlantic LED R, Outdoor Wall 225 lm Atlantic LED O 220 lm
Luminous flux $\Phi_E/\Phi_N$ 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 <sup>2</sup>
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

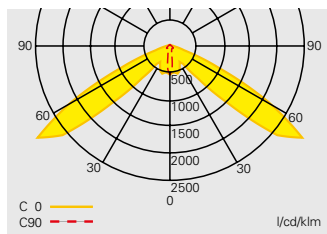


# Atlantic LED, Outdoor Wall CG-S

Safety luminaire

## Engineering help for Atlantic LED R – Asymmetric optics = 1.0 lx (0.5 lx)

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

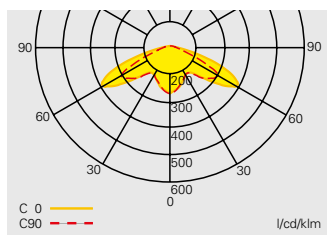


Atlantic R CG-S  
with asymmetric optics

Mounting height [m]	Types of mounting	L1	L2	L3	L4
2.5	Ceiling mounting	6.0 ( 6.5)	13.0 (14.2)	2.0 (3.1)	6.1 (7.4)
3.0	Escape route centre	6.8 ( 7.5)	15.0 (16.2)	1.7 (3.2)	6.4 (8.0)
3.5		7.6 ( 8.4)	16.8 (18.3)	1.5 (2.8)	5.6 (8.5)
4.0		8.3 ( 9.3)	18.5 (20.3)	1.4 (2.5)	4.9 (8.9)
4.5		9.0 (10.0)	20.0 (22.2)	1.3 (2.2)	4.3 (9.1)
5.0		9.7 (10.8)	21.5 (24.0)	1.3 (2.0)	3.8 (7.8)
5.5		10.3 (11.5)	23.0 (25.6)	1.3 (1.9)	3.6 (7.1)
6.0		10.8 (12.2)	24.4 (27.2)	1.3 (1.8)	3.3 (6.6)
6.5		3.6 (12.9)	25.8 (28.7)	1.2 (1.8)	3.3 (6.0)
7.0		3.5 (13.6)	27.1 (30.2)	1.2 (1.8)	3.3 (5.5)
7.5		3.4 (14.2)	28.3 (31.7)	1.2 (1.9)	3.2 (5.1)
8.0		3.3 (14.8)	29.5 (33.1)	1.1 (1.8)	3.1 (4.9)
8.5		3.1 (15.3)	30.6 (34.6)	1.0 (1.8)	3.0 (4.6)

## Engineering help for Atlantic LED O – Symmetric optics = 1.0 lx (0.5 lx)

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

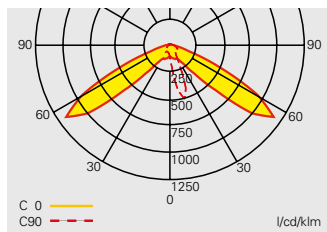


Atlantic O CG-S  
with symmetric optics

Mounting height [m]	Types of mounting	L1	L2	L3	L4
2.5	Ceiling mounting	4.2 (4.9)	9.8 (11.3)	3.8 (4.4)	8.8 (10.0)
3.0	Escape route centre	4.6 (5.5)	10.9 (12.5)	4.1 (4.9)	9.9 (11.3)
3.5		4.7 (5.9)	11.8 (13.8)	4.1 (5.4)	10.7 (12.3)
4.0		4.3 (6.3)	12.5 (14.9)	3.7 (5.8)	11.5 (13.4)
4.5		1.9 (6.6)	13.1 (15.9)	2.0 (5.8)	11.5 (14.3)
5.0		1.5 (6.6)	13.1 (16.8)	1.4 (5.7)	11.3 (15.2)
2.5	Ceiling mounting	3.4 (4.5)	8.2 ( 9.0)	3.5 (4.4)	8.2 (9.6)
3.0	Room illumination	4.5 (5.5)	9.0 (10.0)	3.4 (4.4)	9.2 (11.0)
3.5		4.5 (5.5)	9.8 (11.4)	3.4 (4.4)	10.0 (11.6)
4.0		4.5 (5.5)	10.6 (12.6)	3.4 (4.4)	10.6 (12.4)
4.5		2.5 (5.5)	11.2 (13.4)	1.4 (5.4)	11.4 (13.4)
5.0		1.4 (5.5)	12.4 (14.2)	1.5 (5.4)	11.4 (14.2)

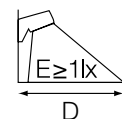
## Engineering help for Outdoor Wall – Asymmetric optics = 1.0 lx (0.5 lx)

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



Outdoor Wall CG-S  
with asymmetric optics

Mounting height [m]	Types of mounting	L1	L2	L1
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

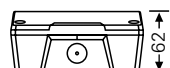
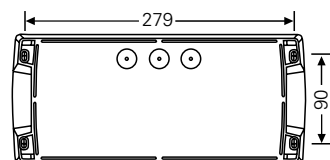
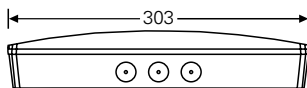




Atlantic LED R HB CG-S



Atlantic LED O HB CG-S



## 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
- Suitable for use in food processing industry acc. IFS
- 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 (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

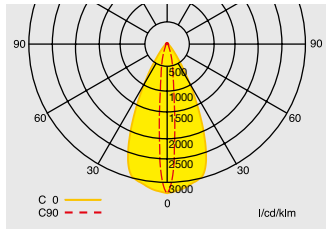
Luminous flux	340 lm
Luminous flux $\Phi_E/\Phi_N$ at the end of rated operating time	100 %
Housing material	Aluminium diecast, Polycarbonate (850 °C glow wire resistant)
Housing colour	Grey
Weight	1.4 kg
Type of mounting	Wall mounting
Connection terminals	3 x 2.5 mm <sup>2</sup>
Connection voltage	220 - 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	40071354990
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	40071354991

# Atlantic LED HB CG-S

Safety lighting with narrow-beam lenses

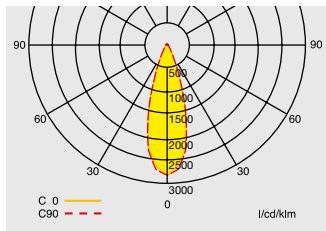


1 Atlantic R HB CG-S with asymmetric optics

## Engineering help for Atlantic LED R HB – Asymmetric optics = 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
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)

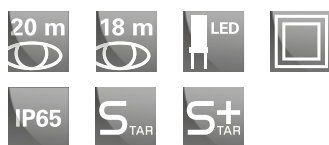


Atlantic O HB CG-S with symmetric optics

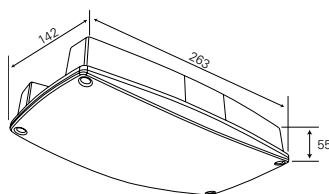
## Engineering help for Atlantic LED O HB – Symmetric optics = 1.0 lx (0.5 lx)

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

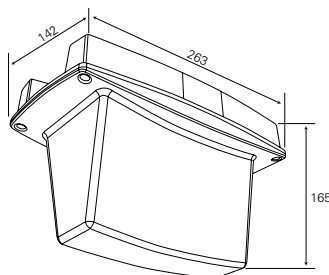
Mounting height [m]	Types of mounting	L1	L2	L3	L4
8	Ceiling mounting	3.9 (4.6)	9.2 (11.2)	3.9 (4.8)	9.6 (11.6)
10	Escape route centre	4.3 (5.2)	10.3 (12.3)	4.3 (5.3)	10.5 (12.8)
12		4.8 (5.7)	11.4 (13.5)	4.6 (5.6)	11.2 (13.9)
14		5.1 (6.2)	12.3 (14.5)	5.0 (6.0)	12.0 (14.8)
16		5.2 (6.5)	13.0 (15.5)	5.2 (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)	14.7 (18.6)
26		3.0 (7.4)	14.8 (19.6)	3.3 (7.4)	14.7 (19.3)
28		0.2 (7.4)	14.7 (20.1)	0.5 (7.3)	14.5 (19.8)
30		- (7.1)	14.2 (20.5)	- (7.0)	14.0 (20.3)
8	Ceiling mounting	3.4 (3.4)	7.8 ( 9.4)	3.5 (4.5)	8.0 (10.4)
10	Room illumination	3.4 (3.4)	8.6 (10.6)	3.5 (5.5)	8.6 (10.6)
12		3.4 (4.4)	9.4 (11.4)	4.5 (4.5)	9.2 (11.4)
14		3.4 (4.4)	9.6 (12.2)	4.5 (5.5)	10.4 (12.0)
16		3.4 (4.4)	9.6 (12.8)	5.5 (5.5)	11.8 (12.8)
18		4.4 (5.4)	10.0 (12.4)	4.5 (5.5)	12.6 (14.8)
20		3.4 (5.4)	10.8 (12.8)	5.5 (5.5)	13.0 (15.8)
22		3.4 (5.5)	11.2 (13.8)	4.5 (5.4)	13.6 (16.0)
24		3.4 (5.4)	12.0 (14.8)	4.5 (6.5)	13.8 (16.2)
26		2.4 (5.4)	12.6 (15.2)	3.5 (6.5)	14.0 (17.0)
28		0.6 (5.4)	12.8 (15.8)	0.9 (6.5)	14.6 (17.6)
30		0.7 (5.4)	13.8 (16.0)	0.7 (5.5)	14.0 (18.4)



i-P65 S CG-S



i-P65 D CG-S

**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
- Low operating cost due to low power consumption
- 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 expenditures by STAR technology
- Freely programmable mixed operation of the switching modes per luminaire in one circuit

Viewing distance	20 m one-sided / 18 m double-sided
Luminous flux $\Phi_E/\Phi_N$ 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 <sup>2</sup>
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

**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

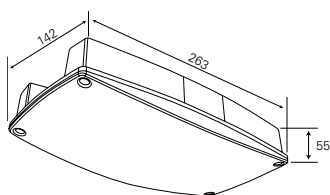
Safety luminaire



1 i-P65 E CG-S



i-P65 O CG-S



## 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 (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

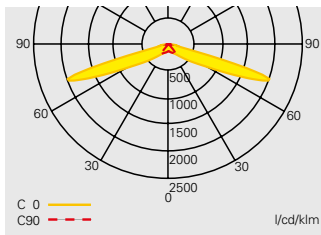
Luminous flux	225 lm
Luminous flux $\Phi_E/\Phi_N$ at the end of rated operating time	100 %
Housing material	Polycarbonate
Housing colour	Light grey
Weight	0.54 kg
Type of mounting	Ceiling mounting
Connection terminals	3 x 2.5 mm <sup>2</sup>
Connection voltage	220 - 240 V AC, 50/60 Hz 176 - 275 V DC
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

### Engineering 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

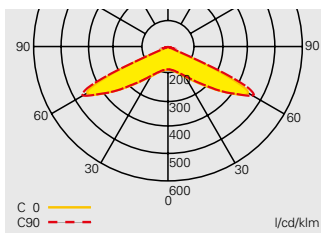


i-P65 E CG-S  
with asymmetric optics

Mounting height [m]	Types of mounting	L1	L2	L3	L4
2.5	Ceiling mounting	7.9 ( 8.5)	16.8 (17.9)	2.2 (2.4)	4.6 ( 4.8)
3.0	Escape route centre	8.9 ( 9.8)	19.6 (20.8)	2.6 (2.7)	5.3 ( 5.6)
3.5		9.7 (11.0)	22.0 (23.7)	2.9 (3.0)	6.1 ( 6.5)
4.0		9.9 (12.2)	24.2 (26.4)	3.0 (3.4)	6.7 ( 7.2)
4.5		6.8 (13.1)	26.1 (29.0)	3.1 (3.8)	7.5 ( 8.0)
5.0		– (13.8)	– (31.4)	– (4.1)	– ( 8.6)
2.5	Ceiling mounting	7.0 ( 7.8)	14.4 (15.8)	1.5 (2.0)	4.1 ( 4.3)
3.0	Room illumination	7.9 ( 8.1)	16.4 (18.4)	1.4 (2.2)	4.6 ( 4.9)
3.5		5.1 ( 8.9)	17.7 (20.4)	2.0 (2.3)	5.3 ( 5.6)
4.0		5.1 ( 9.8)	18.8 (22.3)	2.0 (2.2)	5.8 ( 6.3)
4.5		4.1 ( 9.9)	19.7 (23.7)	2.0 (2.3)	6.1 ( 7.0)
5.0		– ( 9.9)	– (25.0)	– (2.2)	– ( 7.7)

### Engineering 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	4.5 (5.0)	10.1 (10.8)	4.6 (5.1)	10.2 (10.6)
3.0	Escape route centre	4.6 (5.7)	11.4 (12.5)	4.7 (5.9)	11.7 (12.5)
3.5		3.8 (6.3)	12.5 (14.2)	3.9 (6.4)	12.7 (14.3)
4.0		– (6.5)	– (15.6)	– (6.7)	– (15.8)
2.5	Ceiling mounting	4.6 (6.0)	9.6 (10.4)	4.6 (5.0)	9.8 (10.2)
3.0	Room illumination	5.1 (5.7)	10.9 (12.0)	4.1 (5.7)	11.3 (12.0)
3.5		3.2 (6.9)	12.0 (13.7)	3.1 (5.9)	12.2 (13.7)
4.0		0.6 (6.5)	8.3 (15.0)	0.6 (6.6)	8.3 (15.2)

# Alfalux LED CG-S

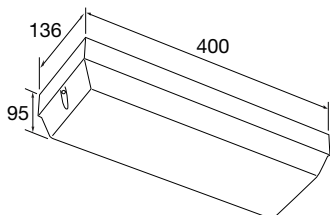
Safety lighting with narrow-beam lenses



Alfalux LED E CG-S



Alfalux LED O CG-S



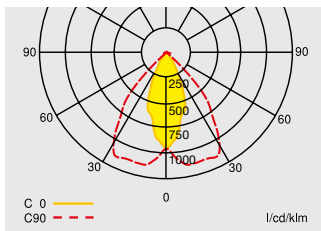
## Alfalux LED CG-S

- 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 (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

Luminous flux	Alfalux LED E 480 lm Alfalux LED O 660 lm
Luminous flux $\Phi_E/\Phi_N$ 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 <sup>2</sup>
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



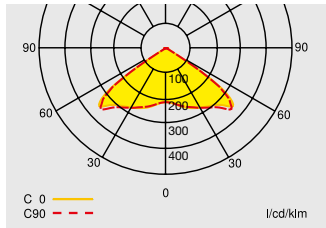
Alfalux LED E CG-S  
with asymmetric optics

## Planning help for Alfalux LED O 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 ( 9.8)	9.1 (21.0)	3.1 (5.8)	6.5 (14.0)
5	Escape route centre	5.3 (10.5)	11.1 (22.7)	3.5 (6.1)	7.9 (14.5)
6		6.1 (11.2)	12.9 (24.4)	3.8 (6.4)	9.1 (15.1)
7		6.9 (11.7)	14.8 (26.0)	4.1 (6.6)	9.9 (15.7)
8		7.6 (12.2)	16.5 (27.5)	4.3 (6.7)	10.4 (16.4)
9		8.2 (12.5)	18.1 (28.9)	4.6 (6.8)	11.0 (16.9)
10		8.7 (12.7)	19.6 (30.3)	4.8 (6.8)	11.6 (17.5)
11		8.9 (12.8)	21.0 (31.5)	4.8 (6.9)	12.2 (17.9)
12		9.1 (12.9)	22.3 (32.7)	4.9 (6.8)	12.7 (18.4)
13		9.2 (13.1)	23.4 (33.6)	4.8 (6.7)	13.1 (18.7)
14		9.3 (13.2)	24.3 (34.5)	4.6 (6.4)	13.4 (18.9)
15		9.4 ( 3.4)	25.0 ( 6.8)	3.6 (3.5)	13.5 ( 6.2)
16		9.4 ( 3.4)	25.3 ( 9.0)	3.1 (4.5)	13.6 ( 6.8)
17		9.2 ( 4.4)	25.5 ( 9.8)	2.7 (4.5)	13.7 ( 8.4)
18		8.5 ( 5.4)	25.8 (12.0)	1.9 (4.5)	13.6 ( 8.8)
19		6.7 ( 6.4)	26.1 (13.0)	0.4 (4.5)	13.4 (10.0)
20		– ( 5.4)	26.4 (14.8)	– (5.5)	12.7 (10.4)
4	Ceiling mounting	3.4 ( 3.4)	6.8 ( 7.0)	3.5 (4.5)	6.2 ( 6.8)
5	Room illumination	3.4 ( 4.4)	9.0 ( 8.6)	4.5 (4.5)	6.8 ( 8.0)
6		4.4 ( 4.4)	9.8 (10.4)	4.5 (5.5)	8.4 ( 9.0)
7		5.4 ( 5.4)	12.0 (11.8)	4.5 (5.5)	8.8 (10.2)
8		6.4 ( 6.4)	13.0 (13.2)	4.5 (5.5)	10.0 (11.4)
9		5.4 ( 7.4)	14.8 (15.2)	5.5 (5.5)	10.4 (12.0)
10		6.4 ( 6.4)	15.8 (16.6)	5.5 (6.5)	11.2 (13.0)
11		6.4 ( 7.4)	17.4 (18.4)	5.5 (6.5)	11.4 (13.6)
12		7.4 ( 8.4)	17.6 (20.0)	5.5 (6.5)	12.6 (14.2)
13		7.4 ( 7.4)	19.2 (21.2)	5.5 (7.5)	12.8 (15.0)
14		7.4 ( 8.4)	20.4 (23.0)	4.5 (7.5)	13.2 (15.2)
15		7.4 ( 8.4)	21.6 (23.8)	4.5 (7.5)	13.4 (16.0)
16		8.4 ( 9.4)	22.8 (24.2)	3.5 (7.5)	13.6 (17.0)
17		6.4 ( 9.4)	24.2 (25.0)	3.5 (7.5)	13.6 (17.8)
18		6.4 ( 9.4)	25.4 (26.6)	2.5 (7.5)	13.6 (18.0)
19		6.8 (10.4)	26.6 (27.6)	0.7 (6.5)	13.4 (18.6)
20		0.7 (10.4)	27.4 (29.0)	0.7 (6.5)	12.6 (18.8)

# Alfalux LED CG-S

Safety lighting with narrow-beam lenses



1 Alfalux LED O CG-S with symmetric optics

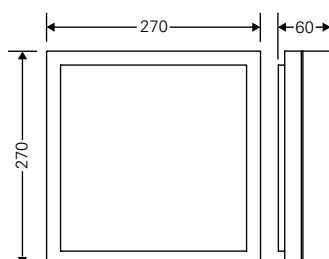
## Planning help for Alfalux LED O CG-S – Symmetric optics for E = 1.0 lx (0.5 lx)

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

Mounting height [m]	Types of mounting	L1	L2	L3	L4
3	Ceiling mounting	4.6 ( 4.8)	9.6 ( 9.9)	4.6 ( 4.8)	9.5 ( 9.8)
4	Escape route centre	6.0 ( 6.3)	12.5 (12.9)	5.9 ( 6.2)	12.4 (12.7)
5		7.0 ( 7.6)	15.1 (15.8)	7.1 ( 7.6)	15.1 (15.7)
6		7.8 ( 8.8)	17.6 (18.6)	8.0 ( 8.8)	17.6 (18.4)
7		8.3 ( 9.9)	19.7 (21.2)	8.5 (10.0)	19.9 (21.1)
8		8.3 (10.7)	21.4 (23.7)	7.7 (10.9)	21.7 (23.7)
9		6.9 (11.4)	22.7 (26.0)	6.7 (11.6)	23.1 (26.1)
10		5.4 (11.7)	23.4 (28.1)	5.5 (12.0)	23.9 (28.3)
11		– (11.9)	23.7 (29.9)	– (11.4)	22.7 (30.2)
12		– (10.6)	21.2 (31.2)	– (10.2)	20.3 (31.8)
3	Ceiling mounting	4.4 ( 4.4)	8.4 ( 8.8)	5.5 ( 5.5)	8.6 ( 8.8)
4	Room illumination	5.4 ( 5.4)	11.2 (11.6)	6.5 ( 6.5)	11.0 (11.4)
5		6.4 ( 7.0)	13.6 (14.2)	7.5 ( 7.0)	13.6 (14.0)
6		7.4 ( 8.1)	16.0 (16.6)	8.5 ( 8.1)	16.0 (16.6)
7		8.2 ( 9.1)	18.4 (19.2)	8.2 ( 9.0)	18.2 (19.0)
8		8.3 (10.0)	20.4 (21.6)	8.0 (10.0)	20.4 (21.4)
9		5.4 (10.4)	22.6 (23.8)	6.5 (11.5)	22.4 (23.8)
10		4.5 (11.4)	23.2 (26.2)	4.4 (11.5)	23.8 (26.0)
11		0.7 (11.4)	24.0 (28.4)	0.7 (12.5)	17.4 (28.2)
12		0.7 ( 9.4)	15.8 (30.4)	0.7 (10.5)	15.6 (30.4)



83022 CG-S

**83022 CG-S**

- Quadratic safety and escape route luminaire 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 (IP67) and double terminal for through-wiring
- 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

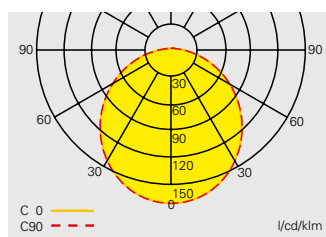
Luminous flux $\Phi_E/\Phi_N$ at the end of rated operating time	75 %
Housing material	Aluminium diecast, PC
Housing colour	White, sim. RAL 9010
Weight	2.2 kg
Type of mounting	Wall or ceiling mounting
Connection terminals	Clamp terminal 2.5 mm <sup>2</sup> , reverse-polarity protected
Connection voltage	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	TC-F 18W

**Ordering details**

Type	Order No.
Safety luminaire 83022 CG-S with CEWA GUARD monitoring and 20-digit address switch, without light source	40071352950
Legend-set for 83022 (1 x PL, PR, PU), acc.to ISO 7010	40071351924

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

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



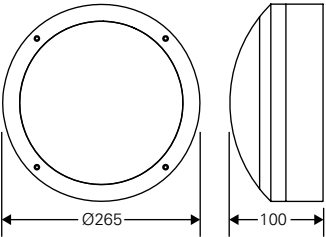
Mounting height [m]	Types of mounting	L1	L2	L3	L4
2.5	Ceiling mounting	4.1 (5.1)	10.1 (12.4)	4.1 (5.1)	10.2 (12.4)
3.0	Escape route centre	4.4 (5.5)	10.9 (13.4)	4.4 (5.5)	10.9 (13.4)
4.0		4.7 (6.1)	12.0 (15.0)	4.7 (6.1)	12.1 (15.1)
5.0		4.8 (6.4)	12.8 (16.3)	4.8 (6.5)	12.8 (16.4)
6.0		4.7 (6.7)	13.2 (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)
2.5	Ceiling mounting	3.4 (4.4)	8.8 (10.4)	3.5 (4.5)	8.6 (10.6)
3.0	Room illumination	3.4 (4.4)	9.4 (11.4)	4.5 (4.5)	9.4 (11.4)
4.0		3.4 (4.4)	10.6 (12.4)	4.5 (5.5)	10.6 (12.2)
5.0		3.4 (4.4)	11.6 (13.0)	4.5 (5.5)	11.4 (13.0)
6.0		3.4 (4.4)	12.2 (13.8)	4.5 (5.5)	12.2 (13.6)
7.0		3.4 (5.0)	12.8 (14.4)	4.5 (5.0)	12.6 (14.2)

# 84022 CG-S

Safety luminaire



84022 CG-S



## 84022 CG-S

- Round safety luminaire 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 (IP67) and double terminal for through-wiring
- 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

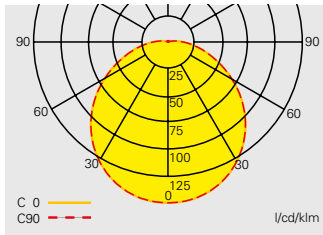
Luminous flux $\Phi_E/\Phi_N$ at the end of rated operating time	75 %
Housing material	Aluminium diecast, PC
Housing colour	White, sim. RAL 9010
Weight	1.7 kg
Type of mounting	Wall or ceiling mounting
Connection terminals	Clamp terminal 2.5 mm <sup>2</sup> , reverse-polarity protected
Connection voltage	220 - 240 V AC, 50/60 Hz 176 - 275 V DC
Current consumption - battery operation (220 V)	35 mA
Power consumption mains operation	16 VA
Permissible ambient temperature	-10 °C to +40 °C
Light source	TC-DEL 10 W

## Ordering details


Type	Order No.
Safety luminaire 84022 CG-S with CEWA GUARD monitoring and 20-digit address switch, without light source	40071352940

**Planning help for SL 84022 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	3.5 (4.4)	8.7 (10.8)	3.5 (4.4)	8.7 (10.8)
3.0	Escape route centre	3.6 (4.7)	9.3 (11.6)	3.6 (4.7)	9.3 (11.6)
4.0		3.7 (5.1)	10.0 (12.9)	3.7 (5.1)	10.0 (12.9)
5.0		3.6 (5.3)	10.4 (13.8)	3.6 (5.3)	10.4 (13.8)
6.0		3.2 (5.3)	10.3 (14.4)	3.2 (5.3)	10.3 (14.3)
7.0		2.3 (5.1)	9.9 (14.7)	2.3 (5.1)	9.9 (14.6)
2.0	Wall mounting	2.3 (3.1)	6.2 ( 8.0)	2.3 (3.1)	6.2 ( 8.0)
2.5		2.1 (3.1)	6.0 ( 8.1)	2.1 (3.1)	6.0 ( 8.1)
3.0		1.7 (2.9)	5.7 ( 4.2)	1.7 (2.9)	5.7 ( 4.2)
2.5	Ceiling mounting	2.9 (3.4)	7.6 ( 9.4)	2.9 (4.5)	7.6 ( 9.2)
3.0	Room illumination	3.0 (3.4)	8.2 (10.0)	3.0 (4.5)	8.0 (10.0)
4.0		3.4 (3.4)	9.0 (10.8)	3.5 (4.5)	9.0 (10.6)
5.0		3.0 (4.0)	9.6 (11.4)	2.9 (4.0)	9.6 (11.2)
6.0		2.4 (4.4)	10.2 (11.8)	3.5 (4.5)	10.0 (11.8)
7.0		1.4 (4.4)	10.4 (12.2)	2.5 (4.5)	10.2 (12.2)

A photograph of a large industrial facility, likely a refinery or chemical plant. The scene is filled with a complex network of pipes, valves, and machinery. The pipes are painted in various colors, including green, brown, and red. Several large blue storage tanks are visible in the background. The floor is a light-colored concrete. The lighting is provided by a series of long, rectangular, explosion-protected safety luminaires mounted on the ceiling. The text "Explosion protected safety luminaires and escape sign luminaires" is overlaid in the bottom right corner in a blue, sans-serif font.

Explosion protected  
safety luminaires  
and escape sign  
luminaires



## 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

# dKLK 23 CG-S

Explosion protected safety luminaire and escape sign luminaire



## dKLK 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

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 max. +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 mm² (rigid)
Connection terminals (Ex-d-Verschluss)	L, N, PE, max. 2.5 mm² terminals
Light source	Compact fluorescent lamp with integrated EVG, socket E27, power 5-8 W, suitable for DC-operation Brand: e.g. Philips Master PL-E
Weight	approx. 1.7 kg

## Ordering details

Type	Scope of supply	Order No.
dKLK 23 CG-S with eXLink	Luminaire with CG monitoring and 20-digit address switch, without light source, with eXLink	GHG8712001R0001
dKLK 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 dKLK 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
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)

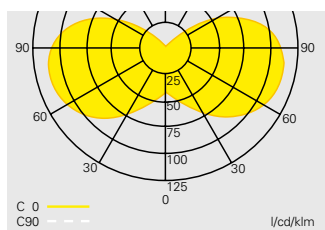
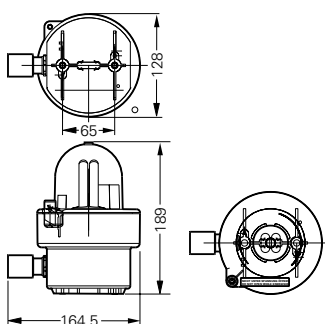
dKLK 23 CG-S with eXLink



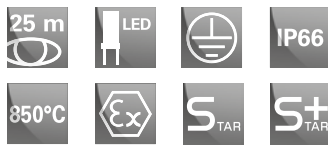
dKLK 23 CG-S



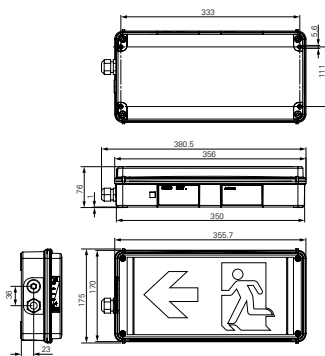
Escape sign cube for dKLK 23 CG-S



Light distribution curve  
dKLK 23 CG-S



EXIT CG-S



## 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

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
Viewing distance	25 m (gem. DIN EN 1838)
Housing material	Polycarbonate (850 °C glow wire resistant)
Housing colour	Grey, RAL 7035
Protective cover	Polycarbonate
Rated voltage EXIT CG-S admissible tolerances acc. to EN 60079-0	AC: 220 - 254 V, 50/60 Hz 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 <sup>2</sup>
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 CG-S

Explosion protected safety luminaire



## 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	Ex II 2G Ex de mb IIC T4 Gb Ex 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 <sup>2</sup> 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 <sup>1)</sup> 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

<sup>1)</sup> 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

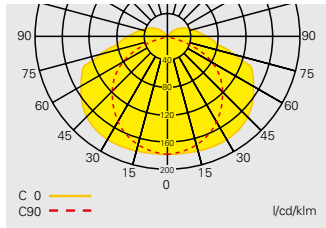
Type/ code	Corrosion protectiong	for pipes DIN	Outer Ø D (mm)	Qty. per light fitting	Order No.
Pipe clamp R12	hot galvanized	1 1/4"	38- 42	2	22480462000
Pipe clamp R14	CrNi	1 1/4"	38- 42	2	22480464000
Pipe clamp R22	hot galvanized	1 1/2"	47- 51	2	22480472000
Pipe clamp R24	CrNi	1 1/2"	47- 51	2	22480474000
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

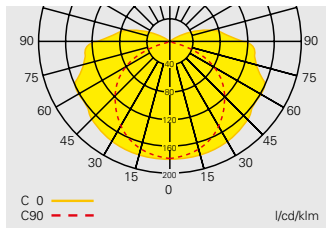


Light distribution curve  
eLLK 92018/18 CG-S

Mounting height [m]	Types of mounting	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

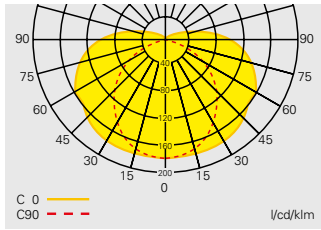


Light distribution curve  
eLLK 92036/36 CG-S

Mounting height [m]	Types of mounting	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

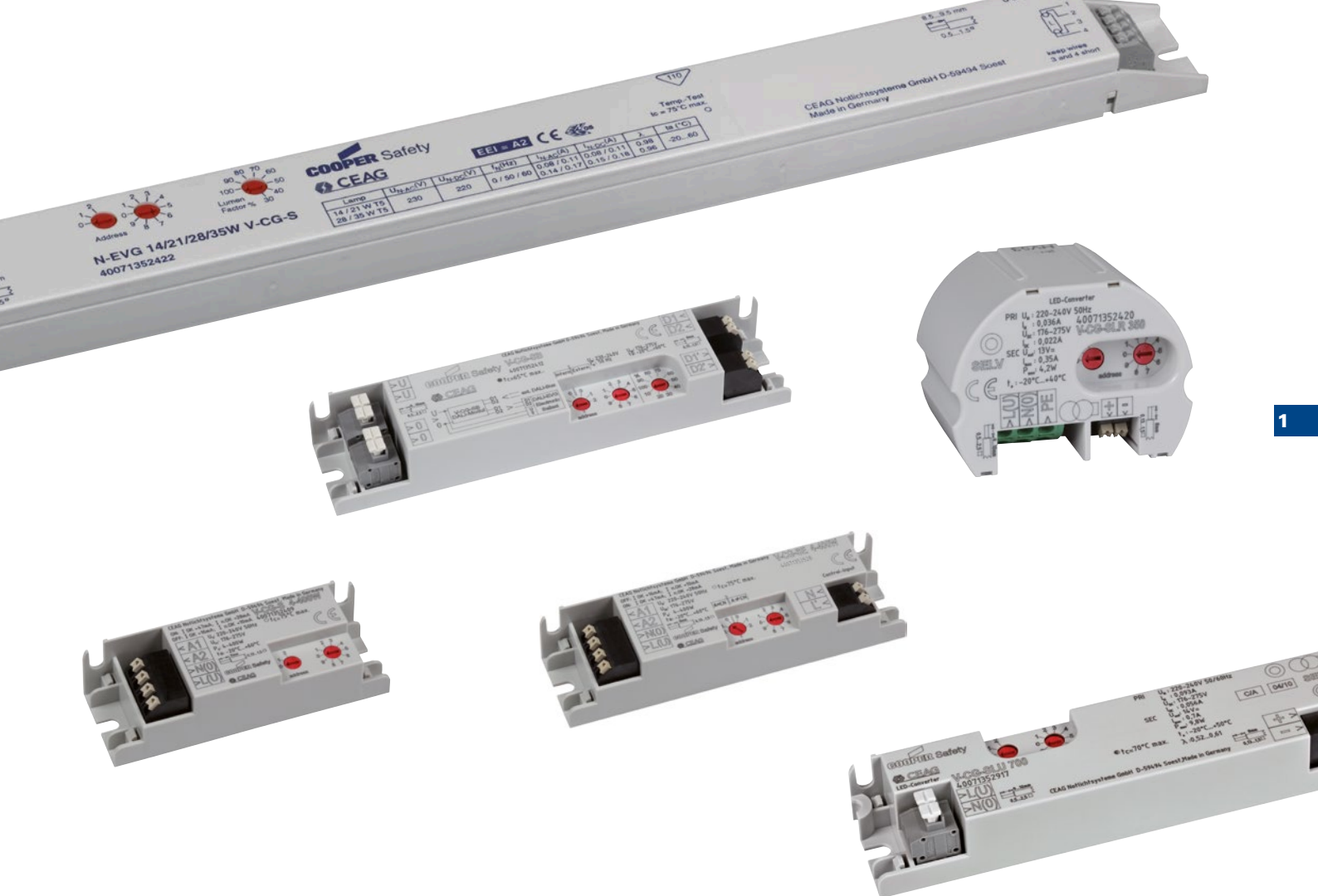


Light distribution curve  
eLLK 92058/58 CG-S

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.

## 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.



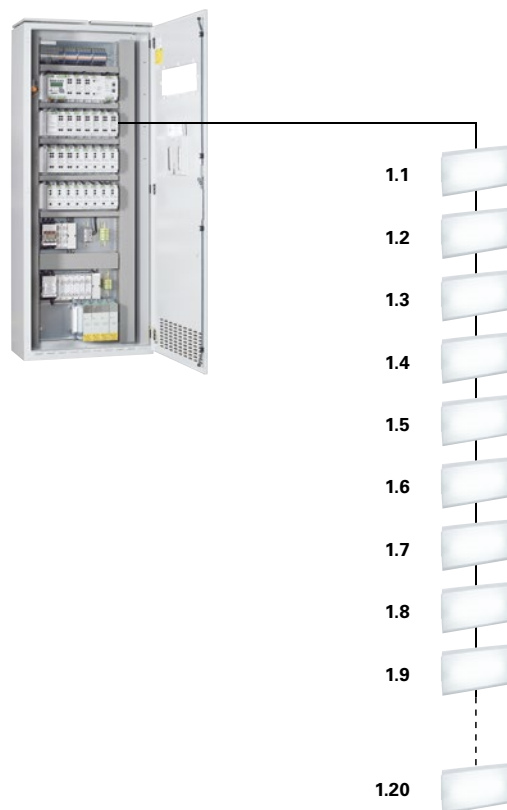
When an emergency lighting system is put into operation, it is in perfect condition. What, however, counts more, is its reliable functioning in case of emergency, regardless of whether this happens after 4 weeks or 5 years.

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 higher-level 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.

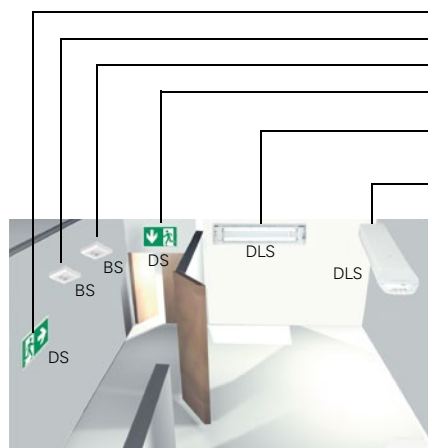
### S\*-Technologie



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**.

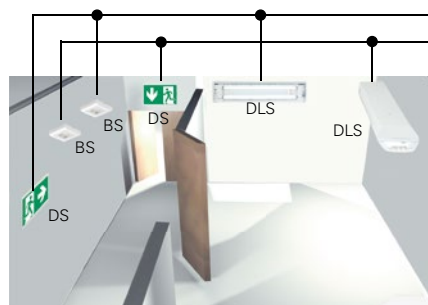
### Conventional Installation:

- 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

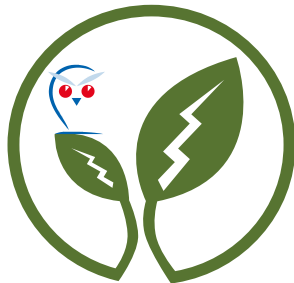


## Reduced battery capacity costs with settable luminous flux ratio.

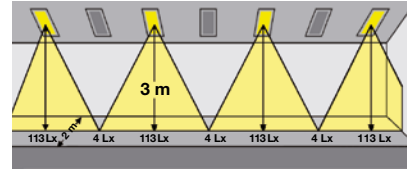
CEAG offers a wide range of special ballasts for emergency light for installation into existing light fittings. The ballasts include a monitoring module which signals the luminaire's current status to the central emergency lighting system.

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.

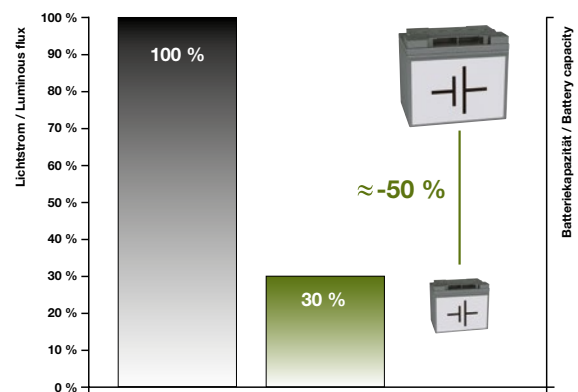
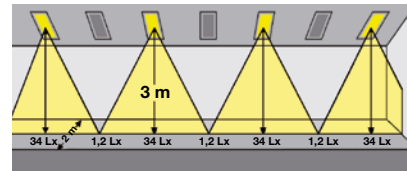
By the use of efficient electronic ballasts with automatically reduced luminous flux in battery operation, a considerable reduction of energy is achieved. This saves costs and adds to environmental protection since it provides equal safety with smaller batteries.



### 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



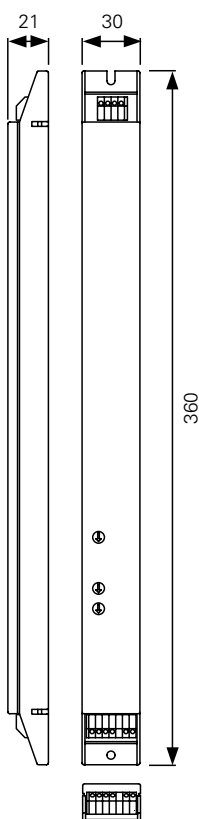
Rated voltage ranges	220 – 240V, 50/60 Hz / 176 – 275 V DC
Energy-Efficiency-Index	EEI = A2
Lamp start	< 1 s with optimum pre-heating
Standby power loss	≤ 1 W (230V / 50 Hz)
Lamp load	See table on next page
Maximum line length	1 m (ECG – lamp)
Type of mounting	To be mounted in luminaires with protection category I or II Attention: Functional earth necessary!
Degree of protection	IP20
Permissible temperature range	t <sub>a</sub> = -20 °C to +60 °C
Maximal permissible test point temperature	t <sub>c</sub> = 75 °C
Connection terminals	Plug in terminals 1.5 mm <sup>2</sup> / 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 $\Phi_E/\Phi_N$ 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



## N-EVG 54 W V-CG-S



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

Term						
Lamp cap	T5	T5	T5	T5	T5	T5
Lamp cap	G5	G5	G5	G5	G5	G5
Type N-EVG ... V-CG-S	14 / 21 / 28 / 35 W	14 / 21 / 28 / 35 W	14 / 21 / 28 / 35 W	14 / 21 / 28 / 35 W	24/39 W	24/39 W
Lamp load [W]	14	21	28	35	24	39
<b>Current consumption [A] at 220 V battery operation, setting (Luminous flux <math>\Phi_E/\Phi_N</math> in %)</b>						
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 $\lambda$	0.96	0.96	0.98	0.98	0.98	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					
Lamp cap	T5	T5	T5	T8	T8
Lamp cap	G5	G5	G5	G13	G13
Type N-EVG ... V-CG-S	49W	54W	80W	36W	58W
Lamp load [W]	49	54	80	36	58
<b>Current consumption [A] at 220 V battery operation, setting (Luminous flux <math>\Phi_E/\Phi_N</math> in %)</b>					
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 $\lambda$	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 CG-S, EVG 18V-CG-S, EVG 18C V-CG-S

Electronic ballasts



## EVG 13.3 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<sup>+</sup>-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



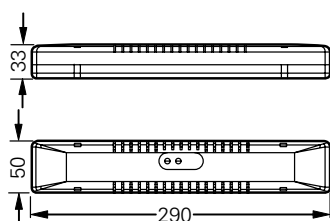
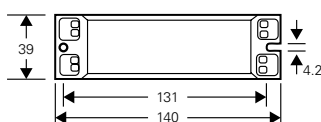
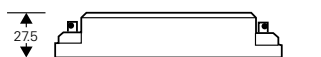
EVG 18C V-CG-S



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 (LCG- 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 <sup>2</sup> / 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 $\Phi_E/\Phi_N$ 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
Built-in module with EVG 13.3 V-CG-S and lamp socket 4W / G5	40071342851
Built-in module with EVG 13.3 V-CG-S and lamp socket 8W / G5	40071342852
Built-in module with EVG 13.3 V-CG-S and lamp socket 5-11W / 2G7	40071342691



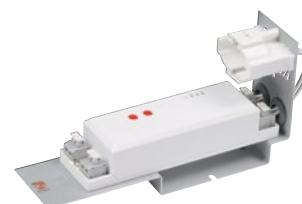
Housing with strain relief



Built-in module with EVG 13.3 CG-S  
and socket G5 for 4W T16  
Order No. 40071342851



Built-in module with EVG 13.3 CG-S  
and socket G5 for 8W T16  
Order No. 40071342852



Built-in module with EVG 13.3 CG-S  
and socket 2G7  
Order No. 40071342691

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] <sup>1</sup>	Power consumption in [VA]	Inrush current [A]	power factor $\lambda$
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
TC-TEL	G 24 q-2	18C V-CG-S	18	0.070	30	8	0.6
	GX 24 q-1	13.3 V-CG-S	13	0.050	23	3	0.6
TC-F	GX 24 q-2	18C V-CG-S	18	0.070	30	8	0.6
	G 13	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
		18 V-CG-S	18	0.070	30	8	0.6

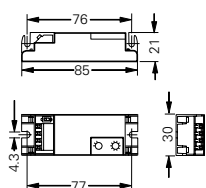
<sup>1</sup>) Luminous flux  $\Phi_E/\Phi_N = 75 \%$

# V-CG-S 4-400 W

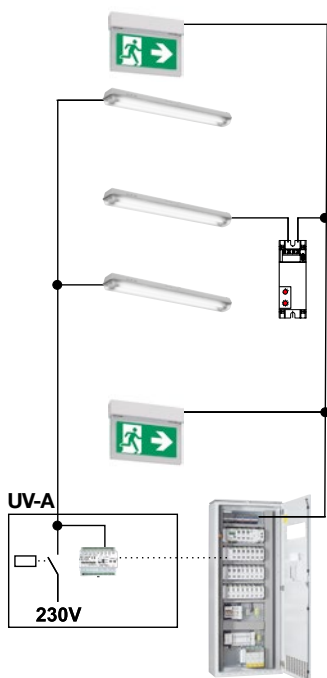
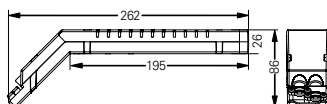
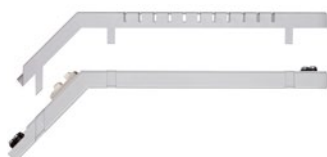
## Monitoring module



V-CG-S 4-400 W



Module housing



### 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 sideways 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 <sup>2</sup> / 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 <sub>OK</sub>	I <sub>n,OK*</sub>
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<sub>n,OK\*</sub>.

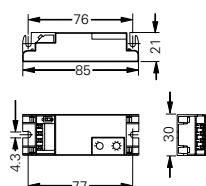
For the use of standard control gears make sure that a correct function of the control gear is guaranteed as well in the voltage range of 186 to 275 V. We recommend to obtain a corresponding certificate of the manufacturer.

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

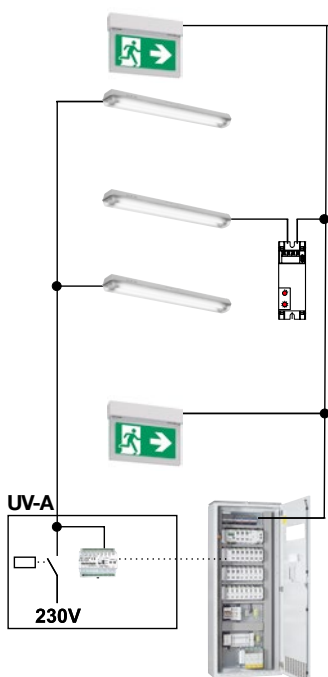
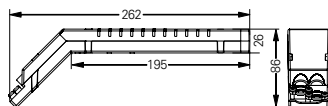
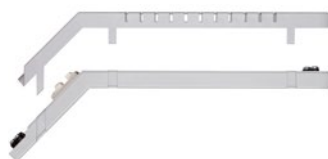
The current consumption of the ballast must be sinusoidal for AT-S+-systems.



V-CG-S2 1.5-30 W



Module housing

**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 sideways 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 <sup>2</sup> / 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.

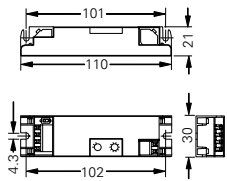
# V-CG-SE 4-400 W

Monitoring module with control input

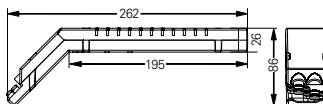


V-CG-SE 4-400 W

1



Module housing



## 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 sideways 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 <sup>2</sup> / 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)

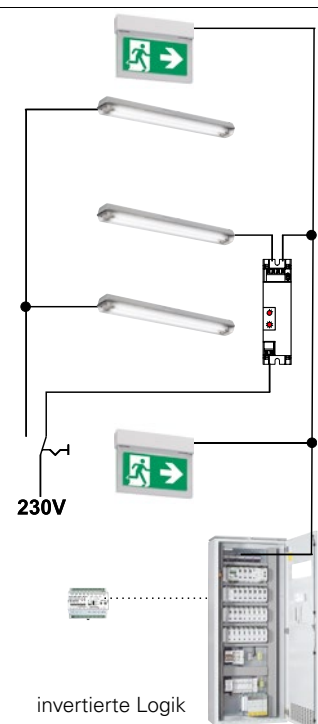
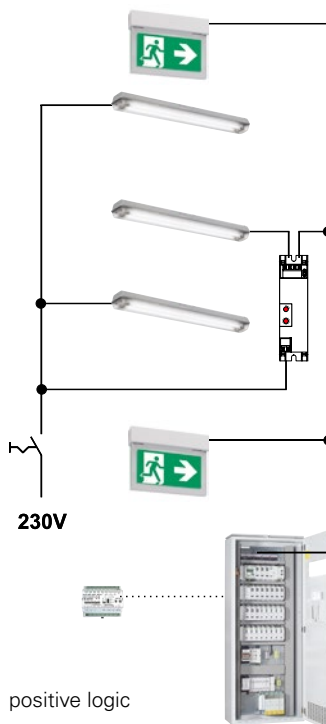
L(U) / N(0)	Address	STAR command	L' / N	A1 / A2
0 V	1- 20	-	0 / 230V AC	0 V
230 V AC	1- 20	OFF	0 V	0 V
230 V AC	1- 20	OFF	230 V AC	230 V AC
230 V AC	1- 20	ON	0 / 230 V AC	230 V AC
230 V AC	1- 20	Emergency mode	0 / 230 V AC	230 V AC
220 V DC	0- 20	-	0 / 230 V AC	220 V DC

## 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

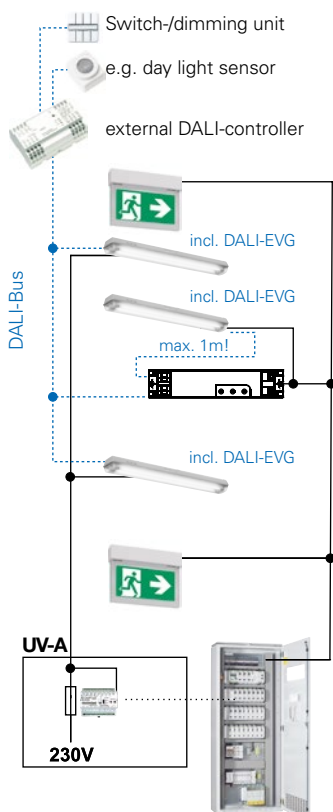
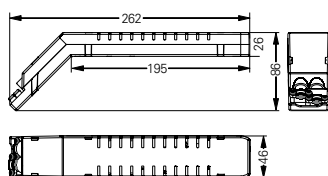
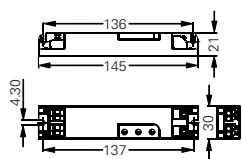
The module may only be used for final circuits with STAR- or STAR\* technology.

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





V-CG-SB.1

**V-CG-SB.1**

- 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
- 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<sup>+</sup>-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 (V-CG-SB / DALI ECG)
Type of mounting	To be mounted in luminaires with protection category I or II
Degree of protection	IP20
Permissible temperature range	ta = -20 °C up to +60 °C
Maximal permissible test point temperature	tc = 65 °C
Connection terminals mains	Plug in terminals 2.5 mm <sup>2</sup> / reserve-polarity protected
Connection terminals DALI-BUS	Plug in terminals 1.5 mm <sup>2</sup> / 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.**

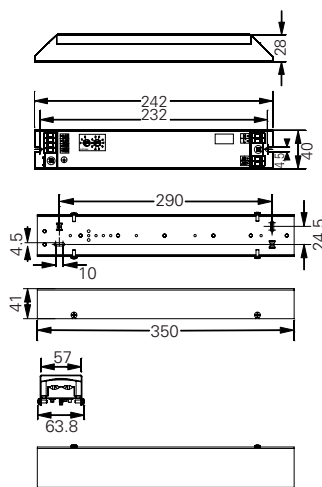
For the use of DALI control gears make sure that a correct function of the control gear is guaranteed as well in the DC voltage range of 186 V to 275 V. We recommend to obtain a corresponding certificate of the manufacturer.

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.



V-CG-SUW



### 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 up to +60 °C
Maximal permissible test point temperature	tc = 75 °C
Connection terminals	Plug-in terminals 2.5 mm <sup>2</sup> / 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.

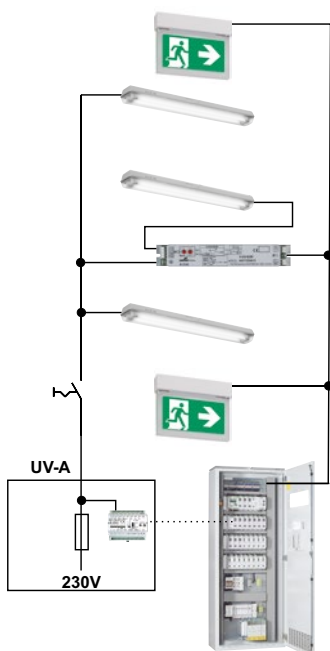
I <sub>OK</sub>	I <sub>n,OK</sub> *
> 47 mA	< 28 mA
> 16 mA	< 10 mA

\* 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.

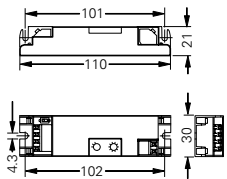
The disconnection of the control gears in case of lamp failure must occur within 1.6 seconds.

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

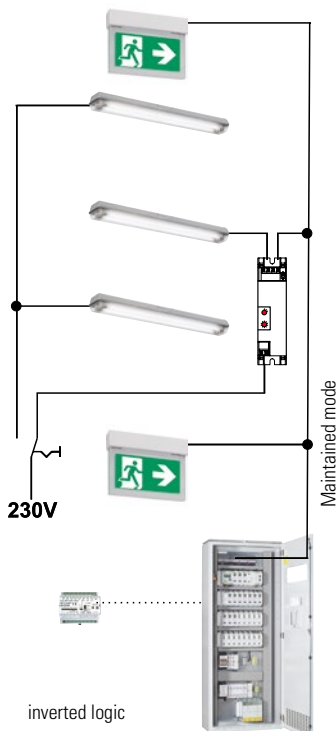
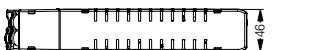
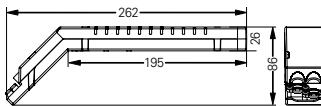
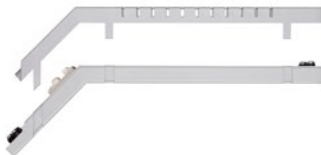




CG-K 4-400 W



Modulgehäuse

**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 sideways 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 up to +60 °C
Maximal permissible test point temperature	tc = 75 °C
Connection terminals	Plug-in terminals 1.5 mm <sup>2</sup> / 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.

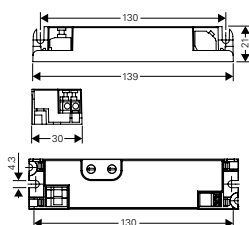
The module may not be used for final circuits with STAR or STAR+ technology.

