Ex-Escape sign luminaires

Ex-Lite

3 Metal version with LED technology for Zone 1 and Zone 21 / NEC applications

The robust escape sign luminaire

The Ex-Lite series of explosion-protected escape sign luminaire fulfils the requirements of ATEX Directive 2014/34/EU 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 for both indoor and outdoor use, even under extreme conditions. As an emergency lighting luminaire for maintained operation 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 V-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.

Features

- Robust light alloy housing
- Power-saving LED technology, maintenance-free throughout service life
- High degree of protection IP66
- 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“ and Ex-Lite Z series are available as mains luminaires e.g. for specially safeguarded industrial networks in production plants, as “Ex-Lite V-CG-S” emergency lighting luminaires with individual function monitoring for use in CEAG emergency lighting supply systems, as well as “Ex-Lite N” and Ex-Lite ZE 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 IP66, the Ex-Lite luminaire can be installed almost anywhere, both indoors and out. The luminaire is designed in the type of protection Ex e m ib IIC up to T6 as well as Ex tb IIIC T80 °C and in accordance with the ATEX Directive. It can be used in hazardous areas with explosive gas atmospheres (Zones 1 and 2) and explosive dust atmospheres (Zones 21 and 22).

Conformity to standards

The Ex-Lite explosion-protected escape sign luminaire series fulfils the requirements of ATEX Directive 2014/34/EU and EN 60598, Part 2.22 for emergency lighting luminaires. It is suited for marking escape routes and exits in hazardous areas. The housing of this luminaire is made of light alloy and it goes without saying that the escape sign comply with the latest standards.

Maintenance-free operation

The white LED technology used as the light source allows maintenance-free operation without replacement of the illuminant. The lighting values required 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 considerably, 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 up to 250 V DC, this luminaire can be used internationally, whereby the supply circuits of the LED circuits are intrinsically safe.

The internationally valid certificate „IECEx“ enhances the scope of this light fitting.

With the version Ex-Lite Z and Ex-Lite ZE a special version is available for use in the scope of the NEC regulations

The luminaire has a visibility range of 25 metres and it is available with a wide variety of pictograms, where country-specific solutions can be created without any problems.

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 hazardous areas.

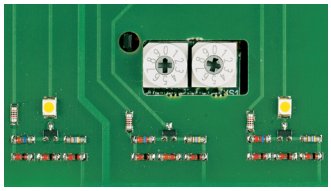
Ex-Lite ZE for NEC-application

Central emergency lighting supply via system luminaires with V-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 V-CG-S function can be operated in these circuits.

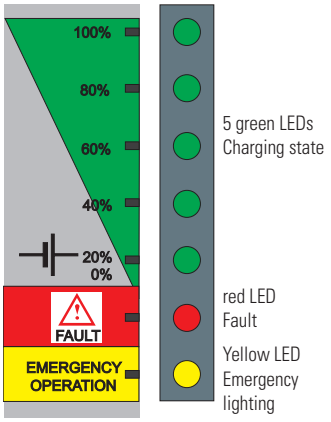
Better safe than sorry

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 V-CG-S version with a convenient monitoring function. In conjunction with the V-CG-S monitoring module with coding switch for max. 20 addresses, this luminaire can be operated as an 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 V-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 lots of time and money. During this function test, the correct functioning of the luminaire is monitored by the built-in V-CG-S module and any faults are reported to the central control unit. Thus, for example, the failure of LED groups is indicated automatically.



