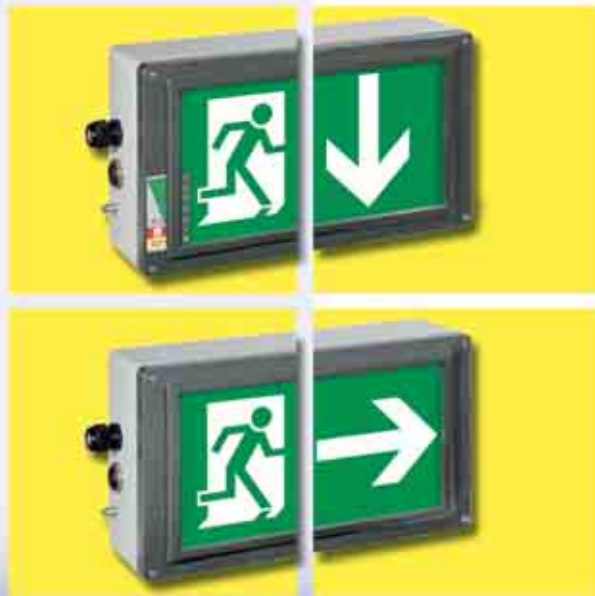


“ E x - L i t e “ E X P L O S I O N - P R O T E C T E D  
M E T A L E S C A P E S I G N L U M I N A I R E S

  
**COOPER** Crouse-Hinds



 **CEAG**



# EX - ESCAPE SIGN LUMINAIRES

## **Ex-Lite** **Metal version with LED technology for Zone 1 and Zone 21**

The Ex-Lite series of explosion-protected escape sign luminaire fulfils the requirements of ATEX Directive 94/9/EC and EN 60598, Section 2.22 for emergency lighting luminaires. The luminaires are suited for marking escape routes and exits in potentially explosive atmospheres.

Only white, high-efficiency LEDs are used as illuminants for these luminaires. This guarantees maintenance-free operation, as the illuminants do not need replacing throughout the complete service life of the luminaire.

The supply electronics are also laid out for this service life; the LED circuits are intrinsically safe.

The wide input voltage range allows international use. The housing of these luminaires is made of robust light alloy: the escape signs comply with the latest standards.

Thanks to the very robust design and high degree of protection, these luminaires are suited although under rough conditions for both indoor and outdoor use.

As an emergency lighting luminaire with self-contained battery system, the Ex-Lite N features an NC battery and automatic function monitoring with operating time test.

With the optional built-in CG-S monitoring module with coding switch for max. 20 addresses, this luminaire can also be used as an individually monitored emergency lighting luminaire that is connected to a CEAG emergency lighting supply system. With this, the operator can programme the switching mode according to the respective requirements. Thus, as many as 20 luminaires with different switching modes can be connected to one end circuit.



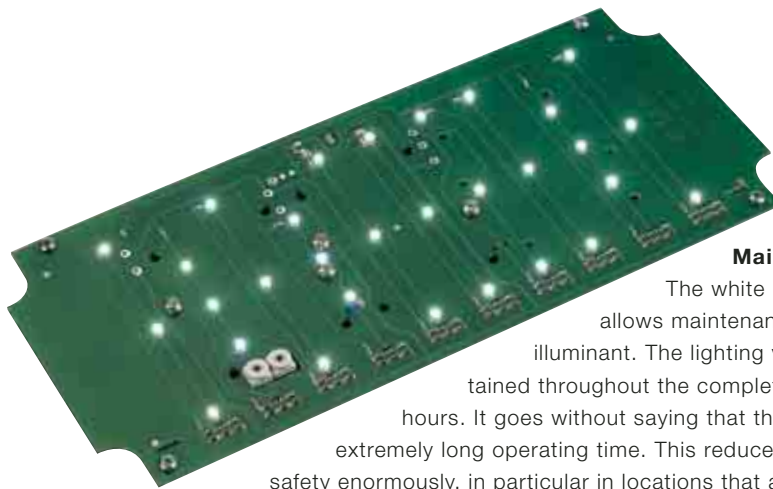
- Robust light alloy housing**
- Power-saving LED technology**
- Maintenance-free LED technology throughout service life**
- High degree of protection IP 66**
- Luminaire with self-contained battery unit and automatic function monitoring**
- Connection and monitoring with CEAG emergency lighting supply systems possible**

**For all types of application**

The escape sign luminaires of the Ex-Lite series are available as mains luminaires "Ex-Lite", e.g. for specially safeguarded industrial networks in production plants, as "Ex-Lite CG-S" emergency lighting luminaires with individual function monitoring for use in CEAG emergency lighting supply systems, and as "Ex-Lite-N" emergency lighting luminaires with self-contained battery systems and automatic function and operating time tests.