# V-CG-SLU 350

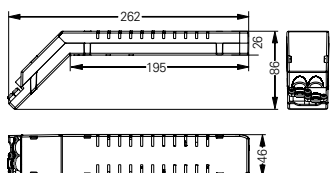
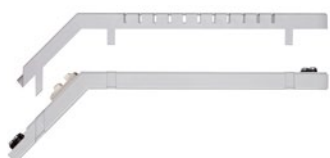
LED supply- and monitoring module



V-CG-SLU 350



Module housing



## 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 sideways 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 $\lambda$	0.44...0.61
Inrush current	$\leq 3.0$ A
Operating frequency	25-130 kHz
EEL	A2
Connection terminals	Clamp terminals 2.5 mm <sup>2</sup> / reverse-polarity protected

### Secondary side

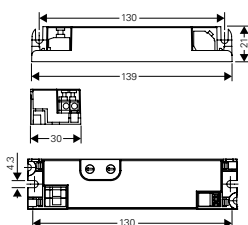
Output current	350 mA (constant current)
Output voltage	28 V DC (open-circuit operation)
Lamp load	1-8 LEDs (rated current 350 mA, UF = 2.85 ... 3.5 V), series connection
Output power (max.)	9.8 W
Connection terminals	Clamp terminals 1.5 mm <sup>2</sup> / not reverse-polarity protected
Maximum line length	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 $\Phi_E/\Phi_N$ at the end of rated operating time	100 %

## Ordering details

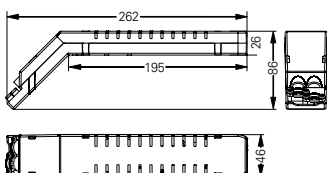
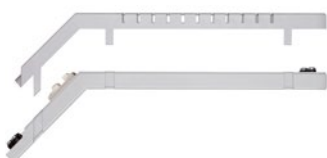
Scope of supply	Order No.
V-CG-SLU 350	40071352915
Module housing with strain relief	40071352765



V-CG-SLU 490



Module housing



## 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<sup>+</sup>-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 <sup>2</sup> / 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 <sup>2</sup> / 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 139 x 30
Housing material / Colour	Flame retardant polycarbonate / grey
Weight	0.061 kg
Luminous flux Φ <sub>E</sub> /Φ <sub>N</sub> at the end of rated operating time	100 %

## Ordering details

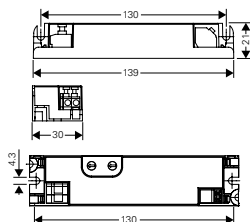
Scope of supply	Order No.
V-CG-SLU 490	40071352916
Module housing with strain relief	40071352765

# V-CG-SLU 700

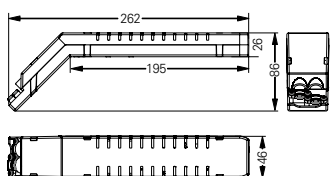
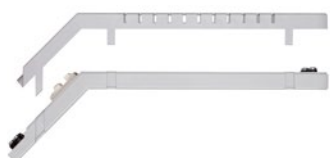
LED supply- and monitoring module



V-CG-SLU 700



Module housing



## 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 $\lambda$	0.52...0.61
Inrush current	$\leq 3.0$ A
Operating frequency	25-130 kHz
EEL	A2
Connection terminals	Clamp terminals 2.5 mm <sup>2</sup> / reverse-polarity protected

### Secondary side

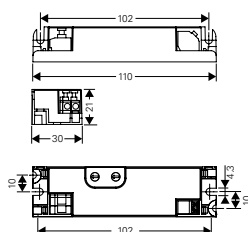
Output current	700 mA (constant current)
Output voltage	14 V DC (open-circuit operation)
Lamp load	1-4 LEDs (rated current 700 mA, UF = 2.85 ... 3.5 V), series connection
Output power (max.)	9.8 W
Connection terminals	Clamp terminals 1.5 mm <sup>2</sup> / not reverse-polarity protected
Maximum line length	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 $\Phi_E/\Phi_N$ at the end of rated operating time	100 %

## Ordering details

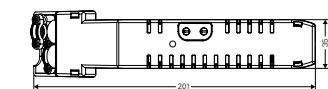
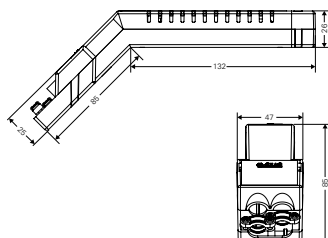
Scope of supply	Order No.
V-CG-SLU 700	40071352917
Module housing with strain relief	40071352765



V-CG-SLS 28



Module housing

**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 sideways 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<sup>+</sup>-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 <sup>2</sup> / 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 <sup>2</sup> / 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 <sub>a</sub> = -20 °C up to +50 °C
Maximal permissible test point temperature	t <sub>c</sub> = 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 <sub>E</sub> /Φ <sub>N</sub> at the end of rated operating time	100 %

**Ordering details**

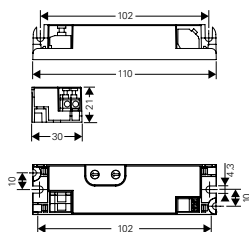
Scope of supply	Order No.
V-CG-SLS 28	40071352419
Module housing with strain relief	40071351928

# V-CG-SLS 350

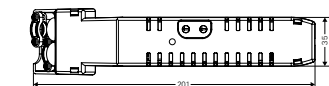
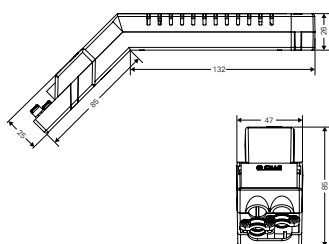
LED supply- and monitoring module



V-CG-SLS 350



Module housing



## 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 $\lambda$	0.60...0.70
Inrush current	$\leq 1.5$ A
Operating frequency	132 kHz
EEL	A2
Connection terminals	Clamp terminals 2.5 mm <sup>2</sup> / reverse-polarity protected

### Secondary side

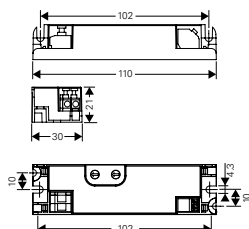
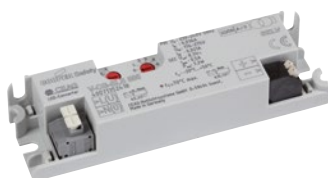
Output current	350 mA (constant current)
Output voltage	14.5 V DC (open-circuit operation)
Lamp load	1-4 LEDs (rated current 350 mA, UF = 3.0 ... 3.3 V), series connection
Output power (max.)	4.62 W
Connection terminals	Clamp terminals 1.5 mm <sup>2</sup> / not reverse-polarity protected
Maximum line 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 $\Phi_E/\Phi_N$ at the end of rated operating time	100 %

## Ordering details

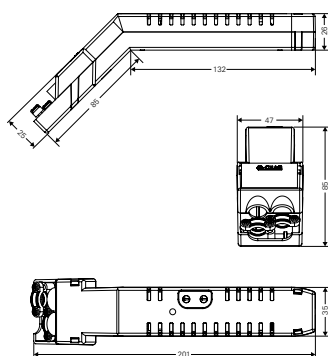
Scope of supply	Order No.
V-CG-SLS 350	40071352417
Module housing with strain relief	40071351928



V-CG-SLS 500



Module housing



### 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 sideways 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<sup>+</sup>-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 <sup>2</sup> / 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), series connection
Output power (max.)	3.2 W
Connection terminals	Plug-in terminals 1.5 mm <sup>2</sup> / 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 <sub>a</sub> = -20 °C up to +50 °C
Maximal permissible test point temperature	t <sub>c</sub> = 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 <sub>E</sub> /Φ <sub>N</sub> at the end of rated operating time	100 %

### Ordering details

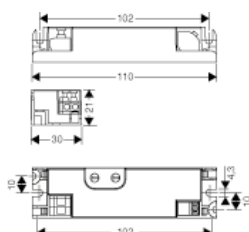
Scope of supply	Order No.
V-CG-SLS 500	40071352418
Module housing with strain relief	40071351928

# V-CG-SLS 501

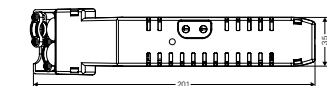
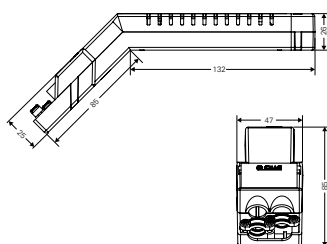
LED supply- and monitoring module



V-CG-SLS 501



Module housing



## 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 $\lambda$	0.57
Inrush current	$\leq 1.5$ A
Operating frequency	132 kHz
EEL	A2
Connection terminals	Plug-in terminals 2.5 mm <sup>2</sup> / reverse-polarity protected

### Secondary side

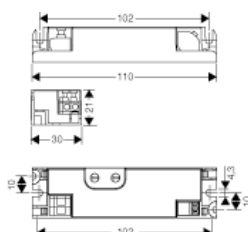
Output current	500 mA (constant current)
Output voltage	4.2 V DC (open-circuit operation)
Lamp load	1 x LED (rated-current 500 mA), (UF = 2.5...3.85 V)
Output power (max.)	2.0 W
Connection terminals	Plug-in terminals 1.5 mm <sup>2</sup> / not reverse-polarity protected
Maximum line length	1 m (module – 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 up 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 $\Phi_E/\Phi_N$ at the end of rated operating time	100 %

## Ordering details

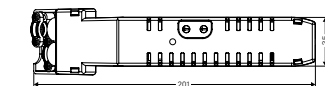
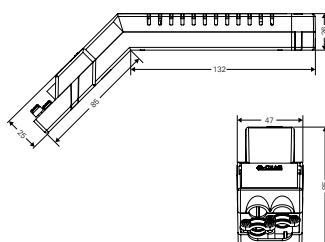
Scope of supply	Order No.
V-CG-SLS 501	40071352369
Module housing with strain relief	40071351928



V-CG-SLS 701



Module housing



### 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 sideways 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<sup>+</sup>-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 $\lambda$	0.59
Inrush current	$\leq 1.5$ A
Operating frequency	132 kHz
EEL	A2
Connection terminals	Plug-in terminals 2.5 mm <sup>2</sup> / 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 <sup>2</sup> / 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 up 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 $\Phi_E/\Phi_N$ at the end of rated operating time	100 %

### Ordering details

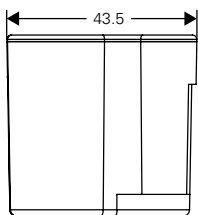
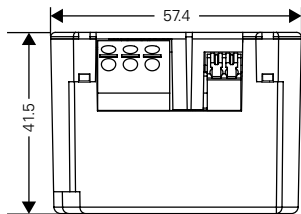
Scope of supply	Order No.
V-CG-SLS 701	40071352399
Module housing with strain relief	40071351928

# V-CG-SLR 350

LED supply- and monitoring module



V-CG-SLR 350



## 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 $\lambda$	0.60 ... 0.70
Inrush current	$\leq 1.5$ A
Operating frequency	132 kHz
EEL	A2
Connection terminals	Plug-in terminals 2.5 mm <sup>2</sup> / 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 <sup>2</sup> / 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 (Ø 60 mm, height min. 61 mm!)
Degree of protection	IP20
Permissible ambient temperature	$t_a = -20$ °C up 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 $\Phi_E/\Phi_N$ at the end of rated operating time	100 %

## Ordering details

### Scope of supply

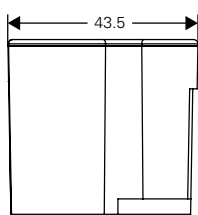
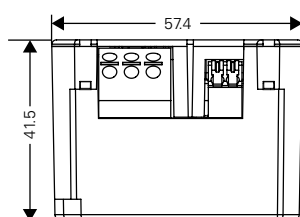
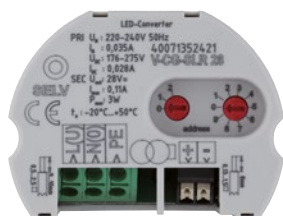
V-CG-SLR 350

### Order No.

40071352420



V-CG-SLR 28



### 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

1

#### 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 $\lambda$	0.45 ... 0.60
Inrush current	$\leq 1.5$ A
Operating frequency	132 kHz
EEL	A2
Connection terminals	Plug-in terminals 2.5 mm <sup>2</sup> / 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 <sup>2</sup> / 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 (Ø 60 mm, height min. 61 mm!)
Degree of protection	IP20
Permissible ambient temperature	$t_a = -20$ °C up 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 $\Phi_E/\Phi_N$ at the end of rated operating time	100 %

### Ordering details

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

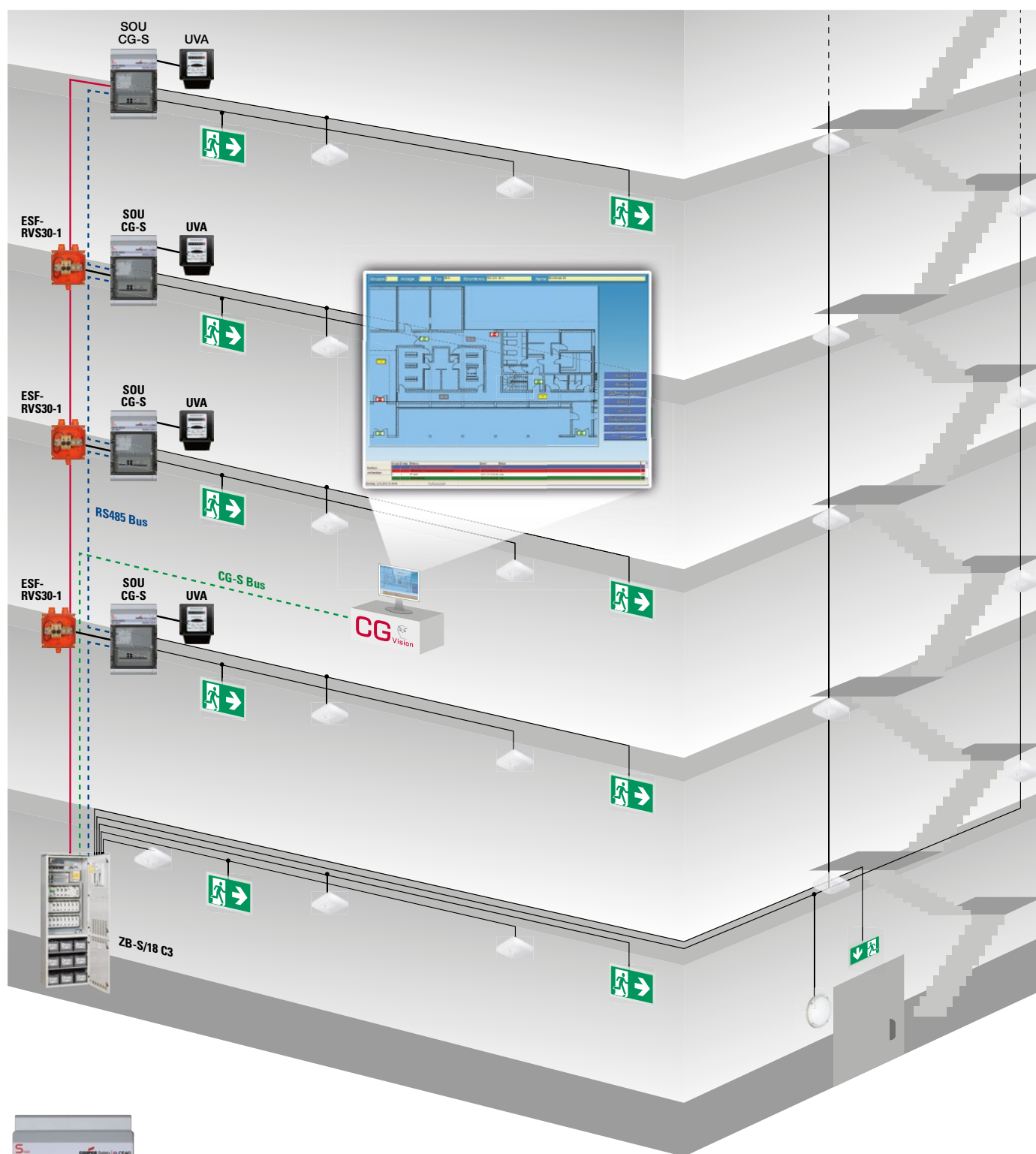




# Central battery system ZB-S with single luminaire monitoring and STAR technology



# Central battery system ZB-S with STAR technology



## 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

# What is STAR?

**S** = Switching  
**T** = Technology  
**A** = Advanced  
**R** = Revision

**STAR**  
TECHNOLOGY

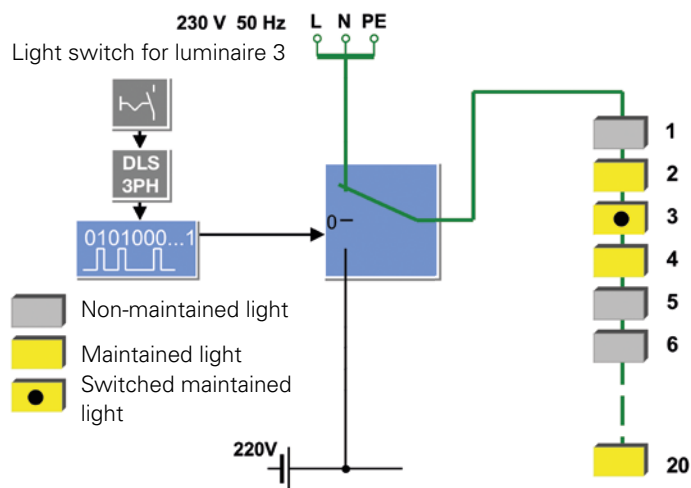
## Switch to safety!

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.

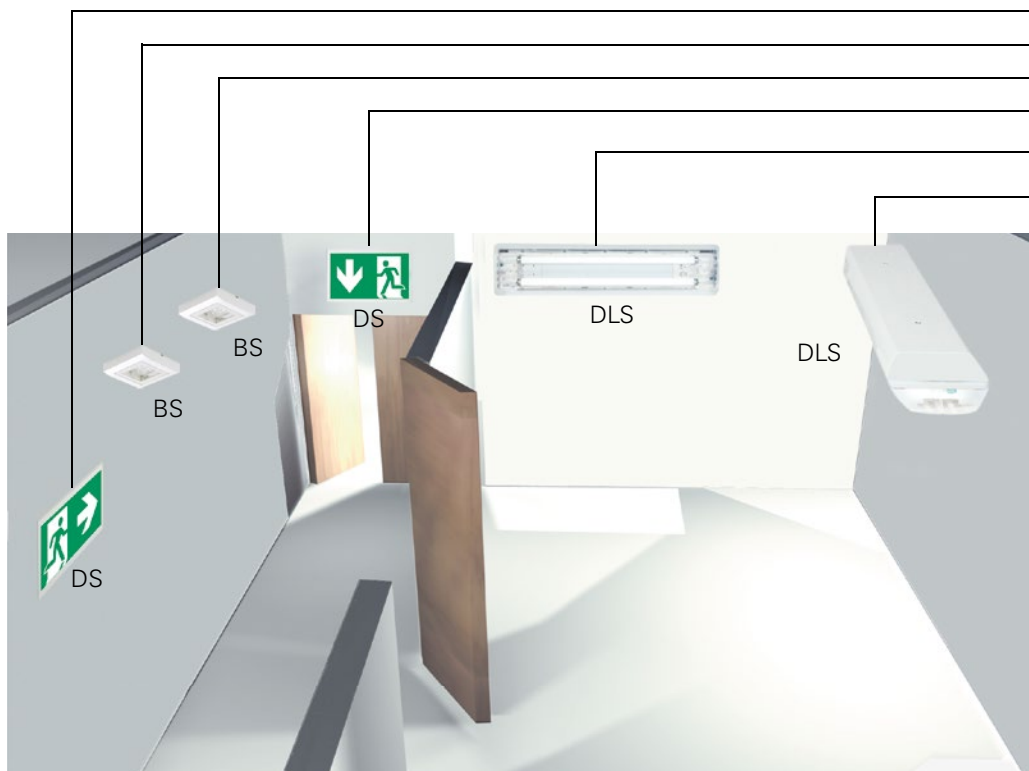
This allows the use of shorter cable distances, reduces installation costs and minimises the effects of burning materials. Any mode of operation can be assigned at a later date – **without encroachment in the lighting installation**. This enables simple project planning without having to take all possible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

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

# S

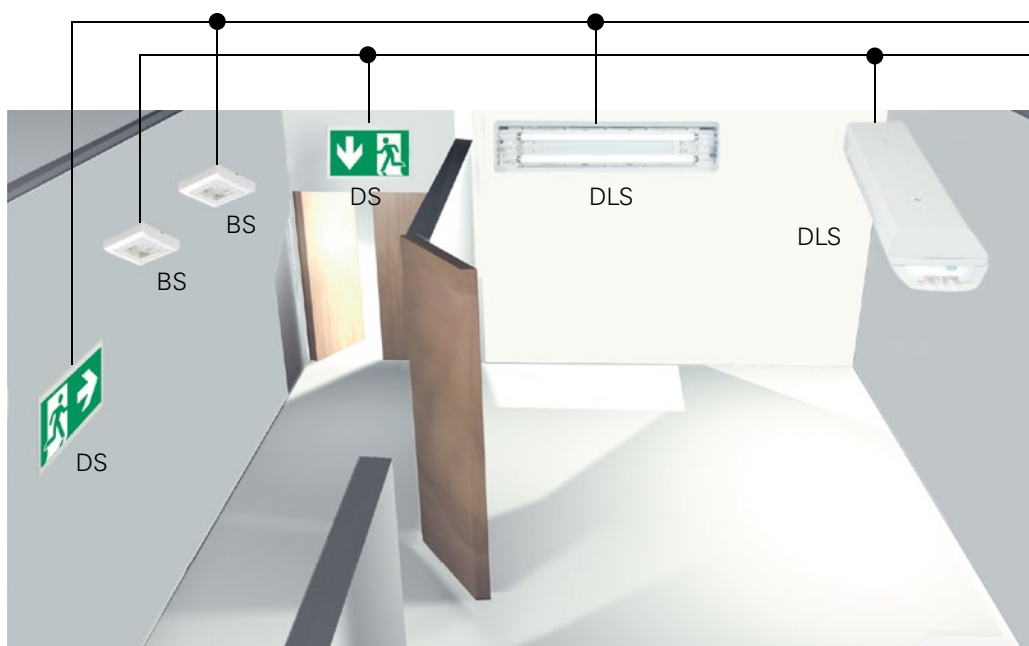
  
TAR  
TECHNOLOGY

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



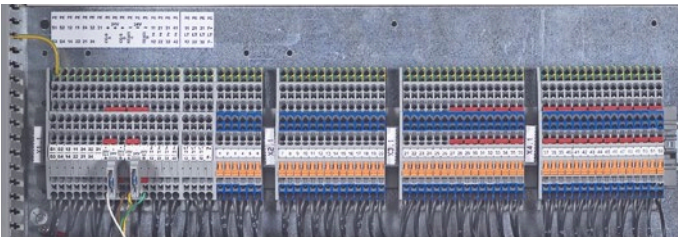
## ZB-S Installation with STAR-Technology:

- 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

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.

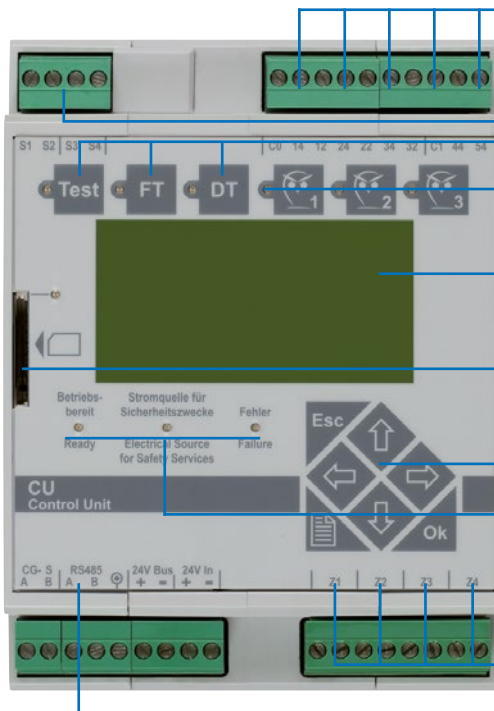
The wiring of the control module and the battery control module is standard. Wiring of the SKUs to 4 mm<sup>2</sup> triple deck installation terminals with spring connection and N disconnect terminal is optional.

## 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

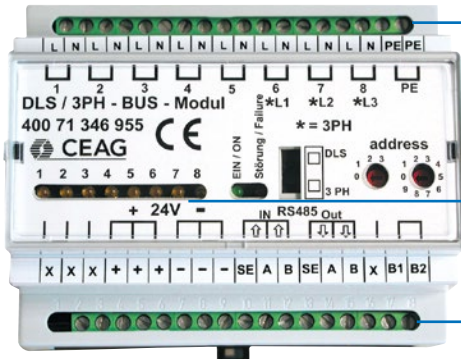
- Test (emergency function)
- Function test
- Duration test

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

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

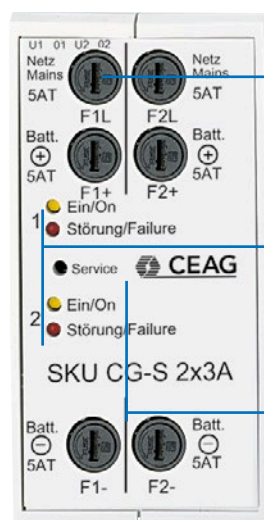


Freely programmable assignment of independent DLS inputs (2.5 mm<sup>2</sup>) per emergency lighting circuit or per light

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



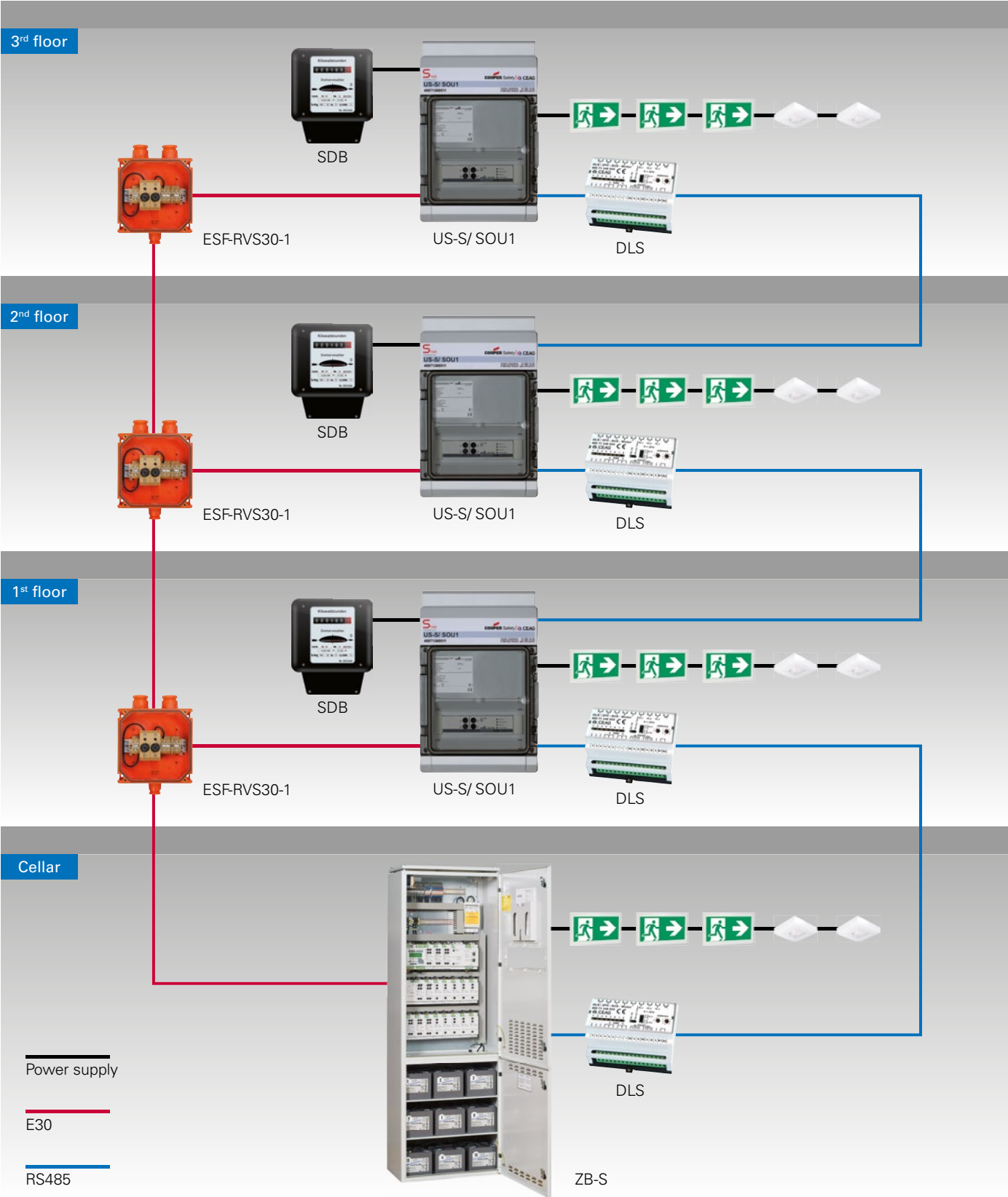
separate fuse protection for mains- and battery operation (two-pole) fuses on front side of the module, easily accessible

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

# Distribution board US-S/ SOU1

Installation example Emergency lighting system ZB-S with distribution board US-S/ SOU1



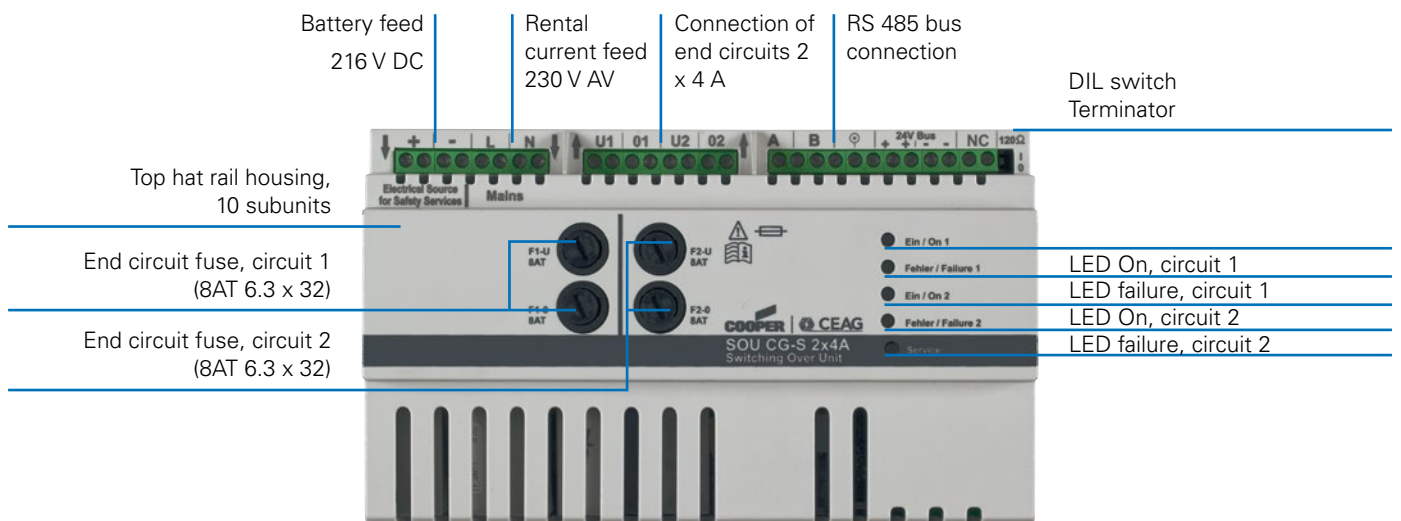


## Distribution Board US-S/ SOU1

- 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



# Function retention without compromise

## ESF-E30 as wall or standing alone cabinet

Type	ZB-S		ZB 96/EURO ZB.1	
	ESF-E30/13-S Wall cabinet	ESF-E30/28-S Standing alone cabinet	ESF-E30/17 Wall cabinet	ESF-E30/28 Standing alone cabinet
Fire protection data				
Fire exposure from the outside (min.)			30	
Maximum air moisture beyond 30 min. (%)	40	47	40	47
Maximum air temperature increase acc. to EN 60439-1 (K)	13	15	13	15
Weight (kg)	235	388	235	388
Noise pressure level (dB)	46	60	46	60

2



- Line partition**

Easy insertion of the lines trough prepunched roof sheeting with diameters of:

Standing alone cabinet:	Wall cabinet:
• D 17 mm x 9	• D 17 mm x 8
• D 26 mm x 59	• D 20 mm x 26
• D 40,50 mm x 4	• D 25 mm x 2
	• D 31 mm x 4

- Line cooling room**

Substantial measurements at different burn tests showed that heat and humidity permeate through the lines into the fire protection cabinet. Temperatures on the lines are up to 50% higher with direct insertion than with line cooling section.

Furthermore, the chemically adhered water in the isolation of the lines condenses at the roof of the fire protection cabinet. The dripping water can cause failures in the electronics. The cooling room avoids unduly high heat and humidity entry via the lines.



- Cross point closing**

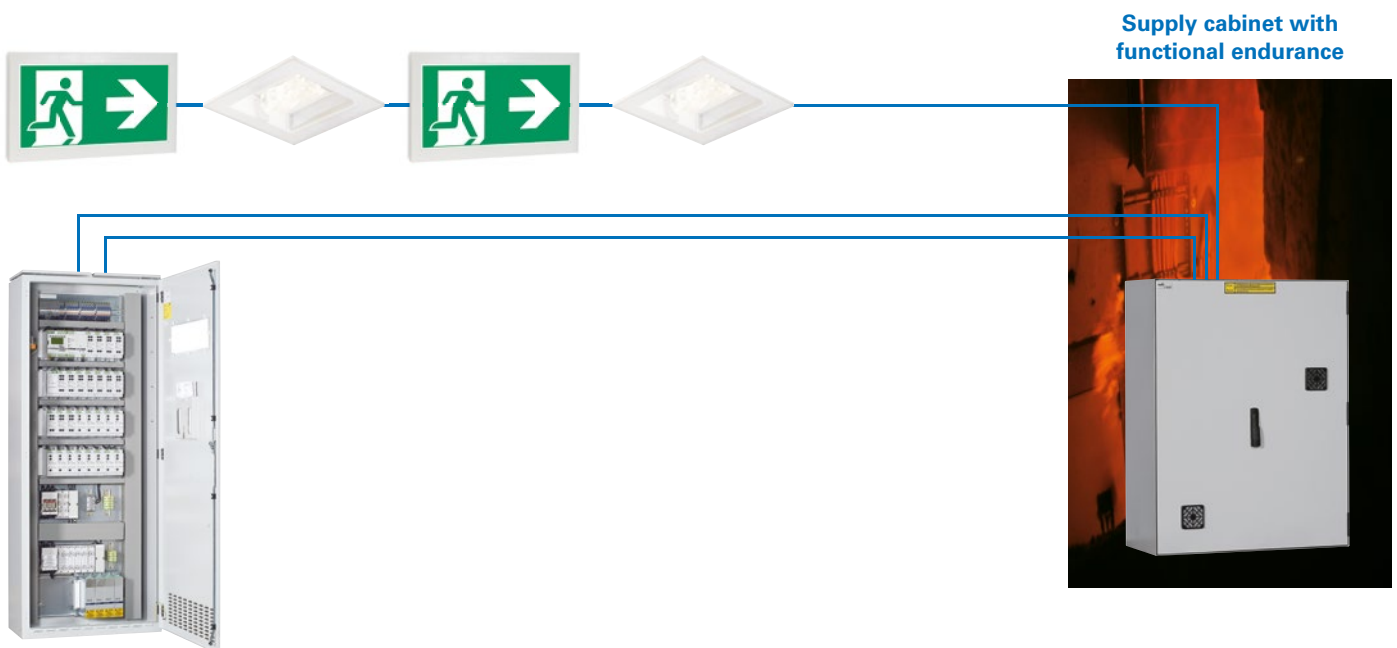
For supply cabinets with functional endurance the closeness of the enclosure is a significant matter for the construction. The equal grip of the cross point closing guarantees optimal closeness. Even a door left open by mistake as with separate sash fasteners can thus be avoided. A further advantage is that the rotary lever handhold is able to adjust all standardised profile half cylinders so that project-specific closing can be realised.
- Technical aeration**

Supply cabinets with functional endurance in the event of fire must protect the embedded equipment from temperatures of up to 850° C. Among others, a suitable insulation body can provide this. What in the event of fire protects the electrical equipment can in normal operation cause problems due to the emerging loss heat of the electronics. The heat transmission value of a supply cabinet with function endurance compared with a normal sheet steel cabinet is 3:1. To conduct the loss heat, the supply cabinet must be aerated. Herewith, the aeration may not affect the fire protection behaviour of the enclosure.

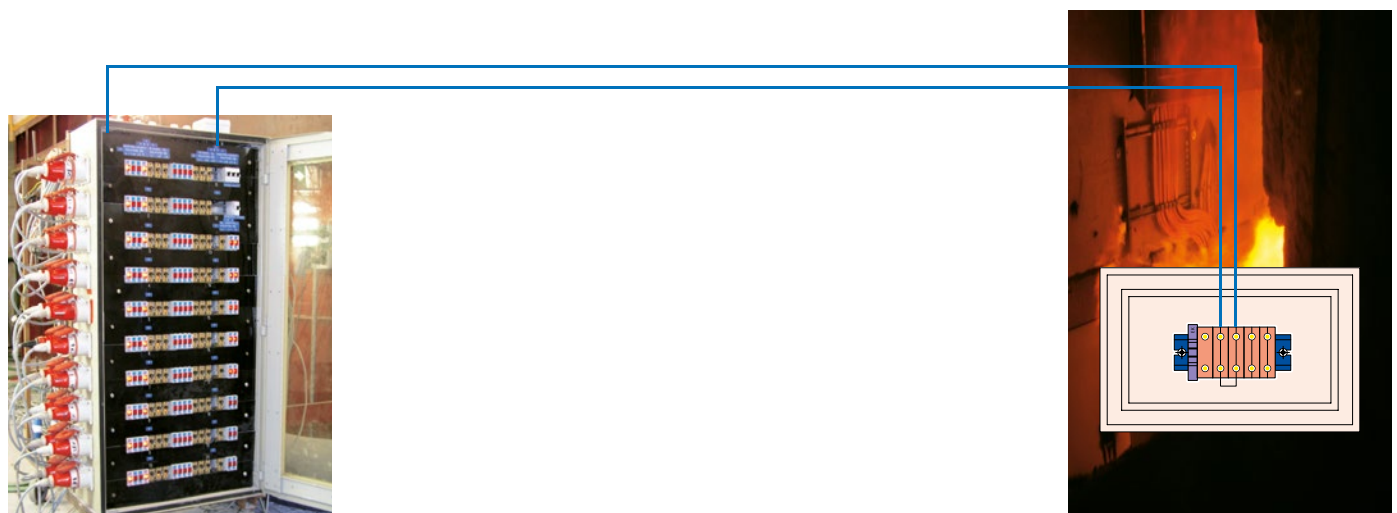
# Function retention without compromise ESF-E30 as wall or standing alone cabinet

- **First electrical distributor with functionality** and integrated electronics for safety lighting installations via higher-level fire area installation approved by the German Institution for Structural Engineering (DIBT)
- 30 minutes functionality with external fire exposure according to DIN 4102-2
- No approval required from the construction supervision authority in individual cases according to the building regulations
- Tested under realistic conditions, including ventilation
- Humidity and inside temperature under the required limit according to EN 60439-1 and EN 50178
- Technical ventilation
- Central crosspoint closing suitable for profile half cylinder
- Integrated cable cooling room
- Robust sheet steel housing
- CE-conform

2

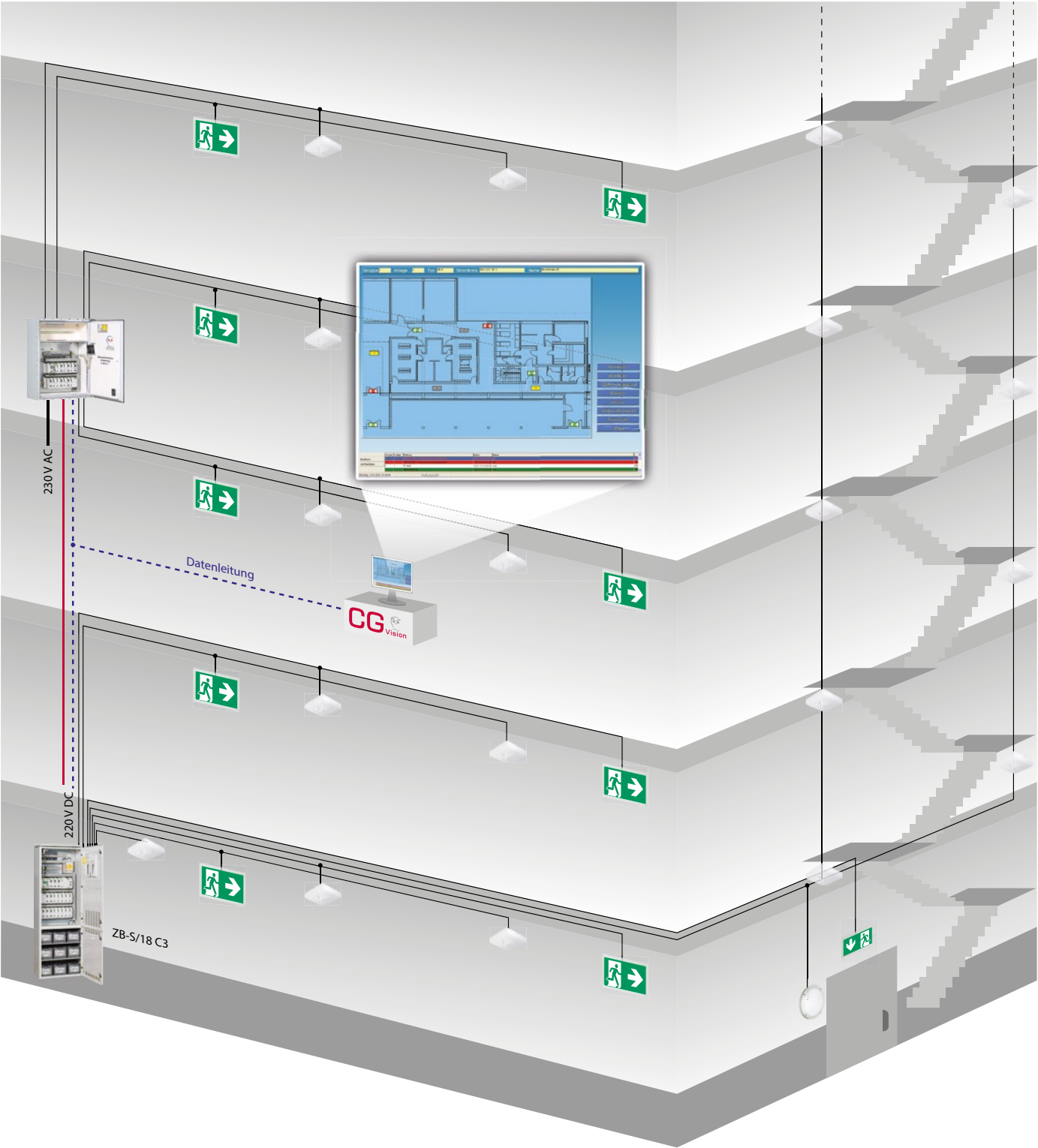


The test set-up shown below only tests a fire protection cabinet/termination box. A statement as to whether the integrated electronics remains functionable during a fire is not effected herewith.



# Central battery system ZB-S with STAR technology

2

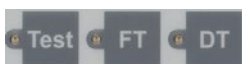




### Controle module

A freely programmable control module with non-volatile program memory and 4-line alpha-numeric 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 M<sup>3</sup>



### 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.



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

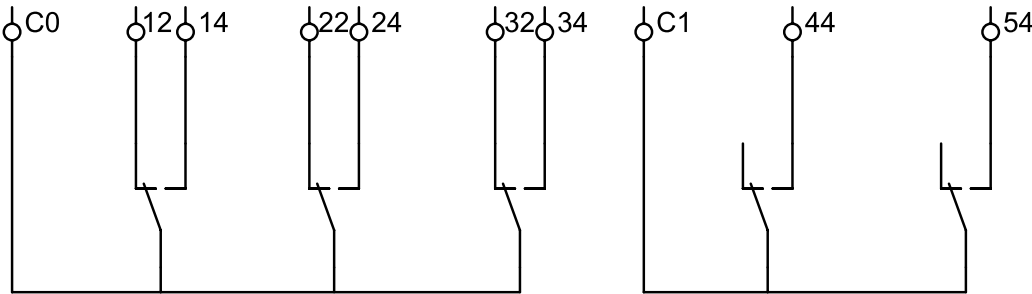
Potential-free signal contacts, buzzer

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						



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.

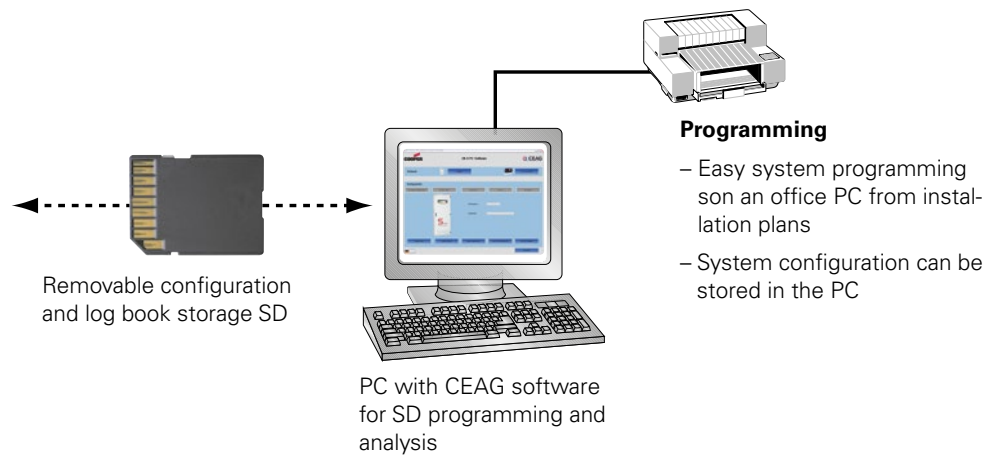
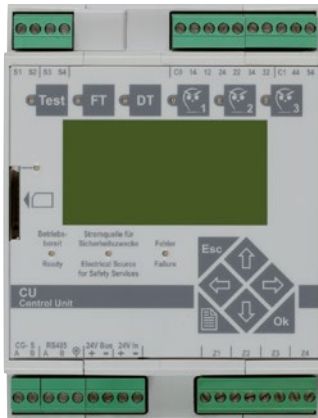
Storage of:

- 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	Bestell-Nr.
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)



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 x 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
- When there is a phase-to-ground fault in AC operation, fault-free DC operation may continue
- 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 mm<sup>2</sup> disconnect neutral terminals (optional)
- Gear tray mounting

Fusing	2.5 AT/250 V, 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) 250 V (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 ballast and LED-luminaires
- Service-friendly modular units are wired up and ready to connect to 3-tier 4 mm<sup>2</sup> disconnect neutral terminals (optional)
- Gear tray mounting

Fusing	5 AT/250 V, 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) 250 V (PU 10 pcs.)	40071689047

SKU CG-S 1 x 6 A



2

### 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 ballast and LED luminaires
- Service-friendly modular units are wired up and ready to connect to 3-tier 4 mm<sup>2</sup> disconnect neutral terminals (optional)
- Gear tray mounting

Fusing	10 AT/250 V, 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) 250 V (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 ballast and LED luminaires
- Service-friendly modular units are wired up and ready to connect to 3-tier 4 mm<sup>2</sup> disconnect neutral terminals (optional)
- DIN rail mounting

Fusing	8 AT/250 V, 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) 250 V (PU 10 pcs.)	40071360484

SKU CG 2 x 3 A

**SKU CG 2 x 3 A**

Change-over module SKU, module without S-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 ballast and LED-luminaires
- Service-friendly modular units are wired up and ready to connect to 3-tier 4 mm<sup>2</sup> disconnect neutral terminals (optional)
- Gear tray mounting

Fusing	5 AT/250 V, 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) 250 V (PU 10 pcs.)	40071689047

SKU CG 1 x 6 A

**SKU CG 1 x 6 A**

Change-over module SKU, module without S-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 ballast and LED luminaires
- Service-friendly modular units are wired up and ready to connect to 4 mm<sup>2</sup> 3-tier disconnect neutral terminals (optional)
- Gear tray mounting

Fusing	10 AT/250 V, 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) 250 V (PU 10 pcs.)	40071070715

SWR 150 sinus inverter supplies



SWR 150

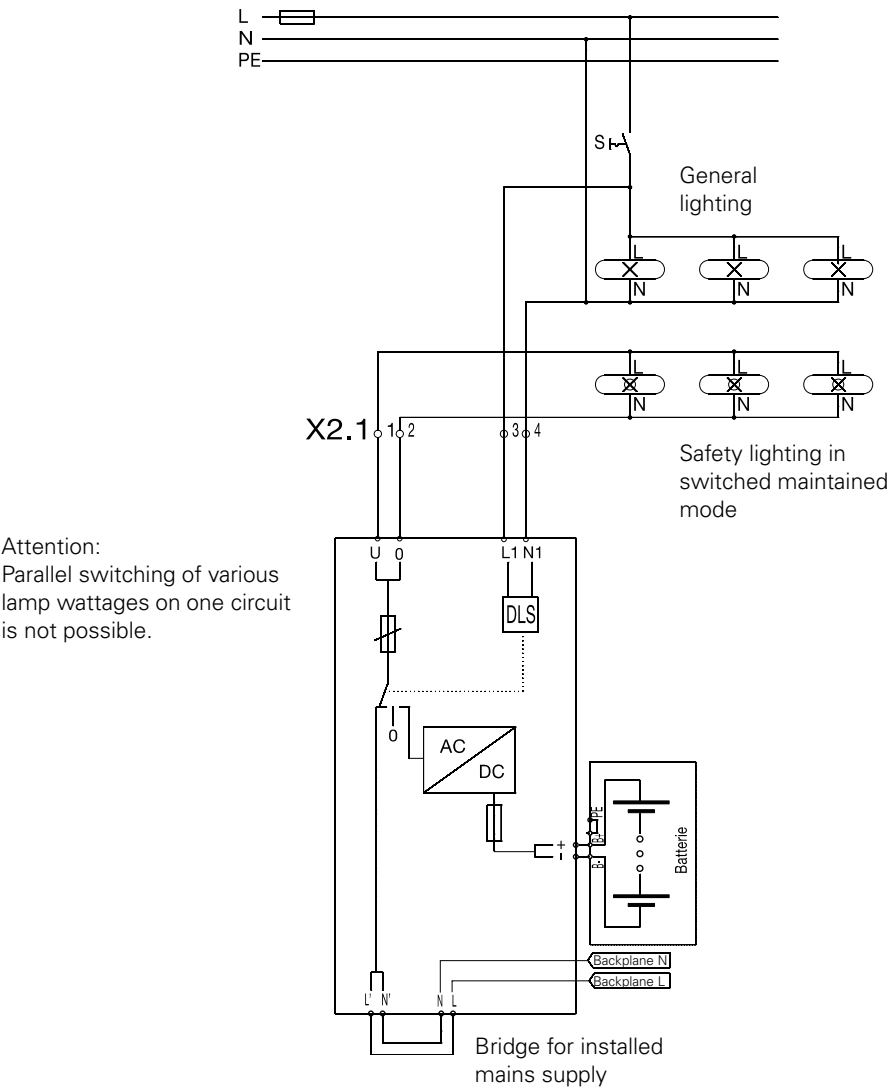
The SWR 150 sinus inverter supplies and monitors emergency luminaires with conventional ballasts. In battery operation, the sinus inverter supplies a sinus voltage of 230 V AC. By altering the frequency of the output sinus voltage, the luminous flux of emergency luminaires with conventional ballast can 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

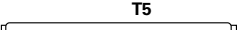
Slots	1	
Fusing	G-Fuse 0.5 x 20	1.6 AT
Max. rated current AC		0.65 A
Max. rated current DC		1.00 A
Max. connection terminals		150 VA
for luminaire		KVG
Rated power DC/DC-converter		2.3 W
Distortion factor		< 5 %

Ordering details

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



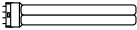
**Table 1. Battery current consumption values (A) dependent upon number of luminaires and luminous flux ratio (LV%) at 20°C ambient temperature at the luminaire.**

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	18
Luminous flux ratio (%)												100	87
Switch setting												0	1
Number of luminaires / Current consumption from the battery / Apparent power												[A] [VA]	[A] [VA]
1												0.62 147	0.37 84
2												0.59 137	0.47 109
3												0.47 107	0.34 80

**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							
Luminous fluxverhältnis (%)		100	59	43	100	73	57	46	100	71	52	47							
Switch setting		0	5	9	0	3	6	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]
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
2		–	–	0.43	96	0.33	76	–	–	0.42	99	0.34	79	0.32	74	–	–	0.42	98
3		–	–	0.58	135	0.44	103	–	–	0.61	136	0.44	103	0.37	86	–	–	0.57	135
4		–	–	–	–	–	–	–	–	–	–	0.56	130	0.47	105	–	–	–	–

**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]
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
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
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
4		–	–	–	–	0.57	132	0.43	97	–	–	0.60	106	0.44	81	0.34	62	–	–
5		–	–	–	–	–	–	–	–	0.71	125	0.53	94	0.40	73	–	–	0.57	130
6		–	–	–	–	–	–	–	–	0.60	108	0.44	83	–	–	–	–	0.52	120
7		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.59	136

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 a 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

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.

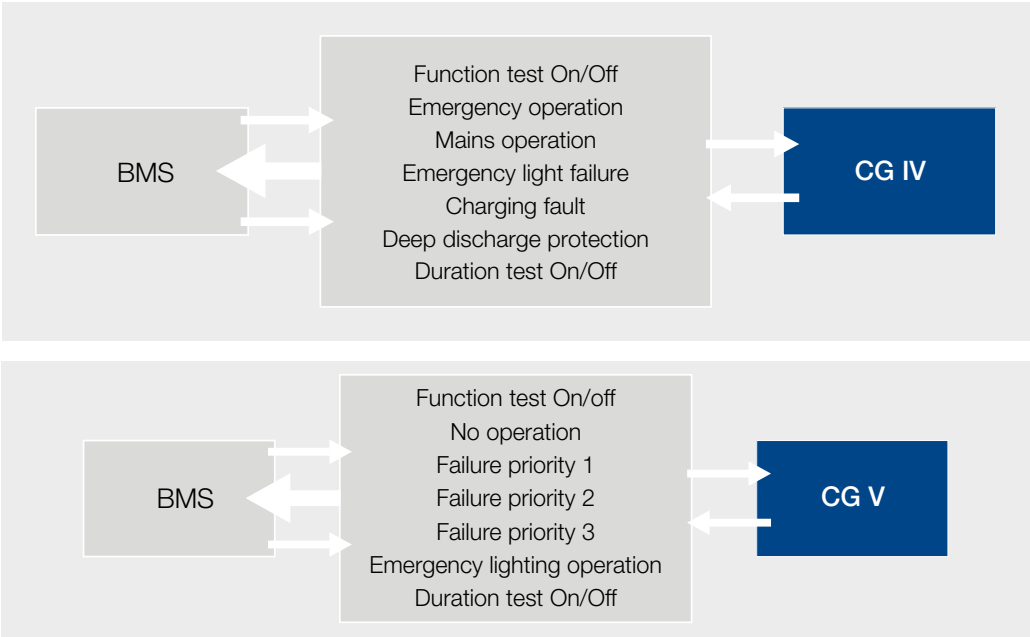
- Gear tray mounting

Connection terminals/Clamp terminals	2.5 mm² rigid and flexible
Switching capacity of the contacts	24 V/0.5 A AC DC

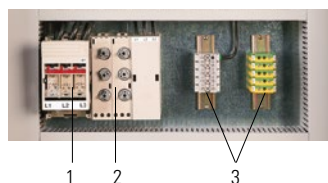
Ordering details

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 disconnect (1) with a maximum conductor size of 50 mm<sup>2</sup> 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

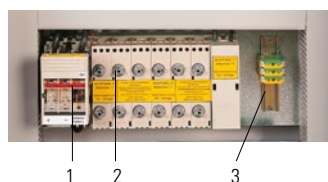


Current rating	63 A
Rated operating voltage	400 V
Box terminal for circulator conductor	to 16 mm <sup>2</sup>
Material	Polyamide (PA 6.6), 30 % glass-fibre-reinforced
Scope of supply	incl. 3 pcs. screw caps E18 and 3 pcs. D02-fuse inserts 25 A

### 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 disconnect (1) with a maximum conductor size of 50 mm<sup>2</sup> 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 <sup>2</sup>
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

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 mm² 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.	