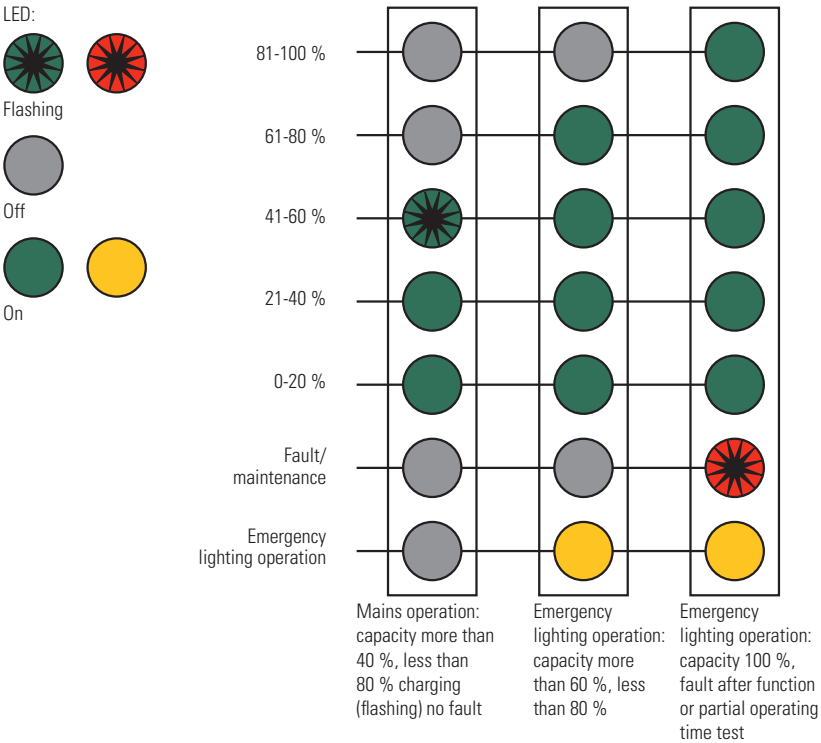
Emergency lighting luminaires with self-contained battery systems

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 charge 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 charge 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 luminaire is 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 partial 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.



Ordering details / Dimension drawing

Ex-Lite / Ex-Lite V-CG-S / Ex-Lite N / Ex-Lite Z / Ex-Lite ZE

Ordering details standard temperature

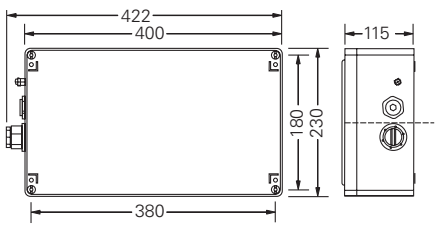
Type	Scope of delivery	Cable gland/Thread: Plastic cable glands	Cable gland/Thread: Screw plug	Cable gland/Thread: Metal thread	Standard Pictogram ISO 7010 Order No.	optional pictogram accord. to DIN 4844 Order No.
Ex-Lite	including cover with pictogram (arrow 3h)	1 x M25	1 x M25		**1 2191 011 021**	**1 2191 011 001**
	including cover with pictogram (arrow 9h)	1 x M25	1 x M25		**1 2191 011 022**	**1 2191 011 002**
	including cover with pictogram (arrow 6h)	1 x M25	1 x M25		**1 2191 011 023**	**1 2191 011 003**
	including cover with pictogram (arrow 3h)			2 x M20	**1 2191 011 121**	**1 2191 011 101**
	including cover with pictogram (arrow 9h)			2 x M20	**1 2191 011 122**	**1 2191 011 102**
	including cover with pictogram (arrow 6h)			2 x M20	**1 2191 011 123**	**1 2191 011 103**
Ex-Lite V-CG-S	including cover with pictogram (arrow 3h)	1 x M25	1 x M25		**1 2191 021 021**	**1 2191 021 001**
	including cover with pictogram (arrow 9h)	1 x M25	1 x M25		**1 2191 021 022**	**1 2191 021 002**
	including cover with pictogram (arrow 6h)	1 x M25	1 x M25		**1 2191 021 023**	**1 2191 021 003**
	including cover with pictogram (arrow 3h)			2 x M20	**1 2191 021 121**	**1 2191 021 101**
	including cover with pictogram (arrow 9h)			2 x M20	**1 2191 021 122**	**1 2191 021 102**
	including cover with pictogram (arrow 6h)			2 x M20	**1 2191 021 123**	**1 2191 021 103**
Ex-Lite N	including cover with pictogram (arrow 3h)	1 x M25	1 x M25		**1 2191 031 021**	**1 2191 031 001**
	including cover with pictogram (arrow 9h)	1 x M25	1 x M25		**1 2191 031 022**	**1 2191 031 002**
	including cover with pictogram (arrow 6h)	1 x M25	1 x M25		**1 2191 031 023**	**1 2191 031 003**
	including cover with pictogram (arrow 3h)			2 x M20	**1 2191 031 121**	**1 2191 031 101**
	including cover with pictogram (arrow 9h)			2 x M20	**1 2191 031 122**	**1 2191 031 102**
	including cover with pictogram (arrow 6h)			2 x M20	**1 2191 031 123**	**1 2191 031 103**
Ex-Lite 24 V	including cover with pictogram (arrow 3h)	1 x M25	1 x M25		**1 2191 124 021**	
	including cover with pictogram (arrow 9h)	1 x M25	1 x M25		**1 2191 124 022**	
	including cover with pictogram (arrow 6h)	1 x M25	1 x M25		**1 2191 124 023**	