**Green light for all zones**

On account of the very robust, light alloy housing in the high degree of protection IP 66, the Ex-Lite luminaire can be installed almost anywhere, both indoors and out. The luminaire is designed in the type of protection EEx e m ib IIC up to T6 and in accordance with the ATEX Directive. It can be used in hazardous areas with potentially explosive gas atmospheres (Zones 1 and 2) and potentially explosive dust atmospheres (Zones 21 and 22).



**Maintenance-free operation**

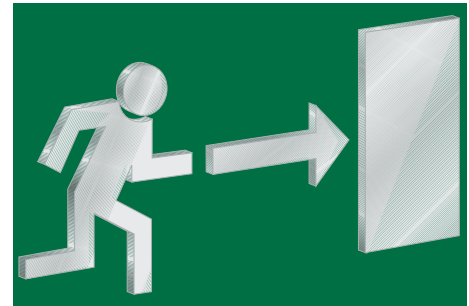
The white LED technology used as the light source allows maintenance-free operation without replacement of the illuminant. The lighting values specified for the escape sign are maintained throughout the complete service life of the LEDs, namely ca. 50,000 hours. It goes without saying that the supply electronics are also designed for this extremely long operating time. This reduces operating costs and increases the operating safety enormously, in particular in locations that are not easily accessible.

**For international use**

The LED escape sign luminaire of the Ex-Lite series was designed to meet the requirements of a large number of different safety concepts. Thanks to the wide input voltage range from 110 V to 277 V AC and 250 V DC, this luminaire can be used internationally, whereby the supply circuits of the LED circuits are intrinsically safe. The luminaire has a visibility range of 28 metres and it is available with a wide variety of pictograms.



Simply change of the pictogram



**Conformity to standards**

The Ex-Lite explosion-protected escape sign luminaire series fulfils the requirements of ATEX Directive 94/9/EC and EN 60598, Part 2.22 for emergency lighting luminaires. It is suited for marking escape routes and exits in potentially explosive atmospheres. The housing of this luminaire is made of light alloy and it goes without saying that the escape sign comply with the latest standards.

**Double safety**

Whenever the operational safety of explosion-protected safety and escape sign luminaires is involved, there is no room for compromises, as only a luminaire that is fully functional at all times can save human lives. The new series of explosion-protected LED escape sign luminaires not only fulfils the extremely high explosion protection requirements, but it also fulfils the legal requirements for emergency and safety lighting installations. The new Ex-Lite is capable of safely showing the right way to go at all times, even in complex and often badly laid out industrial installations with potentially explosive atmospheres.





**Ex-Lite and Ex-Lite CG-S**

**Central emergency lighting supply via system luminaires with CG-S module**

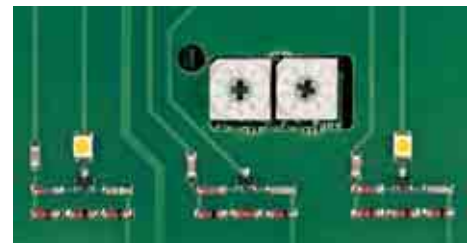
A central emergency lighting supply using CEAG group supply and central battery systems are used wherever a large number of emergency lighting luminaires can be combined and operated as system luminaires.

These battery systems are generally installed outside the hazardous areas and, therefore, they are not subjected to the ambient conditions of the luminaires in the field. As a result, the operating life of the battery is relatively long and the amount of maintenance required is minimal.

The mains and emergency lighting supplies of these luminaires are fed via separate circuits from the emergency lighting power supply installation to the escape sign luminaire in the hazardous area. Various luminaires with CG-S function can be operated in these circuits.

**Better safe than sorry**

In addition to the Ex-Lite for use as a mains luminaire, e.g. for specially safeguarded industrial networks in production plants, there is also the Ex-Lite CG-S version with easy function monitoring. In conjunction with the CG-S monitoring module with coding switch for max. 20 addresses, this luminaire can be operated as emergency lighting luminaire with individual monitoring. The operator can programme the switching mode according to his individual requirements, thus allowing the operation of up to 20 luminaires with different switching modes in one end circuit.



**Addressing switch in the Ex-Lite CG-S**

No additional installation work is required. The central control unit monitors all the functions of the luminaire, checks the feed line for shorts or open circuits and indicates any incidents clearly on the display. Thus, even with highly complex installations, troubleshooting and eliminating faults are not a problem. Another considerable advantage: all the function and operating time tests are carried out automatically and recorded by the central control unit. This saves no end of time and money. During this function test, the correct functioning of the luminaire is monitored by the built-in CG-S module and any faults are reported to the central control unit. Thus, for example, the failure of LED groups is indicated automatically.