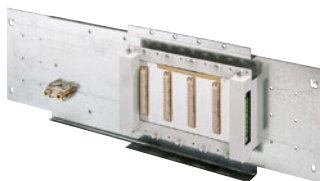
Ordering details

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 <sup>2</sup>

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

2

Charging module rack 1-way, compact



### Charging module rack, compact

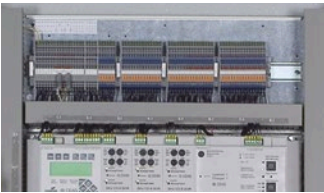
The compact version of the Charging module rack is intended for use in ZB-S compact systems. The single and double compact Charging module racks have been designed for system types ZB-S/10 C and ZB-S/10 C6 respectively. These are for supplying CM 3.4 A boost chargers only!

Connection voltage	230 V AC/220 V DC
Conductor size	max. 2.5 mm <sup>2</sup>

### 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

Connection terminals



Connection terminals

Standard terminals up to 4 mm<sup>2</sup>, rigid or flexible, are provided for connecting the external phase monitors, monitoring equipment and control units. Optional terminals up to 4 mm<sup>2</sup> 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.

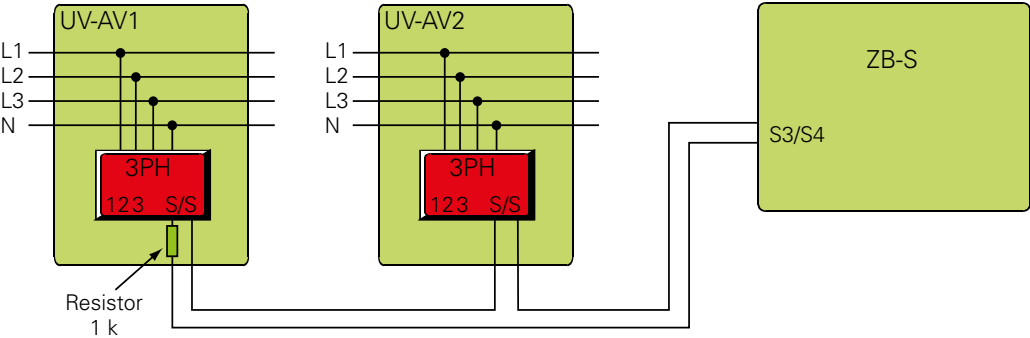
Dimensions mm (H x W x D)	85 x 52.5 x 65
Enclosure	Plastic, red
Connection terminals	2.5 mm <sup>2</sup> rigid and flexible
Type of mounting	DIN mounting rail
Contact	0.5 A/24 V AC/DC, 1 x open contact, 1 x changeover contact
Trigger threshold	$U < 85 \% U_N$

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 for flush-mounting



### 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.

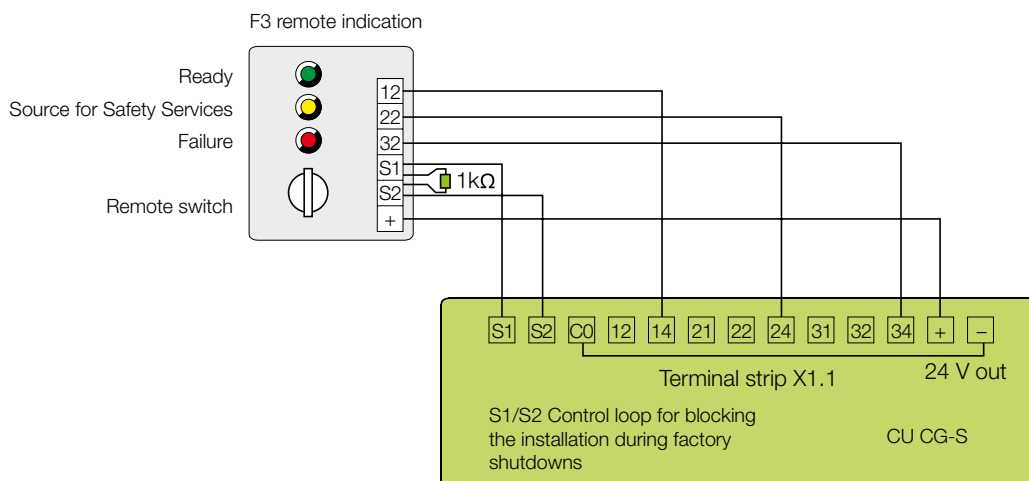
Connection terminals wall surface-mounting	2.5 mm <sup>2</sup> rigid and flexible
Dimensions mm (H x W x D)	160 x 80 x 55
Connection terminals for flush-mounting	1.5 mm <sup>2</sup> rigid or 1 mm <sup>2</sup> flexible
Dimensions mm (H x W x D)	80 x 80 x 55
Colour enclosure	sim. RAL 7035 Light grey

### 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:

A short-circuit or open circuit causes the system to be enabled.

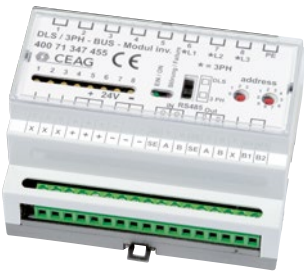
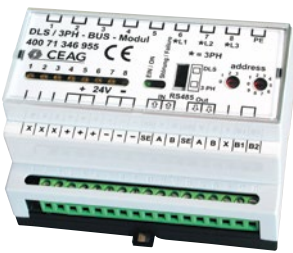
F3 switch closed:

System ready

F3 switch open (1 kΩ):

System blocked

External DLS/3PH-Bus Module



External DLS/3PH-Bus Module

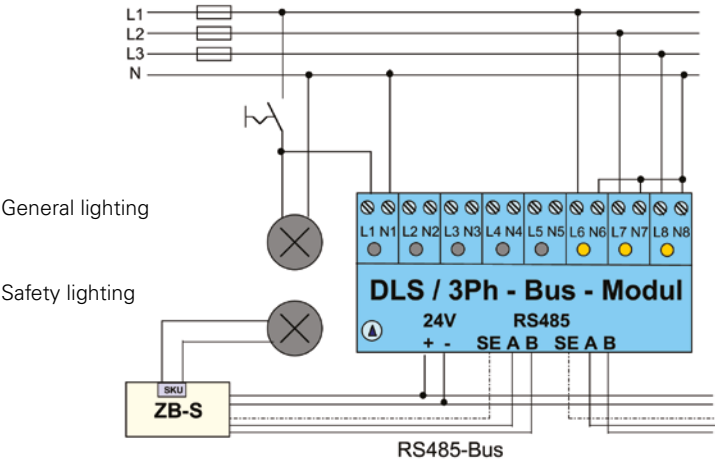
The DLS/3PH bus module can be used as a phase monitor and for light switch polling for the common switching of safety and general lighting systems. Switch cables to the safety luminaires are not required. The housing is suitable for DIN rail mounting. The module has a service button, an RS 485 bus port (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 <sup>2</sup> 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).

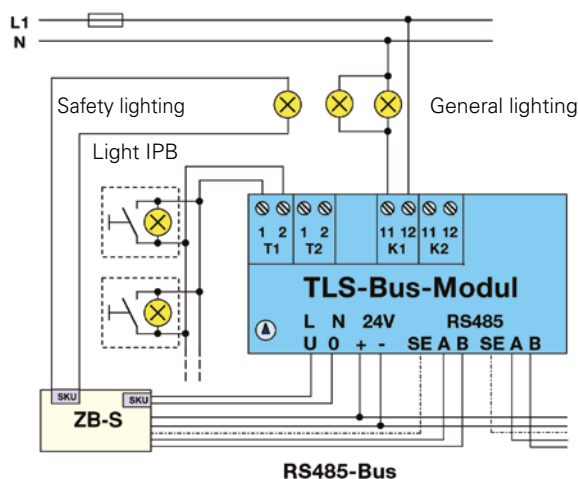
The module has a service button, an RS 485 bus port (integral 120 Ohm bus load resistor), 24 V module supply, and generates the glow lamp voltage. It also has a glow lamp flash function (30 s before On-time timeout). The TLS bus module is addressed with encoding switches. Coloured LEDs indicate fault, 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 $\pm$ 3 mA 1 pushed push-button 35 mA $\pm$ 5 mA 2 pushed push-button 60 mA $\pm$ 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/ms
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 <sup>2</sup> 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

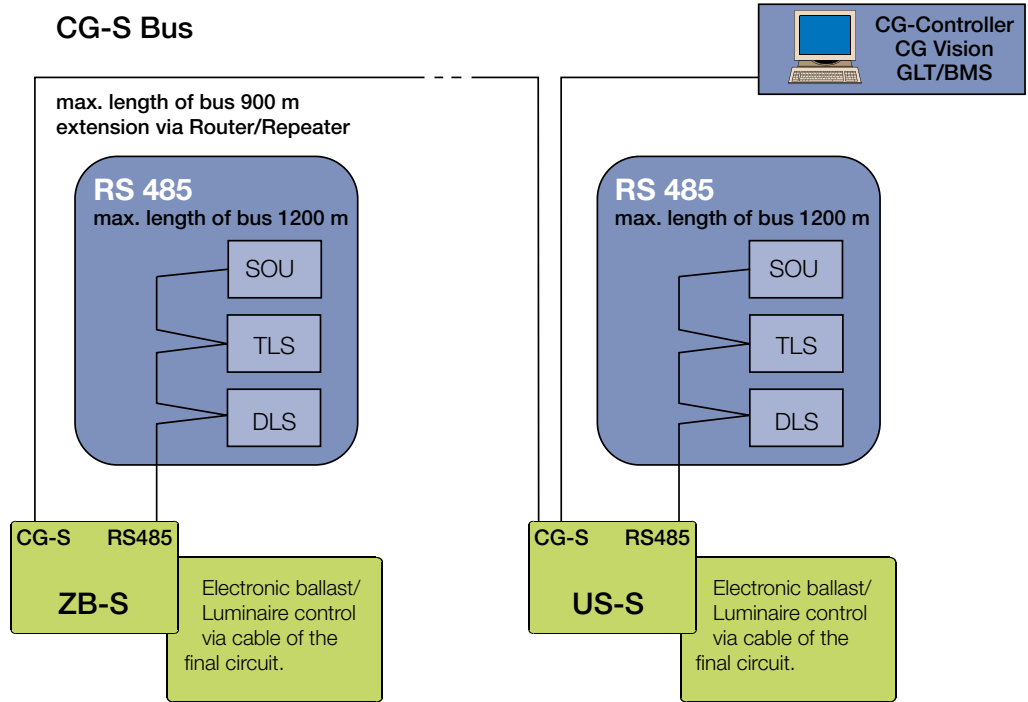
Type	Scope of supply	Order No.
TLS-Bus-Module	Module for DIN rail mounting	40071346965
DIN mounting rail	4 pcs. DIN-rails for mounting external modules in the cabinet incl. mounting accessories	40071347125



### Bus technology according to RS 485

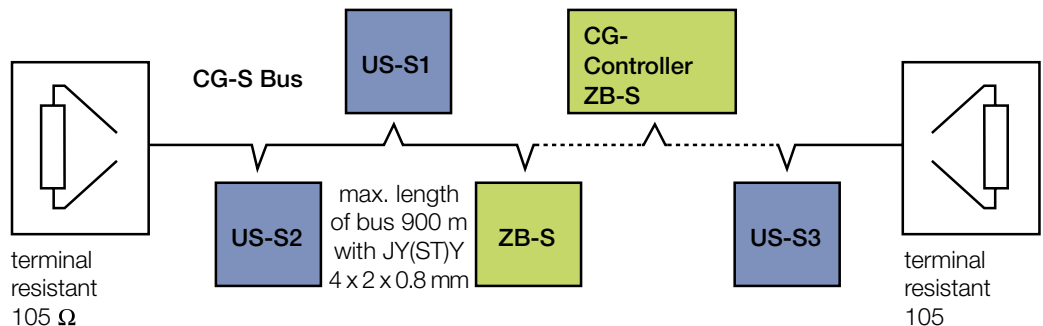
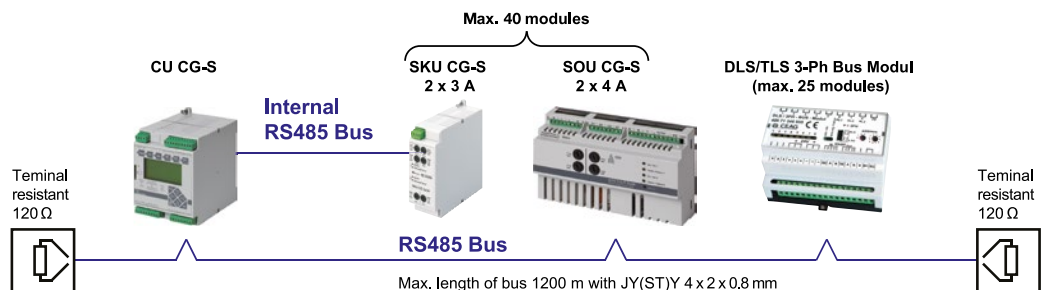
An RS 485 bus is used for data communication with external bus modules (DLS/3PH or TLS). A connection to a central building services management system (BMS) can be made with the CG-S bus. An isolated 24V/0.5 A power supply (SELV) is available for the external modules. The maximum line length depends 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 ( $U_{min} = 19 \text{ V DC}$ ).
- 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 <sup>2</sup> 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



### 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

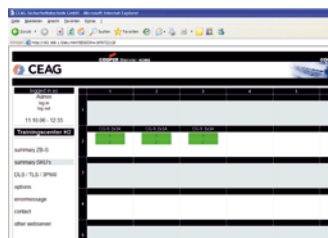
Webmodule ZB-S/AT-S<sup>+</sup>



Example: ZB-S-Device status



Example: SKU-Status



## Webmodule ZB-S/AT-S<sup>+</sup>

Webmodule ZB-S/AT-S<sup>+</sup> 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 <sup>+</sup>	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



Webmodule ZB-S with analog modem



### Webmodule ZB-S with modem

Webmodule ZB-S with modem for visualisation and monitoring of a central battery system or substation of type ZB-S/US-S via dial-up connection (V.92) or via local LAN ethernet or internet (WWW) with conventional web browser. Access to the webmodule via internet must be set up and administrated on-site by a responsible IT department.

Integral e-mail program and SMS program for convenient, event-oriented fault messaging via e-mail or SMS to up to 10 e-mail or SMS recipients.

- Simple menu navigation
- Integrated web server and modem
- Complete visualisation and monitoring of a ZB-S or US-S via a dial-up connection or local ethernet (LAN) via a conventional web browser
- Query and display of actual operating conditions
- Localised display of faults per emergency light circuit and SL/RZ luminaires with target location specification in plain text in connection with function test
- Continuous actual indication of charging state and battery
- Parallel access via local LAN from various PC workstations to one webmodule is possible (max. 8)
- Integrated e-mail program for convenient fault messaging via e-mail
- Sending of e-mails can be set according to type of fault or function test
- Up to 10 e-mail recipients (2 groups of 5 recipients) can be programmed
- Integrated SMS program for convenient fault messaging per SMS (e.g. via mobile phone)
- Sending of SMS can be set according to type of fault or function test
- Up to 10 SMS recipients (2 groups of 5 recipients) can be programmed
- Settable WEB browser updating cycle via the webmodule
- Access to administrator account authenticated with password protection
- Parameterisable guest account for limited access with password protection
- Static or dynamic (DHCP) IP address assignment possible
- Any number of webmodules can be operated in parallel in LAN
- Overview display of all active webmodules in local ethernet with status display and hyperlink function

Beispiel: ZB-S-Gerätestatus



Beispiel: SKU-Status



Supply voltage device	24 V DC
Rated power	< 2 W
Connection phone	RJ11
Connection LAN	RJ45
Degree of protection	IP20
Weight	0.2 kg
Dimensions mm (H x W x D)	94 x 77 x 35

### Ordering details

Type	Scope of supply	Order No.
Webmodule ZB-S with analog modem	Module for DIN-rail mounting, incl. supply cable and telephone line RJ11	40071360101

**Connection example:**

**Direct access via IP-address:**  
e.g.: 192.168.100.5



**Analoges Modem**



**landline telephone network**

**Webmodule ZB-S with analog modem**

Tel.: xxxx/xxxxxxx



Tel.: xxxx/xxxxxxx



2

**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.



### 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* <sup>1</sup>	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* <sup>1</sup>	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* <sup>1</sup>	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* <sup>1</sup>	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* <sup>1</sup>	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* <sup>1</sup>	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
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
Distribution board ESF-RVS30	Fire proof distribution board with D02-NEOZED fuses	40071347920

\*<sup>1</sup> 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

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)* <sup>5</sup>	1	1	1	1
BCM	1	1	1	1
Circuit module SKU CG-S* <sup>5</sup>	0-26* <sup>8</sup>	0-18* <sup>8</sup>	0-2* <sup>2</sup>	0-10* <sup>8</sup>
Maximum number of SWR 150 due to 100% luminous flux and max. rated power	7	7	2	7
Charging module 1,7 A	0-2	0-2	0-2	0-2
Charging module 3,4 A	0-6* <sup>1</sup>	0-6* <sup>1</sup>	0-10	0-1* <sup>3</sup>
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* <sup>9</sup>	-5 °C up to +35 °C	-5 °C up to +35 °C	-5 °C up to +35 °C	-5 °C up to +35 °C
Insulation class	1	1	1	1
Degree of protection	IP21	IP21	IP21	IP21
Max. current rating mains [ $\Sigma$ 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 <sup>2</sup>	50 mm <sup>2</sup>	50 mm <sup>2</sup>	16 mm <sup>2</sup>
Outgoing circuits	0- 6 Feeders	0-6 Feeders	0- 15 Feeders	1 Feeder
Conductor size	16 mm <sup>2</sup>	16 mm <sup>2</sup>	16 mm <sup>2</sup>	35 mm <sup>2</sup>
Max. conductor size final circuits	4 mm <sup>2</sup>	4 mm <sup>2</sup>	4 mm <sup>2</sup>	4 mm <sup>2</sup>
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* <sup>7</sup>	yes
Cable entry from below	yes	yes	yes* <sup>7</sup>	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* <sup>6</sup>	23.3-245 Ah* <sup>6</sup>	23.3-308 Ah* <sup>6</sup>	–
Battery rack	23.3-245 Ah* <sup>6</sup>	23.3-245 Ah* <sup>6</sup>	23.3-308 Ah* <sup>6</sup>	–

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-converter are operated on the same module assembly frame next to each other.

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 up to +35 °C	-5 °C up to +35 °C	-5 °C up to +35 °C	-5 °C up to +35 °C	-5 °C up to +35 °C	-5 °C up 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 <sup>2</sup>	35 mm <sup>2</sup>	16 mm <sup>2</sup>	16 mm <sup>2</sup>	16 mm <sup>2</sup>	16 mm <sup>2</sup>
2 Feeders	2 Feeders	1 Feeder	1 Feeder	1 Feeder	–
35 mm <sup>2</sup>	35 mm <sup>2</sup>	35 mm <sup>2</sup>	16 mm <sup>2</sup>	16 mm <sup>2</sup>	–
4 mm <sup>2</sup>	4 mm <sup>2</sup>	4 mm <sup>2</sup>	4 mm <sup>2</sup>	4 mm <sup>2</sup>	4 mm <sup>2</sup>
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.

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)* <sup>1</sup>	1	1	1	1
Circuit module SKU CG-S* <sup>1</sup>	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 up to +35 °C	-5 °C up to +35 °C	-5 °C up to +35 °C	-5 °C up 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 <sup>2</sup>	35 mm <sup>2</sup>	35 mm <sup>2</sup>	16 mm <sup>2</sup>
Outgoing circuits	–	–	–	–
Max. conductor size final circuits	4 mm <sup>2</sup>	4 mm <sup>2</sup>	4 mm <sup>2</sup>	4 mm <sup>2</sup>
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

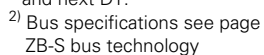
\*1 After more than 13 SKU CG-S 4 x 1.5 A or 26 SKU CG-S 2 x 3 A / 1 x 6 A a second DC/DC converter is needed.  
Please observe that all DC/DC-converters are operated on the same module assembly frame next to each other.

\*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.

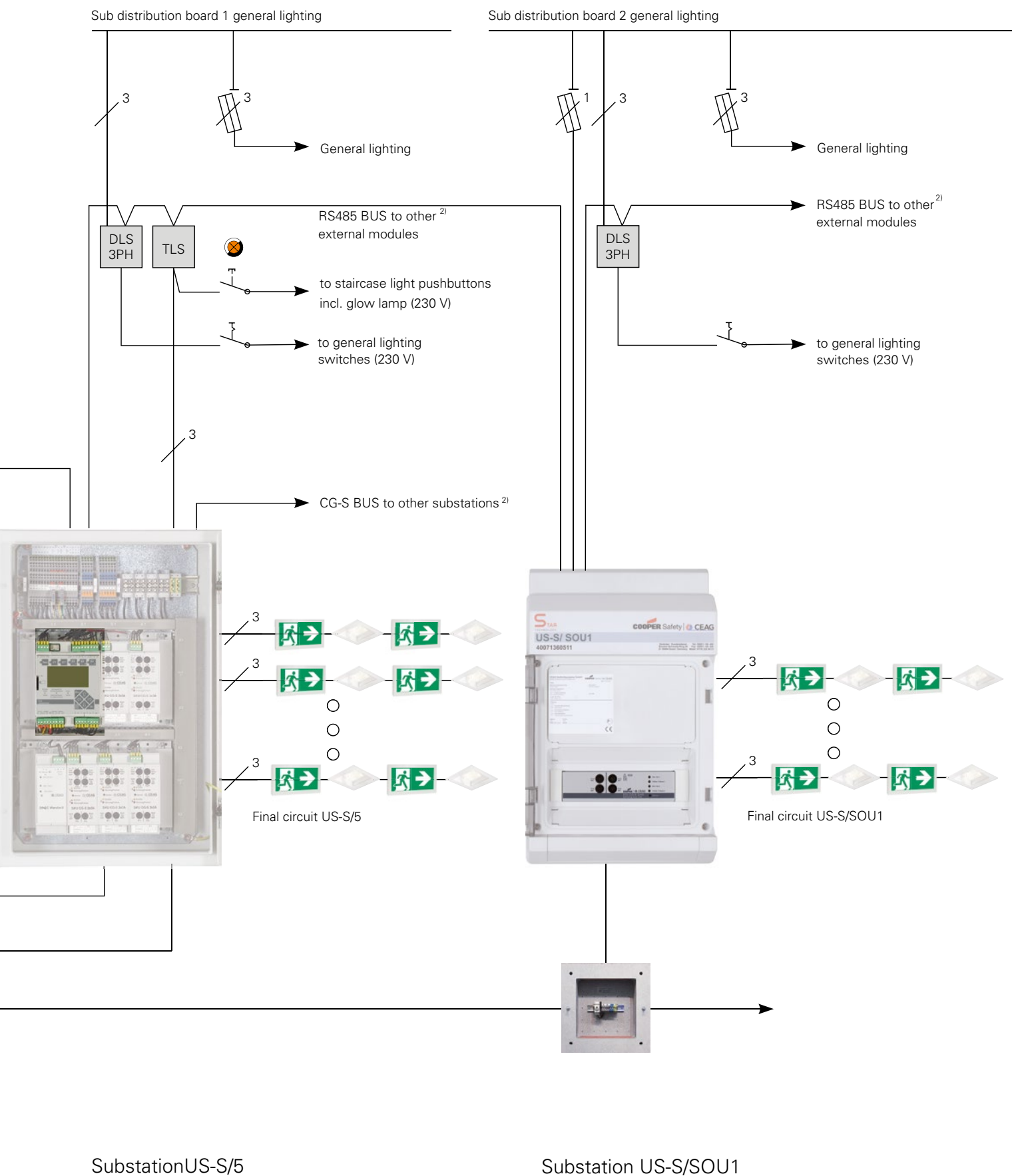
\*3 The housing has insulation class II. The earth conductor must however be routed in the housing.

\*4 IP54 with optional IP54 hood.

US-S/5	US-S/ SOU2	US-S/ SOU1	ESF-E30/13-S*2	ESF-E30/28-S*2
1	–	–	1	1
1	–	–	1	1
0-5	incl. 2 x	incl. 1 x SOU CG-S 2 x 4 A	0-13	0-28
SOU CG-S 2 x 4 A	incl. 1 x SOU CG-S 2 x 4 A	0-13	0-28	–
–	–	–	–	–
230 V	230 V	230 V	230 V	400/230 V
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
-5 °C up to +35 °C	-5 °C up to +35 °C	-5 °C up to +35 °C	-5 °C up to +35 °C	-5 °C up to +35 °C
1	2*3	2*3	1	1
IP54	IP65	IP65	IP41*4	IP41*4
30	16	8	35	50
6.9	3,6	1,8	8.1	11.5
30	16	8	35	50
6.5	3.4	1.7	7.6	10.8
no	no	no	no	yes
16 mm <sup>2</sup>	10 mm <sup>2</sup>	10 mm <sup>2</sup>	16 mm <sup>2</sup>	16 mm <sup>2</sup>
–	–	–	–	–
4 mm <sup>2</sup>	4 mm <sup>2</sup>	4 mm <sup>2</sup>	4 mm <sup>2</sup>	4 mm <sup>2</sup>
20	4	2	26	56
600 x 400 x 250	583 x 295 x 129	458 x 295 x 129	1150 x 885 x 405	2190 x 885 x 405
Sheet steel / Wall cabinet	Plastic / Small distribution board	Plastic / Small distribution board	Sheet steel / func. endurance 30 min. / Wall cabinet	Sheet steel / func. endurance 30 min. / Stand alone cabinet
right	right	right	right	right
Textured powder paint	–	–	Textured powder paint	Textured powder paint
RAL 7035	RAL 7035	RAL 7035	RAL 7035	RAL 7035
No	Yes	Yes	No	No
3 mm Two-way	On request	On request	3 mm Two-way	3 mm Two-way
yes	yes	yes	yes	yes
no	no	no	no	no
–	–	–	–	–
approx. 42 kg	approx. 8.8 kg	approx. 7.5 kg	approx. 235 kg	approx. 390 kg



## Central Battery system ZB-S



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	=	2 pcs.
acc. to table 3		

#### • 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 <sub>N</sub> battery	=	216 V
90% U <sub>N</sub> battery		
(108 battery) = 194.4 V	=	<b>1.8 V per battery</b>

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 <sub>zu</sub> 0.72 kVA		=	0.72 kVA
Booster CM 3.4 A			
P <sub>zu</sub> 0.98 kVA			0.98 kVA
Total connected load		=	10.90 kVA

## N-EVG 54 W V-CG-S



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

Term						
Lamp cap	T5	T5	T5	T5	T5	T5
	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
<b>Current consumption [A] at 220 V battery operation, setting (Luminous flux <math>\Phi_E/\Phi_N</math> in %)</b>						
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 $\lambda$	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

2

## N-EVG 58 W V-CG-S



Term					
Lamp cap	T5	T5	T5	T8	T8
	G5	G5	G5	G13	G13
Type N-EVG ... V-CG-S	49W	54W	80W	36W	58W
Lamp load [W]	49	54	80	36	58
<b>Current consumption [A] at 220 V battery operation, setting (Luminous flux <math>\Phi_E/\Phi_N</math> in %)</b>					
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 $\lambda$	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!

EVG 13.3



EVG 13.3 V-CG-S



EVG 18 V-CG-S



EVG 18C V-CG-S



**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] <sup>1)</sup>	Power consumption in [VA]	Inrush current [A]	Power factor $\lambda$
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
TC-TEL	G 24 q-2	18C V-CG-S	18	0.070	30	8	0.6
		18C 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
		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
		18 V-CG-S	18	0.070	30	8	0.6

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

**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		
	$\Phi$ 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	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 39.8	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	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	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	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	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	1.7	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

**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	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	0	0	0	1	1	1	0	0	1	0	0	1	1	1	1	0
		3.4	0	0	0	0	0	1	1	1	1	1	1	2	2	2	3	3	3	4	4	5	6
	1.5	1.7	1	1	1	1	0	0	0	0	1	1	0	0	1	0	0	1	1	1	0	0	1
		3.4	0	0	0	0	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	0	0	0	0	1	1	0	0	1	0	0	1	0	0	1	0	0
		3.4	0	0	0	0	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	0	0	0	1	1	1	0	1	1	0	1	0	0	0	0	1	1
		3.4	0	0	0	0	1	1	1	1	1	1	2	2	2	3	3	4	4	5	6	6	7
	8.0	1.7	1	1	1	0	0	0	1	1	1	0	0	1	0	1	0	1	1	0	1	1	1
		3.4	0	0	0	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	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	2	2	2	2	2	3	3	3	4	4
Total weight per battery set approx. kg	45	65	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	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	0.60	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	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

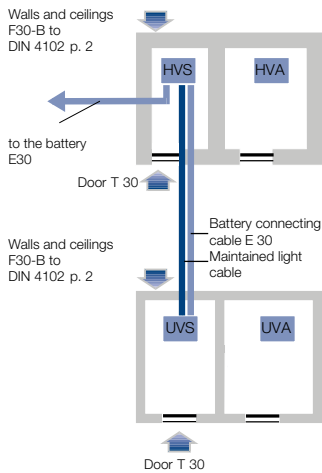
**Table 5.2**

Calculation of ventilation of electrical rooms acc. to DIN EN 50272-2 (calculated for float charge)\*:

Battery 216 V	5.5	8.5	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	0.08	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	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.

### Example 1



A number of rules and regulations apply to the accommodation of central battery systems, in particular the EltBauVo, DIN EN 50272-2, MLAR and LBO.

Depending on the constructional circumstances, the following accommodation possibilities result from these rules and regulations.

#### Example 1:

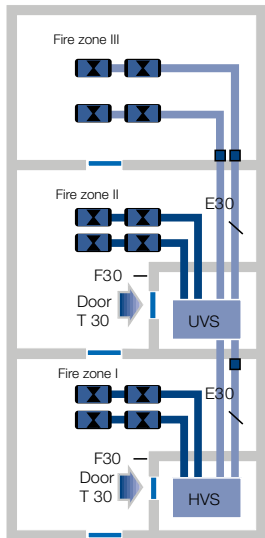
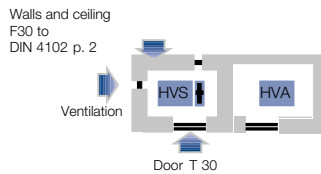
Main distribution board of the general lighting power supply (MDB) and main distribution board of the emergency lighting power supply (ZB) in an electrical room.

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 m<sup>3</sup>/h

0,05 = fixed factor

n = no. of accumulator cells

$I_{\text{gas}}$  = current in mA per Ah, fits 8 mA per Ah for Iboost with VRLA batteries

$C_N$  = capacity  $C_{10}$  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 m<sup>3</sup>/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:

$$A \geq 28 \times Q$$

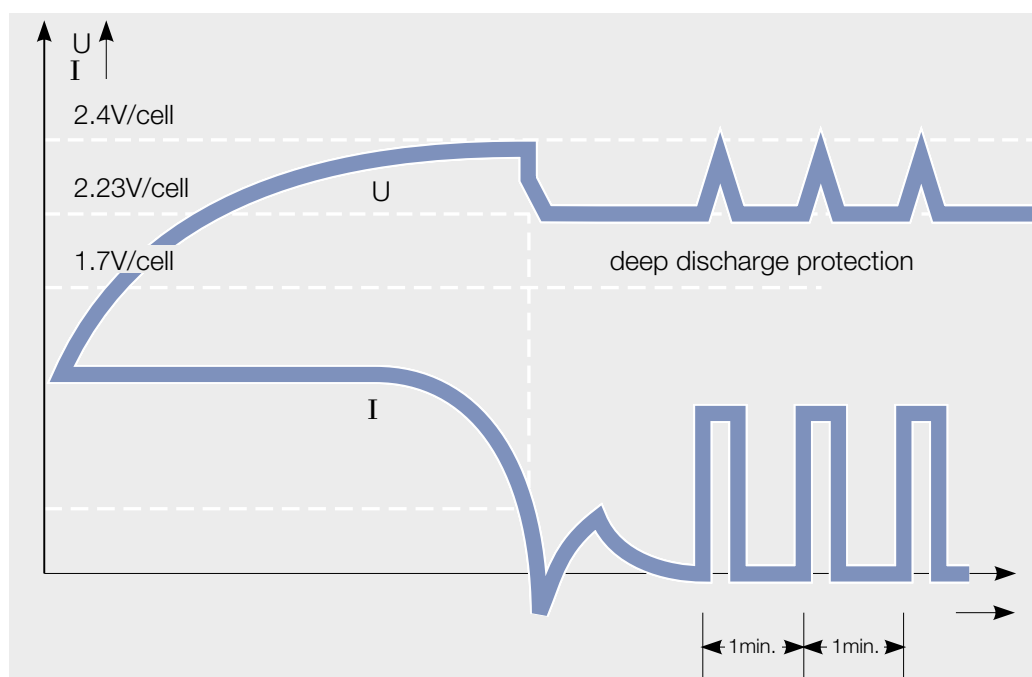
$$A \geq 28 \times 6,72 \text{ m}^3/\text{h}$$

$$A \geq 188,21 \text{ cm}^2$$

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).

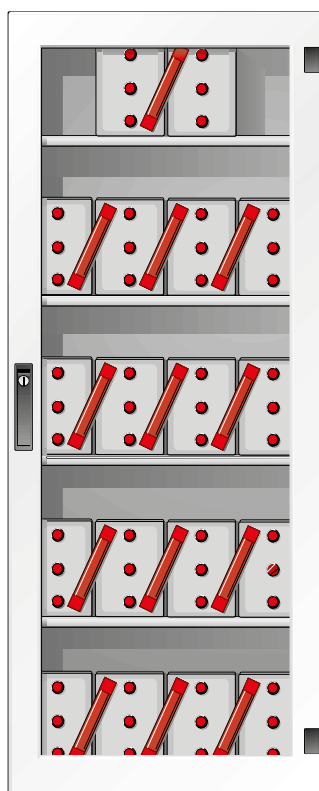
Due to the installed low maintenance of sealed lead acid gas recombination batteries, no further special constructional requirements such as a floor resistant to electrolyte or a floor covering (tiles) etc. have to be met.

**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



### 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 new 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.

All operating modes can be assigned retrospectively without modifying the luminaire installation. A choice of the operation modes maintained light and non-maintained light with contingently slide switch, coding switch or a respectively jumper on the monitoring module or EVG is not allowed. Any claims for additional costs for installation wiring due to the use of non-CEAG products or additional components cannot be accepted.

Electronic units in service-friendly modular design, wired up ready for connection on three-level installation terminal blocks with neutral isolation. The modules have quick-release locks that make them easy to fit and replace. Simple connection method with plug-on terminals on the modules.

Connections are made from above or below onto shock-proof terminals. With optional built-in terminal block for battery and mains supplies to the substations, including fusing. Modular plug-on design.

#### 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



### 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 mm<sup>2</sup>) 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 mm<sup>2</sup>) including supply of glow lamps, max. 50 mA per TLS input.

2 load circuits for general lighting (2.5 mm<sup>2</sup>), 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

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 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 <http://www.ceag.de>

e-mail [info-n@ceag.de](mailto:info-n@ceag.de)

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)

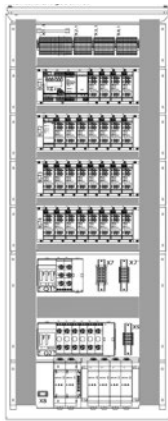
Battery capacity C10 at 1.8 V/C and +20°C	Ah	5.5	8.5	14.0	23.3	32.0	39.8	50.4	53.7	66.2	85.7	89.4	106.0	118.0	143.1	155.6	178.8	195.4	245.0	268.2	308.0	357.6
													1 x 39.8 1 x 66.2		1 x 89.4 1 x 53.7	1 x 89.4 1 x 66.2	2 x 89.4	1 x 89.4 1 x 66.2	2 x 89.4 1 x 66.2	3 x 89.4	3 x 89.4 1 x 39.8	4 x 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	13.2	15.5	19.9	23.5	29.5	37.4	40.5	47.9	57.3	67.4	77.4	85.3	95.8	105.2	133.2	143.7	163.6	198.6
	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

**Table 3b**

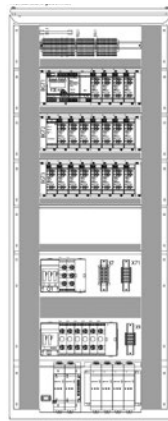
Number of 1.7 A and 3.4 A booster **not acc. to EN 50171** for recharging of 10 h and 20 h:

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	0	0	0
		3.4	0	0	0	0	1	1	1	1	1	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	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
		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	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	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	0	0	1	1	0	1
		3.4	0	0	0	0	0	0	0	0	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	1	0	1	0
		3.4	0	0	0	0	0	0	0	1	1	1	1	1	1	1	2	2	2	2	3	3	4
	2.0	1.7	1	1	1	1	1	0	0	0	0	0	0	1	1	0	0	0	1	0	0	1	0
		3.4	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	0	0	0	0	1	1	1	1	0	0	1	1	0	1	0	1
		3.4	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	2	2	2	2	3	3	4	4	5

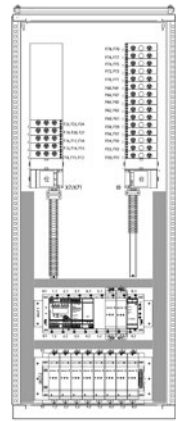
**ZB-S/26**



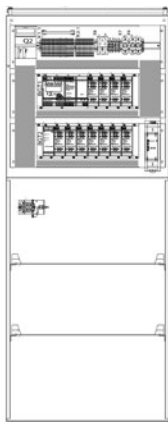
**ZB-S/18**



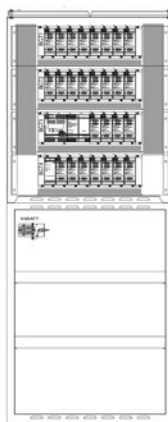
**ZB-S/LAD**



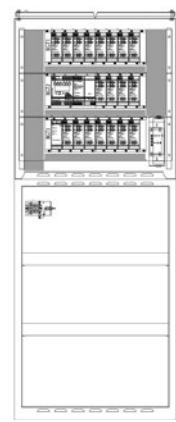
**ZB-S/10C**



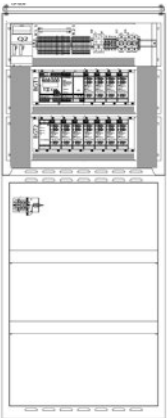
**ZB-S/26C6**



**ZB-S/18C6**



**ZB-S/10C6**



**ZB-S/18C3**



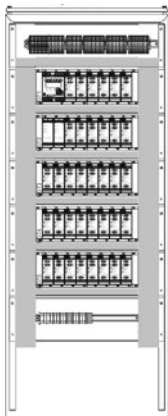
**ZB-S/10C3**



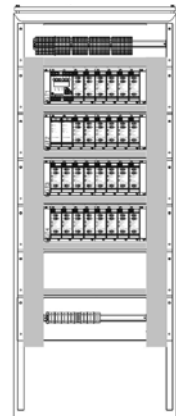
**ZB-S/2C3**



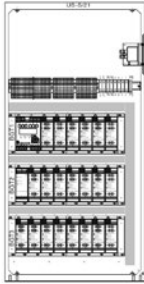
**US-S/36**



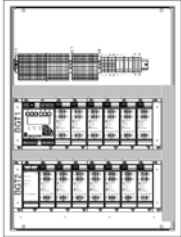
**US-S/28**



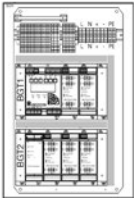
**US-S/21**



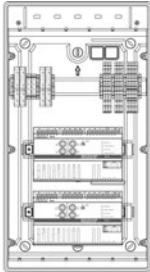
**US-S/13**



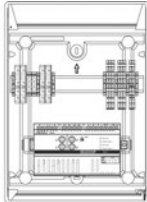
**US-S/5**



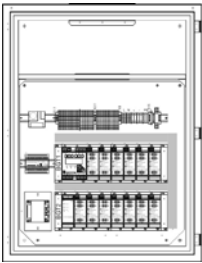
**US-S/ SOU2**



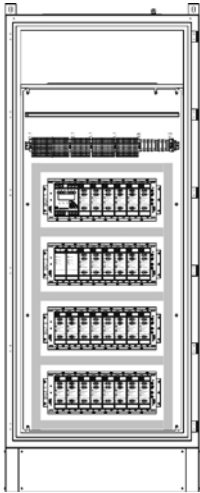
**US-S/ SOU1**



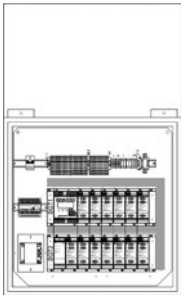
**ESF-E30/13S**



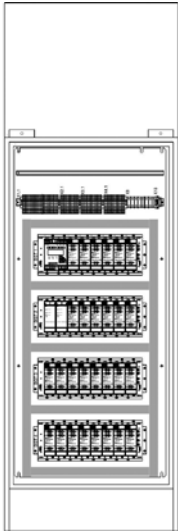
**ESF-E30/28S**



**ESF-E30/13S-P**



**ESF-E30/28S-P**







## Central battery system EURO ZB.1 with circuit monitoring



# Central battery system EURO ZB.1 with circuit monitoring

3



With central battery system EURO ZB.1, CEAG offers a solution for all applications where luminaires need not be monitored. EURO ZB.1 has a reliable charging system, is of modular design and distributed configuration. Relevant information about cover status, functioning of luminaire circuits as well as logging of the prescribed tests are collected via the compact control module of the EURO ZB.1 and stored in a log book as required by the respective regulations. Luminaire circuit faults are detected and indicated as faults of the electrical circuits. The results can be printed out by means of the optional event printer PD2.

## Properties:

- Compact design of components and substations
- Individual circuit switching
- Freely programmable switching modes of the circuits
- Maximum safety due to distributed system design
- Service-friendly modular units



### Ordering details

Type	Scope of supply	Order No.
Central battery system EURO-ZB.1/52	Central battery system incl. ST20 E, BCM and DC/DC.2 26 free module slots *1	40071346070
Central battery system EURO-ZB.1/20K	Central battery system incl. ST20 E, BCM and DC/DC.2 10 free module slots *1	40071346071
Central battery system EURO-ZB.1/204K	Central battery system incl. ST20 E, BCM and DC/DC.2 14 free module slots *1	40071346854
Central battery system EURO-ZB.1/26K	Central battery system incl. ST20 E, BCM and DC/DC.2 10 free module slots *1	40071346615
Central battery system EURO-ZB.1/264K	Central battery system incl. ST20 E, BCM and DC/DC.2 14 free module slots *1	40071346855
Central battery system EURO-ZB.1/18K	Central battery system incl. ST20 E, BCM and DC/DC.2 10 free module slots	40071346180
Central battery system EURO-ZB.1/188K	Central battery system incl. ST20 E, BCM and DC/DC.2 18 free module slots	40071346853
Central battery system ZB 96/LAD	Central battery system incl. ST20 E, BCM and DC/DC.2 (2 free module slots possible)	40071347400
Substation EURO-US.1/72	Substation incl. ST20 E and DC/DC.2 36 free module slots	40071346335
Substation EURO-US.1/42	Substation incl. ST20 E and DC/DC.2 21 free module slots	40071347561
Substation EURO-US.1/26	Substation incl. ST20 E and DC/DC.2 13 free module slots	40071347560
Substation EURO-US.1/10	Substation incl. ST20 E and DC/DC.2 5 free module slots	40071346247
Substation EURO ESF-E30/17	Cabinet for substation EURO ESF-E30/17, with control module ST20E, DC/DC-converter, 2 x module rack 8 units and 1 x module rack 4 units	40071347806
Substation EURO ESF-E30/28	Cabinet for substation EURO ESF-E30/28, with control module ST20E, DC/DC-converter, 4 x module rack	40071347808

\*1 Plus maximal two additional slots in correlation of CM 1.7 A and CM 3.4 A placement.

### Ordering details accessories

Type	Order No.
4 pcs. DIN mounting rail incl. mounting accessories	40071347125
3 pcs. C-section rail incl. mounting accessories	40071347126
Socket 200 mm for ZB-S, depth 400 mm	40071347121
Socket 100 mm for ZB-S, depth 400 mm	40071347120
Socket 200 mm for ZB-S/18C3 and 10C3, depth 330 mm	40071360049
3-piece baseplate for ZB-S, depth 400 mm, mouse-proof	40071347124
Cable support rail	40071347123
Metal flange plate undrilled for battery cabinet	40071346225
Flange plate with foam rubber for battery cabinet	40036070164
Fireproof dowel M10 for E30 sub-distribution board, Set of = 12 pcs., for mounting in concrete walls	40036070298
Optional wall mounting plate for wall mounting for EURO ESF-E30/17	40071347726

# EURO ZB.1

## Table of covers, technical data

Type	EURO ZB.1-52	EURO ZB.1/20K	EURO ZB.1/204K	EURO ZB.1/26K	EURO ZB.1/264K
Modules:					
Control module: ST20E	1	1	1	1	1
DC/DC.2-converter (DCM)* <sup>5</sup>	1	1	1	1	1
BCM	1	1	1	1	1
Circuit module SKU* <sup>5</sup>	0-26* <sup>8</sup>	0-10* <sup>8</sup>	0-14* <sup>8</sup>	0-10* <sup>8</sup>	0-14* <sup>8</sup>
Charging module 1.7 A	0-2* <sup>1</sup>	0-2* <sup>3</sup>	0-2* <sup>3</sup>	0-2* <sup>4</sup>	0-2* <sup>4</sup>
Charging module 3.4 A	0-6* <sup>1</sup>	0-1* <sup>3</sup>	0-1* <sup>3</sup>	0-2* <sup>4</sup>	0-2* <sup>4</sup>
Electrical cabinet construction:					
Rated voltage	400/230 V	230 V	230 V	230 V	230 V
Rated frequency	50/60 Hz	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	TN-C-S / IT
Insulation class	1	1	1		
Degree of protection	IP21	IP21	IP21	IP21	IP21
Max. current rating mains [ $\Sigma$ L1, L2, L3] [A]	80	60	60	63	63
Max. rated power mains [KW]	18.4	13.8	13.8	14.5	14.5
Max. current rating battery [A]	80	35	35	63	63
Max. rated power battery [KW]	17.3	7.6	7.6	13.6	13.6
Three-phase distribution	No	No	No	No	No
Conductor size for mains and battery supply	50 mm <sup>2</sup>	16 mm <sup>2</sup>	16 mm <sup>2</sup>	16 mm <sup>2</sup>	16 mm <sup>2</sup>
Outgoing circuits	0- 6 Feeders	1 Feeder	–	2 Feeders	–
Conductor size	16 mm <sup>2</sup>	35 mm <sup>2</sup>	–	35 mm <sup>2</sup>	–
Max. conductor size final circuits	2.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>
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 600	2050 x 800 x 600
Material / Design	Sheet steel / Stand alone cabinet	Sheet steel / Compact cabinet	Sheet steel / Compact cabinet	Sheet steel / Compact cabinet	Sheet steel / Compact cabinet
Door stop	right	right	right	right	right
Outer coating	Textured powder paint	Textured powder paint	Textured powder paint	Textured powder paint	Textured powder paint
Colour	RAL 7035	RAL 7035	RAL 7035	RAL 7035	RAL 7035
Partial viewing door	Yes	Yes	Yes	Yes	Yes
Lock	3 mm Two-way	3 mm Two-way	3 mm Two-way	3 mm Two-way	3 mm Two-way
Cable entry from above	Yes	Yes	Yes	Yes	Yes
Cable entry from below	Yes	No	No	No	No
Socket (optional)	100/200	200	200	–	–
Battery capacity, installed in:					
Compact cabinet	–	5.5-53.7 Ah	5.5-53.7 Ah	5.5-89.4 Ah	5.5-89.4 Ah
Battery cabinet	23.3-245 Ah* <sup>6</sup>	–	–	–	–
Battery rack	23.3-245 Ah* <sup>6</sup>	–	–	–	–

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 Up to 8 charging modules are possible when 2 SKUs are fitted.

\*3 When 1 charging module is fitted a single booster adapter 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-converter are operated on the same module assembly frame next to each other.

EURO ZB.1/18K	EURO ZB.1/188K	EURO US.1/72	EURO US.1/42	EURO US.1/42	EURO US.1/10	EURO-ESF-E30/17	EURO-ESF-E30/28
1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1
1	1	–	–	–	–	–	–
0-10	0-18	0-36	0-21	0-13	0-5	0-13	0-28
1	1	–	–	–	–	–	–
–	–	–	–	–	–	–	–
230 V	230 V	400/230 V	230 V	230 V	230 V	230 V	400/230 V
50/60 Hz	50/60 Hz	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	TN-C-S / IT	TN-C-S / IT
IP21	IP21	IP54	IP54	IP54	IP54	IP54	IP54
25	25	80	50	50	30	35	50
5.8	5.8	18.4	11.5	11.5	6.9	8.1	11.5
25	25	80	50	50	30	35	50
5.4	5.4	17.3	10.8	10.8	6.5	7.6	10.8
No	No	Yes	No	No	No	No	Yes
16 mm <sup>2</sup>	16 mm <sup>2</sup>	35 mm <sup>2</sup>	35 mm <sup>2</sup>	16 mm <sup>2</sup>	16 mm <sup>2</sup>	16 mm <sup>2</sup>	16 mm <sup>2</sup>
1 Feeder	1 Feeder	–	–	–	–	–	–
16 mm <sup>2</sup>	16 mm <sup>2</sup>	–	–	–	–	–	–
2.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>	4 mm <sup>2</sup>	4 mm <sup>2</sup>
1800 x 600 x 350	1800 x 600 x 350	2050 x 800 x 400	1200 x 600 x 300	800 x 600 x 250	600 x 400 x 250	1150 x 885 x 405	2190 x 885 x 405
Sheet steel / Compact cabinet	Sheet steel / Compact cabinet	Sheet steel / Stand alone cabinet	Sheet steel / Wall cabinet	Sheet steel / Wall cabinet	Sheet steel / Wall cabinet	Sheet steel / func. endurance 30 min. / Wall cabinet	Sheet steel / func. endurance 30 min. / Wall cabinet
right	right	right	right	right	right	right	right
Textured powder paint	Textured powder paint	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	RAL 7035	RAL 7035
Yes	Yes	Yes	No	No	No	No	No
3 mm	3 mm	3 mm	3 mm	3 mm	3 mm	3 mm	3 mm
Two-way	Two-way	Two-way	Two-way	Two-way	Two-way	Two-way	Two-way
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No	No	Yes	No	No	No	No	No
200	200	100/200	300	–	–	–	–
5.5-23.3 Ah	5.5-23.3 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.

SKU 4 x 1 A



### SKU 4 x 1 A

Circuit charger

- Circuit monitoring per each circuit pair
- Individual selection and programming per AC/DC circuit pair
- Easy access to fuses
- LED indicates fault and Run/ON for each circuit
- Supplies ballast luminaires
- Service-friendly modular units

Fusing	1.6 A/250 V / 6.3 x 32
Max. connected load per circuit pair	230 VA/220 W
Max. starting current per circuit	60 A per circuit
Number of circuits per module	4 pcs.
Typical switch over time	AC/DC approx. 200 ms
Connection terminals/Clamp terminals	2.5 mm <sup>2</sup> rigid and flexible
Own consumption	3.85 W

### Ordering details

Type	Scope of supply	Order No.
SKU 4 x 1 A	Plug-in module for EURO ZB.1 with circuit monitoring	40071346610
Spare part	Fuse 1.6 AT (6.3 x 32) 250 V (PU 10 pcs.)	40071070717

SKU 2 x 3 A



### SKU 2 x 3 A

Circuit charger

- Circuit monitoring per each circuit
- Individual selection and programming per AC/DC circuit
- Separate fusing for mains and battery operation
- Easy access to fuses
- LED indicates fault and Run/ON for each circuit
- Supplies ballast luminaires
- Service-friendly modular units

Fusing	5 AT/250 V, 6.3 x 32
Continuous current rating	3 A per circuit
Starting current	120 A per circuit
Typical switch over time	AC/DC approx. 200 ms
Connection terminals/Clamp terminals	2.5 mm <sup>2</sup> rigid and flexible
Own consumption	3.85 W

### Ordering details

Type	Scope of supply	Order No.
SKU	Circuit change over module SKU 2 x 3 A	40071347306
Spare part	Fuse 5.0 AT (6.3 x 32) 250 V (PU 10 pcs.)	40071689047

SKU 1 x 6 A

**SKU 1 x 6 A**

Circuit charger

- Circuit monitoring per each circuit
- Individual selection and programming per AC/DC circuit
- Separate fusing for mains and battery operation
- Easy access to fuses
- LED indicates fault and Run/ON for each circuit
- Supplies ballast luminaires
- Service-friendly modular units

Fusing	10 AT/250 V, 6.3 x 32
Continuous current rating	6 A per circuit
Starting current	180 A per circuit
Typical switch over time	AC/DC approx. 200 ms
Connection terminals/Clamp terminals	2.5 mm <sup>2</sup> rigid and flexible
Own consumption	3.85 W

3

**Ordering details**

Type	Scope of supply	Order No.
SKU	Circuit change over module SKU 1 x 6 A	40071347348
Spare part	Fuse 10 AT (6.3 x 32) 250 V (PU 10 pcs.)	40071070715

Control module ST 20 E

**Control module ST 20 E**

The freely programmable ST 20 E control module with 4-line plain text display is used for programming, monitoring and logging of all operational states.

All functions such as charge, mains and battery changeover and deep discharge protection as well as the emergency luminaires connected to the central power supply system are automatically checked. Optionally, an external phase monitor and an annunciator cover with key-operated switch can be connected by means of terminals. The test intervals for the function and duration test can be inputted. Malfunctions are shown in the display and signalled by means of potential-free contacts. An 'E/G/A interface' allows connection to an overriding monitoring station.

Max. current load of volt-free contacts 11/12, 21/22, 31/32	24 V 0.5 A AC/DC
Display	4-line/20 characters per line
Printer interface	DB 25 Centronics

**Ordering details**

Type	Scope of supply	Order No.
Control module ST 20 E	Plug-in module for all devices	40071346120

DC-DC Converter (DCM)



DC/DC Converter (DCM)

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

With more than 26 SKUs 2 x 3 A/1 x 6 A/4 x 1 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:

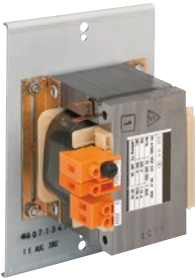
- Supplies 26 SKUs CG-S 2 x 3 A/1 x 6 A or 4 x 1 A
- Incoming supply can be run via AC/AC

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) Supplies max. 26 SKUs

Ordering details

Type	Order No.
DC/DC Converter (DCM)	70071347071

AC Module



AC Module

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

Model acc. 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-Modul	external transformer module AC/AC-converter 240 VA incl. mounting adapter	40071347162

DLS maintained light switch monitor

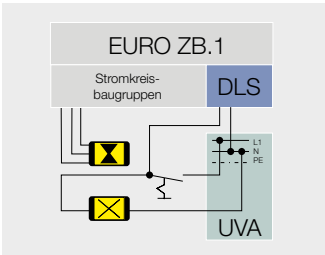


DLS maintained light switch monitor

By means of the DLS module it is possible to jointly switch luminaires for general lighting and circuits for emergency lighting via existing light switches in mains operation. Only the switched phase (tapping downstream of the light switch) and the respective neutral conductor must be connected to the DLS terminals. Via electrically isolated input channels the DLS module can monitor up to 8 light switches. The assignment of the light switches to the emergency light circuits is freely programmable (max. 2 independent light switches per circuit). The assignment can be altered at any time, e. g. in case of modified use or modified operational procedures. There is no problem to adapt the emergency lighting to all operational requirements without additional cost.