Type	Scope of delivery	Cable gland/Thread: Plastic cable glands	Cable gland/Thread: Screw plug	Cable gland/Thread: Metal thread	Pictogram Order No
Ex-Lite	including cover, clear, without pictogram	1 x M25	1 x M25		**1 2191 011 004**
	including cover, clear, without pictogram			2 x M20	**1 2191 011 104**
Ex-Lite V-CG-S	including cover, clear, without pictogram	1 x M25	1 x M25		**1 2191 021 004**
	including cover, clear, without pictogram			2 x M20	**1 2191 021 104**
Ex-Lite N	including cover, clear, without pictogram	1 x M25	1 x M25		**1 2191 031 004**
	including cover, clear, without pictogram			2 x M20	**1 2191 031 104**

Type	Scope of delivery	Cable gland/Thread: Screw plug	Cable gland/Thread: Metal thread	Pictogram EXIT Order No
Ex-Lite Z	including cover with red inscription „EXIT", with CSA-certification	1 x M20	1 x 3/4" [1]	**1 2191 001 005**
Ex-Lite ZE	including cover with red inscription „EXIT", self-contained emergency version with CSA-certification	1 x M20	1 x 3/4" [1]	**1 2191 130 005**

[1] 1 x 3/4" Myer Hub, 1 x M20 screw plug. Other silk-screen pictograms or inscriptions available on request.
A wide selection of cable glands can be found at www.crouse-hinds.de/products or in the catalogue Part 2, Section 3

Ex-Lite / Ex-Lite 24 V / Ex-Lite V-CG-S / Ex-Lite N / Ex-Lite Z / Ex-Lite ZE



arrow 3h

arrow 9 h

arrow 6 h

Dimensions in mm

Technical data

Ex-Lite / Ex-Lite 24 V / Ex-Lite N / Ex-Lite V-CG-S

Technical data

	Ex-Lite / Ex-Lite 24 V	Ex-Lite V-CG-S	Ex-Lite N
EC-Type Examination Certificate	BVS 09 ATEX E 048	BVS 09 ATEX E 048	BVS 09 ATEX E 048
Marking accd. to 2014/34/EU	⟨Ex⟩ II 2 G Ex e ib mb IIC T6/T5 Gb ⟨Ex⟩ II 2 D Ex tb IIIC T80°C Db	⟨Ex⟩ II 2 G Ex e ib mb IIC T6/T5 Gb ⟨Ex⟩ II 2 D Ex tb IIIC T80°C Db	⟨Ex⟩ II 2 G Ex e ib mb IIC T5/T4 Gb ⟨Ex⟩ II 2 D Ex tb IIIC T80°C Db
IECEx Certificate of Conformity	IECEx BVS 13.0016	IECEx BVS 13.0016	IECEx BVS 13.0016
Marking accd. to IECEx	Ex e ib mb IIC T6/T5 Gb Ex tb IIIC T80°C Db	Ex e ib mb IIC T5/T4 Gb Ex tb IIIC T80°C Db	Ex e ib mb IIC T5/T4 Gb Ex tb IIIC T80°C Db
Permissible ambient temperature specified data	-20 °C up to +50 °C (T5) Ex-Lite/Ex-Lite 24 V -20 °C up to +40 °C (T6) Ex-Lite/Ex-Lite 24 V	-40 °C up to +50 °C (T5) -40 °C up to +40 °C (T6)	-20 °C up to +50 °C (T4) Ex-Lite N -20 °C up to +40 °C (T5) Ex-Lite N +5 °C up to +35 °C / -40 °C up to +35 °C
Battery			NC-Accu 12 V/800 mAh
Rated power consumption	approx. 6 VA	approx. 6 VA	approx. 10 VA
Rated voltage	AC: 110 V - 277 V / 110 V - 254 V 50/60 Hz DC: 110 V - 250 V DC: 12 V - 24 V ±20 % (Ex-Lite 24 V)	AC: 220 V - 254 V, 50/60 Hz DC: 195 V - 250 V	AC: 110 V - 277 V / 110 - 240 V, 50/60 Hz DC: 110 V - 250 V
Rated current	DC: 220 V = 20 mA, 110 V = 40 mA	DC: 220 V = 20 mA, 110 V = 40 mA	230 V ≃ 50 mA, 110 V ≃100 mA
Charging duration (capacity > 90 %)			24 h
Power factor cos φ	≥ 0.95	≥ 0.95	≃ 0.5
Protection class	I	I	I
Viewing distance	up to 28 m	up to 28 m	up to 28 m
Lamp / Illuminant	high output LEDs, white	high output LEDs, white	high output LEDs, white
Rated emergency lighting duration			3 h
Dimensions (L x W x H)	400 x 230 x 115	400 x 230 x 115	400 x 230 x 115
Connecting terminals	4 x cage clamp loop-terminal max. 2.5 mm^2	4 x cage clamp loop-terminal max. 2.5 mm^2	4 x cage clamp loop-terminal max. 2.5 mm^2
Enclosure colour	grey, RAL 7035	grey, RAL 7035	grey, RAL 7035
Enclosure material	light alloy	light alloy	light alloy
Weight	6.2 kg	6.4 kg	6.7 kg
Cable glands / gland plates / enclosure drilling	1 x Ex e-cable gland M25 x 1.5 (plastic), 1 x Ex e-screw plug M25 x 1.5 or 2 x M20 x1.5 metal thread, 1 x screw plug M20	1 x Ex e-cable gland M25 x 1.5 (plastic), 1 x Ex e-screw plug M25 x 1.5 or 2 x M20 x1.5 metal thread, 1 x screw plug M20	1 x Ex e-cable gland M25 x 1.5 (plastic), 1 x Ex e-screw plug M25 x 1.5 or 2 x M20 x1.5 metal thread, 1 x screw plug M20
Type of mounting	wall mounting	wall mounting	wall mounting
Degree of protection accd. to EN 60529	IP66	IP66	IP66
Protective cover / protective bowl	mineral glass	mineral glass	mineral glass