Ex-Lite | Ex-Lite CG-S

**EX-ESCAPE SIGN LUMINAIRES**

**| Ex-Lite | Ex-Lite CG-S |**



PL

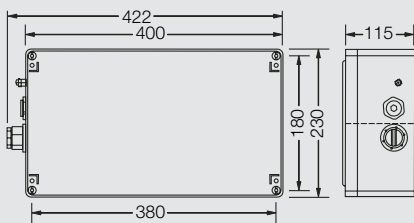


PR



PU

Escape sign acc. to current standard



Ex-Lite

**Technical data**

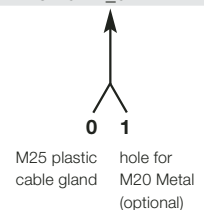
**Ex-Lite | Ex-Lite CG-S**

Marking to 94/9/EC	Ex II 2 G   Ex II 2 D T60 °C
Explosion protection	EEx e m ib IIC T6 (t <sub>a</sub> max. +40 °C), T5 (t <sub>a</sub> max. +50 °C)
EC-Type Examination Certificate	PTB 02 ATEX 2111
Visibility range	up to 28 m
Enclosure material	Light alloy
Protective cover	Mineral glass
Cable entries	1 x Ex e cable entry M25 x 1.5 (moulded plastic) 1 x Ex e blanking plug M25 x 1.5
Enclosure colour	Grey, RAL 7035
Mounting	Wall mounting
Dimensions in mm (L x H x D)	400 x 230 x 115
Connection terminals	4 x cage clamp terminals, max. 2.5 mm <sup>2</sup> , double engagement
Rated voltage Ex-Lite	AC: 110 - 277 V, 50/60 Hz DC: 110 V - 250 V DC: 12 - 24 V ±20 % (optional)
Rated voltage Ex-Lite CG-S	AC: 220 - 254 V, 50/60 Hz   DC: 195 V - 250 V
Rated power	approx. 6 VA
Rated current	DC: 220 V = 20 mA, 110 V = 40 mA
Permissible temperature range	- 20 °C to + 50 °C
Illuminants	High-efficiency LEDs, white
Insulation class	I
Degree of protection EN 60529	IP 66

**Ordering details**

Type	Scope of delivery <sup>1)</sup>	Order No.
Ex-Lite	incl. cover with pictogram PR	1 2191 011 _01
	incl. cover with pictogram PL	1 2191 011 _02
	incl. cover with pictogram PU	1 2191 011 _03
	incl. cover, clear without pictogram	1 2191 011 _04
Ex-Lite CG-S	incl. cover with pictogram PR	1 2191 021 _01
	incl. cover with pictogram PL	1 2191 021 _02
	incl. cover with pictogram PU	1 2191 021 _03
	incl. cover, clear without pictogram	1 2191 021 _04

<sup>1)</sup> Other pictograms or inscriptions available on request





**Ex-Lite N**

**Emergency lighting luminaires with self-contained battery systems**

Emergency lighting luminaires with self-contained battery systems provide the required emergency lighting from a decentralized source, independent of central systems. These luminaires are particularly economical when used in extensive plants. Until now, compared to centrally operated and monitored installations, the disadvantage of the emergency lighting luminaires with self-contained battery systems was that they did not provide any information on the state of the luminaire. However, this monitoring function has been incorporated in the Ex-Lite N escape sign luminaire. Five green LEDs supply constant information on the