Connection terminals/Clamp terminals	2.5 mm <sup>2</sup> rigid and flexible
Number of light switch inputs	8 pcs.

3



Ordering details

Type	Scope of supply	Order No.
DLS	Plug-in module	40071343761

SDS 8



SDS 8 module

By means of the SDS 8 module it is possible to monitor max. 8 sub-distributions of the general lighting via separate 24 V current loops. The emergency light circuits can thus selectively be switched on. When a sub-distribution fails, only those emergency luminaires will be switched on that are assigned to it.

Connection terminals	2.5 mm² rigid and flexible
Number of 24 V monitoring threshold	8 pcs.

Ordering details

Type	Scope of supply	Order No.
SDS 8	Plug-in module	40071346075

**Note:**  
It is possible to install max. 4 optional modules (DLS/TLS/SDS 8) either individually or in combination, in one cover or one substation. Max. 2 different, freely programmable DLS or SDS 8 inputs can be assigned, also in combination, to each circuit.

Printer PD 2



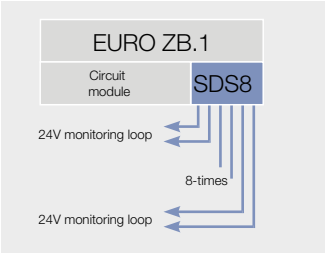
Printer PD 2

The printer logs and memorizes all function tests and mains failures of a EURO ZB.1 cover or a substation.  
After the performance of an automatic function test, the results are printed out in plain text also stating the time and date. 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. With the printer the information on possible failures of luminaires (e. g. defective lamp) is printed out in detail. The printer must not be used together with a LON module.

Printing paper	Woodfree printing paper
Paper width	57.5 mm
Max. diameter paper roll	50 mm
Core hole diameter	12 mm

Ordering details

Type	Scope of supply	Order No.
PD 2	Plug-in module	40071343970
Printing paper		40078079666



CG IV relay module



**CG IV relay module**

The bipolar CG IV relay module transmits data and operational states of the covers/substations to a central building management system.

Connection terminals/Clamp terminals	2.5 mm <sup>2</sup> rigid and flexible
Switching capacity of the contacts	24 V/0.5 A AC DC

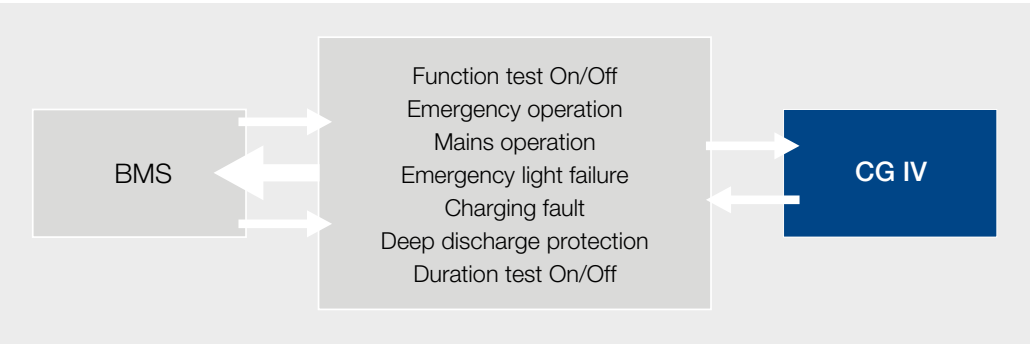
**Ordering details**

Type	Scope of supply	Order No.
CG IV	Plug-in module	40071343971

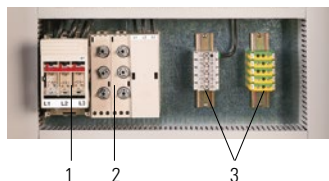
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**Attention!**

The combination of LON module and PD 2 printer in one system is not possible.



Mains distribution board



### Mains distribution board

The mains supply to a EURO ZB.1/52 system comes via a modular mains distribution board. This includes a size 00C load disconnecter (1) with a maximum conductor size of 50 mm<sup>2</sup> 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

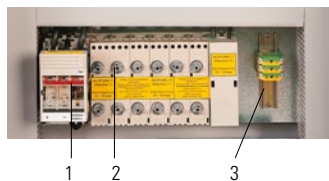


Current rating	63 A
Rated operating voltage	400 V
Box terminal for circulator conductor	to 16 mm <sup>2</sup>
Material	Polyamide (PA 6.6), 30 % glass-fibre-reinforced
Scope of supply	incl. 3 pcs. screw caps E18 and 3 pcs. D02-fuse inserts 25 A

### 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 EURO ZB.1/52 system comes via a modular battery distribution board. This includes a size 00C load disconnecter (1) with a maximum conductor size of 50 mm<sup>2</sup> 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 <sup>2</sup>
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

Three-phase monitor



### Three-phase monitor

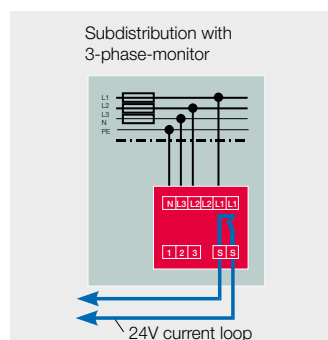
When one phase fails, the module switches a relay contact and interrupts the standard electronic 24 V current loop in the EURO ZB.1 cover and/or the EURO/US substation. The emergency luminaires in non-maintained mode are switched to mains operation if the mains voltage still applies to the EURO ZB.1 cover (HVS).

Dimensions mm (H x W x D)	85 x 52.5 x 65
Enclosure	Plastic
Connection terminals	2.5 mm <sup>2</sup> rigid and flexible
Type of mounting	DIN rail
Contact	0.5 A/24 V AC/DC, 1 x open contact, 1 x changeover contact

3

### Ordering details

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



F3 remote indication



### F3 remote indication

Operating from a battery supply, the F3 remote indication ensures the display of important operational information also in a mains fail condition. By means of the built-in key-operated switch, the connected EURO ZB.1 covers can be centrally put out of operation. Thereby, the F3 remote indication permits remote control only if operation by unauthorized persons is prevented.

Connection terminals wall surface-mounting	2.5 mm <sup>2</sup> rigid and flexible
Dimensions mm (H x W x D)	160 x 80 x 55
Connection terminals recessed	1.5 mm <sup>2</sup> rigid or 1 mm <sup>2</sup> flexible
Dimensions mm (H x W x D)	80 x 80 x 55

### 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

F3 remote indication recessed



Battery Control Modul (BCM)



Battery Control Module (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 mm² 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.	

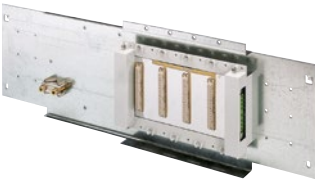
Ordering details

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



Booster rack, 4-way



Booster rack, 2-way



Booster rack 1-way compact



**Booster rack**

A 4-way booster rack with 3-phase supply is mounted in system type EURO ZB.1/52.  
This is for supplying 2.5 A boost chargers only!  
The optional 2-way booster 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 <sup>2</sup>

**Ordering details**

Type	Scope of supply	Order No.
Booster rack 4-way	Unit accommodates 4 booster chargers 2.5 A for EURO ZB.1/52	40071347043
Booster rack 2-way	Unit accommodates 2 additional booster chargers 2.5 A (only in connection with 40071347043)	40071347130

3

**Booster rack, compact**

The compact version of the booster rack is intended for use in EURO ZB.1 compact systems.  
The single compact booster rack has been designed for EURO ZB.1/20K and 204K, the double compact booster rack for system types EURO ZB.1/26K and 264K respectively. These are for supplying the 2.5 A boost chargers only!

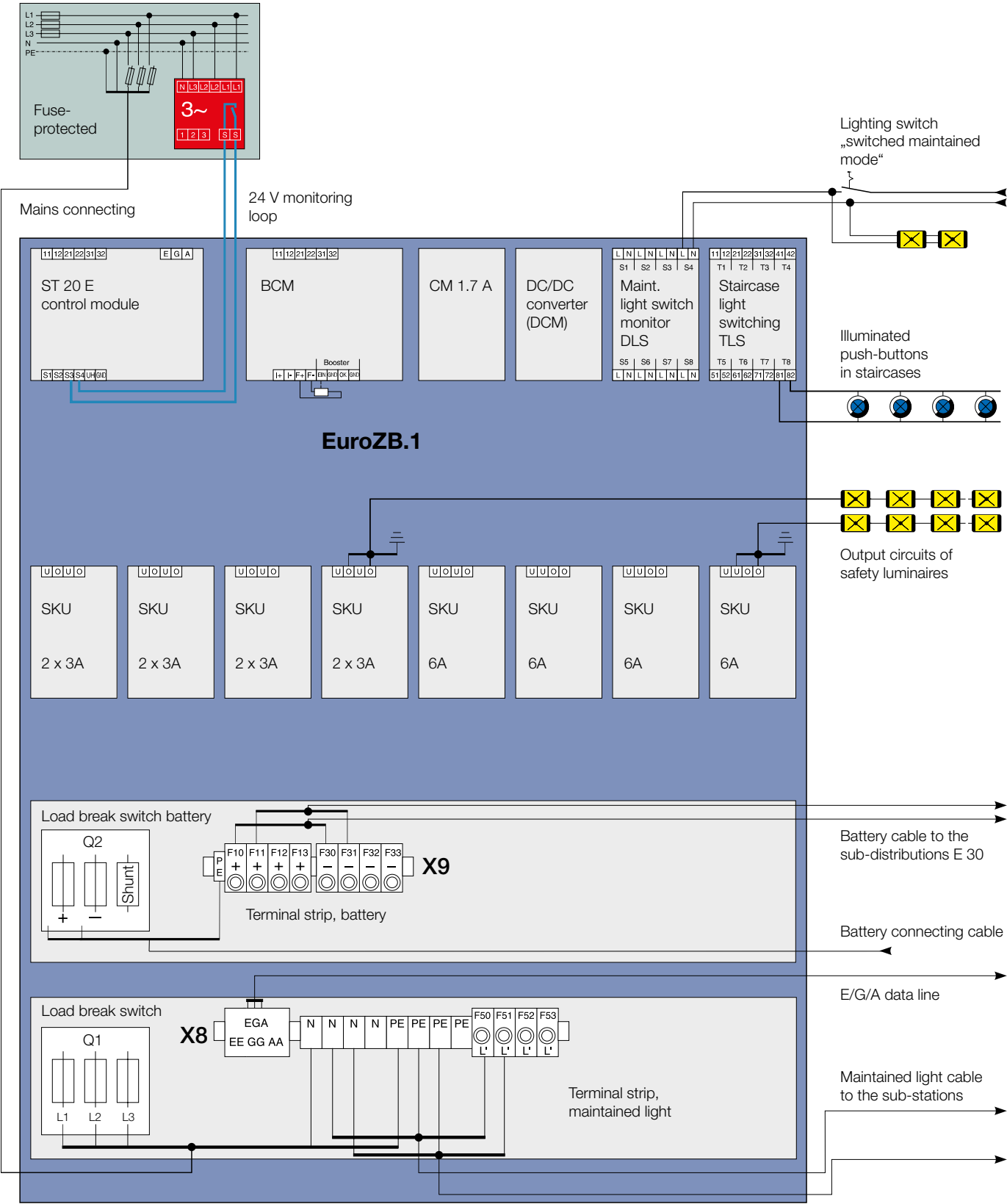
Connection voltage	230 V AC/220 V DC
Conductor size	max. 2.5 mm <sup>2</sup>

**Ordering details**

Type	Scope of supply	Order No.
Booster rack 1-way	Unit accommodates 1 booster chargers 3.4 A compact for EURO ZB.1/20K and 204K	40071347167
Booster rack 2-way	Unit accommodates 2 booster chargers 3.4 A compact for EURO ZB.1/26K and 264K	40071347130

EURO ZB.1

Installation example





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 a	=	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
UN battery	=	216 V
90% UN battery (108 battery) = 194.4 V	=	<b>1,8 V per battery</b>

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	à 16 VA	=	1.60 kVA
250 pcs. 55011 CG	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 <sub>zu</sub> 0.72 kVA		=	0.72 kVA
Booster CM 3.4 A P <sub>zu</sub> 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						
Lamp cap	G5	G5	G5	G5	G5	G5
Type N-EVG ... V-CG-S	14 / 21 / 28 / 35 W	14 / 21 / 28 / 35 W	14 / 21 / 28 / 35 W	14 / 21 / 28 / 35 W	24/39 W	24/39 W
Lamp load [W]	14	21	28	35	24	39
Current consumption [A] at 220 V battery operation, setting (Luminous flux $\Phi_E/\Phi_N$ 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 $\lambda$	0.96	0.96	0.98	0.98	0.98	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					
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
Current consumption [A] at 220 V battery operation, setting (Luminous flux $\Phi_E/\Phi_{Nenn}$ 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
Stromaufnahme [A] bei 230 V Netzbetrieb	0.24	0.25	0.37	0.16	0.24
Leistungsfaktor $\lambda$	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!

**Note: Setting the address switches 1 and 2 on address 0 there is no luminous flux reduction during battery operation.**

EVG 13.3



EVG 13.3 V-CG-S



EVG 18 V-CG-S



EVG 18C V-CG-S



**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] <sup>1</sup>	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
TC-DEL	G 24 q-2	18C V-CG-S	18	0.070	30	8	0,6
		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
		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
		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
		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
		18 V-CG-S	18	0.070	30	8	0,6

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

**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	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 39.8	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	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	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	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	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	1.7	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

3

**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	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	0	0	0	1	1	1	0	0	1	0	0	1	1	1	1	0
		3.4	0	0	0	0	0	1	1	1	1	1	1	2	2	2	3	3	3	4	4	5	6
	1.5	1.7	1	1	1	1	0	0	0	0	1	1	0	0	1	0	0	1	1	1	0	0	1
		3.4	0	0	0	0	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	0	0	0	0	1	1	0	0	1	0	0	1	0	0	1	0	0
		3.4	0	0	0	0	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	0	0	0	1	1	1	0	1	1	0	1	0	0	0	0	1	1
		3.4	0	0	0	0	1	1	1	1	1	1	2	2	2	3	3	4	4	5	6	6	7
	8.0	1.7	1	1	1	0	0	0	1	1	1	0	0	1	0	1	0	1	1	0	1	1	1
		3.4	0	0	0	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	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	2	2	2	2	2	3	3	3	4	4
Total weight per battery set approx. kg	45	65	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	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	0.60	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	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

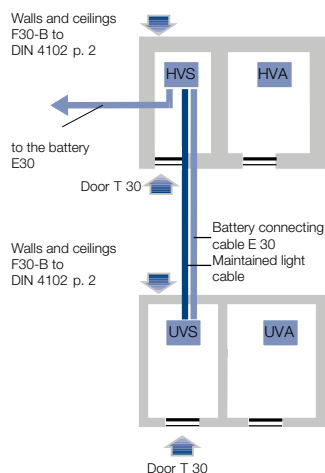
**Table 5.2**

Calculation of ventilation of electrical rooms acc. to DIN EN 50272-2 (calculated for float charge)\*:

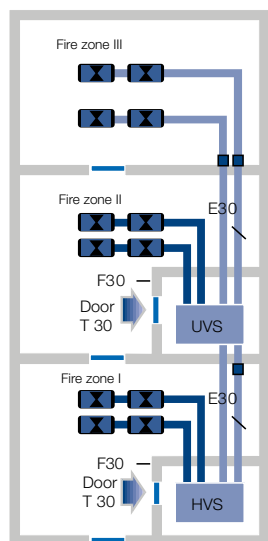
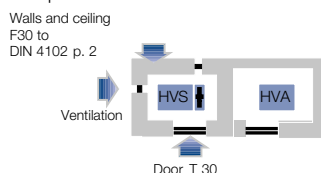
Battery 216 V	5.5	8.5	14.0	23.3	32.0	39.8	50.4	53.7	66.2	85.7	89.4	106.0	118.0	143.1	155.6	178.8	195.4	245.0	268.2	308.0	357.6
Air volume flow req. for the ventilation of the place of installation [m³/h]	0.03	0.05	0.08	0.13	0.17	0.21	0.27	0.29	0.36	0.46	0.48	0.57	0.64	0.77	0.84	0.97	1.06	1.32	1.45	1.66	1.93
Vent cross-section of the air inlets and outlets of the place of installation [cm²]	0.83	1.29	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.

## Example 1



## Example 2



A number of rules and regulations apply to the accommodation of central battery systems, in particular the EltBauVo, 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.

## 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 m<sup>3</sup>/h

0.05 = fixed factor

$n$  = no. of accumulator cells

$I_{\text{gas}}$  = current in mA per Ah, fits 8 mA per Ah

for  $I_{\text{boost}}$  with VRLA batteries

$C_N$  = capacity  $C_{10}$  for lead acid at 20° C

Example for a ZB cover with 155.6 Ah lead-acid battery:

$$Q = 0.05 \times n \times I_{\text{gas}} \times C_N \times 10^{-3}$$

$$Q = 0.05 \times 108 \times 8 \times 155.6 \times 10^{-3} \text{ m}^3/\text{h}$$

$$Q = 6.72 \text{ m}^3/\text{h}$$

In order to ensure the air volume flow of 6.912 m<sup>3</sup>/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:

$$A \geq 28 \times Q$$

$$A \geq 28 \times 6.72 \text{ m}^3/\text{h}$$

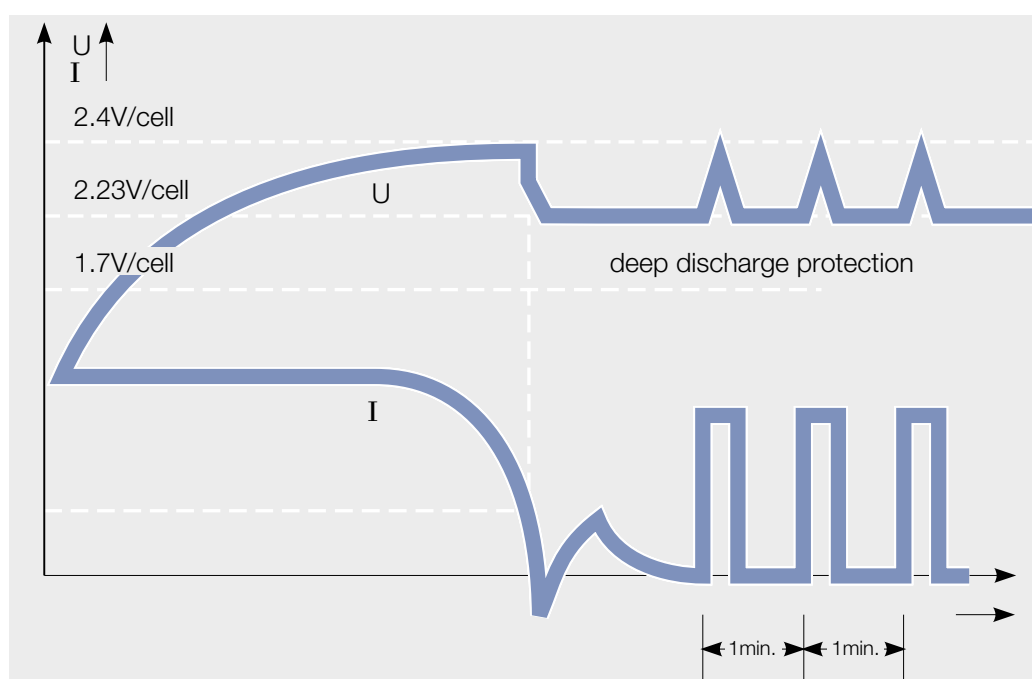
$$A \geq 188.21 \text{ cm}^2$$

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.

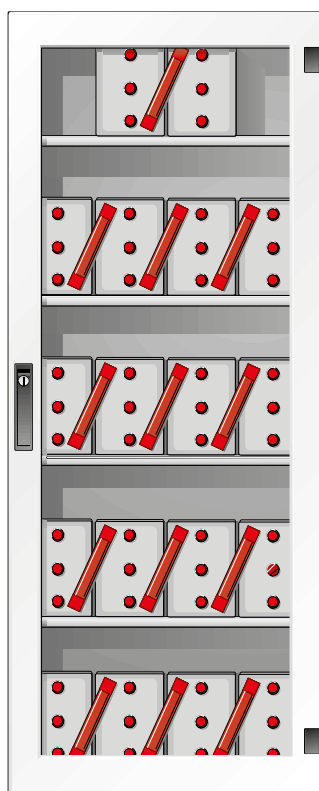
Example for the possible accommodation of a ZB-S and laying of cables which, however, depend on the building's use.



3

#### 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

**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	13.2	15.5	19.9	23.5	29.5	37.4	40.5	47.9	57.3	67.4	77.4	85.3	95.8	105.2	133.2	143.7	163.6	198.6
	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

**Table 3b**

Number of 1.7 A and 3.4 A modules **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	1	0	0	1	0	1	0	0	0
		3.4	0	0	0	0	1	1	1	1	1	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	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
		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	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	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	0	0	1	1	0	1
		3.4	0	0	0	0	0	0	0	0	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	1	0	1	0
		3.4	0	0	0	0	0	0	0	1	1	1	1	1	1	1	2	2	2	2	3	3	4
	2.0	1.7	1	1	1	1	1	0	0	0	0	0	0	1	1	0	0	0	1	0	0	1	0
		3.4	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	0	0	0	0	1	1	1	1	0	0	1	1	0	1	0	1
		3.4	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	2	2	2	2	3	3	4	4	5







## Group battery system CG 2000 with single luminaire monitoring and STAR technology



## What is STAR?

**S** = Switching  
**T** = Technology  
**A** = Advanced  
**R** = Revision

**STAR**  
TECHNOLOGY

4

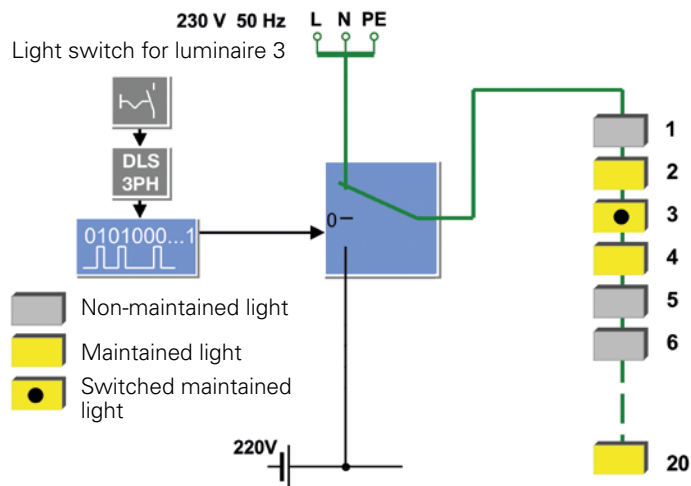
### Switch to safety!

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 new **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.



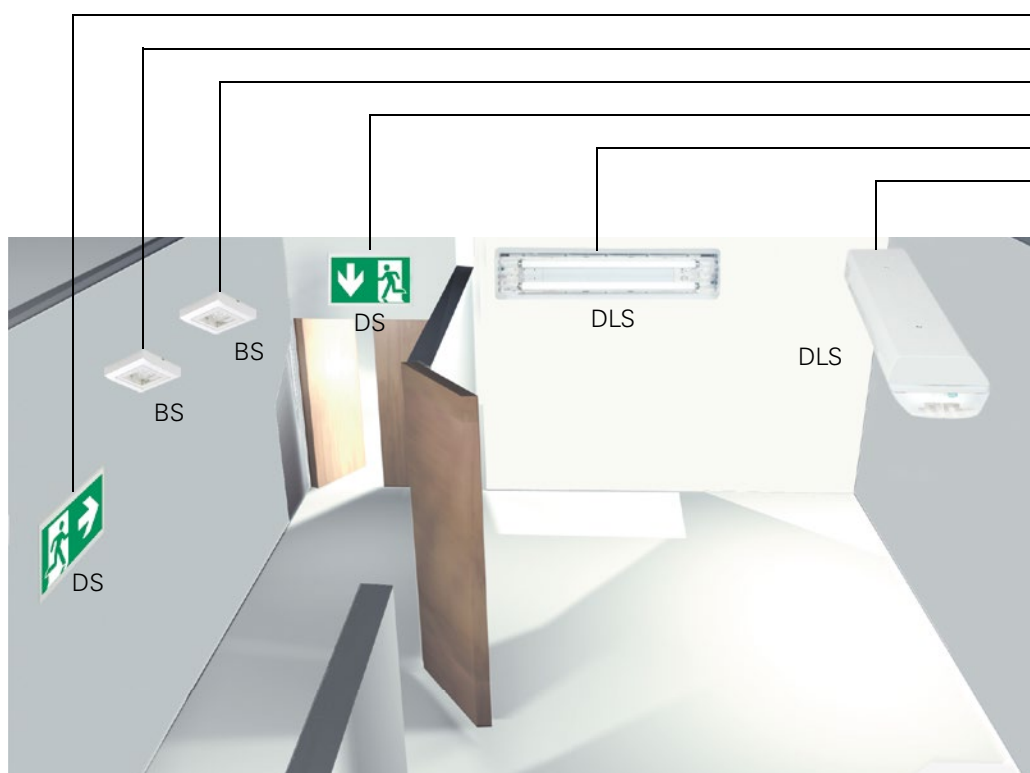
Operation of the STAR technology

## 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.

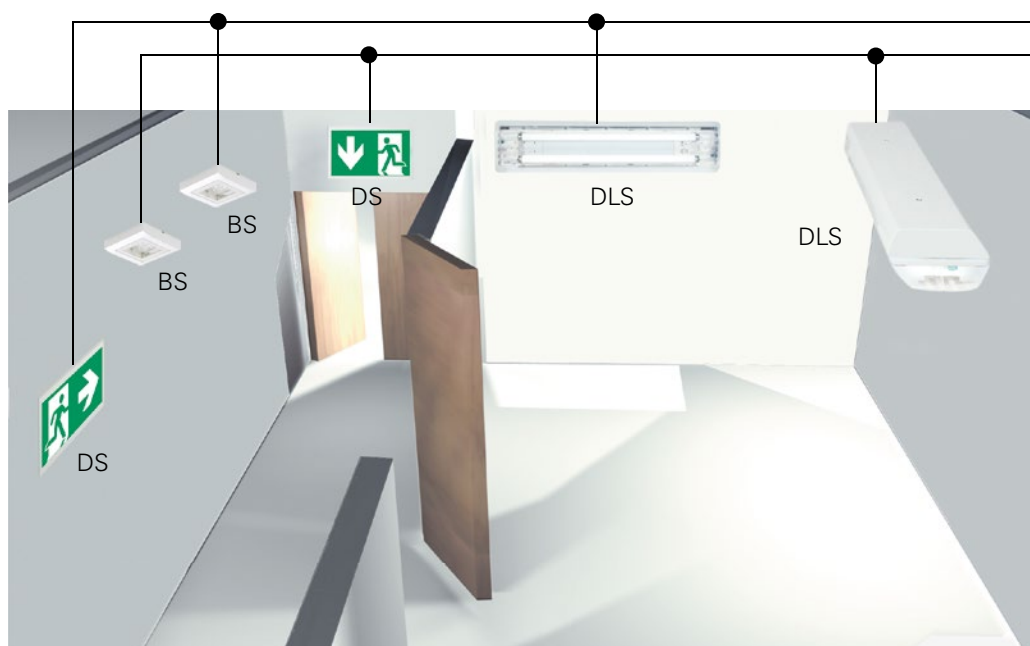
As with CEWA GUARD technology, the patented STAR technology requires no additional data cable to the luminaires.



## 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



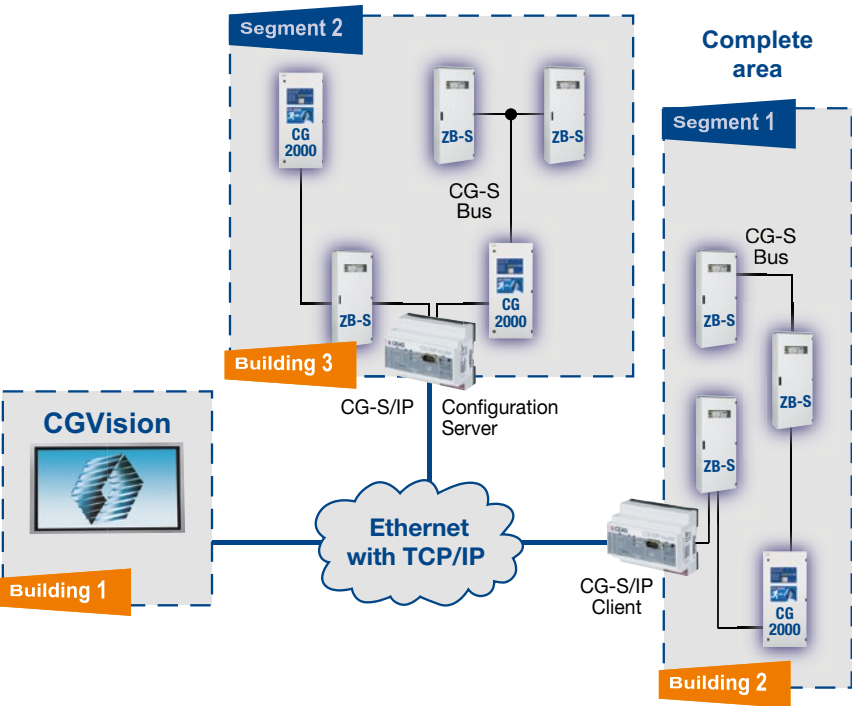
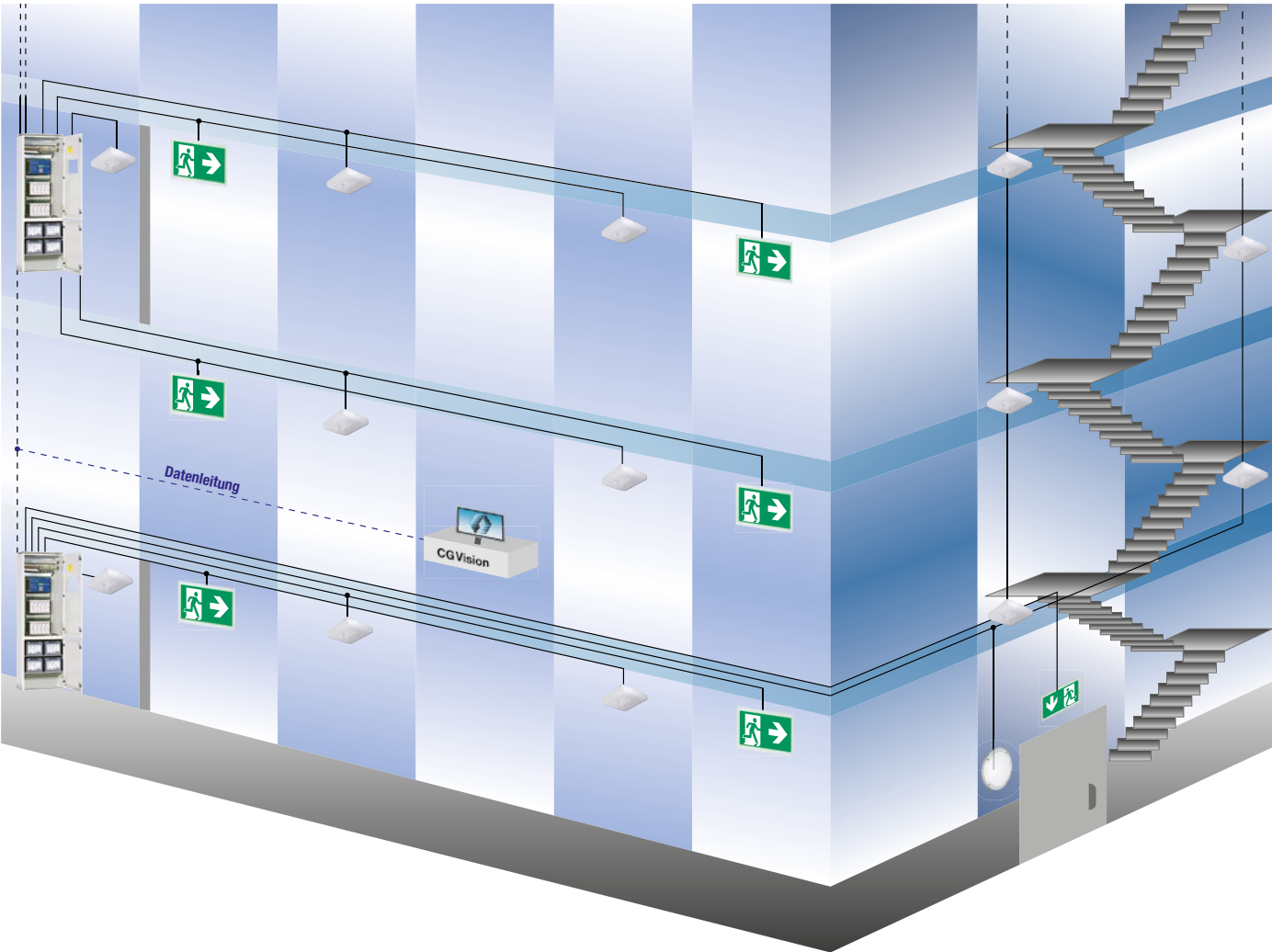
## CG 2000 Installation with STAR-Technology:

- 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

# Group battery system CG 2000 with STAR technology

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Group battery system CG 2000 acc. to EN 50171 and BGV A3 for supply of 230 V / 216 V AC/DC safety and escape route luminaires. Suitable for safety lighting installations according to DIN VDE 0100-718, DIN EN 50172 and E DIN VDE 0108-100.

The advantages of the CG 2000 group battery system become particularly apparent when, for fire protection reasons, the emergency lighting system has to be installed in sectors. As well as providing a dependable supply of power (230V AC/220 V DC) to safety and escape route luminaires, the CG 2000 automatically tests itself 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 Hz supply network using the 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 LCD display monitors and controls the group battery system. It automatically tests all the functions of the devices and emergency luminaires that are 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.

## Features:

- 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
- 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 log book and system configuration with Secure Digital Card
- High safety level due to decentralized arrangement

# Group battery system CG 2000

## Technical data

CG 100 Plus



	CG 102 5,5 LP	CG 102 8,5 LP	CG 104 5,5 LP
Converter bays	2	2	4
Option bays	3	3	3
I max. (A) from battery	5.1 A	7.4 A	5.1 A
max. battery capacity (AhK10; 1.8V/Z, +20°C)	4 x 5.5 Ah	4 x 8.5 Ah	4 x 5.5 Ah
Dimensions (mm)			
H	800 mm	800 mm	800 mm
B	500 mm	500 mm	500 mm
T	180 mm	180 mm	180 mm
Max. ambient temperature	For storage: -20 °C to + 40 °C, For operation: -5 °C to + 35 °C		
Degree of protection / insulation class	IP21 / I		
Weight (approx. kg) without battery and converter	270 kg		

CG 102 5,5 LP



	CG 104 8,5 LP	CG 100 Plus*	CG 200 Plus*
Converter bays	4	5	10
Option bays	3	3	3
I max. (A) from battery	7.4 A	17.5 A	35 A
max. battery capacity (AhK10; 1.8V/Z, +20°C)	4 x 8.5 Ah	4 x 23.3 Ah	4 x 53.7 Ah
Dimensions (mm)			
H	800 mm	1100 mm	1800 mm
B	500 mm	500 mm	600 mm
T	180 mm	180 mm	300 mm
Max. ambient temperature	For storage: -20 °C to + 40 °C, For operation: -5 °C to + 35 °C		
Degree of protection / insulation class	IP21 / I		
Weight (approx. kg) without battery and converter	270 kg	35.5 kg	110.0 kg

\*Converter bays to terminals connected

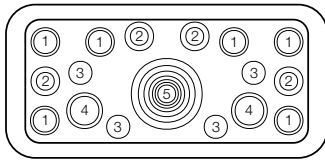
CG 200 Plus



## Ordering details

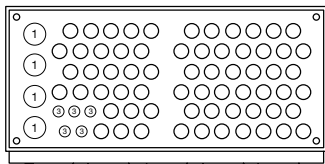
Type	Model	Order No.
CG 102 5,5 LP	CG 102 5.5 LP, incl. control unit, 1 charging module, 2 converters LWL 150 and battery set 5.5 Ah	40071360794
CG 102 8,5 LP	CG 102 8.5 LP, incl. control unit, 1 charging module, 2 converters LWL 150 and battery set 8.5 Ah	40071360795
CG 104 5,5 LP	CG 104 5.5 LP, incl. control unit, 1 charging module, 4 converters LWL 150 and battery set 5.5 Ah	40071360796
CG 104 8,5 LP	CG 104 8.5 LP, incl. control unit, 1 charging module, 4 converters LWL 150 and battery set 8.5 Ah	40071360797
CG 100 Plus	Cabinet with control module, 1 charging module, converter and empty option bays	40071346720
CG 200 Plus	Cabinet with control module, 1 charging module, converter and empty option bays	40071347685

Prepunched cable entries  
CG 102, 104, 100 Plus



- 1 = M16/M20
- 2 = M12/M20
- 3 = M16
- 4 = M20/M25
- 5 = M12/M16/M20/M25/M32/M40/M50

Prepunched cable entries  
CG 200 Plus



- Cable entries from top  
prepunched roof sheeting
- 1 = 4 x M32
- 2 = 65 x M20/M25
- 3 = 5 x M16

## Battery

Rated capacity AhK10, 1.8V/Z, +20°C	Dimensions of one battery L x B x H (mm)	No. of batteries $U_B = 12\text{ V}$ pcs	Total weight of all batteries kg
7 J: 50.0 Ah	261 x 135 x 230	4	74
12 J: 5.5 Ah	152 x 65.5 x 98.4	4	10
12 J: 8.5 Ah	152 x 98 x 98.4	4	14,4
10 J: 23.3 Ah	164 x 129 x 162	4	38
12 J: 32.0 Ah	198 x 133 x 185	4	48
10 J: 53.7 Ah	220 x 172 x 235	4	90

## Ordering details battery sets

Type	Model	Order No.
48 V 50,0 Ah	Battery set with 7 years service life	40066042443
48 V 5,5 Ah	Battery set with 12 years service life	40071360381
48 V 8,5 Ah	Battery set with 12 years service life	40071360382
48 V 23,3 Ah	Battery set with 10 years service life	40071347690
48 V 32,0 Ah	Battery set with 12 years service life	40071347691
48 V 53,7 Ah	Battery set with 10 years service life	40071360384

Operating service life for max. battery temperature +20 °C

## Ordering details accessories

Type	Model	Order No.
Spare part	Fuse 4 AT (5.0 x 20) 250 V (PU 10 pcs.)	4071070718

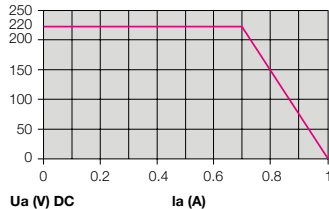
# Group battery system CG 2000

## Technical data

### LWE 150 CG-S converter

The converter supplies and monitors emergency luminaires with electronic ballasts for DC operation. The output voltage during battery operation is 220 V DC.

The CEWA GUARD monitoring station checks the function of the connected luminaire. It is possible to connect up to 20 luminaires.



Ua (V) Output voltage  
LWE 150 CG-S during battery operation

Mechanical construction	Printed circuit
Slots	1
Fusing	4 AT / 250 V 5 x 20 mm
max. continuous output battery operation	150 W
max. start output (< 1 min.) in battery operation	270 W
max. output during mains operation	460 VA
max. inrush current converter output	120 A/ms
for luminaires	EVG
Weight	0.42 kg
Status-LED	– ON – FAULT


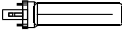
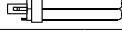



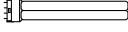
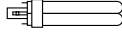

### Ordering details

Type	Model	Order No.
LWE 150 CG-S	Converter	40071346640

Luminaire series	Type of luminaire	Luminaire output [W]*	Battery operation incl. converter efficiency [W]*	Mains operation [VA]*	Inrush current [A]
GuideLed	10011 ... 10026 CG-S	1.9	2.2	4.0	1.5
	10021 ... 10026 CG-S	2.9	3.4	5.5	
	11011 ... 11026 CG-S	2.6	3.1	5.0	
	11021 ... 11026 CG-S	4.1	4.8	7.1	
	13011 ... 13022 CG-S SL	5.0	5.9	8.5	
	10011 ... 10013 CG-S FSL	4.0	4.7	7.2	
Style Variant	29011 LED CG-S	4.4	5.2	7.6	
	29021 LED CG-S	5.8	6.8	9.5	
Spirit LED	Spirit LED 16	1.7	2.0	3.8	
	Spirit LED 28	3.7	4.4	6.6	
Brilliant LED	1503 ... 1803 LED CG-S	2.9	3.4	5.5	
	1504 ... 1804 LED CG-S	4.1	4.8	7.1	
	1903 LED CG-S	3.0	3.5	5.5	
Aluminium enclosure	70011 LED CG-S	2.0	2.4	4.36	
	70021 LED CG-S	3.1	3.6	5.8	
	71011 LED CG-S	3.1	3.6	5.8	
	71021 LED CG-S	5.8	6.8	9.5	
Ceiling mounting	3503.1 LED CG-S	4.4	5.2	7.6	
	3604.1 LED CG-S	5.8	6.8	9.5	
Atlantic	Atlantic LED S CG-S	5.0	5.9	8.5	
	Atlantic LED D CG-S	5.0	5.9	8.5	
		5.0	5.9	8.5	

\* Power consumption from battery and from mains at 20° C ambient temperature at the luminaire

## Rated load/W for luminaires with:

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

Continuous output = start output

## N-EVG 54 W V-CG-S



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

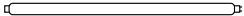
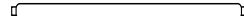
Term	T5	T5	T5	T5	T5	T5
Lamp cap	G5	G5	G5	G5	G5	G5
Type N-EVG ... V-CG-S	14 / 21 / 28 / 35 W	14 / 21 / 28 / 35 W	14 / 21 / 28 / 35 W	14 / 21 / 28 / 35 W	24/39 W	24/39 W
Lamp load [W]	14	21	28	35	24	39
Battery operation incl. converter efficiency in switch position [W] (Luminous flux $\Phi_E/\Phi_N$ in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

# Group battery system CG 2000

## Technical data

N-EVG 58 W V-CG-S



Term					
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
Battery operation incl. converter efficiency in switch position [W] (Luminous flux $\Phi_E/\Phi_N$ in %)					
100 %	62	67	98	44	65
90 %	54	60	88	39	57
80 %	49	54	78	36	52
70 %	44	47	70	31	47
60 %	39	41	62	28	41
50 %	36	39	54	26	36
40 %	31	34	49	23	34
30 %	28	31	44	21	28
Power consumption [VA]	65	68	100	43	65
Inrush current [A]	10	10	12	10	10
System power lamp + EVG acc. 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!

### Calculation example

The following luminaires are to be connected to one converter:

8 pcs. GuideLed 10011 CG-S RZ

4 pcs. 35 W/T5 with N-EVG 54 W V-CG-S, luminous flux ratio 40 %

2 pcs. GuideLed 13011 CG-S SL

### Following parameters must be observed:

#### Battery operation:

max. start output (< 1 min.): 270 W  
max. cont. output: 150 W

#### Mains operation:

max. 460 VA apparent power  
max. inrush current 120 A

Calculation:

#### Continuous output:

10011 CG-S: 8 x 2.2 W	=	17.6 W
35 W/T5: 4 x 23 W (40 %)	=	92.0 W
13011 CG-S: 2 x 5.9 W	=	11.8 W
Summe	=	121.4 W

**< 150 W --> o.k.**

#### Start output:

10011 CG-S: 8 x 2.2 W	=	17.6 W
35 W/T5: 4 x 47 W (100 %)	=	188.0 W
13011 CG-S: 2 x 5.9 W	=	11.8 W
Summe	=	217.4 W

**< 270 W --> o.k.**

#### 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
Summe	=	55.0 A

**< 120 A --> o.k.**

#### max. mains power:

10011 CG-S: 8 x 4 VA	=	32.0 VA
35 W/T5: 4 x 46 VA	=	184.0 VA
13011 CG-S: 2 x 8.5 VA	=	17.0 VA
Summe	=	233.0 VA

**< 460,0 W --> o.k.**



Type	Light source	Circuit	Power consumption in [VA]	Battery operation incl. converter efficiency [W]	Cos $\phi$	Inrush current [A]
eLLK 92018/18 CG-S 2/6-2	2 x 18 W	EVG/CG-S	43.7	26	0.95	10
eLLK 92036/36 CG-S 2/6-2	2 x 36 W	EVG/CG-S	80.5	44	0.95	10
eLLK 92058/58 CG-S 2/6-2	2 x 58 W	EVG/CG-S	124.2	70	0.95	10

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

<sup>1)</sup> Only 1 light source active during DC-operation  
 Delivery without light source and mounting accessories

4

EVG Type	Lamp	Base	Battery operation P [W]	Mains operation S [VA]	Inrush current [A/ms]
1 x 18 W	18 W/T26	G13	20		
2 x 18 W	18 W/T26	G13	40		
1 x 36 W	36 W/T26	G13	40		
2 x 36 W	36 W/T26	G13	80		
1 x 58 W	58 W/T26	G13	58		
2 x 58 W	58 W/T26	G13	116		
18 W	18 W/TC-F	2G10	20		
	18 W/TC-L	2G11	20		
	18 W/TC-DEL	G24q-2	20		
	18 W/TC-TEL	GX24q-2	20		
24 W	24 W/TC-F	2G10	26		
	24 W/TC-L	2G11	26		
26 W	26 W/TC-DEL	G24q-3	30		
	26 W/TC-TEL	GX24q-3	30		
32 W	32 W/TC-DEL	G24q-4	36		
	32 W/TC-TEL	GX24q-4	36		
36 W	36 W/TC-F	2G10	42		
	36 W/TC-L	2G11	42		
40 W	40 W/TC-L	2G11	46		
55 W	55 W/TC-L	2G11	62		

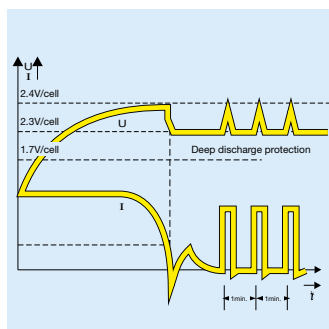
**Notice to  
manufacturers  
data!**

**Notice to  
manufacturers  
data!**

Data approx.  
 For exact calculation manufacturer data have to be considered.

# Group battery system CG 2000

## Components and options

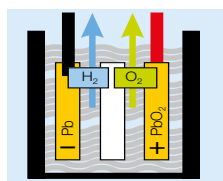


### Charging module CLT 25

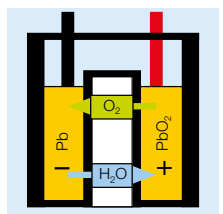
The completely sealed, maintenance-free lead batteries are charged gently and temperature-controlled according to an I/U charging characteristic. Depending on the charging state of the batteries, the boost charge is activated so that the batteries are recharged without exceeding the gassing voltage.

Charging is checked continuously by the patented charge monitoring method, and any faults, such as an interrupted battery circuit, battery asymmetry, a faulty charging unit or a high-drain accumulator are reported immediately.

Charging characteristic	I/U
End-of-charge voltage boost charge	57.2 V DC
End-of-charge voltage trickle charge	55.2 V DC
Deep discharge protection	40.8 V DC
Charging current at 48 V	2.5 A
Power consumption charging module	200 VA
max. no. of charging module	2 (CG 200 Plus)
Weight charging module	0.4 kg



When a conventional lead-acid battery with free electrolyte is overcharged, the water is broken down electrolytically into oxygen on the positive plate and hydrogen on the negative plate. To prevent the battery from drying out, this water must be replaced at regular intervals.



The extremely low gassing absorption cells are designed in such a way that the positive plate is fully charged before the negative plate and, as a result, the oxygen released diffuses to the negative plate. Here it reacts with the lead and is converted into lead oxide which then reacts with the sulphuric acid electrolyte to form lead sulphate and water, whereby a loss of water is prevented completely.

### Ordering details

Type	Model	Order No.
Charging module CLT 25	plug-in module	40071346665

### No. of additional charging modules

Battery capacity (C10; 1..8V/Z, +20°C)	Recharging cycle 12 h/80 % Rated operating time EN50171		
	1 h	3 h	8 h
5.5 Ah / 8.5 Ah / 23.3 Ah	0	0	0
32.0 Ah	0	0	0
49.5 Ah/50 Ah	1	1	1

### Limiting values for group supply systems (LPS) according to standard: Discharge power

EN 50171	
1.0 h	1500 W
3.0 h	500 W

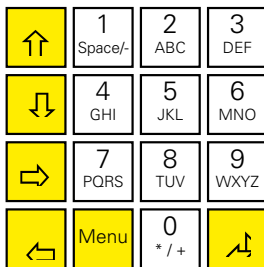
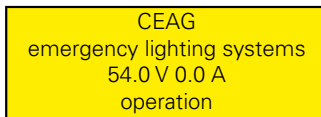
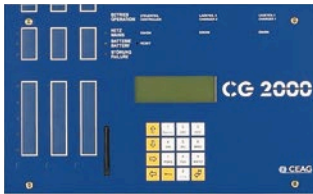
### Max. battery discharge power [W] <sup>1)</sup>

	5-year battery		10-year battery		CG 200			
	CG 100 23.3 Ah*	CG 200 50 Ah*	CG 100 5.5 Ah*	8.5 Ah*	23.3 Ah*	23.3 Ah*	32.0 Ah*	53.7 Ah*
0.5 h	750	1500	210	305	750	1060	1360	1500
1.0 h	634	1409	132	185	634	634	866	1500
1.5 h	490	1009	103	140	490	490	643	1137
2.0 h	380	804	87	120	380	380	527	886
3.0 h	284	577	62	87	284	284	390	651
8.0 h	116	251	29	41	116	116	158	273

\* C10/1.8 V/C up to +20 °C <sup>1)</sup> Efficiency of systems taken into account

### Evaluation of aeration and deaeration off electrical service rooms acc. to DIN EN 50272-2 (calculated for heavy charge!):

Battery 48 V	5.5 Ah	8.5 Ah	23.3 Ah	32.0 Ah	53.7 Ah	50 Ah
For aeration of location room necessary airvolume flow [m³/h]	0.05	0.08	0.22	0.31	0.47	0.51
Vent cross-section of the air inlets and outlets of the place of installation [cm²]	1.47	2.28	6.26	8.60	13.30	14.43

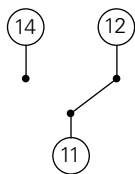


### Control module

A freely programmable control module with a non-volatile program memory and a 4-line alphanumeric display monitors and controls the CG 2000 apparatus. All functions, such as charging, mains/emergency lighting changeover and deep discharge protection of the apparatus and the connected emergency luminaires, are checked automatically. If failures occur these are indicated immediately. An interface allows the connection of a central monitoring unit.

Power consumption	50 VA
Display	4 x 20 characters, Contrast can be set using program
Illumination	Background brightness can be set using program
Keyboard	Foil-keyboard, 16 operating keys
Display	Battery voltage Battery charge current (+) Battery discharge current during test or in event of a fault (-) Charging fault Luminaire fault with location data Deep discharge protection Manual reset Delay-time on mains return Failure UV-AV (location data) Test operation Data / time Insulation fault circuit XX Fault information Program information
Status LED	<div> <div>– Mains</div> <div>– Battery</div> <div>– Failure</div> <div>– On/Off</div> <div>– charging module 1</div> <div>– charging module 2</div> </div>

Potential-free  
contacts,  
each:  
1 x UM /  
1 x 24 / 0 V and 0.5 A



### Potential-free contacts, buzzer

The control module has 3 potential-free contacts (Relay-output) and 1 buzzer

Contact Signal status	11/12/14 Summary failure	21/22/24 Operation	31/32/33 Battery operation
Operations status:			
Mains operation	–	X	–
Mains failure	–	–	X
Mains failure S3-S4 and bus	–	–	X
Charging fault	X	–	–
Converter fault	X	–	–
Luminaire fault	X	–	–
Summary failure	X	–	–
Deep discharge protection	X	–	–
ISO monitoring	X	–	–
Function test	–	X	X
Duration test	–	X	X
Contacts	11/14: NO 11/12: NC	21/24: NO 21/22: NC	31/34: NO 31/32: NC

Marking: X = active, contact 11/14 and 21/24 and 31/34 closed  
NO = Normally Open / NC = Normally Closed

# Group battery system CG 2000

## Components and options

SD card



### Secure Digital Card CG 2000

Memory card for recording the prescribed log book information for a minimum of 4 years.

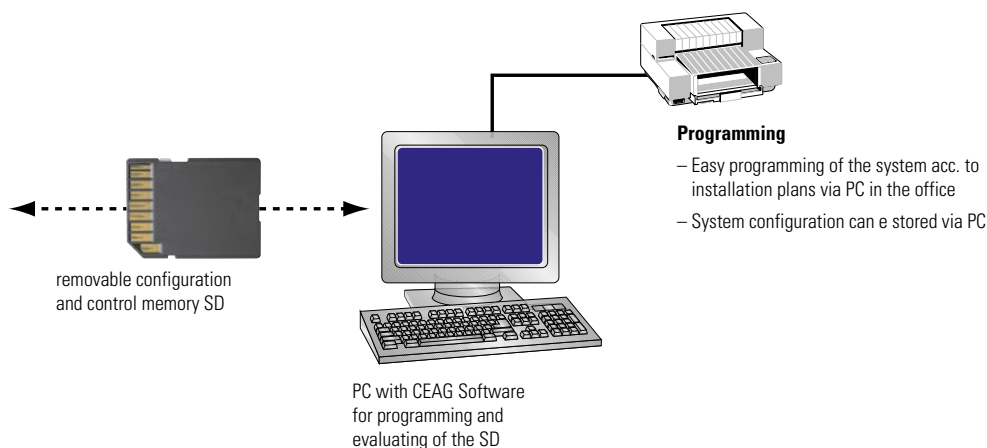
Storage of:

- Location texts for luminaires (20 characters per luminaire)
- Location texts for external modules (20 characters)
- Name of circuit (20 characters)
- Log book
- With the SD card reader and software, programming is possible via PC

### Ordering details

Type	Model	Order No.
SD card	SD card formatted for CG 2000 installations	40071347912
SD card reader USB	SD card reader for USB-Port	40064070561
Software	Software for the external programming of the SD via PC for CG 2000	40071346991

### Principles of SD-Card (Secure-Digital-Card)



### Connection terminals

The connection terminals for the external phase monitors, monitoring facilities and control modules are terminals for 2.5 mm<sup>2</sup> rigid and flexible conductors. Terminals up to 2 x 4 mm<sup>2</sup> on DIN rail are provided for the connection of emergency luminaires. A neutral conductor disconnect terminal is not required, as an automatic insulation fault detection indicates the affected circuit.



### Battery compartment

The battery compartment is shielded from the electronics compartment. It is designed to accommodate maintenance-free, completely sealed lead batteries 48 V with a capacity of 23.3 Ah (CG 100) or 23.3 Ah to 50 Ah (CG 200). Ventilation slots in the front door cover ensure sufficient air circulation in the battery compartment. The batteries feature earth leakage and short-circuit proof connections.



Three-phase monitor



Three-phase monitor

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 in the CG 2000 cover.

The emergency luminaires in non-maintained mode are switched to mains operation, while the mains voltage still applies to the CG 2000 cover.