Technical data

	Ex-Lite Z	EX-Lite ZE
Marking accd. to NEC 505/CEC 018	Class I, Zone 1, AEx em ib IIC T4/T5/T6 Ex em ib IIC T4/T5/T6	Class I, Zone 1 AEx em ib IIC T4/T5/T6 Class I, Zone 1 Ex em ib IIC T4/T5/T6
Marking accd. to NEC 500	Class I, Division 2, Groups A, B, C and D Class II, Division 2, Groups E, F and G	Class I, Division 2, Groups A, B, C and D Class II, Division 2, Groups E, F and G
UL/CSA Listing	1944328	1944328
Permissible ambient temperature specified data	-20 °C up to +40°C (T6) / -20 °C up to +50°C (T5)	-20 °C up to +40°C (T5) -20 °C up to +50°C (T4) -5 °C up to +35 °C
Battery		12 V/800 mAh NC-Accu
Rated power consumption	approx. 6 VA	approx. 8 VA
Rated voltage	110 V - 277 V AC / 110 V - 250 V DC	110 V - 277 V AC / 110 V - 250 V DC
Rated current AC/DC	220 V = 20 mA, 110 V = 40 mA	230 V ≃ 50 mA, 110 V ≃100 mA
Frequency	DC and 50 - 60 Hz (AC)	DC and 50 - 60 Hz (AC)
Charging duration (capacity > 90 %)		24 h
Power factor cos φ	≥ 0.95	≃ 0.5
Circuit	electronic power supply	electronic power supply
Protection class	I	I
Viewing distance	28 m	
Lamp / Illuminant	high output LEDs, red	high output LEDs, red
Rated emergency lighting duration		approx. 3 h (specified data +5 °C up to +35 °C)
Dimensions (L x W x H)	400 x 230 x 115 mm	400 x 230 x 115 mm
Connecting terminals	3 x loop terminal 2.5 mm²	3 x loop terminal 2.5 mm²
Enclosure colour	grey, RAL 7035	grey, RAL 7035
Enclosure material	light alloy	light alloy
Weight	6.2 kg	6.7 kg
Cable glands / gland plates / enclosure drilling	1 x adapter M25/ Meyer Hub 3/4'', 1 x screw plug M20	1 x adapter M25/ Meyer Hub 3/4'', 1 x screw plug M20
Type of mounting	wall mounting	wall mounting
Degree of protection accd. to EN 60529	IP66	IP66
Protective cover / protective bowl	mineral glass	mineral glass

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