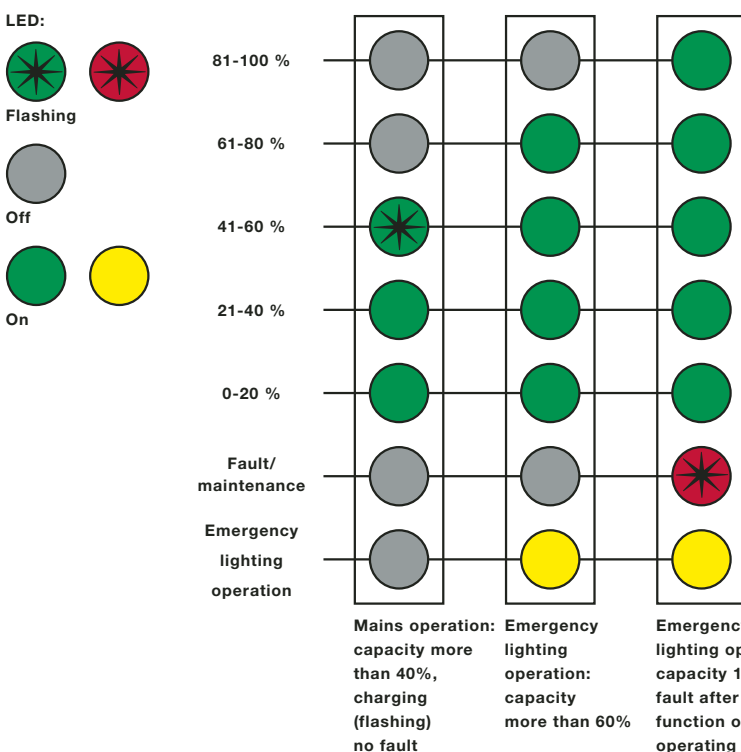
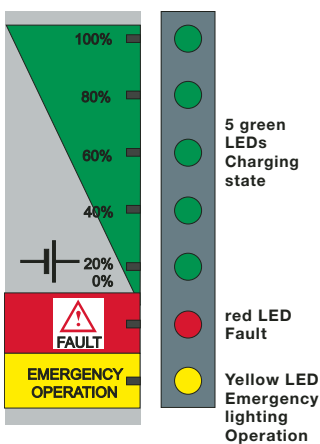
charging state and available battery capacity. A yellow LED indicates the emergency lighting operation mode and an additional red LED indicates any faults.

**Monitoring functions**

The extended self-monitoring with automatic function and partial duty cycle test is also new. The five green LEDs behind the protective cover provide continuous indication of the charging state and the current battery capacity. Charging is signalized by a flashing green LED. The charged capacity is indicated in 20% stages. The yellow LED indicates emergency lighting operation.

An automatic function test lasting 5 minutes is carried out on a weekly basis. For this, the LEDs are switched electronically from mains to battery operation. The emergency lighting function is tested and any faults are indicated by the flashing red LED.

After ca. 3 months a part-operating time test (35 mins.) is initiated automatically. If a minimum emergency lighting operating time of 30 minutes is not reached, it is signalized by the flashing red LED. After the cause of the fault has been eliminated, e.g. by charging or replacing the battery, the fault indication is reset during the next emergency lighting operation (manual or automatic) when the minimum operating time of > 30 minutes has been reached.





Ex-Lite N

**EX - ESCAPE SIGN LUMINAIRE**

**Ex-Lite N**



PL

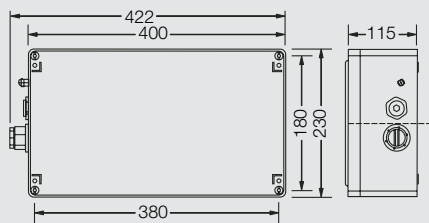


PR



PU

Escape sign acc. to current standard



Ex-Lite N

**Technical data**

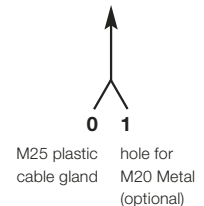
**Ex-Lite N**

Marking to 94/9/EC	Ex II 2 G   Ex II 2 D T60 °C
Explosion protection	EEx e m ib IIC T5 (t <sub>a</sub> max. +40 °C), T4 (t <sub>a</sub> max. +50 °C)
EC-Type Examination Certificate	PTB 02 ATEX 2111
Visibility range	up to 28 m
Enclosure material	Light alloy
Protective cover	Mineral glass
Cable entries	1 x Ex e cable entry M25 x 1.5 (moulded plastic) 1 x Ex e blanking plug M25 x 1.5
Enclosure colour	Grey, RAL 7035
Mounting	Wall mounting
Dimensions in mm (L x H x D)	400 x 230 x 115
Connection terminals	4 x cage clamp terminals, max. 2.5 mm <sup>2</sup> , double engagement
Rated voltage	AC: 110 - 277 V, 50/60 Hz DC: 110 - 250 V
Rated power	approx. 8 VA
Battery	NC-Akku 12 V/600 mAh
Charging time (cap. > 90 %)	28 h
Rated emergency lighting cycle	3 h
Permissible temperature range	- 20 °C to + 50 °C, specified data +5 °C to +35 °C
Illuminants	High-efficiency LEDs, white
Insulation class	I
Degree of protection to EN 60529	IP 66

**Ordering details**

Type	Scope of delivery <sup>1)</sup>	Order No.
Ex-Lite N	incl. cover with pictogram PR	1 2191 031 _01
	incl. cover with pictogram PL	1 2191 031 _02
	incl. cover with pictogram PU	1 2191 031 _03
	incl. cover, clear without pictogram	1 2191 031 _04

<sup>1)</sup> Other pictograms or inscriptions available on request



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