Dimensions in mm (H x B x T)	85 x 52.5 x 65
Enclosure	Plastic, red
Connection terminals	2.5 mm <sup>2</sup> rigid and flexible
Type of mounting	DIN rail
Contact	0.5 A/24 V AC/DC, 1 x open contact, 1 x changeover contact
Trigger threshold	$U < 85 \% U_N$
Pitch	3 units

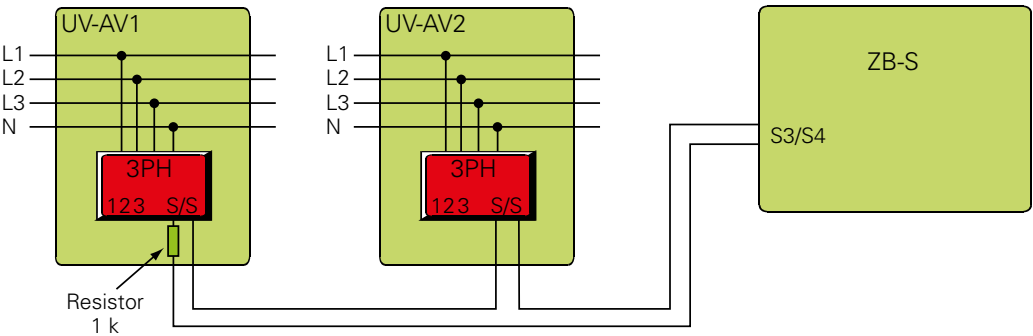
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Ordering details

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

Current loop

24 V current loop for the emergency lighting requirement with differential loop monitoring for the detection of short circuits and open lines.



Differential monitoring:

In the event of a short circuit or open line the system is switched on immediately (maintained lighting)

Switch phase monitor closed (1 kΩ):

Normal operation of installation

# Group battery system CG 2000

## Components and options

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, battery operation, system disrupted. As such the F3 remote indication fulfills the requirement that remote switching is only permissible when operation by unauthorized persons is not possible.

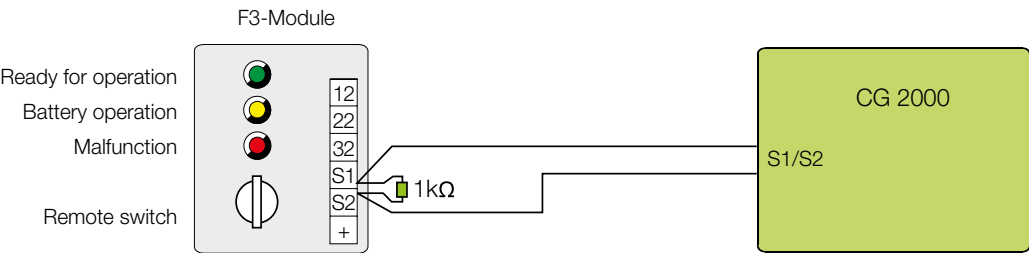
Connection terminals wall surface-mounting	2.5 mm <sup>2</sup> rigid and flexible
Dimensions in mm (H x B x T)	160 x 80 x 55
Enclosure	Plastic for surface mounted installation

### Ordering details

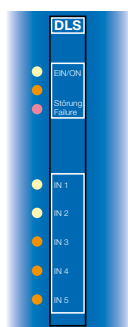
Type	Scope of supply	Order No.
F3 remote indication	Module for surface-mounting	40071338497

### Remote switch

Control loop for blocking the installation during idle periods with differential loop monitoring for the detection of short circuits or open lines.



Differential monitoring:	In the event of a short circuit or open line the installation is released.
F3 switch closed:	Installation ready for operation
F3 switch closed (1 kΩ):	Installation blocked



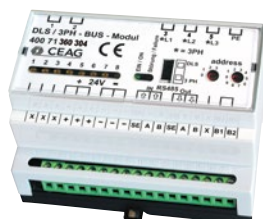
### DLS-maintained light switch monitor, internal

The DLS optional module can be used for switch querying for general switching of safety and general lighting. The universal option slots on the front plate have an insertion bag for inserting the labeling strip supplied with the optional groups to enable corresponding design. Plug-in card for installation in CG 2000 control unit. 5 DLS inputs with LED status indication. Connection terminal (1 x 2.5 mm<sup>2</sup>) on backplane control unit. Monitoring thresholds acc. to EN 60598-2-22: 60-85 % U<sub>NOM</sub>. Address of module: 1 to 3 (according to option slot).

### Ordering details

Type	Model	Order No.
Internal DLS	Plug-in card for installation in free option space (1-3) with 5 separate inputs	40071346670

Ext. DLS-Lichtschalter/  
Phasenwächter-Modul



### 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.

### Ordering details

Type	Model	Order No.
External DLS	Module for mounting on DIN rail with 5 separate inputs	40071360304

Ext. TLS-Modul



### External TLS Bus module

The TLS module is used for staircase light switching and glow lamp supply during emergency operation. Control of the general lighting during mains operation. Automatic function control, also for open bus line and transmission faults. Enclosure for mounting on DIN rail.

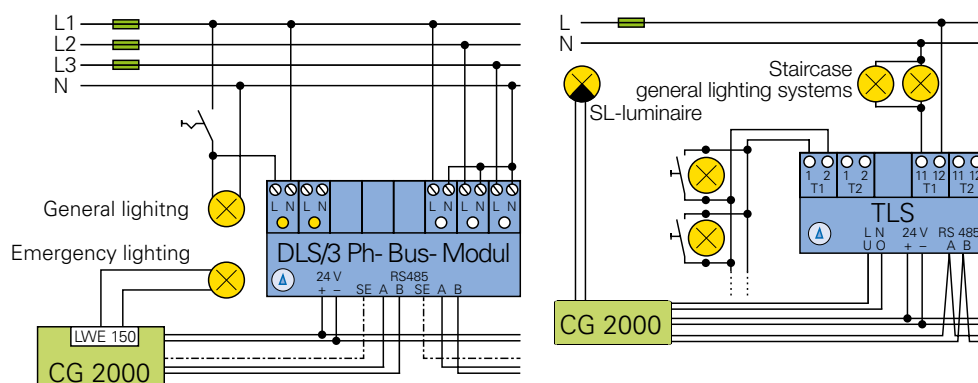
Dimensions (w x h x d/mm): 105 x 60 x 85

2 switch inputs (2.5 mm<sup>2</sup>) incl. supply of glow lamps (50 mA) and control of 2 switch outputs, 230 V, 10 A (120 A/ms).

Connection of RS 485 bus, 24 V module supply and line from outgoing circuit for glow lamp voltage. Glow lamp flashing function before end of adjusted operating time (30 s before end).

### Ordering details

Type	Model	Order No.
External TLS	Module for mounting on DIN rail	40071346965



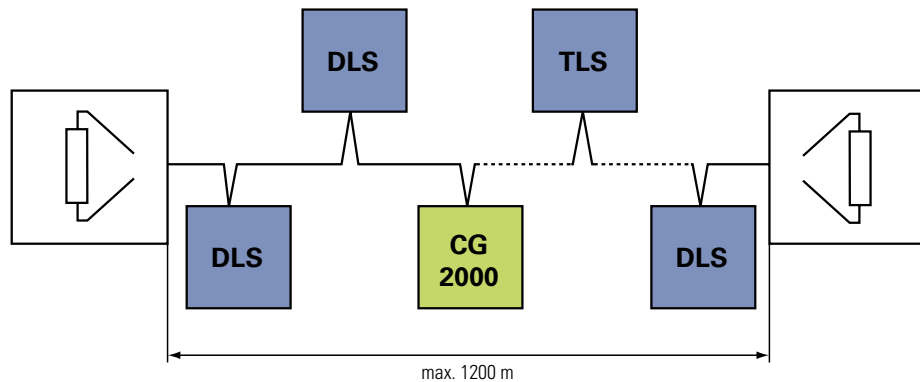
# Group battery system CG 2000

## Components and options

### Bus technology

An RS 485 bus is used for data communication with external bus modules (DLS/3PH or TLS). Connection to higher-level building system technology is possible via the CG-S bus. A galvanically isolated power supply (SELV) 24 V/0.5 A is available for the external modules. The maximum cable length depends on the required energy and the cable diameter.

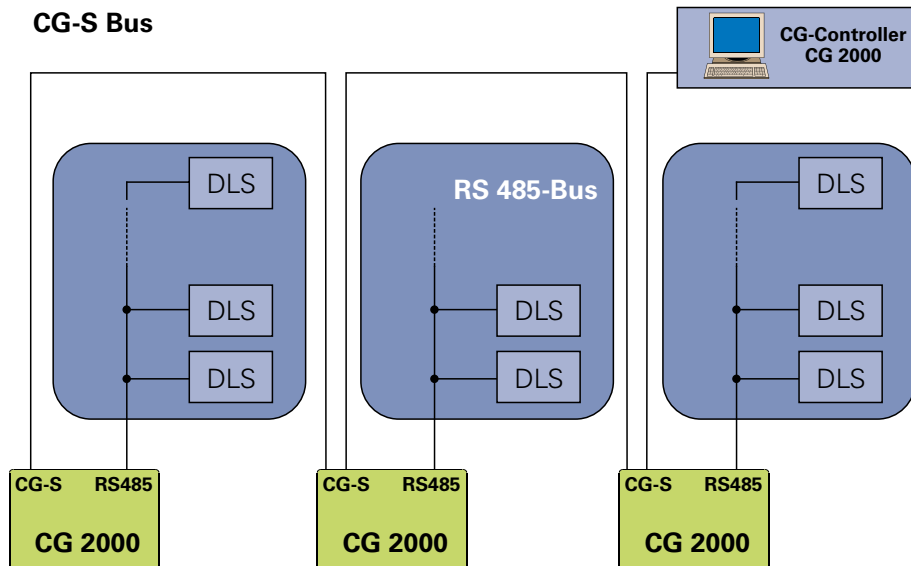
### Wiring RS 485-Bus



Max. length of bus: 1200 m  
Double Terminated Bus.  
Dead-end feeders are not permissible  
Recommended cable: JY (ST) Y 4 x 2 x 0.8 mm Ø  
twisted pair, screened

### Bus Technology CG-S Bus

#### CG-S Bus



Max. length of bus: 900 m  
Bus extension via Router/Repeater  
Double Terminated Bus.  
Dead-end feeders are not permissible  
Recommended cable: JY (ST) Y 4 x 2 x 0.8 mm Ø  
twisted pair, screened  
Terminating resistor: 105 Ω

CG controller



SD card



### CG controller CG 2000

For the central monitoring of CG 2000, the CEAG CG controller CG 2000 offers a variety of features:

- Housing protection IP65
- Control and monitoring of up to 32 emergency supply systems
- Memory card for the storage of systems configuration, luminaire designation and log book
- Programming of the CG Controller via PC, pre-programmed memory card can be realized using an SD card reader
- LED indicators: power, test and failure
- Log book for a period of 4 years
- Storage of luminaire designation for 6400 luminaires with 20 digits
- Potential-free contact freely programmable for:
  - charging fault, · luminaire fault, · ISO failure, · power failure, · battery operation
- Functions
  - Start function test, test interval can be selected as required
  - Start operating time test, test interval can be selected as required
  - Cancel operating time test
  - Continuous device status monitoring
  - Recording individual error messages
  - Interrogation of the current fit

Dimensions in mm (H x B x T)	184 x 240 x 112
Enclosure	Plastic RAL 7035, with transparent panel
Degree of protection enclosure (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 <sup>2</sup> 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 CG 2000	Controller in enclosure incl. bus-interface	40071347900
SD-Card	Speicherkarte formatted for CG-controller CG 2000	40071347870
SD-Card Reader	SD-Card Reader for USB port	40064070561
PC-Software	PC-Software for programming of the CG-controller CG 2000	40071346991





## Self-contained luminaire system CGLine





## Every safety luminaire counts. It protects both health and life.

Only a completely functional safety luminaire installation can fulfill its protective function when general lighting fails. Even when only one safety or escape sign luminaire fails, a significant risk of accident occurs according to the characteristics of the room, for example in stairways without the ingress of light. For this reason, legislators define continuous inspection of safety lighting installations. As a result, it must be inspected at least once weekly whether the luminaire with battery operation functions (function test).

With simple self-contained luminaires a push button on the luminaire must be pressed and the result recorded in a log book.

In addition, the duration test must be carried out yearly over the period of the rated operating time. This inspects whether the battery still has sufficient capacity.

With a large quantity of luminaires, manual inspection is extensive and therefore associated with high costs.

## Automatic tests simplify inspection

CEAG has implemented automatic test functionality with all CGLine self-contained luminaires. All luminaire functions are automatically monitored and controlled via a microprocessor. The specified inspections – function test and duration test – run automatically. Test results can be read off from a status display directly on the luminaire.

### Intelligent self-contained luminaire with microprocessor control

- Permanent monitoring of light source circuit
- Permanent monitoring of battery charge
- Fully automatic function test and duration test
- Status display on luminaire

## Point of time for the duration test

The time for the duration test should always be specified so that the resulting battery charging phase is not carried out during the operating time of the building.

The actual time of the test can therefore be defined with CEAG CGLine luminaires via the time of first commissioning or with a reset of the test button.

If the time cannot be set to occur during idle operating times in this way, – e. g. for buildings with variable operating times – the automatic duration test can be deactivated with GuideLed CGLine luminaires. The luminaire then signals after 12 months with an orange LED display that a test is due.

## Central monitoring

The central monitoring and control of self-contained luminaires significantly minimises effort for inspection and documentation. In addition, further functions such as the blocking of luminaires in idle operating times as required by standards become possible.

According to the extent of the safety lighting installation and the existing infrastructure (e.g. network connections), three variants for central monitoring from CEAG are available:



CGLine Controller 400	CGLine Web-Interface	Visualisation CGVision
For up to 400 luminaires (4 lines)	For up to 400 luminaires (4 lines)	For up to 3200 luminaires (up to 8 interfaces each with 400 luminaires)
Closed system	PC and network required	CGLine web interface, PC and network required
4-line matrix display with button field for navigation and input	Integral web server: visualisation via web browser (e.g. IE, Firefox, etc.), e-mail function	Visualisation within CGVision software, e-mail function
Text-based status display – Status on line and luminaire level – Fault/fault type	Graphic status display – Status on line and luminaire level – Fault/fault type	Clearly arranged display of luminaires in layouts
Configuration at the controller or via user-friendly PC software, storage of configuration on SD card	Configuration via user-friendly PC software, storage of configuration on SD card	Convenient configuration directly in CGVision software
Programming time for FT and DT via menu or PC software	Programming time for FT and DT via web interface or PC software	Programming time for FT and DT in CGVision software
Portable configuration and log book memory via SD memory card for a period of at least 4 years	Portable configuration and log book memory via SD memory card for a period of at least 4 years	Portable configuration and log book memory via SD memory card for a period of at least 4 years
Printout of log book via PC software	Printout of log book from the web server or via PC software	Extended print functions in CG-Vision software
		Simultaneous visualisation of CEAG ZB-S and CGLine systems

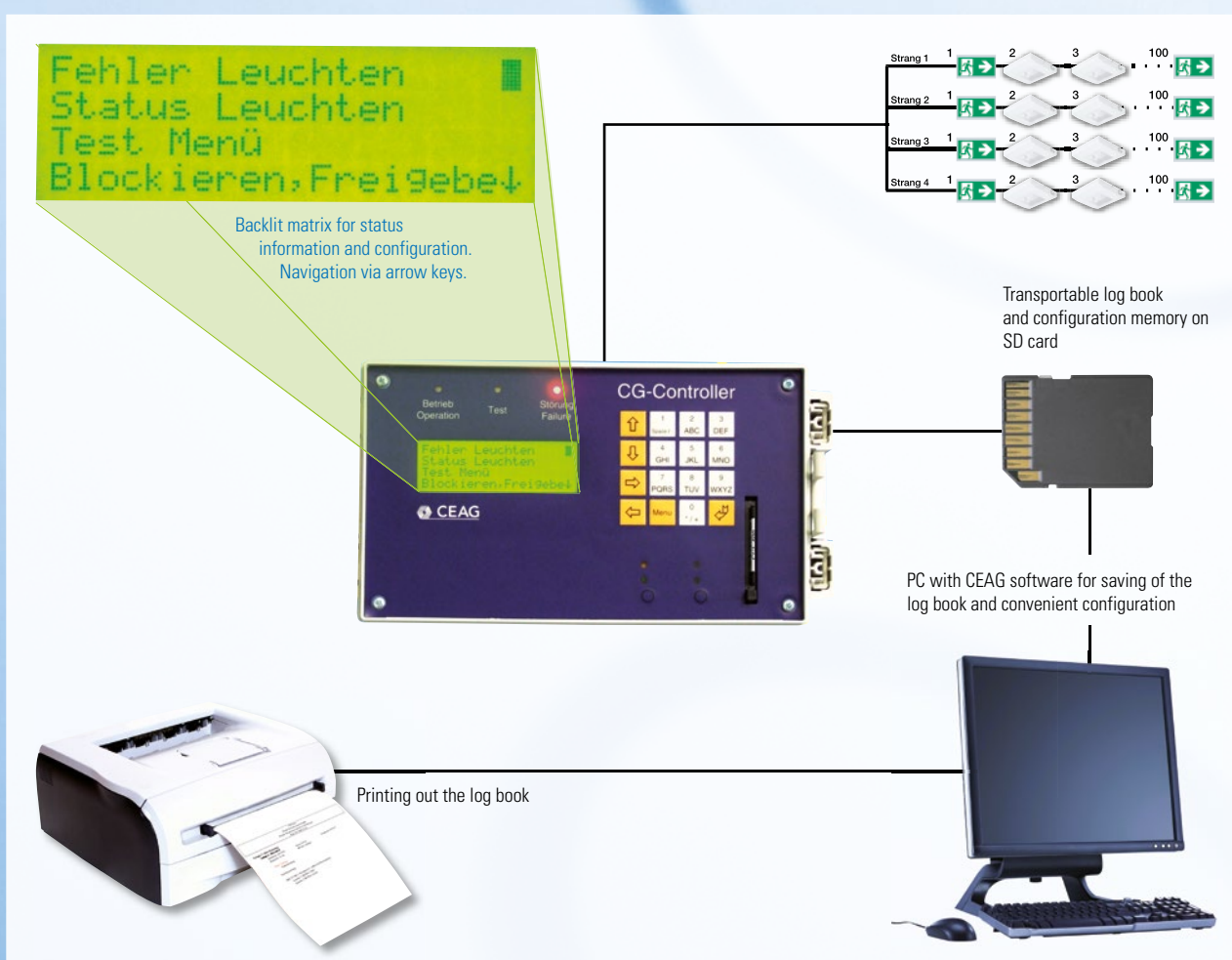
## CGLine Controller 400

The CGLine Controller 400 in a compact wall housing offers all possibilities for centrally controlling and monitoring up to 400 luminaires (4 lines of 100 luminaires). A backlit matrix always informs in real time about the status of the system. If faults occur, the controller allows direct checking of which luminaire has which fault.

The time and interval for function tests and duration tests can be individually defined for each bus line. The user menu enables blocking of the system per luminaire line or completely.

All relevant events are saved to an electronic log book on an SD card in compliance with valid regulations, and these can be archived and printed out via optional PC software. Log book entries can be sorted and printed according to date, time and type of fault.

The configuration can also be conveniently carried out via PC and transferred with an SD card to the controller. The assignment of an individual name (20 characters per luminaire) and a short address is possible per luminaire, for example to describe the installation location.



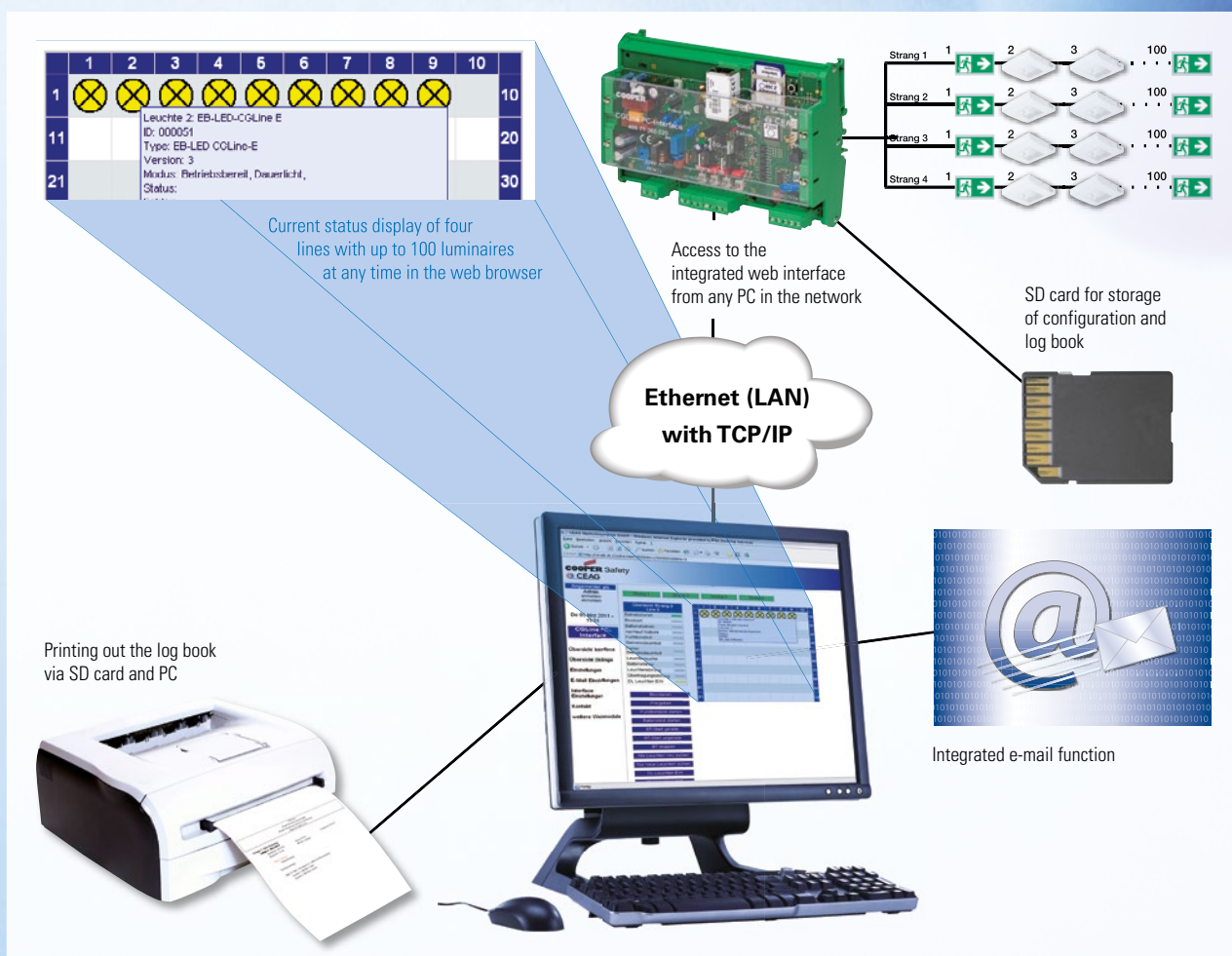
## CGLine WEB interface

The WEB interface enables visualisation of 4 lines each with 100 luminaires on a conventional PC with web browser. In this way the status of the system can be inspected at any time and from any workplace PC in a company intranet.

The status of 100 luminaires on one line is displayed at a glance. When the mouse cursor is moved over a luminaire position further details about the luminaire are shown: designation, type of luminaire, address, status, operating mode. Thus in the case of a fault further steps can be planned from a distance.

The time and interval of regular function tests and duration tests can be set up conveniently and

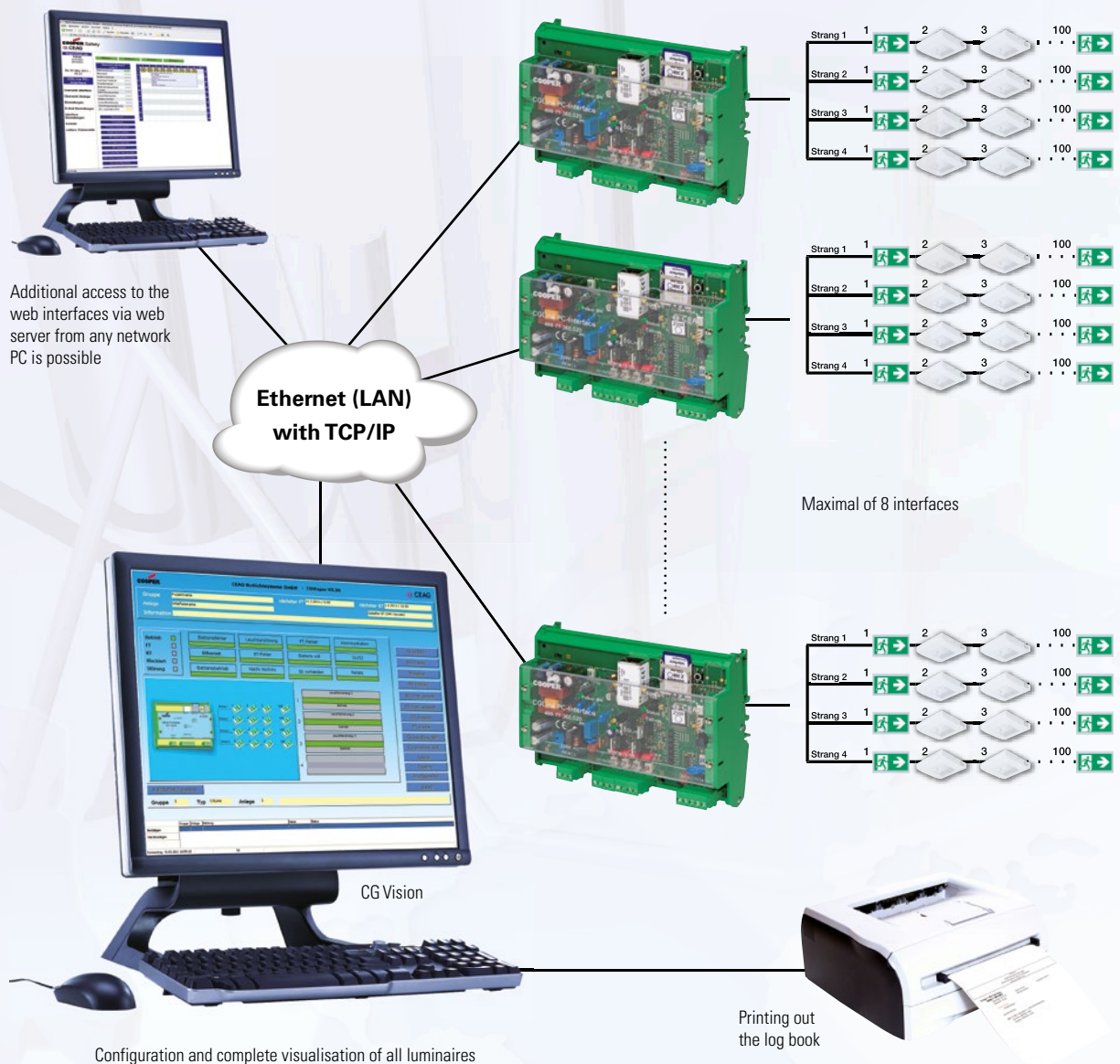
according to the minute via the PC, and in such a way that the system is always ready for use during operational times. In addition, luminaires can be switched and blocked per web application according to lines to avoid discharging during idle operating times. An integral e-mail program sends e-mails when required to previously defined e-mail addresses for configurable events. A confirmation function with e-mail forwarding ensures additional safety: messages sent by the e-mail program must be acknowledged by the recipient. If this is not done, the e-mail is then sent to a representative following a set time period.



## CGVision via CGLine WEB interface

The connection of the WEB interface to the high performance CGVision visualisation software from CEAG represents the largest step in the CGLine system. Up to 3,200 luminaires can be connected. To avoid losing the overview with so many luminaires the layout of individual web interfaces can be displayed in an aerial view or area plan. Within the line, display via layouts aids clarity. Configuration of the systems is implemented directly and comfortably in the software.

With CGVision, both CEAG central battery systems and CEAG CGLine self-contained systems can be monitored simultaneously. An extension of an existing system is also no problem. Access with the PC via web server is fully maintained with connection to CGVision. As such in large-scale, cross-building systems, configuring and monitoring can be carried out centrally via CGVision, and in addition service technicians gain an insight via the web interface into the specific systems they are inspecting.



## Addressing CGLine luminaires

The luminaires must not be manually addressed in the CGLine system, as all CGLine luminaires are pre-assigned an unmistakable address by the manufacturer, a 6-digit ID number in HEX code. During the commissioning process this address is used for auto-addressing by the controller or web interface. In addition each luminaire can be assigned a numerical short address (0-100) and a unique name (up to 20 characters) during configuration. In this way it is possible to adapt the designation according to planning documents for example.

	1	2	3	4	5	6	7	8	9	10	
1	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	10
11		1	Luminaire 2	2	Escape sign 1 corridor						20
21			ID: FD1234		Type: EB-LED CGLine						30

- 1 Numerical short address (0-100 per line)
- 2 Unique name (20 characters)

## CGLine Bus

The CGLine bus can be simply routed with free topology via two wires in an unshielded cable. The cross-section required depends on the length of the cable path.

### Cable lengths per line

Cross-section	Length	with total of 4 lines
0.5 mm <sup>2</sup>	450 m	1800 m
1.0 mm <sup>2</sup>	900 m	3600 lm
1.5 mm <sup>2</sup>	1350 m	5400 lm

### Data per line

Supply voltage on bus	22.5 V DC
Max. permissible voltage drop	13 V
Bus current	400 mA

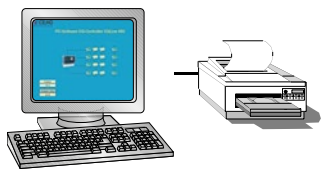
# CG-Controller CGLine 400

Central monitoring system

CG Controller CGLine 400



removable configuration and log book memory SD



PC with CEAG software for programming and evaluation of the SD

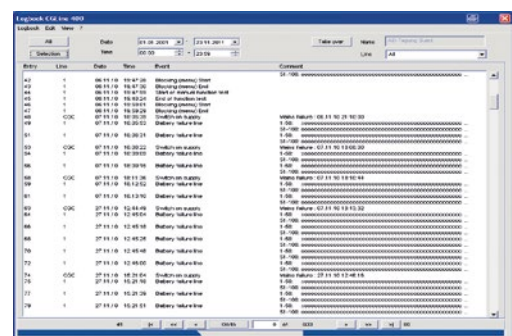
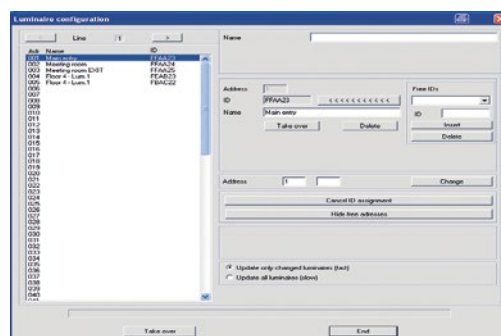
## CG-Controller CGLine 400

- Control and monitoring of up to 400 CGLine self-contained luminaires
- Automatic luminaire search function
- Automatic function test and duration test
- Test results in plain text with details of luminaire ID, abbreviated address, individual luminaire name and type of fault
- Log book: storage of test results for a period of 4 years
- Status display per luminaire
- Potential-free contact freely programmable for: battery operation, function test, duration test, communication fault, luminaire fault, charging fault
- Password protection
- Free assignment of short address and individual names (20 characters per luminaire)
- Memory card for saving of configuration and inspection book
- Configuration and log book evaluation on PC via SD card and corresponding CEAG software for PC

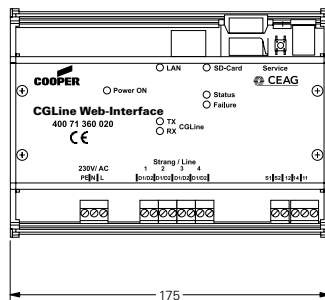
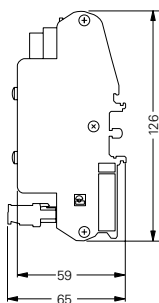
Dimensions in mm (H x W x D)	184 x 240 x 112
Housing	Plastic RAL 7035, with transparent cover
Protection rate of housing (IEC 529)	IP65
Supply voltage	230 V 50 Hz / 24 V DC
Insulation class	II
Ambient temperature	-5 °C to + 40 °C
Connection terminals/plug-in terminals	2.5 mm <sup>2</sup>
Display	Illuminated display, alphanumeric, 4 x 20 characters
Keyboard	Foil keyboard 4 x 4
Potential-free contact	1 x UM, 24 V 0.5 A; freely programmable
LED display for	Operation / test / fault

## Ordering details

Type	Scope of delivery	Order No.
CG-Controller CGLine 400	Controller in housing incl. CG-S BUS interface and SD	40071347901
SD memory card (replacement card)	SD card formatted for CG-Controller CGLine 400	40071347872
SD card reader	SD card reader for USB port	40064070561
Software	PC software for CGLine 400, for alternative configuration and log book evaluation via PC	40071347535
I/O interface plug-in card	for connection to the F3 module	40071347985



CGLine Web-Interface  
with integrated webserver



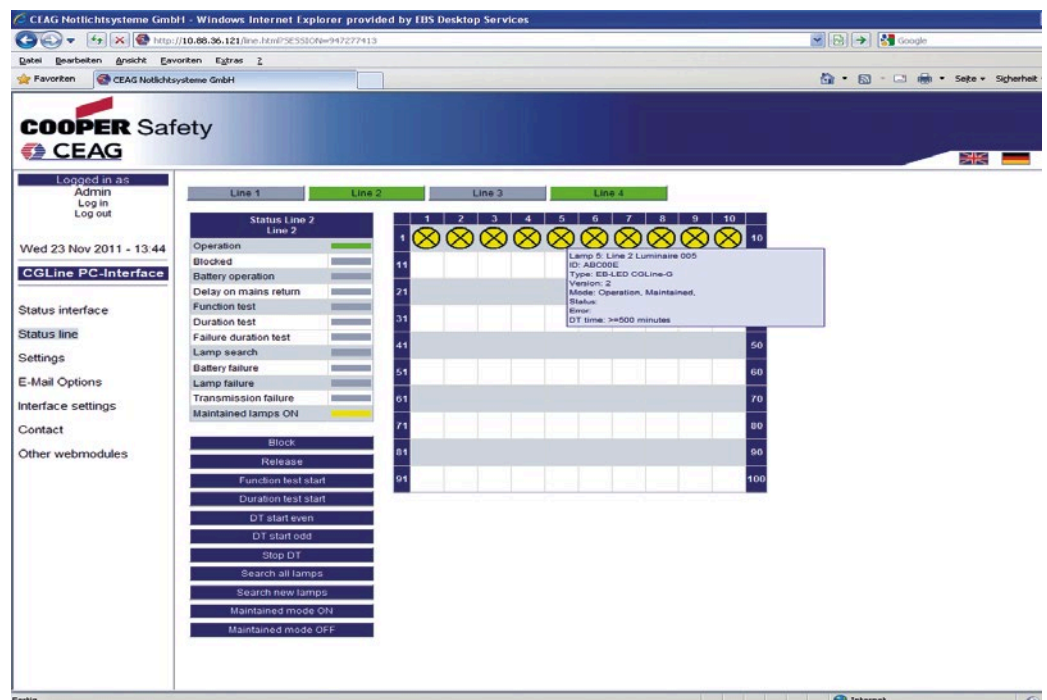
## CGLine WEB-Interface

- E-mail client for up to 10 e-mail recipients with confirmation function and parameterisable messages
- Up to 8 CGLine WEB interfaces with up to 3,200 luminaires to CGVision for complete visualisation
- Automatic luminaire search function (no manual addressing required)
- Automatic function test, test period can be freely defined
- Automatic duration test, test period can be freely defined
- Blocking of emergency light function (completely or per bus line)
- Luminaires with maintained mode can be switched in non-maintained mode (completely or per bus line)
- Free input of luminaire target location designations each with 20 characters, 100 characters. Supplementary information, and short address assignment via CGVision or convenient PC software
- Password protection
- Removable configuration and inspection book memory via SD memory card for a period of at least 4 years
- Evaluation of the log book on SD memory card via optional card reader and CEAG software on conventional PC

Dimensions	175 x 126 x 60 mm
Housing type	For DIN rail 10 TE
Voltage supply (typ.)	230 V AC
Power consumption	< 4 Watt
Connection terminals	max. 2.5 mm <sup>2</sup>
Permissible ambient temperature	0 °C ... 35 °C
Storage temperature	-20°C ... 70°C
Protection rating	IP20

## Ordering details

Type	Scope of delivery	Order No.
CGLine Web-Interface	Module in surface mounted housing for DIN rail	40071360020
SD memory card (replacement card)	SD card formatted for CG-Controller CGLine 400	40071347872
SD card reader	SD card reader USB-Port	40064070561
Software	PC software for CGLine 400, for alternative configuration and log book evaluation via PC	40071347535



### CGLine wireless monitoring set

The CGLine wireless monitoring set enables the wireless visualization of 4 lines each with 100 CGLine self-contained luminaires on an iPad\* tablet PC with the integrated web browser Safari\*. Access by further Wi-Fi devices, e.g. notebooks, Android™\* tablet PCs, etc. is easily possible.

The status of 100 luminaires on one line is displayed at a glance. If a luminaire is touched on the touch screen further details about the luminaire are shown: designation, type of luminaire, address, status, operating mode. Thus in the case of a fault further steps can be planned from a distance.

The time and interval of regular function tests and duration tests can be set up conveniently and

according to the minute via an iPad\* with web browser, and in such a way that the system is always ready for use during operational times. In addition, luminaires can be switched and blocked per web application according to lines to avoid discharging during idle operating times. An integral e-mail program sends e-mails when required to previously defined e-mail addresses for configurable events. A confirmation function with e-mail forwarding ensures additional safety: messages sent by the e-mail program must be acknowledged by the recipient. If this is not done, the e-mail is then sent to a representative following a set time period.

CGLine web interface  
and preconfigured  
WiFi access point incl.  
24 V/DC power supply



WiFi  
(wireless network connection)

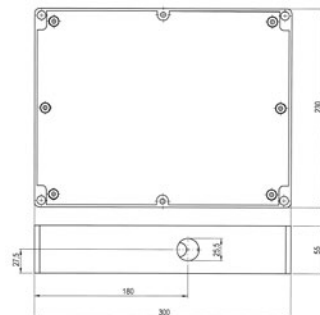


Current status display of four lines  
each with up to 100 luminaires at  
any time in the web browser

\* iPad and Safari are trademarks of Apple Inc., registered in the U.S. and other countries.  
Android is a trademark of Google Inc.



CGLine WiFi connection box + iPad\* with Retina Display



### CGLine Wireless Monitoring Set

- Mobile monitoring of up to 400 CGLine self-contained luminaires via integrated WiFi access point on the CGLine web interface and tablet PC
- Expandable via optional CGLine WiFi connection boxes
- Convenient handling via web browser and touch screen
- Manual start of function test or duration test according to line or in entirety
- Luminaire lines switchable, maintained light ON/OFF
- Block function via web browser or potential-free input (S1/S2) on CGLine web interface
- Detailed status information for each luminaire
- Configurable password protection for web access

Dimensions in mm (H x W x D)	360 x 255 x 165
Housing	Surface-mounted plastic housing
Supply voltage	230 V AC
Power consumption	< 8.5 Watt
Connection terminals/plug-in terminals	max. 2.5 mm <sup>2</sup>
Permissible ambient temperature	0 °C ... 40 °C
Storage temperature	-20 °C ... 70 °C
Protection rate	IP54

### Ordering details

Typee	Scope of delivery	Order No.
CGLine wireless monitoring set	CGLine WiFi connection box + iPad* Air, 32 GB, WiFi, space grey	40071360695
CGLine WiFi connection box	CGLine web interface + WiFi access point in surface-mounted housing	40071360691

\* iPad and Safari are trademarks of Apple Inc., registered in the U.S. and other countries.  
Android is a trademark of Google Inc.



# Self-contained luminaires CGLine



5

CEAG single battery luminaires of the CGLine series, available in a wide variety of enclosure forms and protection ratings, offer a wide range of application possibilities.

All luminaires have the CGLine functionality in common:

In autonomous operation the electronics automatically carries out the required functional and operating tests. The corresponding test results are indicated directly on the luminaire.

CGLine luminaires are generally suitable both for maintained and non-maintained operation.

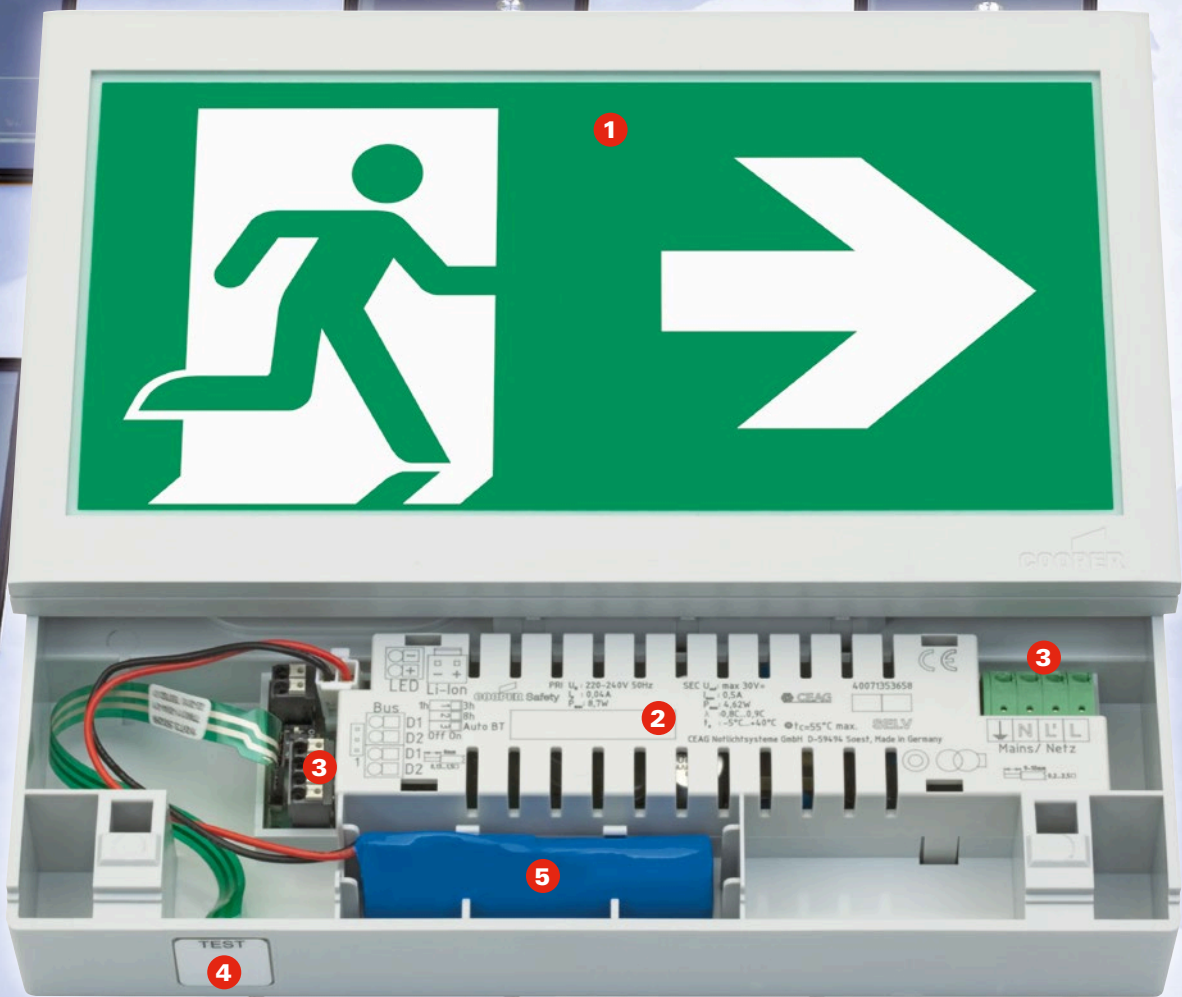
The full potential of the CGLine electronics is however firstly applied when the luminaires are connected via the series interface to the higher-level CGLine monitoring system, the CGLine Controller 400 or CGLine WEB-Interface.

These enable among other functions the central monitoring of the luminaires, blocking of the installation e.g. with idle operation and minimisation of specified log book effort via saving of the data to an SD card. In this way larger projects with many self contained luminaires can also be operated economically, and safety can be monitored in compliance with standards.

Optimised lighting technology additionally ensures economic emergency lighting. This is further improved with the new variants featuring highly efficient LEDs. Especially low connected loads and LED service lives of 50,000 hours minimise energy and maintenance costs.

## Features:

- Automatic function and duration test
- Status indication with fault analysis via multi-colour LEDs
- All luminaires suitable for maintained and non-maintained operation
- Use of highly efficient LEDs for low energy and maintenance costs
- Illumination of pictograms in accordance to standards
- According to the requirements of DIN EN 60598-2-22



## 1 LED Lightguide technology

- Perfect, standard-compliant illumination
- Low energy requirements
- 3-Chip 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 CG-Controller CGLine 400 or CGLine WEB-Interface)
- Convenient and concise central monitoring in combination with CG-Controller, CG WEB-Interface or CG Vision visualisation software

## 3 Optimised connection technology

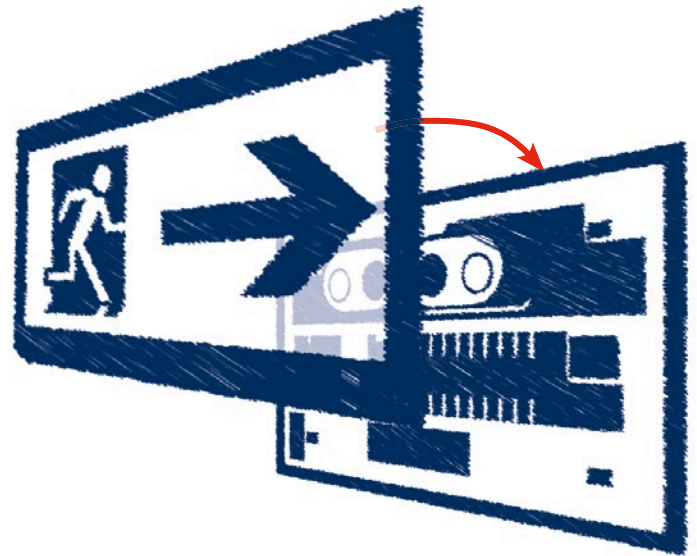
- Spacious insertion areas
- Equipped for through-wiring of mains cable and CGLine bus line via double terminals and 4 cable infeeds

## 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 Lilonen-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



### Simple mounting

- Pictogram cover is simply clipped on with wall mounting
- Several snap connections



### Display via bicolor LED

#### Operating mode

Normal mode

Emergency lighting operation

Follow-on emergency light

Function test active

Duration test active

Luminaire blocked

#### Fault message

Charging fault

Function test failed

Duration test failed

Light source fault

Duration test is due

## 3-Chip 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.

Up to 48 LEDs optimally illuminate the GuideLed pictogram. Three LEDs are encapsulated in a common housing to form each light point.

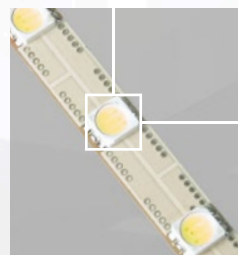
If one of the three LEDs fails, the intact LEDs illuminate more brightly. This ensures excellent illumination on a permanent level.

## 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/m<sup>2</sup> 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):

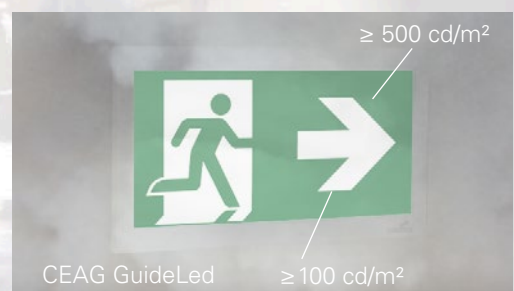
**$L_{min} = 10 \text{ cd/m}^2$  (green surface)**

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.



Powered by



LiIon

- 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



20 m



30 m



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**

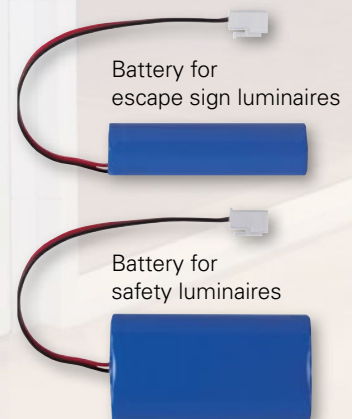
**e.g. places of assembly, sales areas, restaurants, schools, exhibition halls**

**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.

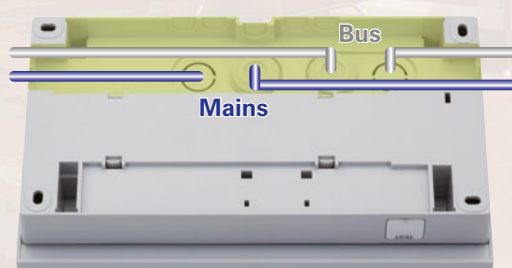
The batteries are equipped with a short-circuit and reverse-polarity protected plug for simple, rapid battery replacement, and they can be snapped simply into corresponding holders.





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.



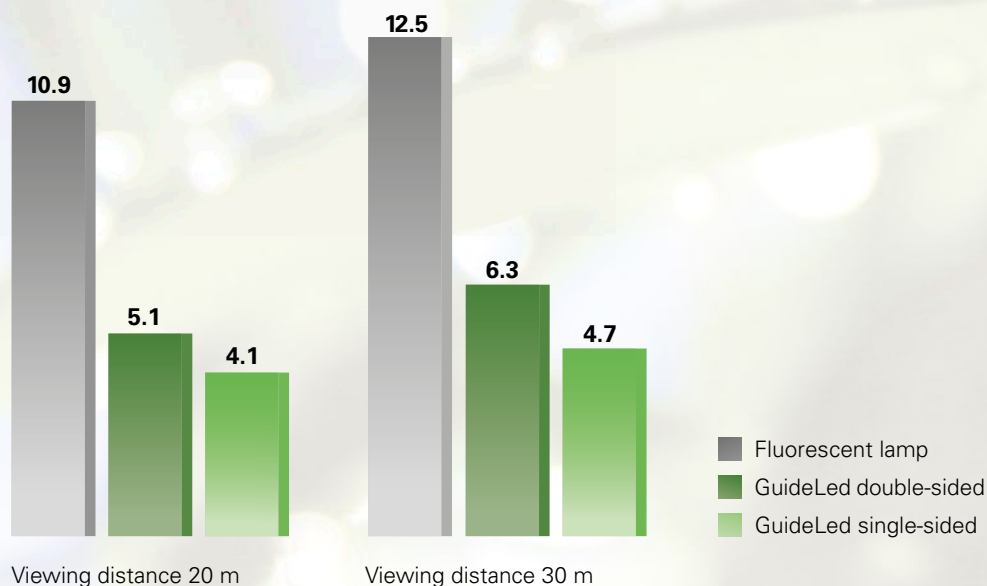
## Safely saving on maintenance costs

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 €**

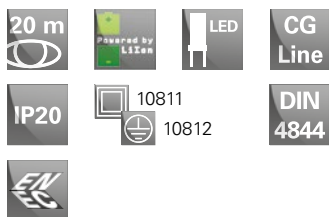
**8.22 €**

Presumed electricity price 0.15 €/kWh

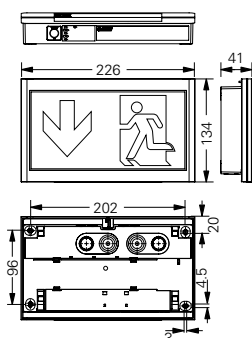
+ saved  
relamping  
costs  
(material,  
work, journey)

# GuideLed 10811, 10812 CGLine

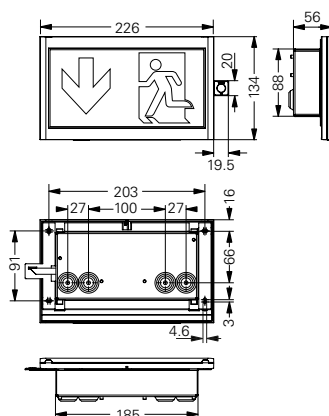
## Wall mounting



10811 CGLine with cover PR



10812 CGLine with cover PR



Please ensure clearance of 10 mm above the luminaire.

### GuideLed 10811, 10812 CGLine

- LED self contained luminaire with automatic test for reduced inspection effort
- Universal use for maintained and non-maintained operation and for 1 h, 3 h or 8 h operation
- For autonomous installation or connection to the CGLine monitoring system
- Environmentally-friendly due to modern lithium ion technology
- Low operating costs via low connected load
- Minimum maintenance effort and increased safety via use of 3-chip LEDs with high service life (50,000 hours)
- Optimal recognition via high luminance of white contrast colour > 500 cd/m<sup>2</sup> 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 (according to DIN VDE 0100-718)
- Blocking function prevents unintended discharge during idle operating times (only with CG controller or CGLine WEB-Interface)

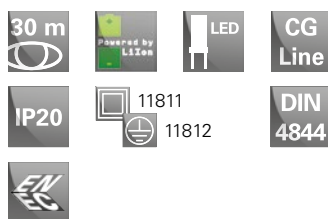
Viewing distance	20 m
Luminous flux $\Phi_E/\Phi_N$ at end of rated operating time	100 % at 1 h; 80 % at 3 h; 25 % at 8 h
Housing material	Polycarbonate, PMMA, sheet steel (semi-recessed wall housing)
Weight	0.64 kg (10811 CGLine) 0.84 kg (10812 CGLine)
Housing colour	Light grey RAL 7035
Type of mounting	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 <sup>2</sup> CGLine bus through-wiring to 1.5 mm <sup>2</sup>
Connection voltage	220 - 240 V, 50 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 with 3-chip LEDs

### Ordering details – mounting set

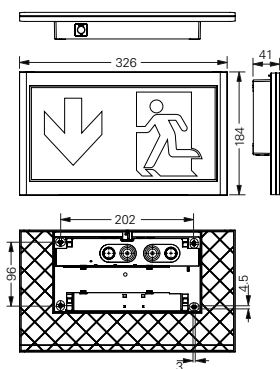
Scope of delivery	Order No.
Wall mounting set for GuideLed 10811 1-8 h/D CGLine and 11811 1-8 h/D CGLine, surface mounted, incl. LED supply and CGLine technology, 20 m and 30 m	40071353080
Wall mounting set for GuideLed 10812 1-8h/D CGLine, recessed mounting of LED supply and CGLine technology, 20 m	40071353060

### Ordering details – LED pictograms (fastening set required)

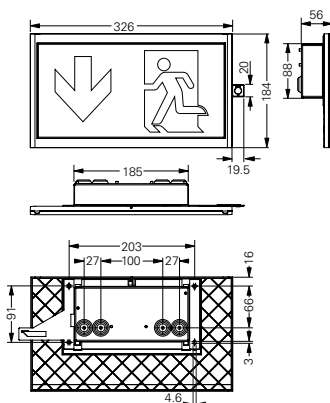
Scope of delivery		Order No.
LED pictogram PL for GuideLed 10x11/10x12, ISO 7010, 20 m		40071354500
LED pictogram PR for GuideLed 10x11/10x12, ISO 7010, 20 m		40071354501
LED pictogram PU for GuideLed 10x11/10x12, ISO 7010, 20 m		40071354502



11811 CGLine with cover PR



11812 CGLine with cover PR



Please ensure clearance of 10 mm above the luminaire.

## 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 3-chip LEDs with high service life (50,000 hours)
- Optimal recognition via high luminance of white contrast colour > 500 cd/m<sup>2</sup> 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 (according to DIN VDE 0100-718)
- Blocking function prevents unintended discharge during idle operating times (only with CG controller or CGLine WEB-Interface)

Viewing distance	30 m
Luminous flux $\Phi_E/\Phi_N$ 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)
Weight	0.77 kg (11811 CGLine) 0.97 kg (11812 CGLine)
Housing colour	Light grey RAL 7035
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 <sup>2</sup> CGLine bus through-wiring to 1.5 mm <sup>2</sup>
Connection voltage	220 - 240 V, 50 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 with 3-chip LEDs

## Ordering details – mounting set

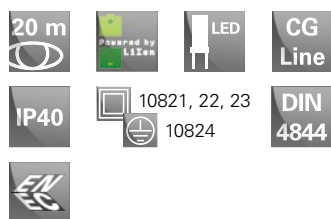
Scope of delivery	Order No.
Wall mounting set for GuideLed 10811 1-8 h/D CGLine and 11811 1-8 h/D CGLine, surface mounted, incl. LED supply and CGLine technology, 20 m and 30 m	40071353080
Wall mounting set for GuideLed 11812 1-8h/D CGLine, recessed mounting of LED supply and CGLine technology, 30 m	40071353070

## Ordering details – LED pictograms (fastening set required)

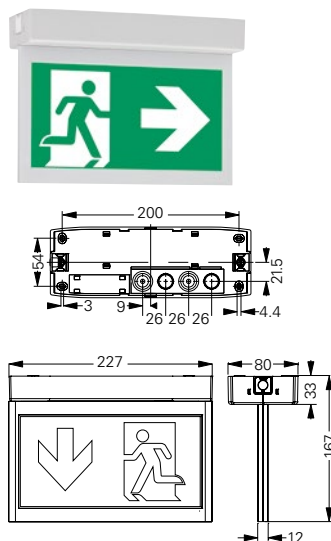
Scope of delivery		Order No.
LED pictogram PL for GuideLed 11x11/11x12, ISO 7010, 30 m		40071354530
LED pictogram PR for GuideLed 11x11/11x12, ISO 7010, 30 m		40071354531
LED pictogram PU for GuideLed 11x11/11x12, ISO 7010, 30 m		40071354532

# GuideLed 10821, 10822, 10823, 10824 CGLine

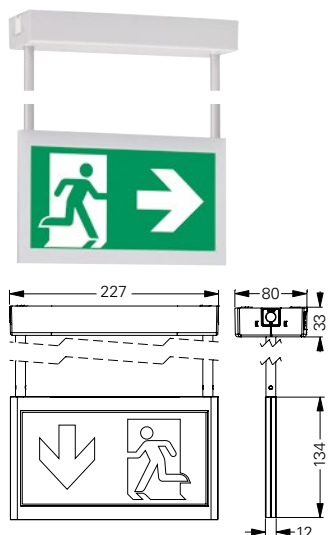
Ceiling mounting



10821 CGLine



10822 CGLine



## 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 3-chip LEDs with high service life (50,000 hours)
- Optimal recognition via high luminance of white contrast colour > 500 cd/m<sup>2</sup> 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 (according to DIN VDE 0100-718)
- Blocking function prevents unintended discharge during idle operating times (only with CG controller or CGLine WEB-Interface)

Viewing distance	20 m
Luminous flux $\Phi_E/\Phi_N$ 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)
Weight	0.70 kg (10821 CGLine) 0.80 kg (10822 CGLine) 0.85 kg (10823 CGLine) 1.06 kg (10824 CGLine)
Housing colour	Light grey RAL 7035
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 <sup>2</sup> CGLine bus through-wiring to 1.5 mm <sup>2</sup>
Connection voltage	220 - 240 V, 50 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 with 3-chip LEDs

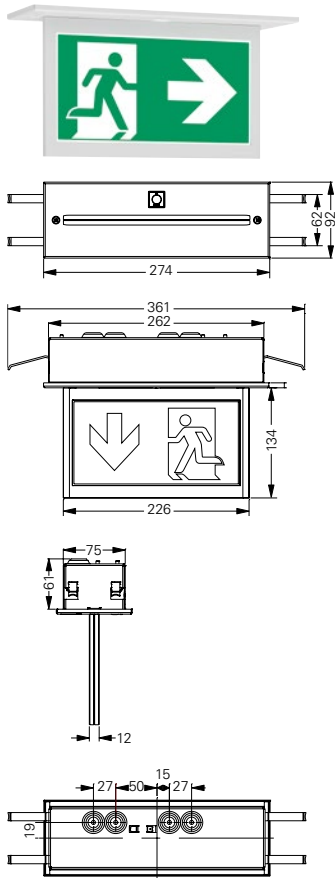
## Ordering details – mounting set

Scope of delivery	Order No.
Ceiling mounting set 10821 1-8 h/D CGLine with canopy, incl. LED supply and CGLine technology, 20 m	40071353061
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	40071353062
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	40071353063
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	40071353064

## 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

10824 CGLine



## Ordering details – LED pictograms (fastening set required)

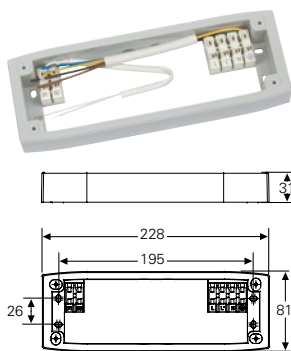
### Scope of delivery

### 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

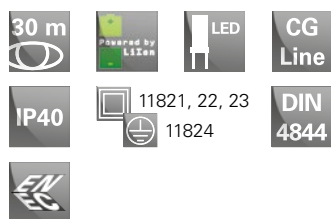
\* R = arrow direction room  
W = arrow direction wall

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

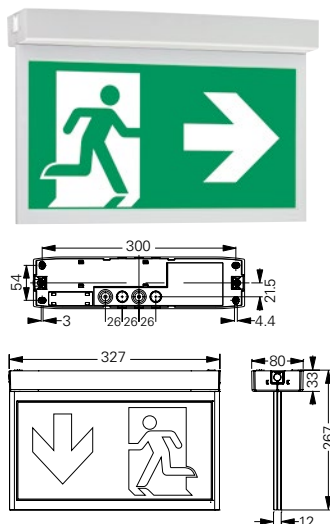


# GuideLed 11821, 11822, 11823, 11824 CGLine

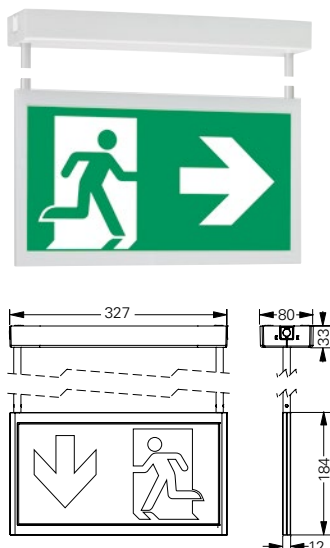
## Ceiling mounting



11821 CGLine



11822 CGLine



### 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 3-chip LEDs with high service life (50,000 hours)
- Optimal recognition via high luminance of white contrast colour > 500 cd/m<sup>2</sup> 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 (according to DIN VDE 0100-718)
- Blocking function prevents unintended discharge during idle operating times (only with CG controller or CGLine WEB-Interface)

Viewing distance	30 m	
Luminous flux $\Phi_E/\Phi_N$ 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)	
Weight		1.04 kg (11821 CGLine)
		1.14 kg (11822 CGLine)
		1.19 kg (11823 CGLine)
		1.65 kg (11824 CGLine)
Housing colour	Light grey RAL 7035	
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 <sup>2</sup> CGLine bus through-wiring to 1.5 mm <sup>2</sup>	
Connection voltage	220 - 240 V, 50 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 with 3-chip LEDs	

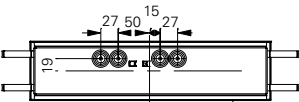
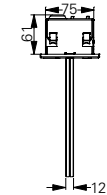
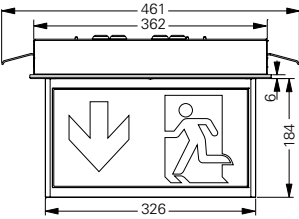
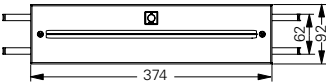
### Ordering details – mounting set

Scope of delivery	Order No.
Ceiling mounting set 11821 1-8 h/D CGLine with canopy, incl. LED supply and CGLine technology, 30 m	40071353071
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	40071353072
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	40071353073
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	40071353074

### 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

11824 CGLine



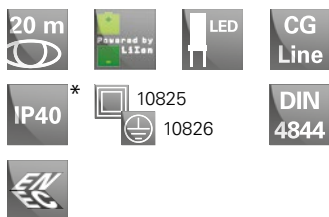
**Ordering details – LED pictograms (fastening set required)**

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

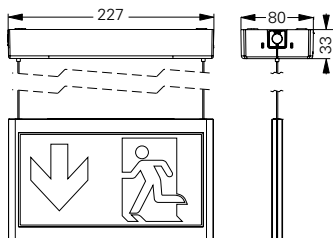
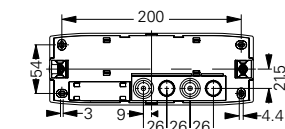
\* R = arrow direction room  
W = arrow direction wall

# GuideLed 10825, 10826 CGLine

Ceiling mounting with rope



10825 CGLine with cover PL/PR



## GuideLed 10825, 10826 CGLine

- LED self contained luminaire with automatic test for reduced inspection effort
- Universal use for maintained and non-maintained operation and for 1 h, 3 h or 8 h operation
- For autonomous installation or connection to the CGLine monitoring system
- Environmentally-friendly due to modern lithium ion technology
- Low operating costs via low connected load
- Minimum maintenance effort and increased safety via use of 3-chip LEDs with high service life (50,000 hours)
- Optimal recognition via high luminance of white contrast colour > 500 cd/m<sup>2</sup> 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 (according to DIN VDE 0100-718)
- Blocking function prevents unintended discharge during idle operating times (only with CG controller or CGLine WEB-Interface)

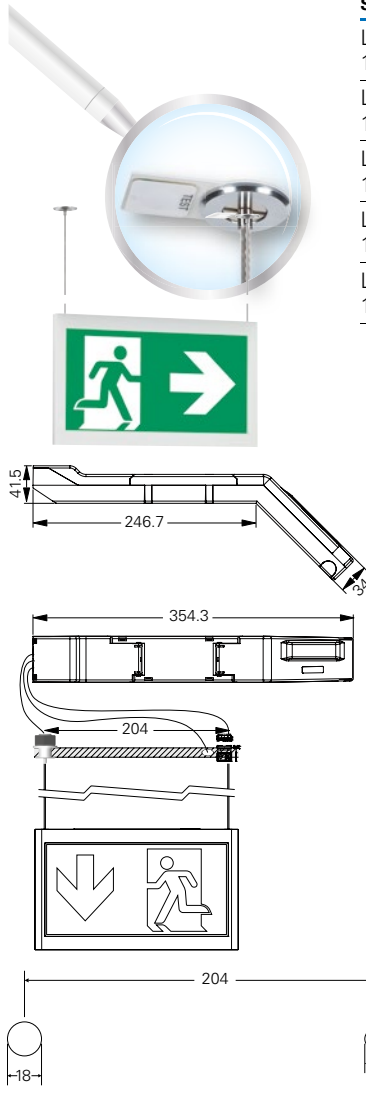
Viewing distance	20 m	
Luminous flux $\Phi_E/\Phi_N$ at end of rated operating time	one sided	100 % at 1 h; 80 % at 3 h; 25 % at 8 h
	double sided	100 % at 1 h; 50 % at 3 h; 15 % at 8 h
Housing material	Polycarbonate, PMMA, sheet steel (10826)	
Weight	0.71 kg (10825 CGLine) 1.24 kg (10826 CGLine)	
Housing colour	Light grey RAL 7035	
Type of mounting	10825	Rope suspension (drop height max. 1.5 m); insulation class II (protective earth required)
	10826	Rope suspension (drop height max. 1.5 m); insulation class I
Terminals	Through-wiring from mains (L, L', N, PE) to 2.5 mm <sup>2</sup> CGLine bus through-wiring to 1.5 mm <sup>2</sup>	
Connection voltage	220 - 240 V, 50 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 with 3-chip LEDs	

## Ordering details – mounting set

Scope of delivery	Order No.
Rope installation set 10825 1-8h/D CGLine with LED supply integrated in canopy and CGLine technology, 20 m	40071353065
Rope installation set 10826/11826 1-8h/D CGLine with ceiling rope holders, LED supply and CGLine technology for mounting in cavity ceiling, 20 m and 30 m	40071353081

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

10826 CGLine with cover PL/PR



Hole pattern ceiling 10826 CGLine

## Ordering details – LED pictograms (fastening set required)

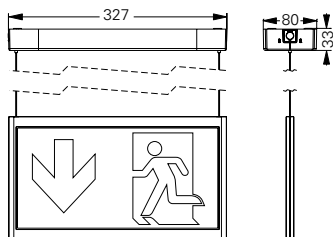
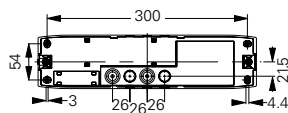
Scope of delivery	Order No.
LED pictogram PL/PR, for GuideLed 10x25/10x26 (rope installation), ISO 7010, 20 m	40071354510
LED pictogram PU/PU, for GuideLed 10x25/10x26 (rope installation), ISO 7010, 20 m	40071354511
LED pictogram PL/BL, for GuideLed 10x25/10x26 (rope installation), ISO 7010, 20 m	40071354512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

# GuideLed 11825, 11826 CGLine

Ceiling mounting with rope



11825 CGLine with cover PL/PR



## GuideLed 11825, 11826 CGLine

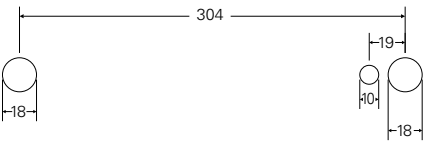
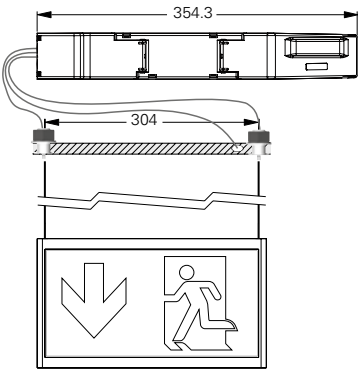
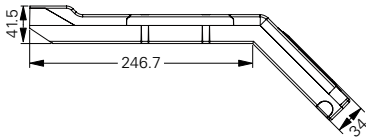
- LED self contained luminaire with automatic test for reduced inspection effort
- Universal use for maintained and non-maintained operation and for 1 h, 3 h or 8 h operation
- For autonomous installation or connection to the CGLine monitoring system
- Environmentally-friendly due to modern lithium ion technology
- Low operating costs via low connected load
- Minimum maintenance effort and increased safety via use of 3-chip LEDs with high service life (50,000 hours)
- Optimal recognition via high luminance of white contrast colour > 500 cd/m<sup>2</sup> 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 (according to DIN VDE 0100-718)
- Blocking function prevents unintended discharge during idle operating times (only with CG controller or CGLine WEB-Interface)

Viewing distance	30 m	
Luminous flux $\Phi_E/\Phi_N$ 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)	
Weight	1.06 kg (11825 CGLine) 1.57 kg (11826 CGLine)	
Housing colour	Light grey RAL 7035	
Type of mounting	10825	Rope suspension (drop height max. 1.5 m); insulation class II (protective earth required)
	10826	Rope suspension (drop height max. 1.5 m); insulation class I
Terminals	Through-wiring from mains (L, L', N, PE) to 2.5 mm <sup>2</sup> CGLine bus through-wiring to 1.5 mm <sup>2</sup>	
Connection voltage	220 - 240 V, 50 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 with 3-chip LEDs	

## Ordering details – mounting set

Scope of delivery	Order No.
Rope installation set 11825 1-8h/D CGLine with LED supply integrated in canopy and CGLine technology, 30 m	40071353075
Rope installation set 10826/11826 1-8h/D CGLine with ceiling rope holders, LED supply and CGLine technology for mounting in cavity ceiling, 20 m and 30 m	40071353081

11826 CGLine with cover PL/PR



Hole pattern ceiling 11826 CGLine

## Ordering details – LED pictograms (fastening set required)

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



## Ceiling recessing and ceiling surface-mounting luminaires

According to the design concept of GuideLed escape sign luminaires, GuideLed CGLine safety luminaires are available as surface-mounted and recessed luminaires.

With the recessed luminaire, the visible outer was reduced to the functional components. The electronics and **Lilonen**-battery are accommodated in supplementary module housing in the ceiling. This housing is equipped with cable strain relief and connection terminals for the through-wiring of mains and bus lines.

The surface-mounted luminaire contains all required components and is also equipped for through-wiring of mains and bus lines.

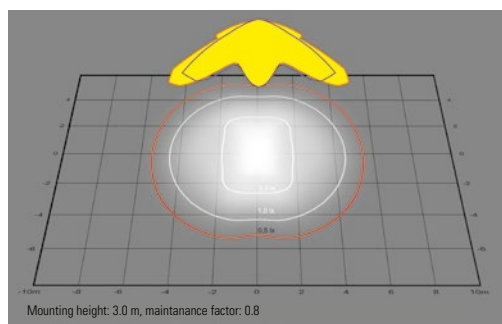
A cavity in the housing base offers additional space for cable routing, whether for the infeed of surface-mounted cables or for compensation of imprecision with flush routing of cables.

## Pioneering lens optics

GuideLed SL is available with two light distribution characteristics precisely matched to the demands of safety lighting. Lens optics integrated in the luminaires guide the light either longitudinally along the escape route or uniformly over the surface.

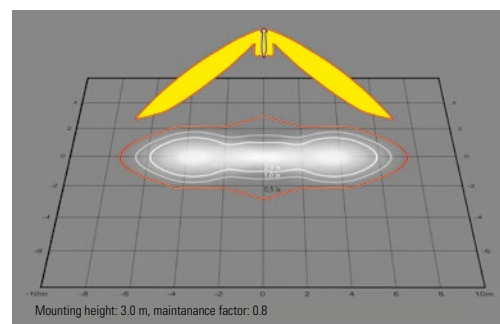
Despite compact construction forms, the new CEAG LED safety luminaires are certainly an equal match for the more watt-intensive fluorescent lamps.

## Light distribution for open-area illumination



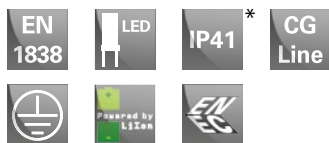
As such, in 1-hour emergency light operation at a mounting height of 3 m, even luminaire spacing of up to 15 m or maximum mounting heights of up to 9 m can be achieved.

## Light distribution for escape route illumination



# GuideLed SL 13811, 13821 CGLine

Ceiling recessed



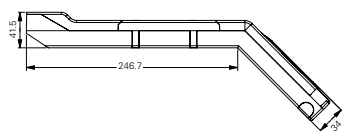
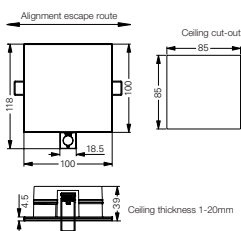
## GuideLed SL 13811, 13821 CGLine

- LED self contained luminaire with automatic test for reduced inspection effort
- Universal use for maintained and non-maintained operation and for 1 h, 3 h or 8 h operation
- For autonomous installation or connection to the CGLine monitoring system
- Environmentally-friendly due to modern lithium ion technology
- Low operating costs via low connected load
- Minimum maintenance effort via high LED service life (50,000 hours)
- Available with special optics for escape route illumination or open-area illumination
- High spacing via double optics technology and highly efficient High Power LEDs
- Simple fault analysis and status display via bicolor LED and testing button
- 1 minute switch-back delay after mains return (according to DIN VDE 0100-718)
- Blocking function prevents unintended discharge during idle operating times (only with CG controller or CGLine WEB-Interface)

13811 CGLine with asymmetric optics



13821 CGLine with symmetric optics



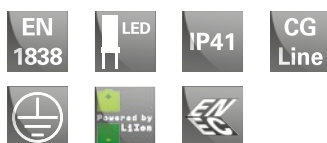
Required height in cavity ceiling for recessing through ceiling cut-out: 150 mm

Luminous flux (mains operation)	asymmetric optics symmetric optics	210 lm 204 lm
Luminous flux $\Phi_E/\Phi_N$ at end of rated operating time		100 % at 1 h; 55 % at 3 h; 20 % at 8 h
Housing material	luminaire module housing	Polycarbonate, aluminium (heat sink) Sheet steel
Weight		0.96 kg
Housing colour		White, similar to RAL 9010
Type of mounting		Ceiling recessing
Terminals		Through-wiring from mains (L, L', N, PE) to 2.5 mm <sup>2</sup> CGLine bus through-wiring to 1.5 mm <sup>2</sup>
Connection voltage		220 - 240 V, 50 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	40071353093
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	40071353092

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



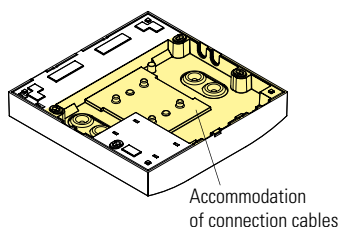
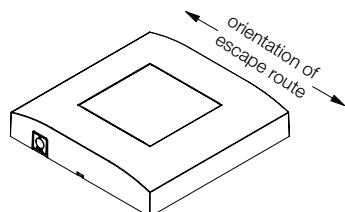
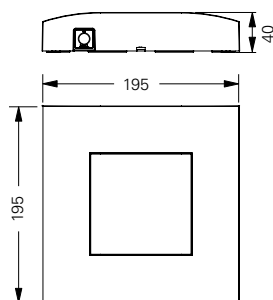
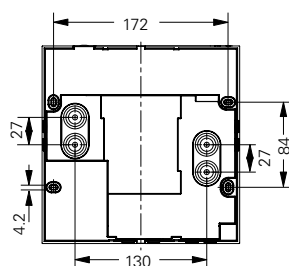
## GuideLed SL 13812, 13822 CGLine

- 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 (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 (according to DIN VDE 0100-718)
- Blocking function prevents unintended discharge during idle operating times (only with CG controller or CGLine WEB-Interface)

13812 CGLine with asymmetric optics



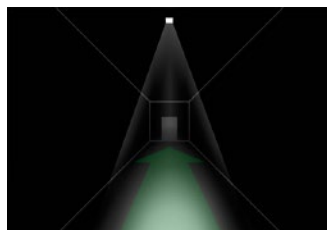
13822 CGLine with symmetric optics



Luminous flux (mains operation)	asymmetric optics symmetric optics	210 lm 204 lm
Luminous flux $\Phi_E/\Phi_N$ at end of rated operating time		100 % at 1 h; 55 % at 3 h; 20 % at 8 h
Housing material		Polycarbonate, aluminium
Weight		0.86 kg
Housing colour		White, similar to RAL 9010
Type of mounting		Ceiling surface-mounting
Terminals		Through-wiring from mains (L, L', N, PE) to 2.5 mm <sup>2</sup> CGLine bus through-wiring to 1.5 mm <sup>2</sup>
Connection voltage		220 - 240 V, 50 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

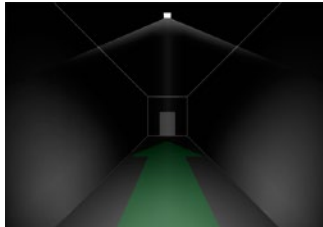
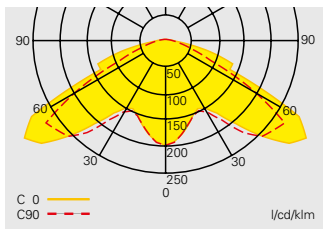
Scope of delivery	Order No.
GuideLed SL ceiling surface-mounted 13812 1-8h/D CGLine with asymmetric optics for escape route illumination, white RAL 9010	40071353091
GuideLed SL ceiling surface-mounted 13822 1-8h/D CGLine with symmetric optics for anti-panic/open-area illumination, white RAL 9010	40071353090



5





Measurement plane 0.02 m, maintenance factor MF = 80 %, battery operation, distances in m

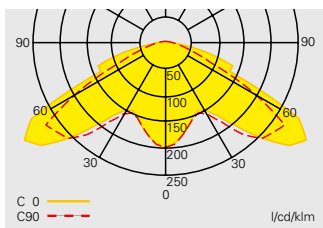
Emergency light operating duration	Mounting height in metres	Mounting types	Mounting distance in metres			
			L1 	L2 	L3 	L4 
1 h	2.5	Ceiling mounting	1.6 (2.9)	5.8 (7.4)	5.9 ( 6.6)	13.2 (14.8)
	3.0	Escape route, central	1.4 (3.0)	6.0 (7.9)	6.6 ( 7.5)	15.0 (16.7)
	3.5		1.3 (2.3)	4.5 (8.2)	7.4 ( 8.3)	16.6 (18.6)
	4.0		1.2 (2.0)	3.9 (8.4)	8.1 ( 9.1)	18.0 (20.4)
	4.5		1.2 (1.8)	3.4 (7.4)	8.8 ( 9.7)	19.4 (22.1)
	5.0		1.2 (1.8)	3.2 (6.3)	9.4 (10.5)	20.9 (23.6)
	5.5		1.2 (1.7)	3.0 (5.7)	10.0 (11.2)	22.4 (25.1)
	6.0		1.2 (1.7)	3.1 (5.2)	10.6 (11.9)	23.8 (26.5)
	6.5		1.1 (1.7)	3.1 (4.7)	3.6 (12.6)	25.1 (27.8)
	7.0		1.1 (1.7)	3.1 (4.6)	3.5 (13.2)	26.4 (29.4)
	7.5		1.1 (1.7)	3.0 (4.4)	3.4 (13.8)	27.6 (30.9)
	8.0		1.0 (1.7)	2.9 (4.3)	3.3 (14.4)	28.7 (32.3)
8.5		1.0 (1.6)	2.9 (4.3)	3.2 (14.9)	29.8 (33.7)	
3 h	2.5	Ceiling mounting	0.9 (1.8)	3.5 (6.0)	5.3 ( 6.0)	12.0 (13.4)
	3.0	Escape route, central	0.9 (1.5)	2.9 (6.3)	6.1 ( 6.8)	13.5 (15.2)
	3.5		0.9 (1.3)	2.5 (4.9)	6.7 ( 7.5)	14.9 (16.9)
	4.0		0.9 (1.3)	2.3 (4.3)	7.3 ( 8.2)	16.4 (18.4)
	4.5		0.9 (1.3)	2.3 (3.8)	7.9 ( 8.9)	17.8 (19.8)
	5.0		0.9 (1.3)	2.3 (3.5)	2.7 ( 9.6)	19.1 (21.2)
	5.5		0.8 (1.3)	2.3 (3.3)	2.6 (10.2)	20.3 (22.7)
	6.0		0.8 (1.3)	2.2 (3.2)	2.5 (10.8)	21.5 (24.2)
	6.5		0.7 (1.2)	2.2 (3.2)	2.2 (11.3)	22.5 (25.5)
	7.0		0.5 (1.2)	2.1 (3.2)	4.1 ( 3.8)	7.4 (26.8)
	7.5		0.2 (1.2)	2.1 (3.2)	4.6 ( 3.7)	7.2 (28.1)
	8.0		– (1.1)	2.0 (3.1)	4.9 ( 3.6)	7.1 (29.3)
8.5		– (1.1)	1.8 (3.0)	5.4 ( 3.4)	6.8 (30.4)	
8 h	2.5	Ceiling mounting	0.6 (0.8)	1.4 (2.5)	4.5 ( 5.1)	10.1 (11.3)
	3.0	Escape route, central	0.5 (0.8)	1.4 (2.1)	1.6 ( 5.8)	11.5 (12.7)
	3.5		0.5 (0.8)	1.3 (1.9)	1.5 ( 6.4)	12.7 (14.2)
	4.0		0.4 (0.7)	1.3 (2.0)	2.3 ( 2.3)	4.6 (15.6)
	4.5		0.1 (0.7)	1.3 (2.0)	2.7 ( 2.2)	4.4 (16.9)



Escape route illumination  
with symmetric optics





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

Emergency light opera- ting duration	Mounting height in metres	Mounting types	L1 	L2 	L3 	L4 
1 h	2.5	Ceiling mounting	3.9 (4.6)	9.1 (10.3)	4.3 (4.9)	9.8 (11.5)
	3.0	Escape route, central	4.2 (5.1)	10.1 (11.6)	4.5 (5.5)	11.0 (12.5)
	3.5		4.1 (5.5)	10.9 (12.7)	4.5 (6.0)	11.9 (13.8)
	4.0		3.6 (5.9)	11.6 (13.8)	2.8 (6.3)	12.4 (15.0)
	4.5		1.9 (5.9)	11.8 (14.7)	1.9 (6.5)	12.9 (16.0)
	5.0		1.4 (5.8)	11.5 (15.5)	1.5 (6.4)	12.6 (16.9)
	5.5		1.0 (5.3)	10.5 (16.2)	1.0 (5.8)	11.3 (17.4)
	6.0		1.6 (3.1)	6.1 (16.7)	1.9 (3.0)	5.7 (17.9)
3 h	6.5		1.4 (2.5)	4.8 (16.6)	1.5 (2.5)	4.8 (18.2)
	7.0		0.6 (2.1)	3.9 (16.3)	0.3 (2.2)	4.0 (17.9)
	2.5	Ceiling mounting	3.1 (4.0)	7.9 ( 9.2)	3.4 (4.4)	8.7 (10.0)
	3.0	Escape route, central	2.6 (4.4)	8.7 (10.3)	2.0 (4.7)	9.3 (11.2)
	3.5		1.3 (4.4)	8.7 (11.2)	1.3 (4.8)	9.5 (12.2)
8 h	4.0		0.8 (4.0)	8.0 (11.9)	0.9 (4.5)	8.8 (12.9)
	4.5		1.2 (2.2)	4.3 (12.4)	1.4 (2.2)	4.2 (13.3)
	5.0		0.9 (1.7)	3.3 (12.3)	0.8 (1.8)	3.3 (13.4)
	2.5	Ceiling mounting	0.4 (2.3)	4.6 ( 7.3)	0.5 (2.5)	4.9 ( 7.9)
	3.0	Escape route, central	0.6 (1.1)	2.0 ( 7.4)	0.5 (1.1)	2.0 ( 8.1)



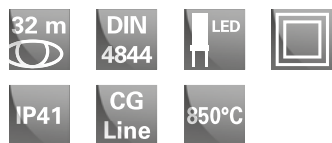
Escape route illumination  
with symmetric optics

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

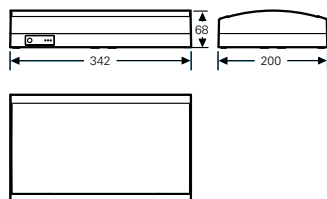
Emergency light opera- ting duration	Mounting height in metres	Mounting types	L1 	L2 	L3 	L4 
1 h	2.5	Ceiling mounting	3.4 (4.4)	8.4 (10.2)	4.5 (4.5)	8.4 ( 9.0)
	3.0	Escape route, central	3.4 (4.4)	9.4 (11.2)	4.5 (5.5)	9.4 (10.4)
	3.5		3.4 (4.4)	10.4 (12.2)	4.5 (5.5)	10.2 (11.6)
	4.0		3.4 (5.0)	11.0 (13.0)	3.5 (4.9)	11.0 (12.8)
	4.5		1.4 (5.4)	11.6 (13.8)	2.5 (5.5)	11.6 (13.8)
	5.0		1.4 (5.4)	12.0 (14.6)	1.4 (5.5)	12.2 (14.6)
	5.5		1.0 (4.4)	11.2 (15.4)	1.0 (5.5)	13.2 (15.2)
	6.0		0.7 (2.4)	9.6 (16.0)	0.7 (3.5)	13.4 (16.0)
3 h	6.5		0.7 (2.4)	10.0 (16.6)	0.7 (2.5)	10.8 (16.6)
	7.0		0.7 (1.9)	9.2 (17.0)	0.7 (1.8)	10.2 (17.2)
	2.5	Ceiling mounting	2.9 (3.4)	7.6 ( 8.8)	2.9 (4.5)	7.4 ( 8.4)
	3.0	Escape route, central	3.0 (3.4)	8.2 ( 9.6)	2.1 (4.5)	8.2 ( 9.6)
	3.5		1.3 (3.4)	8.8 (10.4)	1.3 (4.5)	8.8 (10.6)
8 h	4.0		1.0 (3.4)	8.4 (11.2)	0.9 (4.5)	9.8 (11.2)
	4.5		0.7 (2.0)	7.6 (12.0)	0.7 (1.9)	8.8 (11.8)
	5.0		0.7 (1.4)	7.2 (12.4)	0.7 (2.5)	7.8 (12.6)
	2.5	Ceiling mounting	0.7 (2.4)	4.8 ( 7.0)	0.7 (2.5)	6.0 ( 6.8)
	3.0	Escape route, central	0.7 (1.2)	4.4 ( 7.6)	0.7 (1.2)	4.6 ( 7.4)

# Style Variant 28011 LED CGLine

Escape sign luminaire



28011 LED with cover PR



## Style Variant 28011 LED CGLine

- Self-monitoring LED self-contained luminaire for stand-alone operation or for connection to the central monitoring device CG Controller CGLine 400 or PC-Interface
- Selectable operating time: 1 h or 3 h
- Minimum service requirement due to high service life of the LEDs (50,000 hours)
- Brightness selectable in 3 steps
- Test results with fault analysis (LED, charging and battery circuit) as well as status display (operation, function test, duration test) via 3 coloured LEDs
- Automatic function test (weekly) and duration test (every 3 months)
- Manual function test or operational duration test via testing buttons
- Automatic charging monitoring and deep discharge protection with restart inhibit
- 1 minute delay of normal mode after mains returns (acc. to DIN VDE 0100-718)
- Blocking function with CG Controller CGLine 400 or PC interface in times of shut-down
- Luminaires are generally suitable for maintained or non-maintained mode

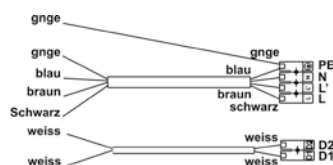
Viewing distance	32 m
Luminous flux $\Phi_E/\Phi_N$ at end of rated operating time	50 % 1 h 20 % 3 h
Housing material	Polycarbonate (850 °C glow wire resistant)
Housing colour	Light grey, sim. RAL 7035
Weight	1.2 kg
Type of mounting	Wall mounting
Connection terminals	Mains connection 3 x 2.5 mm <sup>2</sup> / Bus connection 2 x 1.5 mm <sup>2</sup>
Connection voltage	230 V AC, 50 Hz
Power consumption mains operation	6.4 VA
Permissible ambient temperature	Maintained mode -5 °C to +30 °C Non-maintained mode 0 °C to +35 °C
Battery	Maintenance free and gas tight NiMh 4.8 V / 1.1 Ah
Light source	3 x HighPower LEDs

## Ordering details

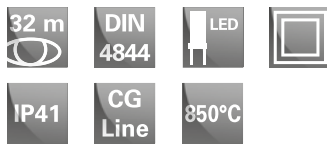
Type	Scope of delivery	Order No.
Escape sign luminaire 28011 1-3/D LED CGLine	single-sided, without cover	40071352221
Cover PL acc. to ISO 7010	Cover with silkscreened pictogram	40071354130
Cover PR acc. to ISO 7010	Cover with silkscreened pictogram	40071354131
Cover PU acc. to ISO 7010	Cover with silkscreened pictogram	40071354132

## Accessories

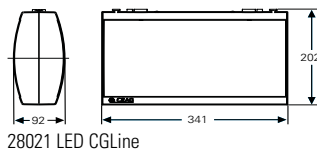
Type	Order No.
Wire guard	40071348370
Through-wiring set PE, N, L, L and D1, D2	40071350422



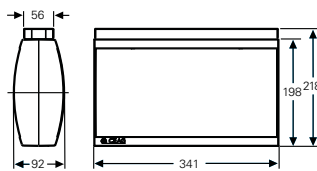
Through-wiring set



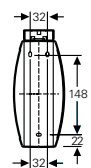
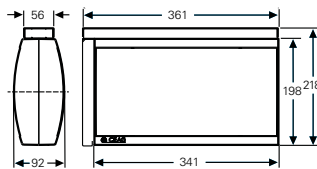
28021 LED with cover PR



28021 LED CGLine



28021 LED CGLine with ceiling mounting



28021 LED CGLine with wall bracket

### Style Variant 28021 LED CGLine

- Self-monitoring LED self-contained luminaire for stand-alone operation or for connection to the central monitoring device CG Controller CGLine 400 or PC-Interface
- Selectable operating time: 1 h or 3 h
- Minimum service requirement due to high service life of the LEDs (50,000 hours)
- Brightness selectable in 3 steps
- Test results with fault analysis (LED, charging and battery circuit) as well as status display (operation, function test, duration test) via 3 coloured LEDs
- Automatic function test (weekly) and duration test (every 3 months)
- Manual function test or operational duration test via testing buttons
- Automatic charging monitoring and deep discharge protection with restart inhibit
- 1 minute delay of normal mode after mains returns (acc. to DIN VDE 0100-718)
- Blocking function with CG Controller CGLine 400 or PC interface in times of shut-down
- Luminaires are generally suitable for maintained or non-maintained mode

Viewing distance	32 m
Luminous flux $\Phi_E/\Phi_N$ at end of rated operating time	50 % 1 h 20 % 3 h
Housing material	Polycarbonate (850 °C glow wire resistant)
Housing colour	Light grey, sim. RAL 7035
Weight	1.2 kg
Type of mounting	Ceiling mounting
Connection terminals	Mains connection 3 x 2.5 mm <sup>2</sup> / Bus connection 2 x 1.5 mm <sup>2</sup>
Connection voltage	230 V AC, 50 Hz
Power consumption mains operation	11.0 VA
Permissible ambient temperature	Maintained mode -5 °C to +30 °C Non-maintained mode 0 °C to +35 °C
Battery	Maintenance free and gas tight NiMh 4.8 V / 1.1 Ah
Light source	4 x HighPower LEDs

### Ordering details

Type	Scope of delivery	Order No.
Escape sign luminaire 28021 1-3/D LED CGLine	double-sided, without cover	40071352223
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		40071350432
Suspension set 0.5 m	with canopy	40071350400
Chain fastening <sup>1)</sup>		40071351158
Wall bracket		40071350418

<sup>1)</sup> Ceiling mounting 40071350432 required

# Style Variant 28011 CGLine

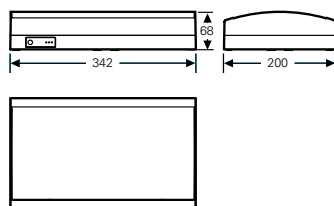
Safety luminaire and escape sign luminaire



28011 with transparent cover



28011 with pictogram PR



## 28011 CGLine

- Self-monitoring self-contained luminaire for stand-alone operation or for connection to the central monitoring device CG Controller CGLine 400 or PC-Interface
- Test results with fault analysis (lamps, charging and battery circuit) as well as status display (operation, function test, duration test) via 3 coloured LEDs
- Optional IP54 set for increased sealing requirements for indoor rooms or for canopied outdoor areas
- Automatic function test (weekly) and duration test (every 3 months)
- Manual function test or operational duration test via testing buttons
- Automatic charging monitoring and deep discharge protection with restart inhibit
- No-load and short-circuit shut-down of the inverter
- 1 minute delay of normal mode after mains returns (acc. to DIN VDE 0100-718)
- Blocking function with CG Controller CGLine 400 or PC interface in times of shut-down
- Luminaires are generally suitable for maintained or non-maintained mode

Viewing distance	32 m
Luminous flux $\Phi_E/\Phi_N$ at end of rated operating time	40 %
Housing material	Polycarbonate (850 °C glow wire resistant)
Housing colour	Light grey, sim. RAL 7035
Weight	Rated operating time 1 h: 1.7 kg Rated operating time 3 h: 1.9 kg
Type of mounting	Wall mounting (RZ and SL), ceiling mounting (SL)
Connection terminals	Mains connection 3 x 2.5 mm <sup>2</sup> / Bus connection 2 x 1.5 mm <sup>2</sup>
Connection voltage	230 V AC, 50 Hz
Power consumption mains operation	16 VA
Permissible ambient temperature	Maintained mode -5 °C to +30 °C Non-maintained mode 0 °C to +35 °C
Battery maintenance free and gas tight	Rated operating time 1 h: NiCd 3.6 V / 1.5 Ah Rated operating time 3 h: NiCd 3.6 V / 4.0 Ah
Light source	8W/T16, 450 lm

## Ordering details for rated operating time 1h

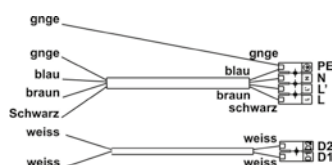
Type	Scope of delivery	Order No.
28011-1/D CGLine (SET) acc. to ISO 7010	Luminaire incl. cover and 3 pictogram foils PL, PR, PU and automatic test function 	40071354700

## Ordering details for rated operating time 3h

Type	Scope of delivery	Order No.
28011-3/D CGLine (SET) acc. to ISO 7010	Luminaire incl. cover and 3 pictogram foils PL, PR, PU and automatic test function 	40071354701

## Accessories

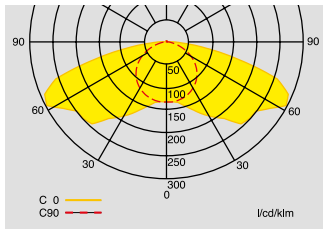
Type	Scope of delivery	Order No.
Wire guard AP		40071348370
IP54 Option	IP54 Protective cover with mounting accessories	40071350420
Through-wiring set PE, N, L, L and D1, D2		40071350422



Through-wiring set

## Planning help for 28011 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 28011  
with transparent cover

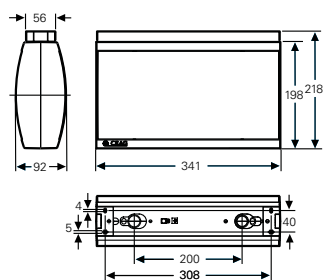
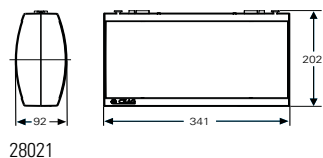
Mounting height (m)	Types of mounting	L1	L2	L3	L4
2.5	Ceiling mounting	2.2 (3.0)	6.0 (7.6)	4.0 (5.4)	10.7 (13.4)
3.0	Escape route, central	2.1 (3.1)	6.1 (8.0)	3.8 (5.6)	11.2 (14.3)
3.5		1.9 (3.1)	6.1 (8.4)	3.7 (5.7)	11.2 (15.1)
4.0		1.6 (3.1)	6.0 (8.6)	3.5 (5.5)	10.8 (15.6)
4.5		1.0 (2.9)	5.7 (8.7)	2.6 (5.3)	10.4 (15.9)
5.0		– (2.7)	5.1 (8.7)	– (5.2)	10.2 (15.8)
5.5		– (2.4)	4.3 (8.5)	– (5.0)	9.8 (15.4)
2.0	Wall mounting	2.4 (2.9)	5.8 (6.9)	2.6 (3.3)	6.6 ( 8.2)
2.5		2.3 (2.9)	5.8 (7.1)	– (3.2)	6.2 ( 8.1)
3.0		2.0 (2.8)	5.6 (7.1)	– ( – )	– ( 7.7)
2.5	Ceiling mounting	2.4 (2.8)	6.0 (7.1)	3.5 ( – )	11.0 ( 7.7)
3.0	Room illumination	2.4 (0.0)	6.2 (0.0)	3.5 (0.0)	11.8 ( 0.0)
3.5		1.9 (0.0)	6.2 (0.0)	3.6 (0.0)	12.4 ( 0.0)
4.0		1.8 (3.0)	6.2 (7.6)	2.8 (4.7)	12.4 (13.2)
4.5		0.7 (3.4)	6.2 (8.0)	0.7 (4.5)	12.2 (14.6)
5.0		0.7 (3.4)	6.0 (8.4)	0.7 (4.5)	12.0 (15.6)
5.5		0.7 (3.1)	5.8 (8.6)	0.7 (4.6)	11.0 (16.6)

# Style Variant 28021 CGLine

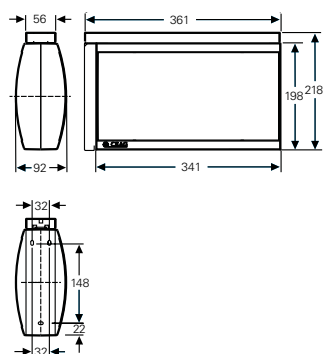
Escape sign luminaire



28021 with cover PR



28021 with ceiling mounting



28021 with wall bracket

## Style Variant 28021 CGLine

- Self-monitoring self-contained luminaire for stand-alone operation or for connection to the central monitoring device CG Controller CGLine 400 or PC-Interface
- Test results with fault analysis (lamps, charging and battery circuit) as well as status display (operation, function test, duration test) via 3 coloured LEDs
- Automatic function test (weekly) and duration test (every 3 months)
- Manual function test or operational duration test via testing buttons
- Automatic charging monitoring and deep discharge protection with restart inhibit
- No-load and short-circuit shut-down of the inverter
- 1 minute delay of normal mode after mains returns (acc. to DIN VDE 0100-718)
- Blocking function with CG Controller CGLine 400 or PC interface in times of shut-down
- Luminaires are generally suitable for maintained or non-maintained mode

Viewing distance	32 m
Luminous flux $\Phi_E/\Phi_N$ at end of rated operating time	40 %
Housing material	Polycarbonate (850 °C glow wire resistant)
Housing colour	Light grey, sim. RAL 7035
Weight	Rated operating time 1 h: 1.7 kg Rated operating time 3 h: 1.9 kg
Type of mounting	Ceiling mounting
Connection terminals	Mains connection 3 x 2.5 mm <sup>2</sup> / Bus connection 2 x 1.5 mm <sup>2</sup>
Connection voltage	230 V AC, 50 Hz
Power consumption mains operation	16 VA
Permissible ambient temperature	Maintained mode -5 °C to +30 °C Non-maintained mode 0 °C to +35 °C
Battery maintenance free and gas tight	Rated operating time 1 h: NiCd 3.6 V / 1.5 Ah Rated operating time 3 h: NiCd 3.6 V / 4.0 Ah
Light source	8W/T16, 450 lm

## Ordering details for rated operating time 1 h

Type	Scope of delivery	Order No.
28021-1/D CGLine (SET) acc. to ISO 7010	Luminaire incl. cover and 4 pictogram foils PL, PR, PU, BL and automatic test function 	40071354710

## Ordering details for rated operating time 3 h

Type	Scope of delivery	Order No.
28021-3/D CGLine (SET) acc. to ISO 7010	Luminaire incl. cover and 4 pictogram foils PL, PR, PU, BL and automatic test function 	40071354711

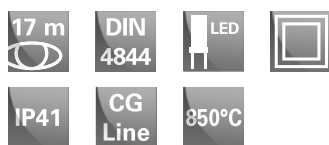
## Accessories

Type	Scope of delivery	Order No.
Ceiling mounting		40071350432
Suspension set 0,5 m	with canopy	40071350400
Chain fastening <sup>1)</sup>		40071351158
Wall bracket		40071350418

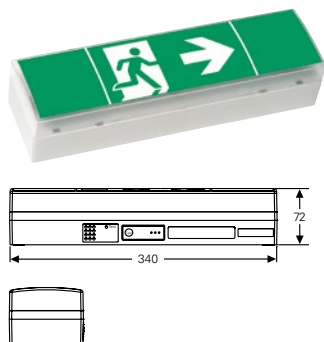
<sup>1)</sup> Ceiling mounting 40071350432 required

# Style Variant 58011 ... 58021 LED CGLine

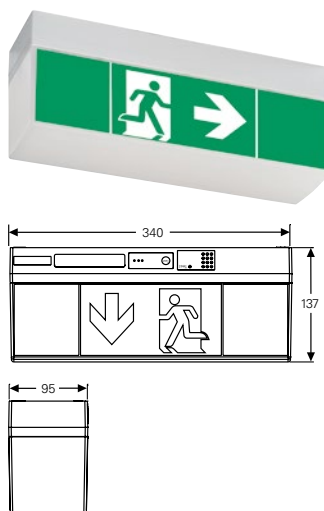
Safety luminaire and escape sign luminaire



58011 1-3/D LED CGLine with pictogramfoil PR



58021 1-3/D LED CGLine with pictogramfoil PR



## Style Variant 58011 ... 58021 LED CGLine

- Self-monitoring LED self-contained luminaire for stand-alone operation or for connection to the central monitoring device CG Controller CGLine 400 or PC-Interface
- Selectable operating time 1 h or 3 h
- Minimum service requirement due to high service life of the LEDs (50000 hours)
- Brightness selectable in 3 steps
- Test results with fault analysis (LED, charging and battery circuit) as well as status displays (operation, function test, duration test) via 3 coloured LEDs
- Automatic function test (weekly) and duration test (every 3 months)
- Manual function test or operational duration test via testing buttons
- Automatic charging monitoring and deep discharge protection with restart inhibit
- 1 minute delay of normal mode after mains returns (acc. to DIN VDE 0100-718)
- Blocking function with CG-Controller CGLine 400 or PC-Interface in times of shut-down
- Luminaires are generally suitable for maintained or non-maintained mode

Viewing distance	17 m
Luminous flux $\Phi_E/\Phi_N$ at end of rated operating time	50 % 1 h 20 % 3 h
Housing material	Polycarbonate (850 °C glow wire resistant)
Housing colour	Light grey, sim. RAL 7035
Weight	58011 1-3/D LED 0.75 kg 58021 1-3/D LED 0.9 kg
Type of mounting	Wall and ceiling mounting
Connection terminals	Mains connection 3 x 2.5 mm <sup>2</sup> / Bus connection 2 x 1.5 mm <sup>2</sup>
Connection voltage	230 V AC, 50 Hz
Power consumption mains operation	6.4 VA
Permissible ambient temperature	Maintained mode -5 °C to +30 °C Non-maintained mode 0 °C to +35 °C
Battery	Maintenance free and gas tight NiMh 4.8 V / 1.1 Ah
Light source	3 x HighPower LEDs

## Ordering details

Type	Scope of delivery	Order No.
58011 1-3/D LED CGLine (SET) acc. to ISO 7010	Escape sign luminaire incl. cover and 3 pictogram foils PL, PR, PU and automatic test function	40071354720
58021 1-3/D LED CGLine (SET) acc. to ISO 7010	Escape sign luminaire inclusive cover and 3 pictogram foils PL, PR, PU and automatic test function	40071354721

## Accessories

Type	Order No.
Chain fastening	40071350669
Wall bracket	40071350668

Chain fastening



Wall bracket



# Style Variant 58011 CGLine

Safety luminaire and escape sign luminaire

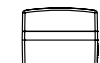
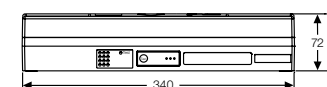
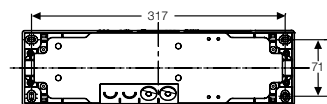


58011 with transparent cover



5

58011 with pictogram foil PR



## Style Variant 58011 CGLine

- Self-monitoring self-contained luminaire for stand-alone operation or for connection to the central monitoring device CG Controller CGLine 400 or PC-Interface
- Test results with fault analysis (lamps, charging and battery circuit) as well as status displays (operation, function test, duration test) via 3 coloured LEDs
- Optional IP54 set for increased sealing requirements for indoor rooms or for canopied outdoor areas
- Automatic function test (weekly) and duration test (every 3 months)
- Manual function test or operational duration test via testing buttons
- Automatic charging monitoring and deep discharge protection with restart inhibit
- No-load and short-circuit shut-down of the inverter
- 1 minute delay of normal mode after mains returns (acc. to DIN VDE 0100-718)
- Blocking function with CG-Controller CGLine 400 or PC-Interface in times of shut-down
- Luminaires are generally suitable for maintained or non-maintained mode

Viewing distance	17 m
Luminous flux $\Phi_E/\Phi_N$ at end of rated operating time	40 %
Housing material	Polycarbonate (850 °C glow wire resistant)
Housing colour	Light grey, sim. RAL 7035
Weight	Rated operating time 1 h: 1.15 kg Rated operating time 3 h: 1.35 kg
Type of mounting	Wall and ceiling mounting
Connection terminals	Mains connection 3 x 2.5 mm <sup>2</sup> / Bus connection 2 x 1.5 mm <sup>2</sup>
Connection voltage	230 V AC, 50 Hz
Power consumption mains operation	16 VA
Permissible ambient temperature	Maintained mode -5 °C to +30 °C Non-maintained mode 0 °C to +35 °C
Battery maintenance free and gas tight	Rated operating time 1 h: NiCd 3.6V / 1.5 Ah Rated operating time 3 h: NiCd 3.6V / 4.0 Ah
Light source	8W/T16, 450 lm

## Ordering details for rated operating time 1h

Type	Scope of delivery	Order No.
58011-1/D CGLine (SET) acc. to ISO 7010	Luminaire incl. clear cover and 3 pictogram foils PL, PR, PU and automatic test function 	40071354730

## Ordering details for rated operating time 3h

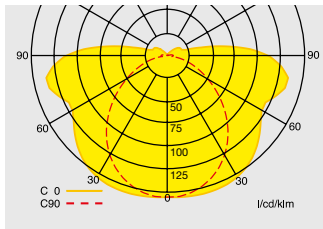
Type	Scope of delivery	Order No.
58011-3/D CGLine (SET) acc. to ISO 7010	Luminaire incl. clear cover and 3 pictogram foils PL, PR, PU and automatic test function 	40071354731

## Accessories

Type	Scope of delivery	Order No.
IP54 Option	IP54 Protective cover with mounting accessories	40071350670

## Planning help for 58011 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 58011  
with transparent cover

Mounting height (m)	Types of mounting	L1	L2	L3	L4
2.5	Ceiling mounting	2.0 (2.7)	5.4 (6.8)	2.9 (4.2)	8.4 (11.4)
3.0	Escape route, central	1.9 (2.8)	5.6 (7.2)	2.9 (4.2)	8.4 (11.8)
4.0		1.1 (2.7)	5.4 (7.8)	2.2 (4.1)	8.2 (11.8)
5.0		– (2.2)	4.4 (7.8)	– (3.7)	7.4 (11.6)
6.0		– (0.5)	2.0 (7.2)	– (1.8)	3.6 (11.4)
7.0		– (–)	2.0 (6.0)	– (–)	2.0 (10.4)
2.0	Wall mounting	2.1 (2.7)	5.4 (6.8)	2.5 (3.7)	7.4 (10.0)
2.5		2.2 (3.0)	6.0 (7.6)	– (3.7)	7.4 (10.4)
3.0		2.2 (3.1)	6.2 (8.2)	– (–)	7.0 (10.6)

# Style Variant 58021 CGLine

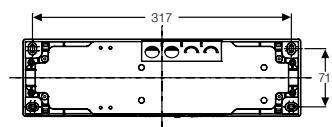
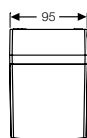
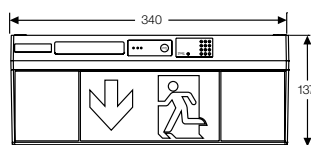
Escape sign luminaire



58021 with pictogramfoil PR



5



Chain fastening



Wall bracket



IP54 Set



## Style Variant 58021 CGLine

- Self-monitoring self-contained luminaire for stand-alone operation or for connection to the central monitoring device CG Controller CGLine 400 or PC-Interface
- Test results with fault analysis (lamps, charging and battery circuit) as well as status displays (operation, function test, duration test) via 3 coloured LEDs
- Optional IP54 set for increased sealing requirements for indoor rooms or for canopied outdoor areas
- Automatic function test (weekly) and duration test (every 3 months)
- Manual function test or operational duration test via testing buttons
- Automatic charging monitoring and deep discharge protection with restart inhibit
- No-load and short-circuit shut-down of the inverter
- 1 minute delay of normal mode after mains returns (acc. to DIN VDE 0100-718)
- Blocking function with CG-Controller CGLine 400 or PC-Interface in times of shut-down
- Luminaires are generally suitable for maintained or non-maintained mode

Viewing distance	17 m
Luminous flux $\Phi_E/\Phi_N$ at end of rated operating time	40 %
Housing material	Polycarbonate (850 °C glow wire resistant)
Housing colour	Light grey, sim. RAL 7035
Weight	58021-1/D: 1.30 kg 58021-3/D: 1.55 kg
Type of mounting	Wall and ceiling mounting
Connection terminals	Mains connection 3 x 2.5 mm <sup>2</sup> / Bus connection 2 x 1.5 mm <sup>2</sup>
Connection voltage	230 V AC, 50 Hz
Power consumption mains operation	16 VA
Permissible ambient temperature	Maintained mode -5 °C to +30 °C Non-maintained mode 0 °C to +35 °C
Battery maintenance free and gas tight	Rated operating time 1 h: NC-Accu 3.6 V / 1.5 Ah Rated operating time 3 h: NC-Accu 3.6 V / 4.0 Ah
Light source	8W/T16, 450 lm

## Ordering details for rated operating time 1h

Type	Scope of delivery	Order No.
58021-1/D CGLine (SET) acc. to ISO 7010	Luminaire incl. high cover and 3 pictogram foils PL, PR, PU and automatic test function 	40071354740

## Ordering details for rated operating time 3h

Type	Scope of delivery	Order No.
58021-3/D CGLine (SET) acc. to ISO 7010	Luminaire incl. high cover and 3 pictogram foils PL, PR, PU and automatic test function 	40071354741

## Accessories

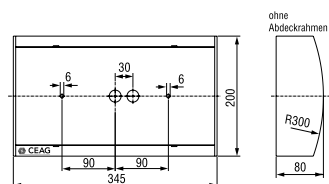
Type	Scope of delivery	Order No.
Wall bracket		40071350668
Chain fastening		40071350669
IP54 Option	IP54 Protective cover with mounting accessories	40071350670



48011 1-3/D LED CGLine IP41  
with cover PR



48011 1-3/D 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 central monitoring device CG Controller CGLine 400 or PC-Interface
- Selectable operating time 1 h or 3 h
- Minimum service requirement due to high service life of the LEDs (50,000 hours)
- Brightness selectable in 3 steps
- Test results with fault analysis (lamps, charging and battery circuit) as well as status displays (operation, function test, duration test) via 3 coloured LEDs
- Optional IP54 set for increased sealing requirements for indoor rooms or for canopied outdoor areas
- Automatic function test (weekly) and duration test (every 3 months)
- Manual function test or operational duration test via testing buttons
- Automatic charging monitoring and deep discharge protection with restart inhibit
- 1 minute delay of normal mode after mains returns (acc. to DIN VDE 0100-718)
- Blocking function with CG-Controller CGLine 400 or PC-Interface in times of shut-down
- Luminaires are generally suitable for maintained or non-maintained mode

5

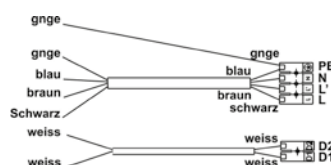
Viewing distance	32 m
Luminous flux $\Phi_E/\Phi_N$ at end of rated operating time	50 % 1 h 20 % 3 h
Housing material	Aluminium
Housing colour	Light grey, sim. RAL 7035
Weight	IP41 2.2 kg IP54 3.0 kg
Type of mounting	Wall mounting
Connection terminals	Mains connection 3 x 2.5 mm <sup>2</sup> / Bus connection 2 x 1.5 mm <sup>2</sup>
Connection voltage	230 V AC, 50 Hz
Power consumption mains operation	6.4 VA
Permissible ambient temperature	Maintained mode -5 °C to +30 °C Non-maintained mode 0 °C to +35 °C
Battery	Maintenance free and gas tight NiMH 4.8 V / 1.1 Ah
Light source	3 x HighPower LEDs

### Ordering details

Type	Scope of delivery	Order No.
48011 1-3/D LED CGLine IP41	Luminaire housing IP41 without cover	40071352811
48011 1-3/D LED CGLine IP54	Luminaire housing IP54 without cover	40071352812
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
Through-wiring set PE, N, L, L and D1, D2		40071350422



Through-wiring set

# STYLE Industry 48011 CGLine

Safety luminaire and escape sign luminaire



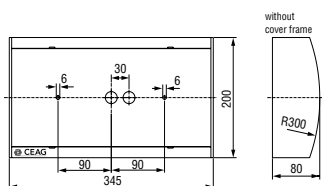
48011 with transparent cover



48011 with cover PR



48011 IP54 with cover PR



## STYLE Industry 48011 CGLine

- Self-monitoring self-contained luminaire for stand-alone operation or for connection to the central monitoring device CG Controller CGLine 400 or PC-Interface
- Robust aluminium with powder coating
- Test results with fault analysis (lamps, charging and battery circuit) as well as status displays (operation, function test, duration test) via 3 coloured LEDs
- Optional IP54 set for increased sealing requirements for indoor rooms or for canopied outdoor areas
- Automatic function test (weekly) and duration test (every 3 months)
- Manual function test or operational duration test via testing buttons
- Automatic charging monitoring and deep discharge protection with restart inhibit
- No-load and short-circuit shut-down of the inverter
- 1 minute delay of normal mode after mains returns (acc. to DIN VDE 0100-718)
- Blocking function with CG-Controller CGLine 400 or PC-Interface in times of shut-down
- Luminaires are generally suitable for maintained or non-maintained mode

Viewing distance	32 m
Luminous flux $\Phi_E/\Phi_N$ at end of rated operating time	40 %
Housing material	Polycarbonate (850 °C glow wire resistant)
Housing colour	Light grey, sim. RAL 7035
Weight	Rated operating time 1 h IP41: 2.6 kg Rated operating time 1 h IP54: 3.0 kg Rated operating time 3 h IP41: 2.8 kg Rated operating time 3 h IP54: 3.2 kg
Type of mounting	Wall and ceiling mounting
Connection terminals	for 2.5 mm <sup>2</sup>
Connection voltage	230 V AC, 50 Hz
Power consumption mains operation	16 VA
Permissible ambient temperature	Maintained mode -5 °C to +30 °C Non-maintained mode 0 °C to +35 °C
Battery maintenance free and gas tight	Rated operating time 1 h: NiCd 3.6 V / 1.5 Ah Rated operating time 3 h: NiCd 3.6 V / 4.0 Ah
Light source	8 W/T16, 450 lm

## Ordering details for rated operating time 1h

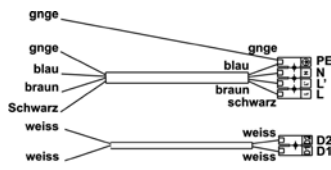
Type	Scope of delivery	Order No.
48011-1/D CGLine IP41	Luminaire housing IP41 without cover	40071350114
48011-1/D CGLine IP54	Luminaire housing IP54 without cover	40071350116

## Ordering details for rated operating time 3h

Type	Scope of delivery	Order No.
48011-3/D CGLine IP41	Luminaire housing IP41 without cover	40071350115
48011-3/D CGLine IP54	Luminaire housing IP54 without cover	40071350117

## Ordering details

Type	Scope of delivery	Order No.
Cover PL	Cover with pictogram acc. to ISO 7010	40071354130
Cover PR	Cover with pictogram acc. to ISO 7010	40071354131
Cover PU	Cover with pictogram acc. to ISO 7010	40071354132
Cover SL	Transparent cover	40071345985



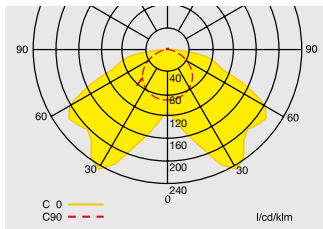
Through-wiring set

## Accessories

Type	Order No.
Wire guard	40071348370
2 x M20 cable glands	40071348422
Through-wiring set PE, N, L, L and D1, D2	40071350422

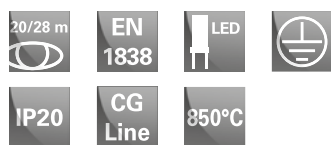
## Planning help for 48011 for E = 1.0 lx (0.5 lx) with transparent cover

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

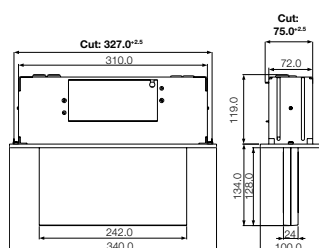


# Brillant 1883, 1884, 1984 LED CGLine

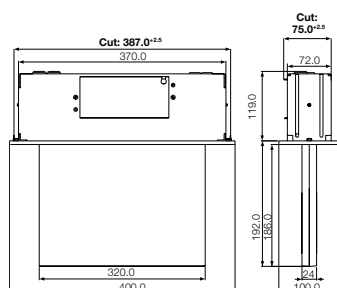
Escape sign panel luminaire



1883 1-3/D LED CGLine



1884 1-3/D LED CGLine



## Brillant 1883, 1884, 1984 LED CGLine

- Self-monitoring LED self-contained luminaire for stand-alone operation or for connection to the central monitoring device CG Controller CGLine 400 or PC-Interface
- Wall and surface mounting housings with rectangular, slender 50 mm profile housing
- Selectable operating time 1 h or 3 h
- Minimum service requirement due to high service life of the LEDs (50,000 hours)
- Brightness selectable in 3 steps
- Test results with fault analysis (LED, charging and battery circuit) as well as status displays (operation, function test, duration test) via 3 coloured LEDs
- Automatic function test (weekly) and duration test (every 3 months)
- Manual function test or operational duration test via testing buttons
- Automatic charging monitoring and deep discharge protection with restart inhibit
- 1 minute delay of normal mode after mains returns (acc. to DIN VDE 0100-718)
- Blocking function with CG-Controller CGLine 400 or PC-Interface in times of shut-down
- Luminaires are generally suitable for maintained or non-maintained mode

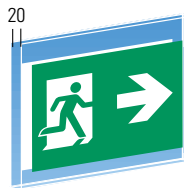
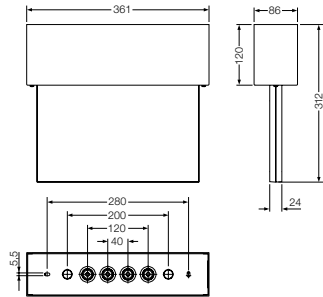
Viewing distance	1883 20 m 1884, 1984 28 m
Luminous flux $\Phi_E/\Phi_N$ at end of rated operating time	50 % 1 h 20 % 3 h
Housing material	Sheet steel, bezel Polycarbonate (850 °C glow wire resistant)
Housing colour	white, sim. RAL 9010
Weight	1883 1-3/D LED 3.0 kg 1884 1-3/D LED 4.0 kg 1984 1-3/D LED 4.0 kg
Type of mounting	1883, 1884 Recessed ceiling mounting 1984 Ceiling surface mounting
Connection terminals	Mains connection 3 x 2.5 mm <sup>2</sup> / Bus connection 2 x 1.5 mm <sup>2</sup>
Connection voltage	230 V AC, 50 Hz
Power consumption mains operation	1883: 6.3 VA; 1884, 1984: 7.1 VA
Permissible ambient temperature	Maintained mode -5 °C to +30 °C Non-maintained mode 0 °C to +35 °C
Battery	Maintenance free and gas tight NiMh 4.8 V / 1.1 Ah
Light source	LED batten with 3-chip LEDs

## Ordering details

Type		Order No.
Panel luminaire 1883 1-3/D LED CGLine	for recessed ceiling mounting, without panel, plastic bezel white, sim. RAL 9010	40071352806
Panel luminaire 1884 1-3/D LED CGLine	for recessed ceiling mounting, without panel, plastic bezel white, sim. RAL 9010	40071352807
Panel luminaire 1984 1-3/D LED CGLine	for surface ceiling mounting, without panel, white, sim. RAL 9010	40071352808

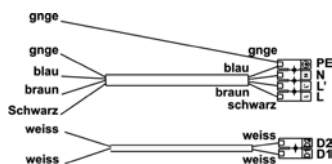
1883 and 1884:  
Required recess height: 120mm /  
Clamping range of the fixing angles  
for ceiling thickness up to 35 mm

1984 1-3/D LED CGLine



Panel PL/PR

Concrete mounting box



Through-wiring set

## 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

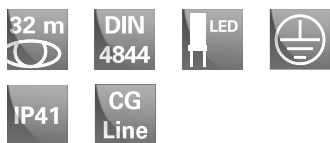
Type	Scope of delivery	Order No.
Panel PL/PR acc. to ISO 7010	Two-sided pictogram panel	40071354630
Panel PU/PU acc. to ISO 7010	Two-sided pictogram panel	40071354631
Panel PU/BL acc. to ISO 7010	Two-sided pictogram panel	40071354632

## Accessories

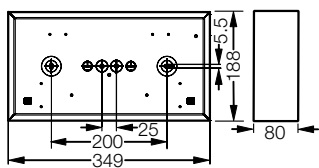
Type	Scope of delivery	Order No.
Concrete mounting box for 1883	for installation in concrete ceilings	40071348725
Concrete mounting box for 1884	for installation in concrete ceilings	40071341710
Mounting kit for 1883/1884	for installation in concrete mounting box	40071341721
Suspension set 0.5 m for 1984	with canopy	40071350517
Wall bracket for 1984	RAL 9010	40071349910
Wall bracket for 1984 simple construction	RAL 9010	40071349952
Wall mounting parallel for 1984	RAL 9010	40071349852
Chain fastening for 1984		40071348723
Through-wiring set PE, N, L, L and D1, D2		40071350422

# 71811 LED CGLine

Escape sign luminaire



71811 1-3/D LED CGLine with cover PR



## 71811 LED CGLine

- Self-monitoring LED self-contained luminaire for stand-alone operation or for connection to the central monitoring device CG Controller CGLine 400 or PC-Interface
- Enclosure made of slim aluminium profile, anodised, with mitre cut
- Selectable operating time 1 h or 3 h
- Minimum service requirement due to high service life of the LEDs (50,000 hours)
- Brightness selectable in 3 steps
- Test results with fault analysis (LED, charging and battery circuit) as well as status displays (operation, function test, duration test) via 3 coloured LEDs
- Automatic function test (weekly) and duration test (every 3 months)
- Manual function test or operational duration test via testing buttons
- Automatic charging monitoring and deep discharge protection with restart inhibit
- 1 minute delay of normal mode after mains returns (acc. to DIN VDE 0100-718)
- Blocking function with CG-Controller CGLine 400 or PC-Interface in times of shut-down
- Luminaires are generally suitable for maintained or non-maintained mode

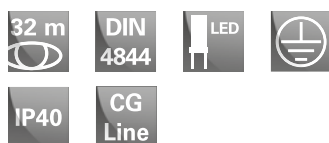
Viewing distance	32 m
Luminous flux $\Phi_E/\Phi_N$ at end of rated operating time	50 % 1 h 20 % 3 h
Housing material	Aluminium
Housing colour	Aluminium, anodized
Weight	1.2 kg
Type of mounting	Wall mounting
Connection terminals	Mains connection 3 x 2.5 mm <sup>2</sup> / Bus connection 2 x 1.5 mm <sup>2</sup>
Connection voltage	230 V AC, 50 Hz
Power consumption mains operation	6.4 VA
Permissible ambient temperature	Maintained mode -5 °C to +30 °C Non-maintained mode 0 °C to +35 °C
Battery	Maintenance free and gas tight NiMH 4.8 V / 1.1 Ah
Light source	3 x HighPower LEDs

## Ordering details

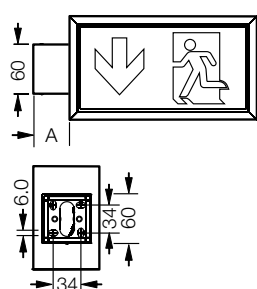
Type	Scope of delivery	Order No.
Escape sign luminaire 71811 1-3/D LED CGLine	single-sided, without cover	40071352802
Scheibe PL gem. ISO 7010	Cover with pictogram	40071354240
Scheibe PR gem. ISO 7010	Cover with pictogram	40071354241
Scheibe PU gem. ISO 7010	Cover with pictogram	40071354242

## Accessories

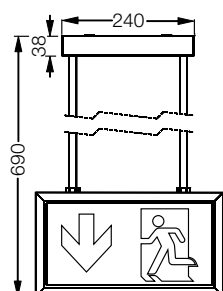
Type	Scope of delivery	Order No.
Wire guard		40071348370



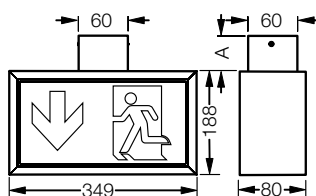
71821 CGLine WM with cover PR



71821 CGLine WM



71821 CGLine PM



71821 CGLine DM

### 71821 LED CGLine

- Self-monitoring LED self-contained luminaire for stand-alone operation or for connection to the central monitoring device CG Controller CGLine 400 or PC-Interface
- Enclosure made of slim aluminium profile, anodised, with mitre cut
- Selectable operating time 1 h or 3 h
- Minimum service requirement due to high service life of the LEDs (50,000 hours)
- Brightness selectable in 3 steps
- Test results with fault analysis (LED, charging and battery circuit) as well as status displays (operation, function test, duration test) via 3 coloured LEDs
- Automatic function test (weekly) and duration test (every 3 months)
- Manual function test or operational duration test via testing buttons
- Automatic charging monitoring and deep discharge protection with restart inhibit
- 1 minute delay of normal mode after mains returns (acc. to DIN VDE 0100-718)
- Blocking function with CG-Controller CGLine 400 or PC-Interface in times of shut-down
- Luminaires are generally suitable for maintained or non-maintained mode

Viewing distance	32 m
Luminous flux $\Phi_E/\Phi_N$ at end of rated operating time	50 % 1 h 20 % 3 h
Housing material	Aluminium
Housing colour	Aluminium, anodized
Weight	1.8 kg
Type of mounting	Ceiling, pendant, chain or wall bracket mounting
Connection terminals	Mains connection 3 x 2.5 mm <sup>2</sup> / Bus connection 2 x 1.5 mm <sup>2</sup>
Connection voltage	230 V AC, 50 Hz
Power consumption mains operation	11.0 VA
Permissible ambient temperature	Maintained mode -5 °C to +30 °C Non-maintained mode 0 °C to +35 °C
Battery	Maintenance free and gas tight, NiMh 4.8 V / 1.1 Ah
Light source	4 x HighPower LEDs

### Ordering details

Type	Scope of delivery	Order No.
Escape sign luminaire 71821 1-3/D LED CGLine WM	double-sided, without cover	40071352803
Escape sign luminaire 71821 1-3/D LED CGLine DM	double-sided, without cover	40071352804
Escape sign luminaire 71821 1-3/D LED CGLine PM	double-sided, without cover	40071352805
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

# 71811 CGLine

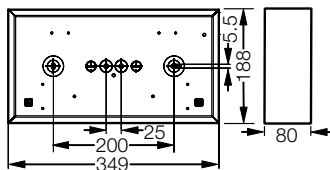
Safety luminaire and escape sign luminaire



71811 with cover PR



5



## 71811 CGLine

- Self-monitoring self-contained luminaire for stand-alone operation or for connection to the central monitoring device CG Controller CGLine 400 or PC-Interface
- Enclosure made of slim aluminium profile, anodised, with mitre cut
- Test results with fault analysis (lamps, charging and battery circuit) as well as status displays (operation, function test, duration test) via 3 coloured LEDs
- Automatic function test (weekly) and duration test (every 3 months)
- Manual function test or operational duration test via testing buttons
- Automatic charging monitoring and deep discharge protection with restart inhibit
- No-load and short-circuit shut-down of the inverter
- 1 minute delay of normal mode after mains returns (acc. to DIN VDE 0100-718)
- Blocking function with CG-Controller CGLine 400 or PC-Interface in times of shut-down
- Luminaires are generally suitable for maintained or non-maintained mode

Viewing distance	32 m
Luminous flux $\Phi_E/\Phi_N$ at end of rated operating time	40 %
Housing material	Aluminium
Housing colour	Aluminium, anodized
Weight	71811-1/D: 2.0 kg 71811-3/D: 2.2 kg
Type of mounting	Wall and ceiling mounting
Connection terminals	Mains connection 3 x 2.5 mm <sup>2</sup> / Bus connection 2 x 1.5 mm <sup>2</sup>
Connection voltage	230 V AC, 50 Hz
Power consumption mains operation	16 VA
Permissible ambient temperature	Maintained mode -5 °C to +30 °C Non-maintained mode 0 °C to +35 °C
Battery maintenance free and gas tight	Rated operating time 1 h: NC-Accu 3.6 V / 1.5 Ah Rated operating time 3 h: NC-Accu 3.6 V / 4.0 Ah
Light source	8W/T16, 450 lm

## Ordering details

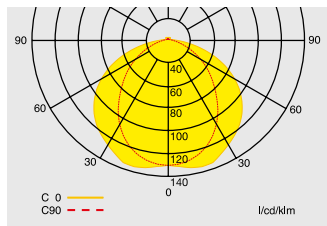
Type	Scope of delivery	Order No.
71811-1/D CGLine	Luminaire housing without cover	40071351242
71811-3/D CGLine	Luminaire housing without cover	40071351243
Cover PL acc. to ISO 7010	Cover with pictogram	40071354240
Cover PR acc. to ISO 7010	Cover with pictogram	40071354241
Cover PU acc. to ISO 7010	Cover with pictogram	40071354242
Cover SL	Transparent cover	40071351187

## Accessories

Type	Scope of delivery	Order No.
Wire guard		40071348370

**Planning help for 71811 for E = 1.0 lx (0.5 lx) with transparent cover SL**

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

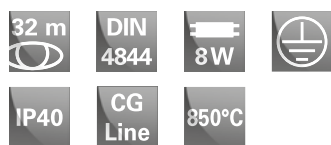


Light distribution curve 71811

Mounting height (m)	Types of mounting	L1	L2	L3	L4
2.5	Ceiling mounting	2.2 (2.8)	5.6 (7.0)	2.7 (3.5)	7.0 ( 8.8)
3.0	Escape route, central	2.2 (3.0)	6.0 (7.6)	2.7 (3.7)	7.4 ( 9.6)
4.0		1.9 (3.1)	6.2 (8.2)	2.4 (3.8)	7.6 (10.4)
5.0		1.1 (2.9)	5.8 (8.6)	1.6 (3.6)	7.0 (10.6)
6.0		– (2.5)	4.8 (8.6)	– (3.1)	5.8 (10.6)
7.0		– (1.5)	2.0 (8.2)	– (2.2)	3.0 (10.0)
2.0	Wall mounting	1.6 (2.1)	4.2 (5.2)	1.5 (2.2)	4.4 ( 5.8)
2.5		1.3 (2.0)	3.8 (5.2)	– (–)	3.4 ( 5.4)
3.0		0.3 (1.6)	3.2 (4.8)	– (–)	2.0 ( 4.4)
3.0	Ceiling mounting	2.4 (2.8)	6.0 (7.4)	2.5 (3.1)	6.6 ( 8.4)
4.0	Room illumination	2.0 (2.4)	6.2 (8.4)	2.0 (4.5)	7.6 ( 9.2)
5.0		0.7 (2.4)	6.2 (8.8)	0.7 (3.5)	7.8 (10.2)
6.0		0.7 (2.4)	5.8 (8.8)	0.7 (2.5)	7.6 (11.0)
7.0		0.7 (0.7)	4.8 (8.8)	0.7 (0.7)	6.0 (11.2)

# 71821 CGLine

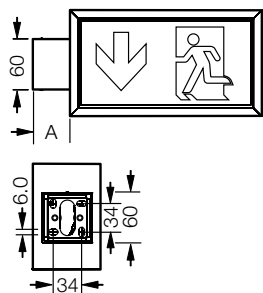
Escape sign luminaire



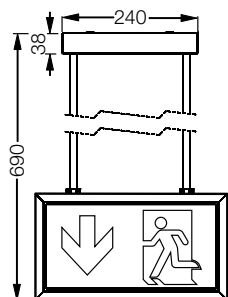
71821 CGLine WM with cover PR



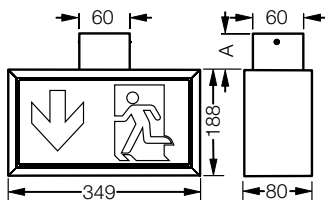
5



71821 CGLine WM



71821 CGLine PM



71821 CGLine DM

## 71821 CGLine

- Self-monitoring self-contained luminaire for stand-alone operation or for connection to the central monitoring device CG Controller CGLine 400 or PC-Interface
- Enclosure made of slim aluminium profile, anodised, with mitre cut
- Test results with fault analysis (lamps, charging and battery circuit) as well as status displays (operation, function test, duration test) via 3 coloured LEDs
- Automatic function test (weekly) and duration test (every 3 months)
- Manual function test or operational duration test via testing buttons
- Automatic charging monitoring and deep discharge protection with restart inhibit
- No-load and short-circuit shut-down of the inverter
- 1 minute delay of normal mode after mains returns (acc. to DIN VDE 0100-718)
- Blocking function with CG-Controller CGLine 400 or PC-Interface in times of shut-down
- Luminaires are generally suitable for maintained or non-maintained mode

Viewing distance	32 m
Luminous flux $\Phi_E/\Phi_N$ at end of rated operating time	40 %
Housing material	Aluminium
Housing colour	Aluminium, anodized
Weight	71821-1/D 1.7 kg 71821-3/D 1.9 kg
Type of mounting	Ceiling, pendant, chain or wall bracket mounting
Connection terminals	Mains connection 3 x 2.5 mm <sup>2</sup> / Bus connection 2 x 1.5 mm <sup>2</sup>
Connection voltage	230 V AC, 50 Hz
Power consumption mains operation	16 VA
Permissible ambient temperature	Maintained mode -5 °C to +30 °C Non-maintained mode 0 °C to +35 °C
Battery maintenance free and gas tight	Rated operating time 1 h: NC-Accu 3.6 V / 1.5 Ah Rated operating time 3 h: NC-Accu 3.6 V / 4.0 Ah
Light source	8W/T16, 450 lm

## Ordering details for rated operating time 1h

Type		Order No.
71821-1/D CGLine WM	Luminaire housing without cover	40071351255
71821-1/D CGLine DM	Luminaire housing without cover	40071351256
71821-1/D CGLine PM	Luminaire housing without cover	40071351257

## Ordering details for rated operating time 3h

Type		Order No.
71821-3/D CGLine WM	Luminaire housing without cover	40071351260
71821-3/D CGLine DM	Luminaire housing without cover	40071351261
71821-3/D CGLine PM	Luminaire housing without cover	40071351262

## Ordering details

Type	Scope of delivery		Order No.
Cover PL acc. to ISO 7010	Cover with pictogram		40071354240
Cover PR acc. to ISO 7010	Cover with pictogram		40071354241
Cover PU acc. to ISO 7010	Cover with pictogram		40071354242
Blind cover	Cover without pictogram		40071351197

**Accessories**

Type	Scope of supply	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	loops for PM	40071351158

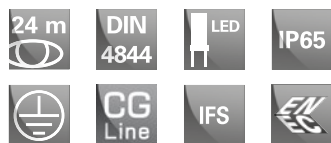
Each luminaire requires 2 covers. Installation material is not included in the scope of supply.

Please order it separately depending on the type of mounting (see accessories).

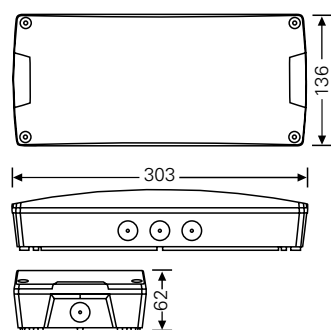
WM = Wall mounting, DM = Ceiling mounting, PM = Pendant mounting

# Atlantic LED CGLine

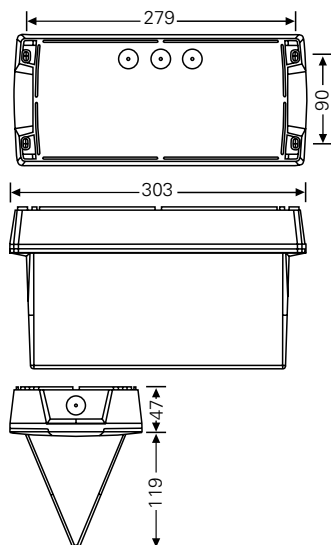
Escape sign luminaire



Atlantic LED S CGLine



Atlantic LED S CGLine



## Atlantic LED CGLine








- LED self-contained luminaire with high protection class (IP65) for indoor and outdoor use
- With automatic test for reduced inspection effort
- Universal use for maintained and non-maintained operation and for 1 h, 3 h or 8 h operation
- For autonomous installation or connection to the CGLine monitoring system
- Robust construction from aluminium diecast and high impact resistant cover made of polycarbonate
- Suitable for use in food processing industry acc. IFS
- Environmentally-friendly due to modern lithium ion technology
- Optional with self-regulating battery heater for use at low temperature up to -20°C
- Low operating costs via low connected load
- Minimum maintenance effort via use of LEDs with high service life (50.000 hours)
- Simple fault analysis and status display via bicolor LED and testing button
- 1 minute switch-back delay after mains return (according to DIN VDE 0100-718)
- Blocking function prevents unintended discharge during idle operating times (only with CG controller or CGLineWEB-Interface)

Viewing distance	24 m	
Luminous flux $\Phi_E/\Phi_N$ at end of rated operating time	100 % at 1 h; 55% at 3 h; 20% at 8 h	
Housing material	Polycarbonate, Aluminium	
Housing colour	grey	
Weight	Atlantic LED S 1.54 kg Atlantic LED D 1.74 kg	
Type of mounting	Wall and ceiling mounting	
Connection terminals	Through-wiring from mains (L, L', N, PE) to 2.5 mm <sup>2</sup> CGLine bus through-wiring to 1.5 mm <sup>2</sup>	
Connection voltage	230 V AC, 50 Hz	
Power consumption mains operation (max.) (apparent power / effective power)	without heater: 7.2 VA / 7.0 W with heater: 9.4 VA / 9.3 W	
Permissible ambient temperature	without heater	with heater
Maintained mode	- 5 °C to +30 °C	- 20 °C to +30 °C
Non-maintained mode	0 °C to +35 °C	- 20 °C to +35 °C
Battery	Lithium ion 3.7 V / 4000 mAh with multiple protective circuit	
Light source	HighPower LEDs 2 x 1.6 W	

## Ordering details

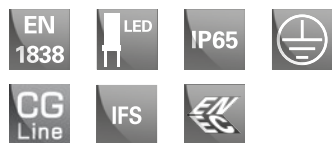
Type	Order No.
Escape sign luminaire Atlantic LED S 1-8h/D CGLine, single sided, Including two cable glands, without pictogram	40071354970
Escape sign luminaire Atlantic LED D 1-8h/D CGLine, double sided, Including two cable glands, without pictogram	40071354971
Escape sign luminaire Atlantic LED S 1-8h/D CGLine <b>H</b> , single sided, Including two cable glands, without pictogram, with battery heater for low ambient temperature up to -20°C	40071354975
Escape sign luminaire Atlantic LED D 1-8h/D CGLine <b>H</b> , double sided, Including two cable glands, without pictogram, with battery heater for low ambient temperature up to -20°C	40071354976

## 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

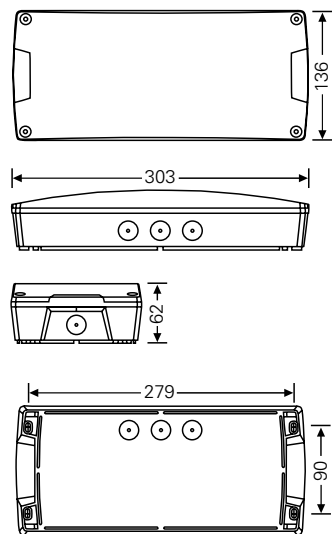


Atlantic LED R CGLine



5

Atlantic LED O CGLine



## Atlantic LED / Outdoor Wall CGLine

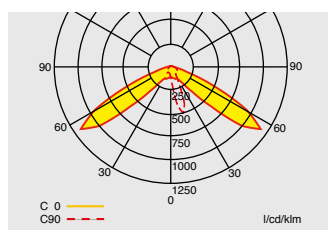
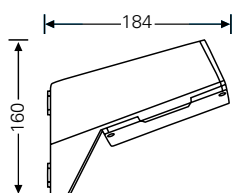
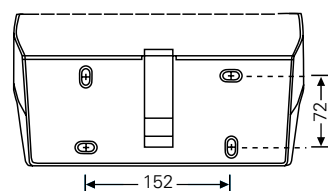
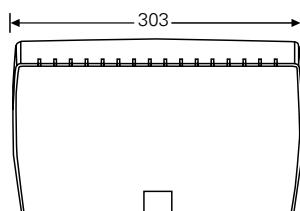
- LED self-contained luminaire with high protection class (IP65) for indoor and outdoor use
- With automatic test for reduced inspection effort
- Universal use for maintained and non-maintained operation and for 1 h, 3 h or 8 h operation
- For autonomous installation or connection to the CGLine monitoring system
- Robust construction from aluminium diecast and high impact resistant cover made of polycarbonate
- Suitable for use in food processing industry acc. IFS (Atlantic LED R and Atlantic LED O)
- Environmentally-friendly due to modern lithium ion technology
- Optional with self-regulating battery heater for use at low temperature up to -20°C
- Low operating costs via low connected load
- Minimum maintenance effort via use of LEDs with high service life (50,000 hours)
- Available with special optics for escape route illumination or wide area illumination
- High spacing by double optics technology and highly efficient HighPower LEDs
- Simple fault analysis and status display via bicolor LED and testing button
- 1 minute switch-back delay after mains return (according to DIN VDE 0100-718)
- Blocking function prevents unintended discharge during idle operating times (only with CG controller or CGLine WEB-Interface)

Luminous flux	Asymmetric optics	225 lm
	Symmetric optics	220 lm
Luminous flux $\Phi_E/\Phi_N$ at end of rated operating time		
100 % at 1h; 55% at 3 h; 20% 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 <sup>2</sup> CGLine bus through-wiring to 1.5 mm <sup>2</sup>	
Connection voltage	230 V AC, 50 Hz	
Battery	Lithium ion 3.7 V/4000 mAh with multiple protective circuit	
Power consumption mains operation (max.) (apparent power / effective power)	without heater	7.2 VA / 7.0 W
	with heater	9.2 VA / 9.3 W
Permissible ambient temperature	without heater	with heater
	Maintained mode - 5 °C bis +30 °C	- 20 °C bis +30 °C
	Non-maintained mode 0 °C bis +35 °C	- 20 °C bis +35 °C
Light source	HighPower LEDs 2 x 1.6 W	

## Ordering details

Type	Order No.
Safety luminaire Atlantic LED R 1-8h/D CGLine, with asymmetric optics for escape route illumination, including two cable glands	40071354972
Safety luminaire Atlantic LED O 1-8h/D CGLine, with symmetric optics for anti-panic / open area illumination, including two cable glands	40071354973
Safety luminaire Outdoor Wall 1-8h/D CGLine, with asymmetric optics for escape route illumination	40071354974
Safety luminaire Atlantic LED R 1-8h/D CGLine <b>H</b> , with asymmetric optics for escape route illumination, including two cable glands, with battery heater for low ambient temperature up to -20°C	40071354977
Safety luminaire Atlantic LED O 1-8h/D CGLine <b>H</b> , with symmetric optics for anti-panic / open area illumination, including two cable glands, with battery heater for low ambient temperature up to -20°C	40071354978
Safety luminaire Outdoor Wall 1-8h/D CGLine <b>H</b> , with asymmetric optics for escape route illumination, with battery heater for low ambient temperature up to -20°C	40071354979

Outdoor Wall CGLine

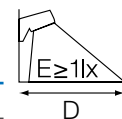


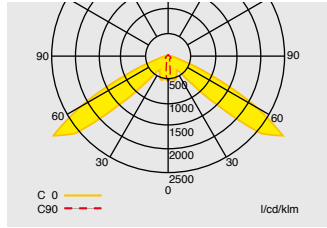
Outdoor Wall CGLine  
with asymmetric optics

## Planning help for Outdoor Wall – asymmetric optics $E = 1.0 \text{ lx}$ ( $0.5 \text{ lx}$ )

Measurement plane: 0.02 m, maintenance factor MF = 80 %, battery operation

Duration of emergency operation	Mounting high (m)	Types of mounting	L1	L2	D
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  
with asymmetric optics

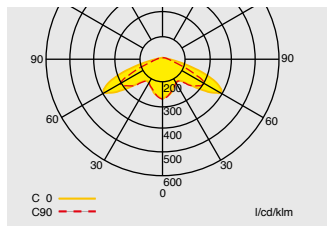
## Planning help for Atlantic LED R – asymmetric optics E = 1.0 lx (0.5 lx)

Measurement plane: 0.02 m, maintenance factor MF = 80 %, battery operation

Duration of emergency operation	Mounting high (m)	Types of mounting	L1	L2	L3	L4
1 h	2.5	Ceiling mounting	6.0 ( 6.6)	13.1 (14.2)	2.0 (3.0)	6.1 (7.4)
	3.0	Escape route, central	6.8 ( 7.5)	15.0 (16.2)	1.7 (3.2)	6.4 (8.0)
	3.5		7.6 ( 8.4)	16.9 (18.3)	1.4 (2.8)	5.7 (8.6)
	4.0		8.3 ( 9.3)	18.5 (20.4)	1.2 (2.5)	5.0 (8.9)
	4.5		9.0 (10.1)	20.1 (22.2)	1.1 (2.2)	4.4 (9.2)
	5.0		9.7 (10.8)	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		10.9 (12.3)	24.5 (27.3)	1.1 (1.6)	3.3 (6.6)
	6.5		3.6 (12.9)	25.8 (28.8)	1.1 (1.6)	3.3 (6.0)
	7.0		3.5 (13.6)	27.1 (30.2)	1.1 (1.6)	3.3 (5.6)
	7.5		3.4 (14.2)	28.3 (31.7)	1.0 (1.6)	3.2 (5.2)
	8.0		3.3 (14.8)	29.6 (33.2)	1.0 (1.5)	3.1 (5.0)
	8.5		3.1 (15.4)	30.7 (34.6)	0.9 (1.5)	3.0 (4.6)
	2.5	Ceiling mounting	5.5 ( 6.1)	12.2 (13.2)	1.1 (2.2)	4.5 (6.3)
	3.0	Escape route, central	6.2 ( 6.9)	13.8 (15.2)	1.0 (1.8)	3.7 (6.6)
3 h	3.5		6.9 ( 7.7)	15.4 (17.1)	0.9 (1.5)	3.1 (6.5)
	4.0		7.5 ( 8.4)	16.8 (18.8)	0.9 (1.3)	2.7 (5.4)
	4.5		8.1 ( 9.2)	18.3 (20.4)	0.8 (1.2)	2.4 (4.9)
	5.0		2.6 ( 9.8)	19.6 (21.9)	0.8 (1.2)	2.5 (4.3)
	5.5		2.5 (10.5)	20.9 (23.3)	0.8 (1.2)	2.4 (3.9)
	6.0		2.4 (11.1)	22.1 (24.8)	0.7 (1.1)	2.3 (3.6)
	6.5		2.1 (11.6)	23.2 (26.2)	0.6 (1.1)	2.2 (3.4)
	7.0		0.5 ( 3.8)	7.6 (27.6)	0.2 (1.1)	2.2 (3.5)
8 h	2.5	Ceiling mounting	4.6 ( 5.2)	10.4 (11.6)	0.5 (0.8)	1.6 (3.2)
	3.0	Escape route, central	1.6 ( 5.9)	11.8 (13.1)	0.5 (0.8)	1.5 (2.7)
	3.5		1.5 ( 6.5)	13.0 (14.6)	0.5 (0.8)	1.5 (2.3)
	4.0		1.2 ( 2.3)	4.6 (16.0)	0.3 (0.7)	1.4 (2.1)
	4.5		- ( 2.2)	4.5 (17.3)	- ( 0.7)	1.3 (2.1)

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

Measurement plane: 0.02 m, maintenance factor MF = 80 %, battery operation



Atlantic O CGLine  
with symmetric optics

Duration of emergency operation	Mounting high (m)	Types of mounting	L1	L2	L3	L4
1 h	2.5	Ceiling mounting	4.4 (5.4)	10.8 (12.5)	3.8 (4.4)	8.9 (10.1)
	3.0	Escape route, central	4.8 (5.9)	11.7 (13.9)	4.1 (5.0)	9.9 (11.4)
	3.5		4.9 (6.3)	12.6 (15.1)	4.1 (5.4)	10.8 (12.6)
	4.0		4.3 (6.6)	13.2 (16.1)	4.1 (5.8)	11.5 (13.6)
	4.5		2.3 (6.8)	13.6 (17.1)	2.1 (5.9)	11.7 (14.5)
	5.0		1.9 (6.9)	13.7 (17.9)	1.9 (5.8)	11.6 (15.3)
	5.5		1.6 (6.5)	13.0 (18.5)	1.5 (5.8)	11.6 (16.1)
	6.0		1.1 (3.5)	7.1 (19.0)	1.1 (3.7)	7.4 (16.5)
	6.5		0.7 (3.1)	6.2 (19.3)	0.8 (2.9)	5.8 (16.5)
	7.0		0.1 (2.7)	5.5 (19.4)	0.1 (2.7)	5.4 (16.4)
3 h	2.5	Ceiling mounting	3.6 (4.6)	9.2 (11.0)	3.0 (3.9)	7.9 ( 9.1)
	3.0	Escape route, central	3.1 (4.9)	9.8 (12.0)	3.0 (4.3)	8.6 (10.1)
	3.5		1.6 (5.1)	10.2 (12.9)	1.5 (4.3)	8.7 (11.0)
	4.0		1.2 (4.9)	9.8 (11.9)	1.2 (4.3)	8.6 (11.8)
	4.5		0.8 (2.5)	5.1 (14.1)	0.8 (2.6)	5.2 (12.2)
	5.0		0.4 (2.2)	4.4 (14.5)	0.4 (2.1)	4.2 (12.2)
8 h	2.5	Ceiling mounting	0.8 (2.8)	5.7 ( 8.3)	0.7 (2.6)	5.2 ( 7.3)
	3.0	Escape route, central	0.3 (1.3)	2.7 ( 8.7)	0.3 (1.3)	2.6 ( 7.4)

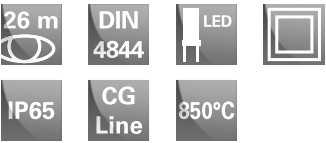
**Planning help for Atlantic LED O – symmetric optics E = 1.0 lx (0.5 lx)**

Measurement plane: 0.02 m, maintenance factor MF = 80 %, battery operation

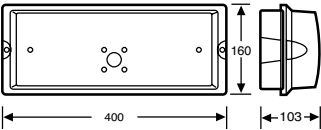
Duration of emergency operation	Mounting high (m)	Types of mounting	L1	L2	L3	L4
1 h	2.5	Ceiling mounting	4.4 (4.4)	9.6 (10.0)	3.5 (4.5)	7.2 ( 9.0)
	3.0	Room illumination	3.4 (5.4)	10.4 (11.6)	4.5 (4.5)	8.2 ( 9.8)
	3.5		3.4 (4.4)	11.6 (13.2)	4.5 (5.5)	8.8 (10.4)
	4.0		3.4 (5.4)	12.2 (14.6)	4.5 (5.5)	9.6 (11.0)
	4.5		2.4 (5.4)	13.0 (15.6)	2.5 (5.5)	10.2 (11.8)
	5.0		1.9 (5.4)	13.6 (16.4)	1.9 (5.5)	10.8 (12.6)
	5.5		1.4 (5.4)	13.2 (17.6)	2.5 (5.5)	12.0 (13.0)
	6.0		1.3 (3.4)	12.6 (18.4)	1.3 (3.5)	11.6 (13.6)
	6.5		1.0 (2.4)	12.0 (18.6)	1.0 (3.5)	9.8 (14.6)
	7.0		0.7 (2.4)	11.4 (19.2)	0.7 (3.5)	8.8 (15.2)
3 h	2.5	Ceiling mounting	3.0 (3.4)	8.4 ( 9.2)	3.0 (4.5)	6.4 ( 7.8)
	3.0	Room illumination	2.4 (3.4)	9.0 (10.6)	3.5 (4.5)	7.2 ( 8.4)
	3.5		1.4 (4.4)	9.8 (11.8)	2.5 (4.5)	7.8 ( 9.0)
	4.0		1.4 (4.0)	10.0 (12.8)	1.3 (4.0)	8.6 ( 9.6)
	4.5		1.1 (2.4)	9.4 (13.6)	1.0 (3.5)	8.4 (10.2)
	5.0		0.7 (1.4)	8.6 (13.8)	0.7 (3.5)	6.8 (11.2)
	5.5		0.7 (1.4)	8.6 (13.8)	0.7 (3.5)	6.8 (11.2)
8 h	2.5	Ceiling mounting	1.0 (2.4)	5.8 ( 8.2)	0.9 (3.5)	5.4 ( 5.6)
	3.0	Room illumination	0.6 (1.5)	5.2 ( 8.2)	0.7 (1.4)	4.2 ( 6.8)
	3.5		0.7 (1.2)	7.0 ( 8.6)	0.7 (1.2)	2.4 ( 7.4)
	4.0		0.7 (0.9)	3.0 ( 8.0)	0.7 (0.8)	3.0 ( 6.4)
	4.5		0.7 (0.7)	2.2 (11.0)	0.7 (0.7)	2.2 ( 3.6)
	5.0		0.7 (0.7)	1.6 ( 6.4)	0.7 (0.7)	1.6 ( 5.2)

# 6811 LED CGLine

Escape sign luminaire



6811 1-3/D LED CGLine  
with pictogram PR



## 6811 LED CGLine

- Self-monitoring LED self-contained luminaire for stand-alone operation or for connection to the central monitoring device CG Controller CGLine 400 or PC-Interface
- High degree of protection of IP65
- Selectable operating time 1 h or 3 h
- Minimum service requirement due to high service life of the LEDs (50,000 hours)
- Brightness selectable in 3 steps
- Test results with fault analysis (LED, charging and battery circuit) as well as status displays (operation, function test, duration test) via 3 coloured LEDs
- Automatic function test (weekly) and duration test (every 3 months)
- Manual function test or operational duration test via testing buttons
- Automatic charging monitoring and deep discharge protection with restart inhibit
- 1 minute delay of normal mode after mains returns (acc. to DIN VDE 0100-718)
- Blocking function with CG-Controller CGLine 400 or PC-Interface in times of shut-down
- Luminaires are generally suitable for maintained or non-maintained mode

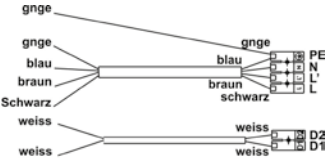
Viewing distance	26 m
Luminous flux $\Phi_E/\Phi_N$ at end of rated operating time	50 % 1 h 20 % 3 h
Housing material	Polycarbonate (850 °C glow wire resistant)
Housing colour	White
Weight	1.7 kg
Type of mounting	Wall and ceiling mounting
Connection terminals	Mains connection 3 x 2.5 mm <sup>2</sup> / Bus connection 2 x 1.5 mm <sup>2</sup>
Connection voltage	230 V AC, 50 Hz
Power consumption mains operation	6,4 VA
Permissible ambient temperature	Maintained mode -5 °C to +30 °C Non-maintained mode 0 °C to +35 °C
Battery	Maintenance free and gas tight NiMh 4.8 V / 1.1 Ah
Light source	3 x HighPower LEDs

## Ordering details

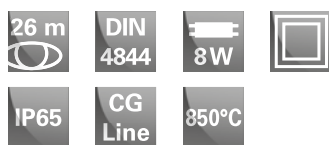
Type	Scope of delivery	Order No.
Escape sign luminaire 6811 1-3/D LED CGLine acc. to ISO 7010	Luminaire incl. cover and three pictogram foils: PL, PR, PU 	40071354750

## Accessories

Type	Order No.
Wire guard	40071348370
Through-wiring set PE, N, L, L and D1, D2	40071350422



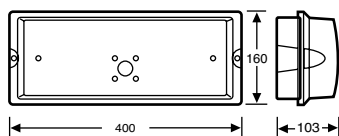
Through-wiring set



6811 with transparent cover



6811 with pictogram PR

**6811 CGLine**

- Self-monitoring self-contained luminaire for stand-alone operation or for connection to the central monitoring device CG Controller CGLine 400 or PC-Interface
- Enclosure with high degree of protection of IP65
- Test results with fault analysis (lamps, charging and battery circuit) as well as status displays (operation, function test, duration test) via 3 coloured LEDs
- Automatic function test (weekly) and duration test (every 3 months)
- Manual function test or operational duration test via testing buttons
- Automatic charging monitoring and deep discharge protection with restart inhibit
- No-load and short-circuit shut-down of the inverter
- 1 minute delay of normal mode after mains returns (acc. to DIN VDE 0100-718)
- Blocking function with CG-Controller CGLine 400 or PC-Interface in times of shut-down
- Luminaires are generally suitable for maintained or non-maintained mode

Viewing distance	26 m
Luminous flux $\Phi_E/\Phi_N$ at end of rated operating time	40 %
Housing material	Polycarbonate (850 °C glow wire resistant)
Housing colour	White
Weight	Rated operating time 1 h: 1.8 kg Rated operating time 3 h: 2.1 kg
Type of mounting	Wall and ceiling mounting
Connection terminals	for 2.5 mm <sup>2</sup>
Connection voltage	230 V AC, 50 Hz
Power consumption mains operation	16 VA
Permissible ambient temperature	Maintained mode -5 °C to +30 °C Non-maintained mode 0 °C to +35 °C
Battery maintenance free and gas tight	Rated operating time 1 h: NiCd 3.6 V / 1.5 Ah Rated operating time 3 h: NiCd 3.6 V / 4.0 Ah
Light source	8 W/T16, 450 lm

**Ordering details for rated operating time 1h**

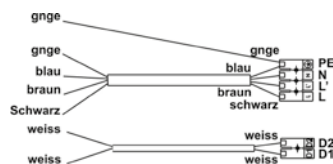
Type	Scope of delivery	Order No.
6811-1/D CGLine acc. to ISO 7010	Luminaire housing with cover incl. 3 pictograms PL, PR, PU 	40071354760

**Ordering details for rated operating time 3h**

Type	Scope of delivery	Order No.
6811-3/D CGLine acc. to ISO 7010	Luminaire housing with cover incl. 3 pictograms PL, PR, PU 	40071354761

**Accessories**

Type	Order No.
Wire guard	40071348370
Through-wiring set PE, N, L', L and D1, D2	40071350422

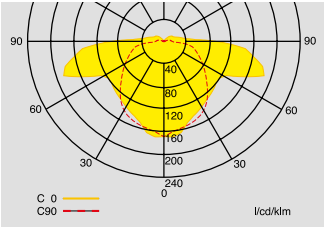


Through-wiring set

# 6811 CGLine

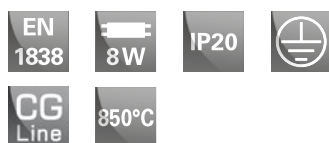
Safety luminaire and escape sign luminaire

**Planning help for 6811 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

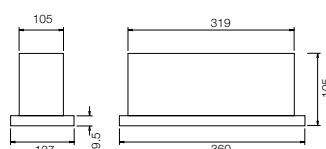


Light distribution curve 6811  
with transparent cover

Mounting height (m)	Types of mounting	L1	L2	L3	L4
2.5	Ceiling mounting	2.6 (3.4)	6.8 ( 8.6)	2.9 (4.2)	8.2 (12.4)
3.0	Escape route, central	2.6 (3.5)	7.0 ( 9.2)	2.9 (4.0)	8.0 (12.2)
4.0		2.5 (3.7)	7.2 ( 9.8)	2.6 (4.0)	7.8 (11.2)
5.0		1.9 (3.6)	7.0 (10.2)	1.9 (3.8)	7.2 (11.2)
2.0	Wall mounting	2.8 (3.6)	7.2 ( 8.8)	3.1 (4.1)	8.2 (10.6)
2.5		3.0 (3.8)	7.6 ( 9.6)	3.2 (4.3)	8.4 (11.2)
3.0		3.0 (4.0)	7.8 (10.0)	3.0 (4.3)	8.6 (11.4)



8811

**8811 CG Line**

- Self-monitoring self-contained luminaire for stand-alone operation or for connection to the central monitoring device CG Controller CGLine 400 or PC-Interface
- Test results with fault analysis (lamps, charging and battery circuit) as well as status displays (operation, function test, duration test) via 3 coloured LEDs
- Automatic function test (weekly) and duration test (every 3 months)
- Manual function test or operational duration test via testing buttons
- Automatic charging monitoring and deep discharge protection with restart inhibit
- No-load and short-circuit shut-down of the inverter
- 1 minute delay of normal mode after mains returns (acc. to DIN VDE 0100-718)
- Blocking function with CG-Controller CGLine 400 or PC-Interface in times of shut-down
- Luminaires are generally suitable for maintained or non-maintained mode

Luminous flux $\Phi_E/\Phi_N$ at end of rated operating time	40 %
Housing material	Polycarbonate (850 °C glow wire resistant)
Housing colour	RAL 9010
Weight	Rated operating time 1 h: 1.9 kg Rated operating time 3 h: 2.1 kg
Type of mounting	Recessed ceiling mounting
Connection terminals	for 2.5 mm <sup>2</sup>
Connection voltage	230 V AC, 50 Hz
Power consumption mains operation	16 VA
Permissible ambient temperature	Maintained mode -5 °C to +30 °C Non-maintained mode 0 °C to +35 °C
Battery maintenance free and gas tight	Rated operating time 1 h: NC-Accu 3.6 V / 1.5 Ah Rated operating time 3 h: NC-Accu 3.6 V / 4.0 Ah
Light source	8W/T16, 450 lm

5

**Ordering details for rated operating time 1h**

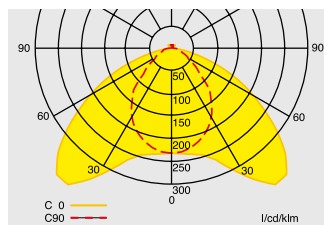
Type	Scope of delivery	Order No.
8811-1/D CGLine	Complete luminaire	40071350118

**Ordering details for rated operating time 3h**

Type	Scope of delivery	Order No.
8811-3/D CGLine	Complete luminaire	40071350119

**Planning help for 8811 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 8811

Mounting height (m)	Types of mounting	L1	L2	L3	L4
2.5	Ceiling mounting	2.3 (2.9)	5.8 (6.8)	3.7 (4.5)	9.0 (10.6)
3.0	Escape route, central	2.6 (3.1)	6.2 (7.6)	4.0 (4.9)	9.8 (11.8)
4.0		2.7 (3.5)	7.0 (8.6)	4.4 (5.5)	11.0 (13.6)
5.0		2.4 (3.8)	7.4 (9.4)	4.6 (6.0)	12.0 (15.0)
2.0	Wall mounting	1.7 (2.3)	4.6 (6.0)	1.6 (2.5)	4.8 ( 6.4)
2.5		1.5 (2.2)	4.4 (6.0)	– (2.2)	4.4 ( 6.2)
3.0		– (2.0)	4.0 (5.8)	– ( – )	2.0 ( 6.0)

# VL 8-1.1 CGLine / VL 8-2.1 CGLine

Single power supply

IP20



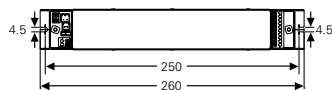
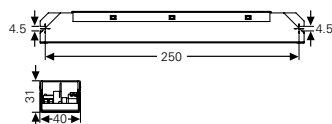
VL 8-1.1 CGLine



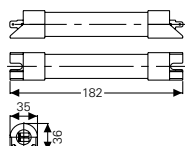
Test button incl. multicolour indication LED



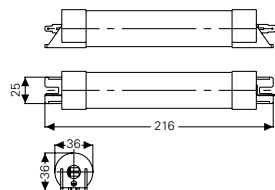
VL 8-1.1 CGLine/VL 8-2.1 CGLine



NiCd-Accu 3.6 V/2.5 Ah



NiCd-Accu 3.6 V/4 Ah



## VL 8-1.1 CGLine / VL 8-2.1 CGLine

- Self-monitoring single power supply for stand-alone operation or for connection to the central monitoring device CG Controller CGLine 400 or PC-Interface
- Test button with integrated 3-coloured LED indicator
- Test results with fault analysis (lamps, charging and battery circuit) as well as status displays (operation, function test, duration test) via multi colour LEDs
- Automatic function test (weekly) and duration test (every 3 months)
- Deep discharge protection with restart inhibit
- Automatic cut off in case of failures within the lamp circuit
- Intelligent charge: integrated capacity control for optimized recharge in case of partial discharge
- Manual function test or duration test with test button
- Blocking function via CG-Controller CGLine 400 in idle operating times
- 1 minute delay of normal mode after mains returns (acc. to DIN VDE 0100-718)
- Luminaires are generally suitable for maintained or non-maintained mode
- Maintained mode only in connection with additional conventional ballast or electronic ballast
- The switchover between mains and battery operation is carried out via a 5-pole switchover unit
- Soft lamp preheat operation

Housing material	Sheet steel, galvanized	
Type of mounting	for installation inside luminaires	
Weight	VL 8-1.1 CGLine	0.80 kg
	VL 8-2.1 CGLine	0.80 kg
	2 x Accu 3.6 V/2.5 Ah	0.50 kg
	2 x Accu 3.6 V/4 Ah	0.86 kg
Battery maintenance free and gas tight	Rated operating time 1 h: NiCd-Accu 2 x 3.6 V / 2.5 Ah	
	Rated operating time 3 h: NiCd-Accu 2 x 3.6 V / 4.0 Ah	
Connection terminals	Mains	2 x 1.5 mm <sup>2</sup>
	Data line	2 x 1.5 mm <sup>2</sup>
	Luminaire/ECG connection	10 x 1.5 mm <sup>2</sup>
Connection voltage	230 V AC, 50 Hz	
Power consumption mains operation	6 VA	
Funktionserder	necessary	
Permissible ambient temperature	VL 8-1.1 CGLine	-10 °C to +50 °C
	VL 8-2.1 CGLine	-10 °C to +50 °C
	Battery	0 °C to +40 °C

## Ordering details

Type	Scope of delivery	Order No.
VL 8-1.1 CGLine	Power supply incl. test button and multicolour LED indication, without battery	40071347680
VL 8-2.1 CGLine	Power supply incl. test button and multicolour LED indication, without battery	40071347681
NiCd-Accu 3.6 V/2.5 Ah	Battery incl. end caps for fixing (for 7.2 V, 2 battery required)	40071352498
NiCd-Accu 3.6 V/4 Ah	Battery incl. end caps for fixing (for 7.2 V, 2 battery required)	40071344713

## Luminous flux depending on lamp

## VL 8-1.1 CGLine

Type	Luminous flux in emergency mode at 20 °C	
T26	36 W	6 %
TC-TEL	32 W	7 %
TC-TEL	42 W	6 %
TC-L	36 W	5 %
TC-L	40 W	5 %
TC-L	55 W	5 %
TC-F	36 W	5 %

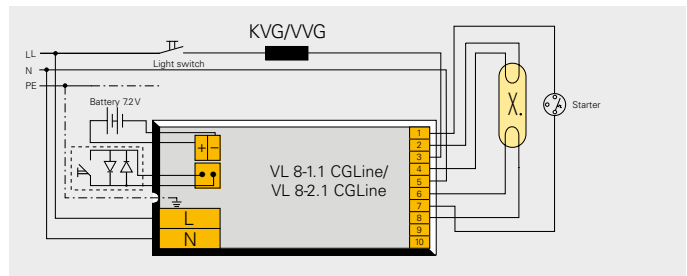
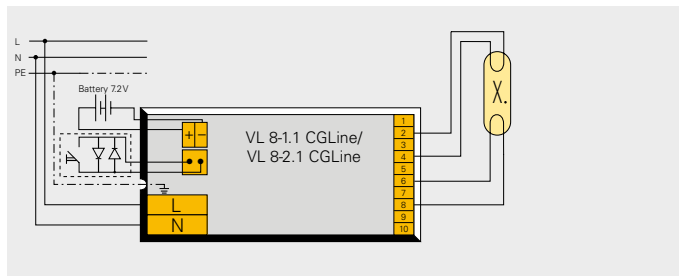
## VL 8-2.1 CGLine

Type	Luminous flux in emergency mode at 20 °C	
T26	18 W	9 %
TC-SEL	11 W	22 %
TC-DEL	10 W	25 %
TC-DEL	13 W	25 %
TC-DEL	18 W	16 %
TC-DEL	26 W	11 %
TC-TEL	13 W	19 %
TC-TEL	18 W	18 %
TC-TEL	26 W	14 %
TC-F	18 W	10 %
TC-F	24 W	10 %
TC-L	18 W	10 %
TC-L	24 W	10 %

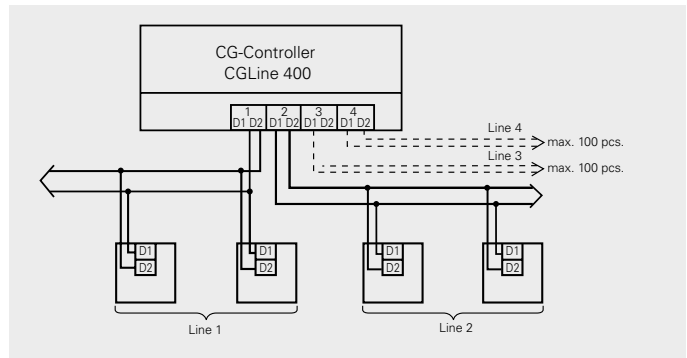
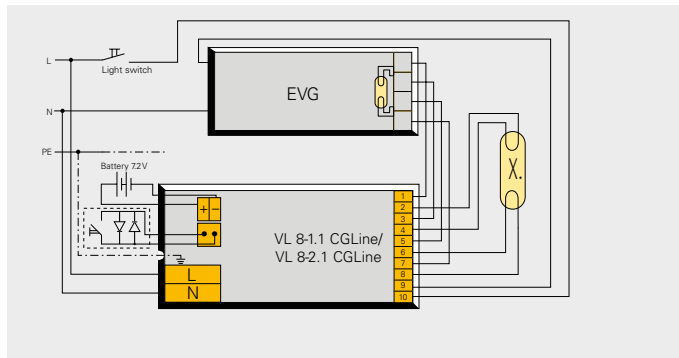
# VL 8-... CGLine Modes

## Single power supply

### Non-maintained mode



### Switched maintained with EVG



## VL 8 CGLine multicolour LED indicator

Status		LED
No fault	●	green lights up
Emergency mode	○	LED does not light up
Delay-time on mains return	*/*	blinks green / yellow alternately
Luminaire in function test	*	green blinks
Luminaire in duration test	*	green flashes
Charging fault	*	red flashes
Fault while function test	*/*	blinks green / red alternately
Fault while duration test	*/*	blinks green / red alternately
Lamp fault	*/*	blinks yellow / red alternately
Block mode <sup>(1)</sup>	*	yellow blinks

● = LED lights up; ○ = LED does not light up; \*/\* = LED blinks; \* = LED flashes

<sup>(1)</sup> Only in mains operation

## VL 8 CGLine test button incl. multicolour indication LED

Test button pressed for	Function	LED
1 Sec. < t < 5 Sec.	Function Test ON	* green blinks
1 > 5 Sec.	Duration test ON / OFF	* green flashes
	Duration test delayed <sup>(1)</sup>	● <sup>(1s)</sup> red for 1s <sup>(2)</sup>
t > 10 Sec.	RESET of luminaires	○ LED does not light up

● = LED lights up; ○ = LED does not light up; \*/\* = LED blinks; \* = LED flashes

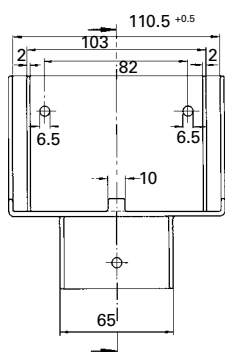
<sup>(1)</sup> Duration test delayed = FT happens in max. 24 h, because charging of battery has not be ended

<sup>(2)</sup> After pressing test button

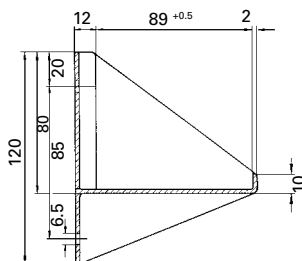
Example: Address 25 = First LED YELLOW blinks 2 times, then LED RED blinks 5 times



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 (3.0 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 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, W 270.3/7 LED

Portable emergency lights



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		
Main beam	3 x HighPower-LED 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



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

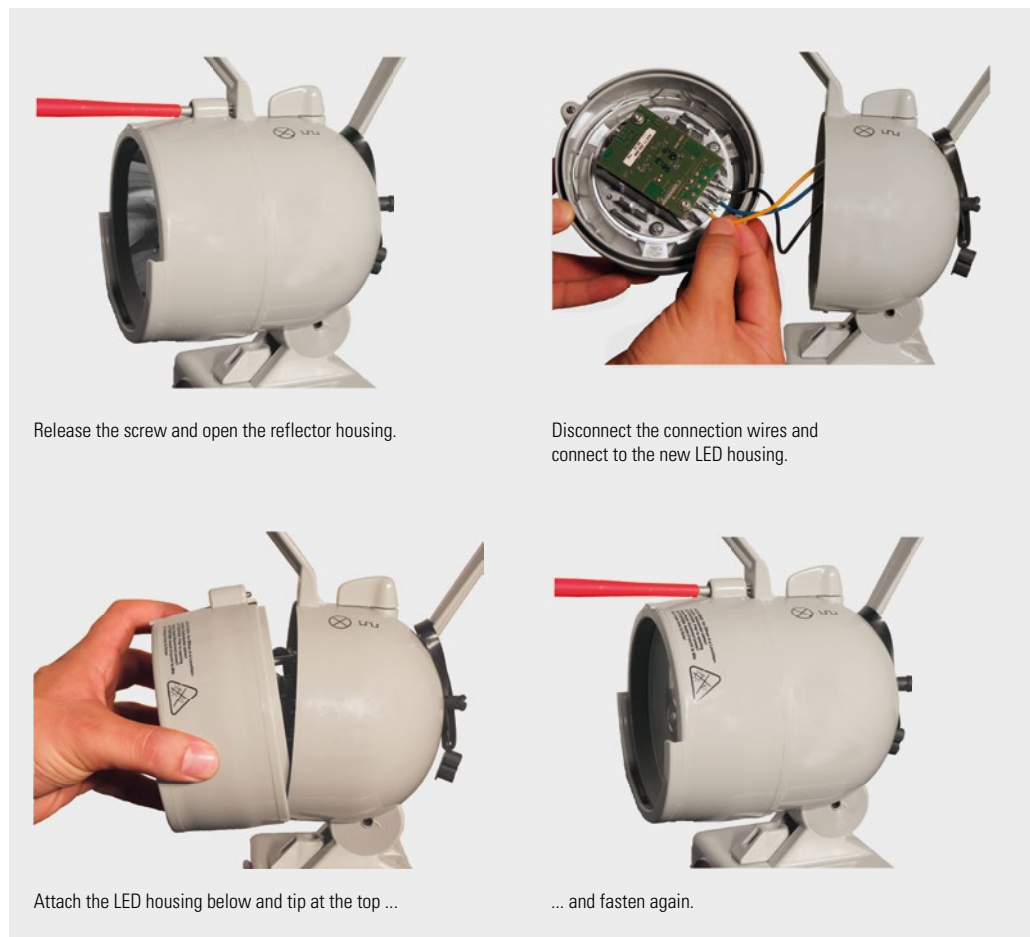
- For upgrading of existing incandescent portable hand lamps
- Suitable for luminaires of W 270.3 and W 276.3 type with 4 Ah or 7 Ah battery
- Existing accessories including chargers can still be used
- Main beam consists of 3 High Power LEDs with narrow distribution reflector optic
- Main beam output 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

5

## Simple replacement in just a few minutes

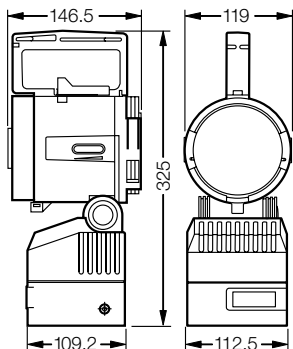


# SEB 9

Ex-portable emergency light with emergency lighting function



SEB 9



## SEB 9

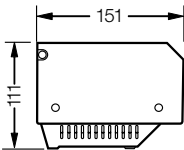
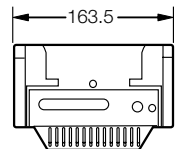
- Explosion protected handheld torch with emergency lighting function and built-in charging unit
- Housing of impact-resistant, non-abrasive polyamide
- EU construction test certificate for explosion protection for gas and dust areas (ATEX certification according to latest explosion protection standards)
- DIN 14642 for explosion-proof hand projector with car bracket, version 9/2003, for equipping of cars and fire brigades
- EU type approval from the German Federal Department of Motor Vehicles, for compliance with EMC directive 2009/19/EG for use in vehicles (e1 certificate)
- Shock testing according to DIN EN 60068-2-27 for use of the luminaires in fire brigade vehicles (DIN 1846-2:2001) including Kfz 90 motor vehicle loaders
- Microprocessor-controlled operational duration display
- Charge depending on drawn capacity
- Flashing light and emergency lighting function
- Emergency light
- Filament break and reserve light switching
- Internal charger (SEB 9L)
- Environmentally-friendly NiMh battery with large capacity and service life
- Function and capacity indication via LED chain
- Adjustable reflector: can be focused from point to wide light, including clear prismatic C-washer

Ignition protection type	Ex e ib IIC T4 II 2 D Ex tD A21 IP66 T85 °C
EU-type inspection certificate	BVS 09 ATEX E 005
Marking	II 2 G / II 2 D
Housing material	Polyamid / black
Light emission	Ø 98 mm mineral glass
Light source	5.5 V / 5.5 W halogen lamp with double bulb 4.8 V / 0.3 A pilot beam
Max. luminous intensity	15000 cd
Luminous flux	approx. 100 lm
Permissible ambient temperature	-20 °C to +40 °C (specified data 0-30 °C)
Battery	SEB 9 NiMh-Accu 4.8 V/9.5 Ah
Rated operating time (main light)	SEB 9 approx. 7 h
Weight	SEB 9 1.9 kg / SEB 9L 2.2 kg
Connection voltage charging unit 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	230 V, 50/60 Hz

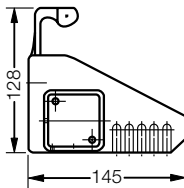
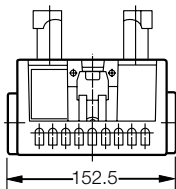
## Ordering details

Type	Battery	Order No.
SEB 9 L	with tungsten halogen lamp with double bulb, incandescent lamp, diffusion lens and battery (rechargeable by means of mains connecting lead, LG 443 or vehicle holder 90)	11147009001
SEB 9	with tungsten halogen lamp with double bulb, incandescent lamp, diffusion lens and battery (rechargeable with LG 443 or vehicle holder 90)	11147009002

Charging unit LG 443

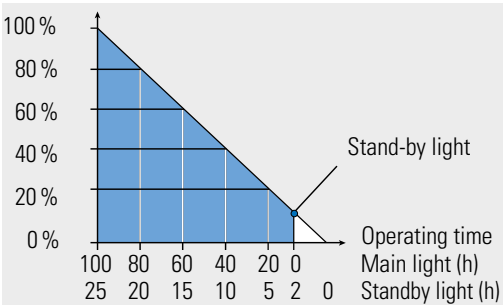
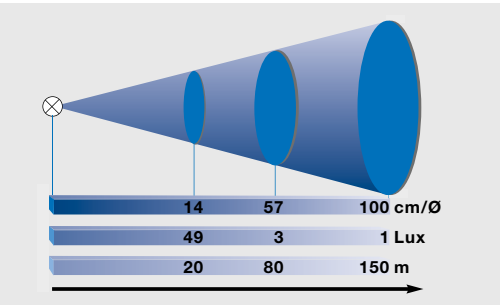


Vehicle holder 90



Ordering details

Type	Order No.
Charging unit LG 443	SEB 9 L, SEB 9 11540000443
Vehicle holder 90	SEB 9 L, SEB 9 11145000792
Wall bracket SW	without charging unit 11145000795
Battery set 9.5 Ah, 4.8 NiMh for SEB 9 L, SEB 9	21147791000
Halogen lamp with double bulb 5.5 V/5.5 W	12061000040
10 incandescent lamp 4.8 V/0.3 A	22041450000
Radial diffuser cap, orange	21145017000
Slip-on filter set red, orange, green	21147300000







## 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.

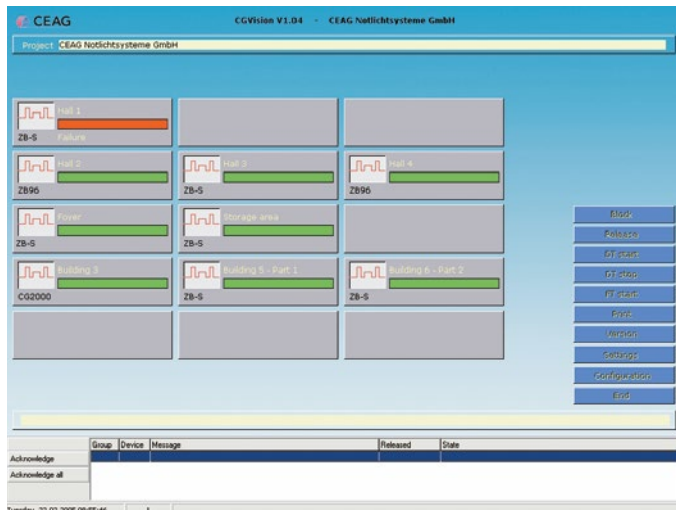
### Every safety luminaire counts

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.

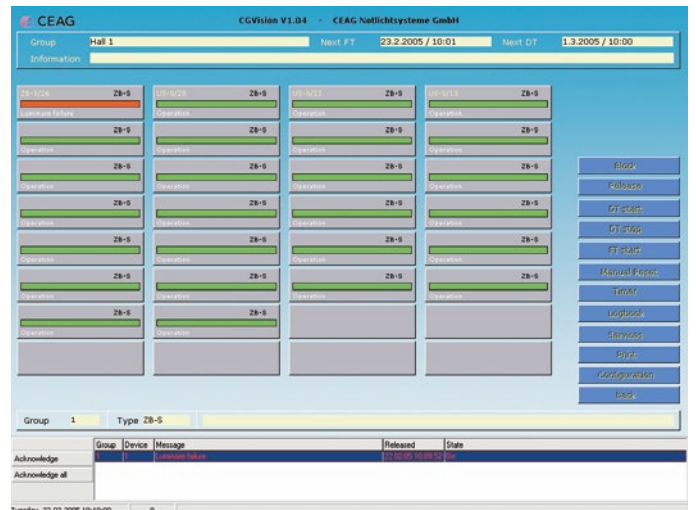
Control in its most cost-efficient form.



# Clarity counts

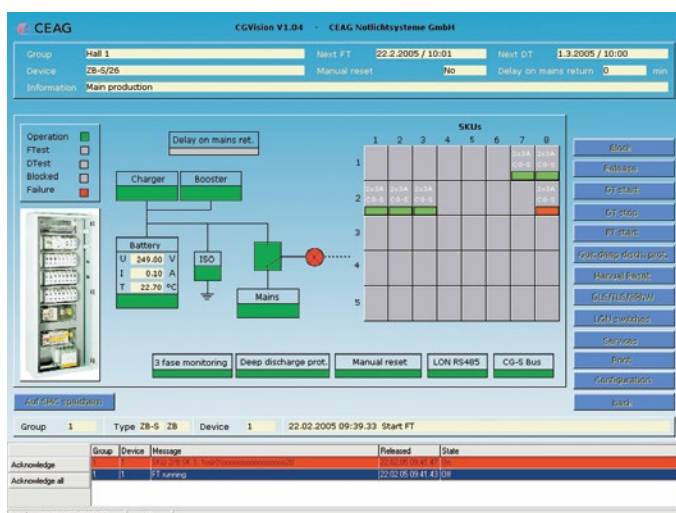


In the main group screen, up to 15 buildings (or other device groups) can be defined. With green everything is fine, red means that a defect has occurred.

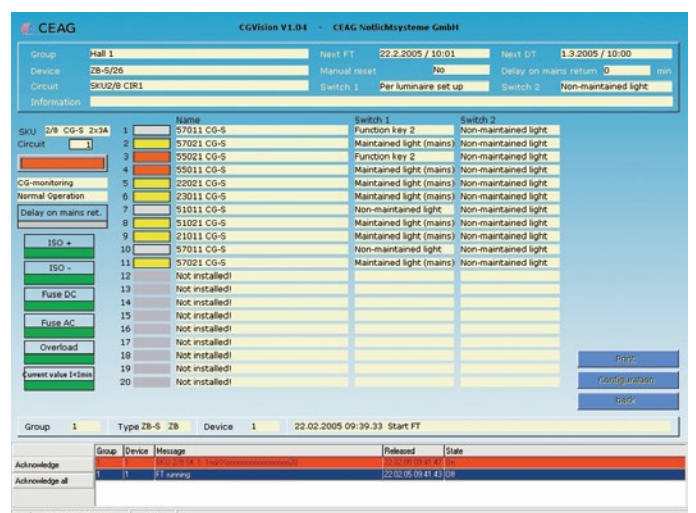


The device group affected by the defect can be opened as simply as that. A maximum of 480 emergency lighting systems with up to 32 devices per group can be visualised here.

# 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

6

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.

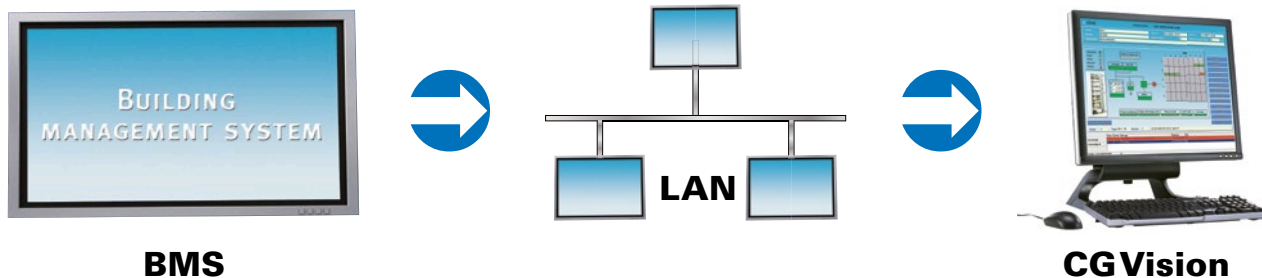
But the graphical display possibilities do not end there: even the location-specific display as part of an aerial view is possible. You can't get an overview more quickly.



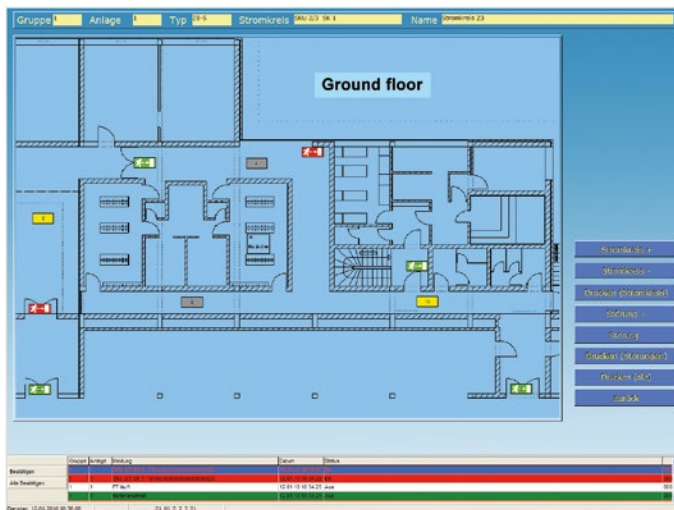
### More comfort with an interface to building technology

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.



# Graphical display possibilities

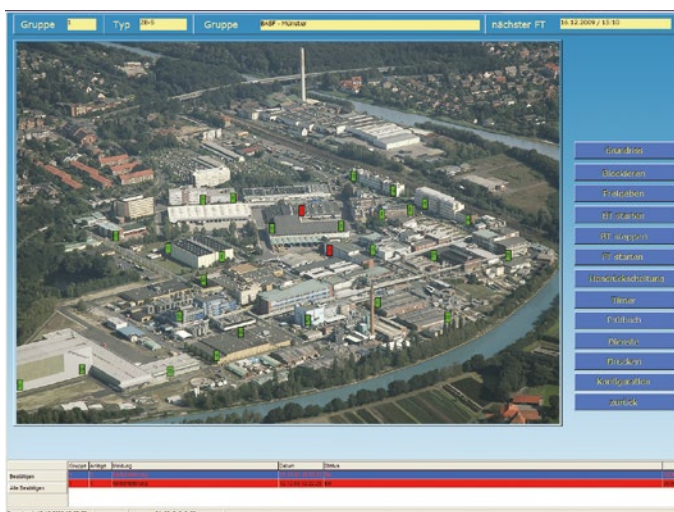


Clear and concise display of the luminaires in the layout plans is also optionally possible. A special graphics tool enables the simple import of CAD plans in .dwg or .dxf format.

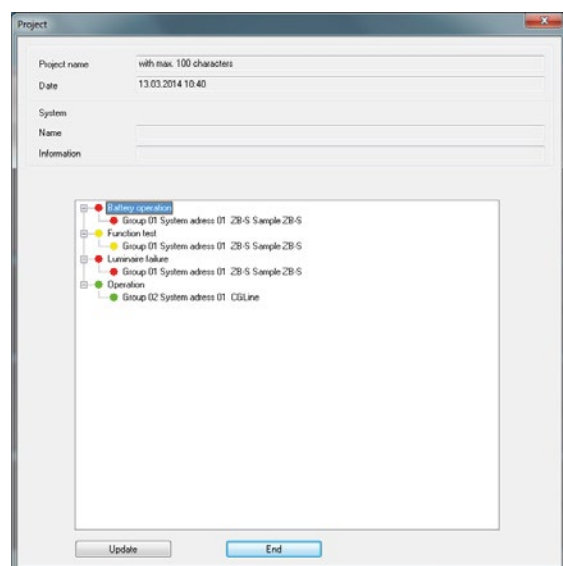


The luminaires can be reprogrammed with respect to their switching types, e.g. from maintained light to standby light with only a few clicks of the mouse in the layout image.

## 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.

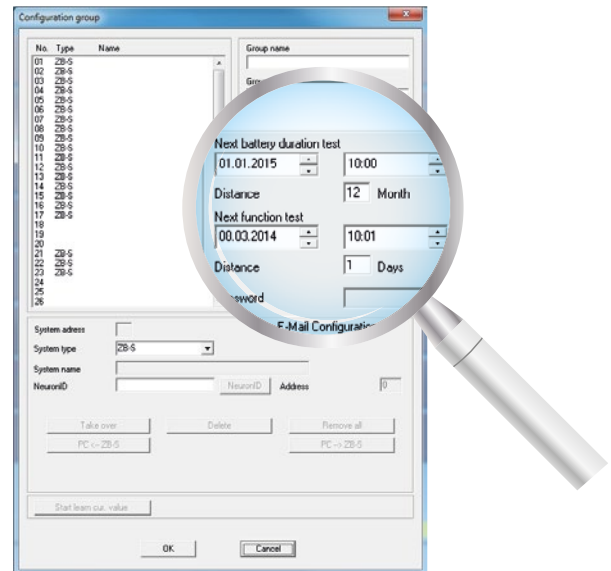
Decentral implementation in particular where several locations are interconnected via

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

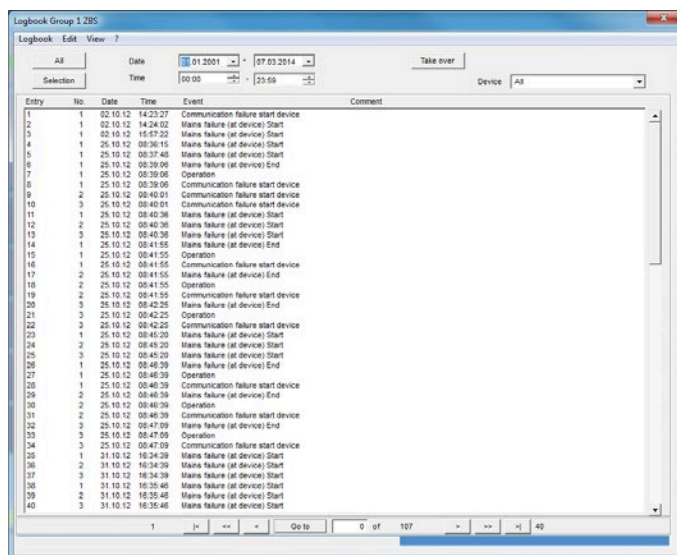


Time-controlled, automatic system status printouts

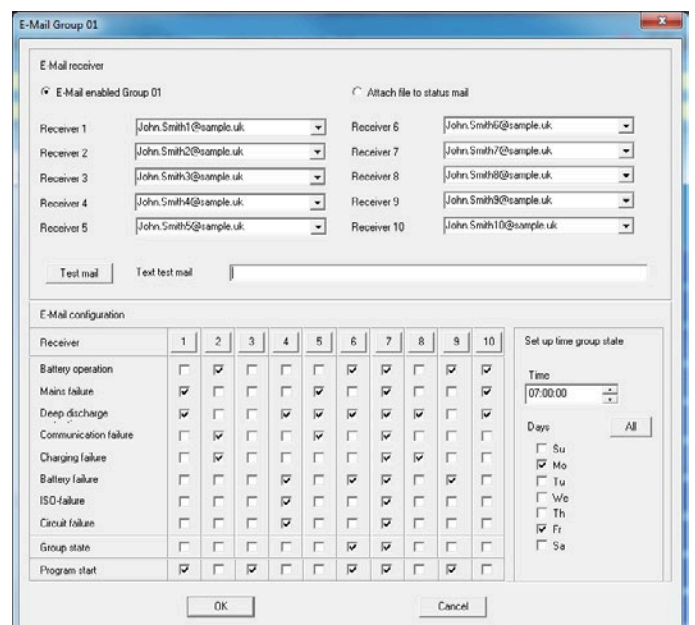


Self-executing tests

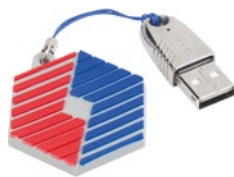
# Professional functions for total convenience



Innovative inspection books with intuitive operation



Notification per e-mail



## The correct license for your application

6

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 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).

**Package II** does not contain a CG-S interface, e.g. only with use of a CGLine single battery system via CGLine web interface.

**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 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

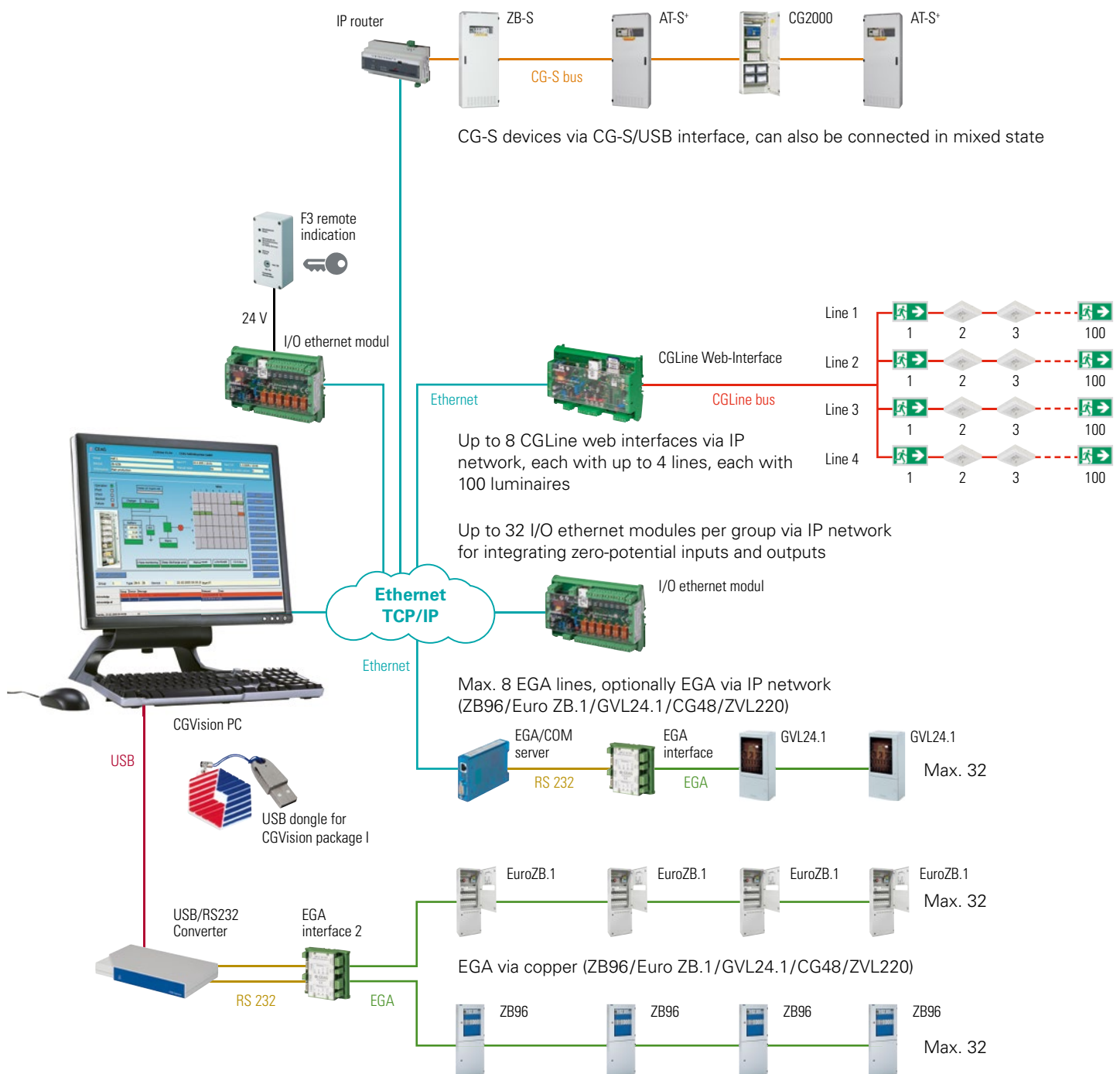
# CGVision Package I

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, AT-S<sup>+</sup> 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).

Any number of ZB-S, AT-S<sup>+</sup> or CG2000 systems, also in mixed state, can be connected to a CG-S/IP router. In CGVision the systems must however be assigned own device groups.

In addition, the CGVision Package I version contains all dongle licenses for EGA devices (ZB96, EuroZB.1, GVL24.1, CG48 or ZVL220), CGLine or Ethernet I/O modules on CGVision.

## CGVision Package I application example



## CGVision Package II

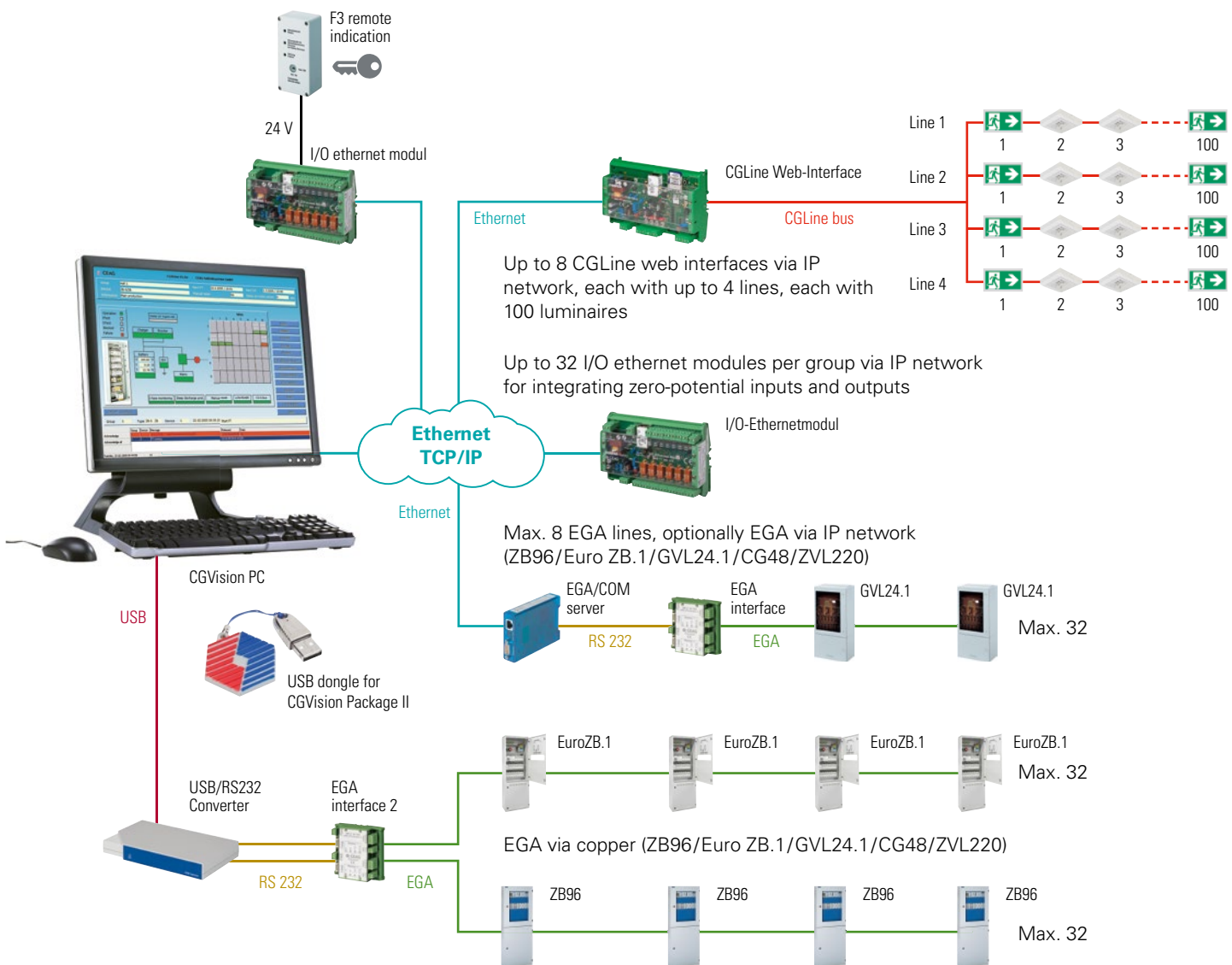
CGVision Package II (Basic or Pro) does not contain the CG-S interface.

The package contains all dongle licenses for EGA devices (ZB96, EuroZB.1, GVL24.1, CG48 or ZVL220), CGLine 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.

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### CGVision Package II application example



# CGVision Package III

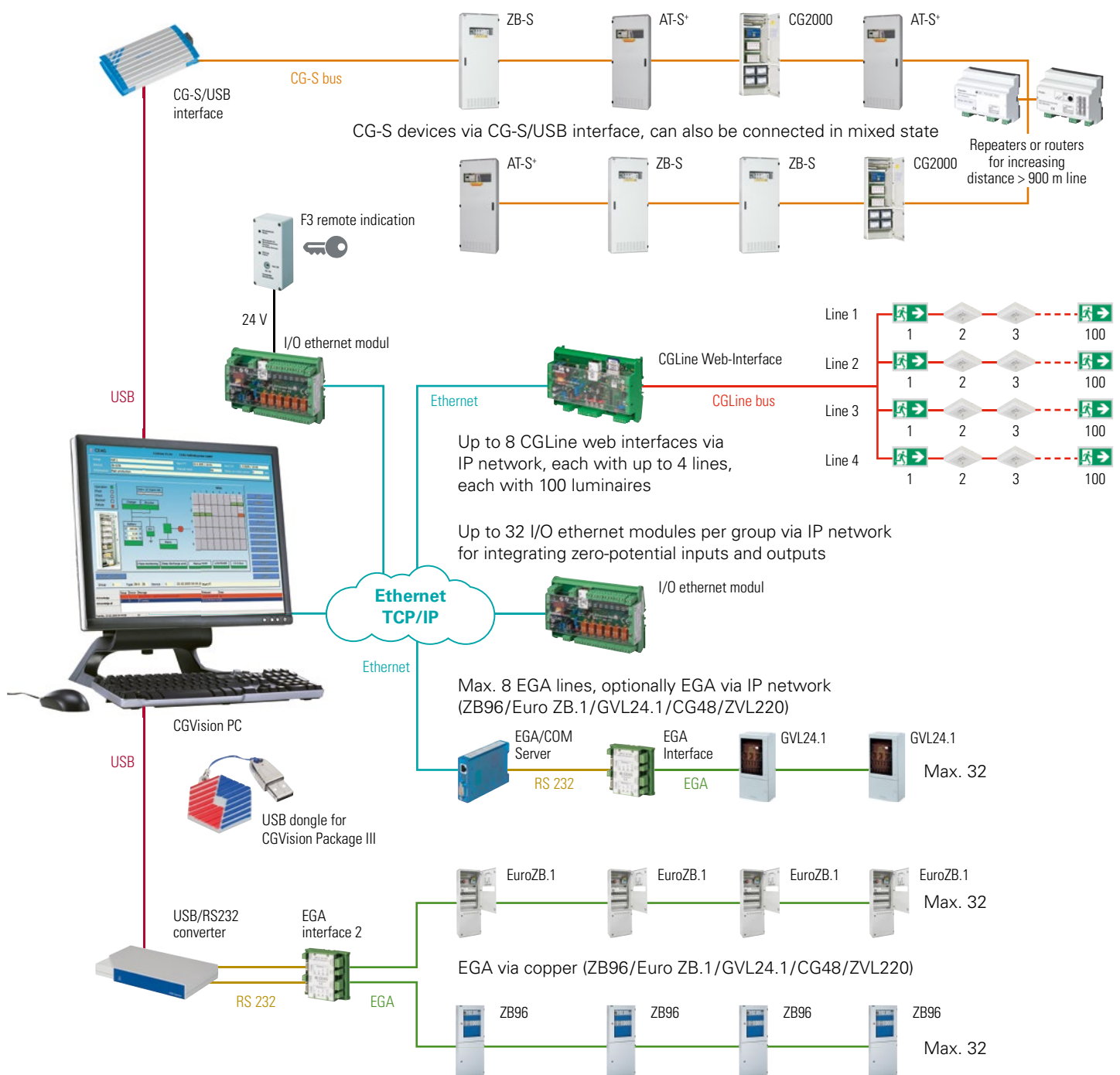
CGVision Package III (Basic or Pro) contains the CG-S/USB interface (USB box), enabling CG-S bus-based emergency light systems such as ZB-S, AT-S+ and CG2000 to be connected to the CGVision visualisation software via a standard bus cable.

Any number of ZB-S, 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 or Ethernet I/O modules on CGVision.

## CGVision Package III application example

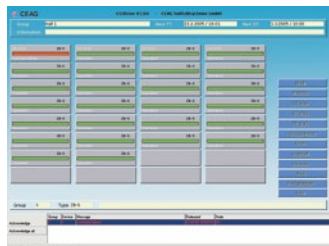


# Monitoring and programming software

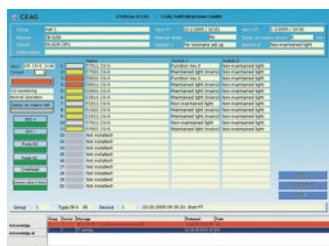


## Monitoring and programming software

- 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 or Windows® XP Professional
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	2 x (CG-S interface/dongle license)
	USB for printer



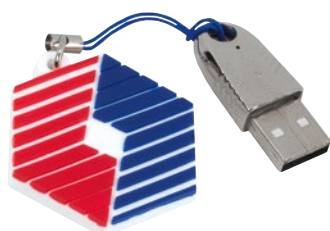
## CGVision

- 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 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 luminaires 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 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

Licence (Dongle) Basic Package I



## CGVision Software Basic Package I

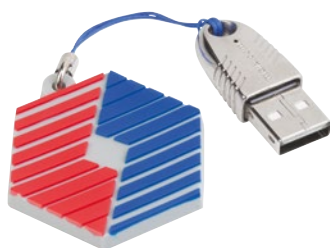
- CG-S/IP-Interface (USB-dongle) for the connection of CEAG emergency lighting systems with STAR technology (AT-S+, ZB-S, CG 2000) via an ethernet (TCP/IP), directly via the LAN-interface (RJ45) of the PC. For the connection of CEAG emergency lighting systems with STAR-Technology via an ethernet, CG-S/IP-Router 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.
- 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 CGVision Software Pro Package I contains:

- Graphic visualisation of the devices in a .bmp graphic, e.g. area plan, aerial map
- Circuit orientated visualisation of luminaires in a building layout

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Licence (Dongle) Basic Package II



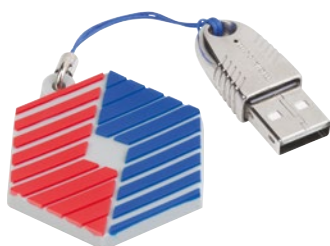
## CGVision Software Basic Package II

- 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.
- 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 CGVision Software Pro Package II contains:

- 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 III



## CGVision Software Basic Package III

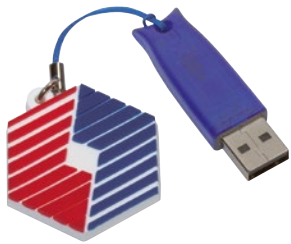
- CG-S/USB-Interfacebox for the connection of CEAG emergency lighting systems with STAR technology (AT-S+, ZB-S, CG 2000) via a conventional two-conductor cable data bus.
- EGA-Licences (release via USB-dongle) for the visualisation of EGA-devices on CGVision. Up to 8 EGA-lines of each device family (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.
- 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 CGVision Software Pro Package III contains:

- Graphic visualisation of the devices in a .bmp graphic, e.g. area plan, aerial map
- Circuit orientated visualisation of luminaires in a building layout

# Monitoring and programming software

Licence BACnet-Server (Dongle)

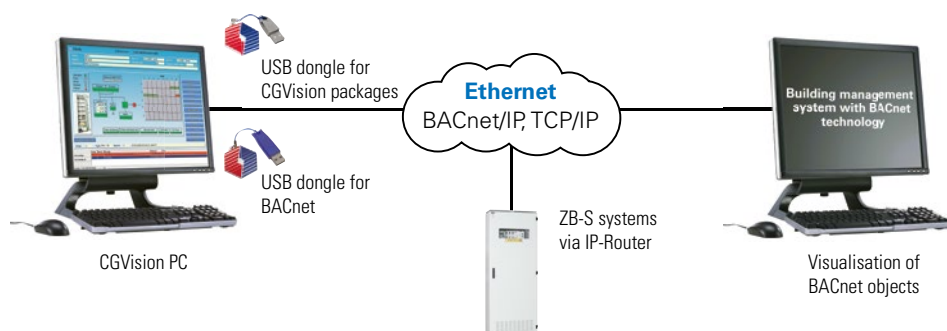


## BACnet Server for CGVision

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/IP-Interface and visualisation in a building layout, EGA components to be ordered separately)	40071361025
PC-Anywhere remote maintenance software, twin license: 1 x host, 1 x remote	40071347151

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## 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

- 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



4-channel repeater



2-channel router 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.

CG-S/IP router+ 1P



CG-S/IP connection box



I/O interface connection box



CG-S/USB Interfacebox



## CG-S/IP router+ 1P

- CG-S/IP router+ 1P 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 decently located emergency lighting systems with STAR technology with coupling of CG-S/IP routers+ 1P 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+ 1P, 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+ 1P 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+ 1P 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+ 1P 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+ 1P through the ethernet directly via the LAN interface of the PC.

## I/O interface connection box

I/O interface connection box for wall mounting, for control and visualisation of external devices via digital inputs or relay outputs with CGVision visualisation, monitoring and programming software. Connection to CGVision is via the CG-S bus.

The connection of external devices is implemented via up to four digital inputs for visualisation or via up to five 24V relay outputs for control of diverse functions such as start function test (if available with the external device).

The switching conditions of the digital inputs can be freely assigned with green/yellow/red in the CGVision software to signalise various notifications, e.g. operation is green, battery operation is yellow or defect is red. Notifications assigned the colour red are logged in the inspection book with date/time stamp and notification text. With integrated 24V/1A electrical power supply.

## 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
2-channel repeater for CG-S bus	40071347143
4-channel repeater for CG-S bus	40071070583
2-channel router for CG-S bus	40071347142

## Order specifications CG-S Bus/Ethernet

Scope of delivery	Order No.
CG-S/IP router+ 1P (ethernet)	40071360391
CG-S/IP-router connection box incl. CG-S/IP router (ethernet) and 24V/DC power supply	40071360592

## EGA bus components

- Universal monitoring of old CEAG systems based on EGA bus
- Display of systems within an aerial view
- Also via TCP/IP networks
- Integrated e-mail function
- Layout display of luminaire level (option)

EGA/RS232 interface box



## EGA/RS 232 interface

EGA interface box for operation of CEAG emergency lighting systems of one line via EGA bus with CGVision visualisation, monitoring and programming software.

Connection is via RS232 interface (COM port) with standard PC's with Windows 7 operating system. Supply is via 230V/AC inlet connection.

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EGA/PC interface 2



## EGA/PC interface 2

EGA/PC interface 2 for operation of CEAG emergency lighting systems with EGA bus technology, up to two lines via EGA bus to CGVision visualisation, monitoring and programming software.

Connection is via RS232 interface (COM port) with standard PC's with Windows 7 (32 Bit) operating system. Up to 32 EGA emergency lighting systems can be connected per line. Supply is external via 24V/DC.

## EGA/PC interface connection box, 4-fold

EGA/PC interface connection box for wall mounting, for operation of CEAG emergency lighting systems with EGA bus technology, up to four lines via EGA bus to CGVision visualisation, monitoring and programming software.

Connection is via RS232 interface (COM port) with standard PC's with Windows 7 operating system. Up to 32 EGA emergency lighting systems can be connected per line. With integrated 24V/1.5A electrical power supply.

USB/RS232 converter



## USB/RS232 converter 4-fold

4-fold USB/RS232 converter for converting up to four RS232 interfaces (DB9) to a USB interface to the PC. Simple configuration via software. The USB/RS232 converter enables the connection of up to four EGA lines via EGA/PC interface 2 to the CGVision visualisation, monitoring and programming software with only one USB port. Includes driver CD and USB cable.

EGA/COM server



## EGA/COM server

EGA/COM server for the connection of CEAG emergency lighting systems with EGA bus to CGVision by at site available Ethernet (with TCP/IP).

Simple, even building-spanned connection of peripherally placed emergency lighting systems with EGA bus via Ethernet.

EGA/IP connection box



## EGA/IP connection box

EGA/IP connection box incl. EGA/COM server and el. power supply for the connection of CEAG emergency lighting systems with EGA bus to CGVision by at site available Ethernet (with TCP/IP).

Simple, even building-spanned connection of peripherally placed emergency lighting systems with EGA bus via Ethernet.

## Order specifications EGA bus (ZB96, GVL 24.1)

Scope of delivery	Order No.
EGA/RS232 interface for max. 32 devices, one line	40071346450
EGA/PC interface 2 for two lines, with RS232 connection cables, without power supply	40071360040
EGA/PC interface connection box for max. four lines, incl. 24 V/1.25 A power supply and RS232 connection cables	40071347821
USB/RS232 converter, 4-fold	40071347775

## Order specifications EGA bus/ethernet

Scope of delivery	Order No.
EGA/COM server	40071347591
EGA/IP connection box (EGA/COM server with EGA interface, wall mounting box)	40071347593





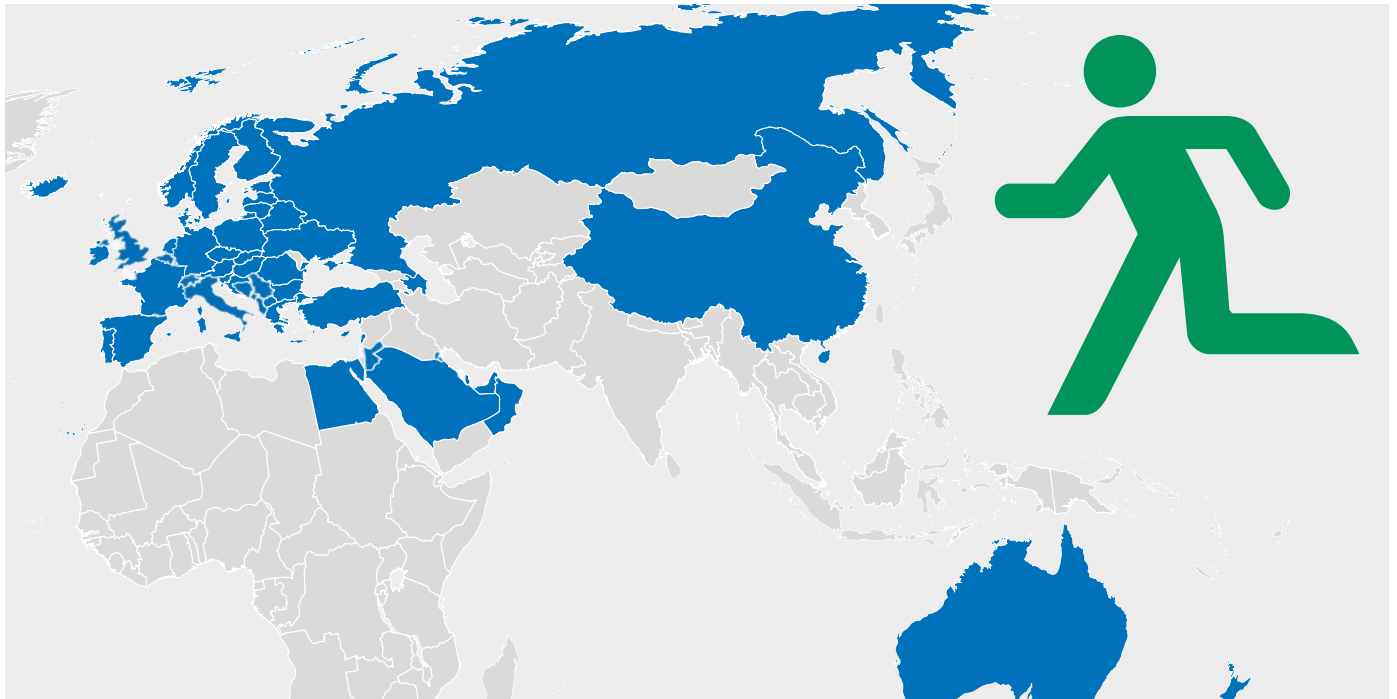


## CEAG contact person

You can find further information at [www.ceag.de](http://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	Bulgaria	France	Kuwait	Norway	Slovenia
Albania	China	Germany	Latvia	Oman	Spain
Australia	Croatia	Greece	Lebanon	Poland	Sweden
Austria	Cyprus	Hong Kong	Lithuania	Portugal	Switzerland
Azerbaijan	Czech Republic	Hungary	Luxembourg	Qatar	Turkey
Bahrain	Denmark	Iceland	Macedonia	Romania	Ukraine
Baltics	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	

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