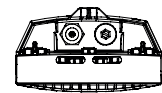
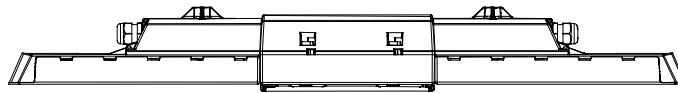
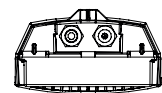
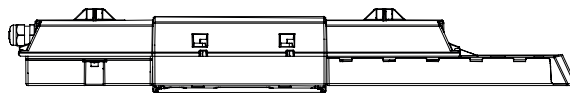


Explosiongeschützte Leuchte ExLin

Explosion protected light fitting ExLin

Luminaire ExLin pour atmosphères explosives

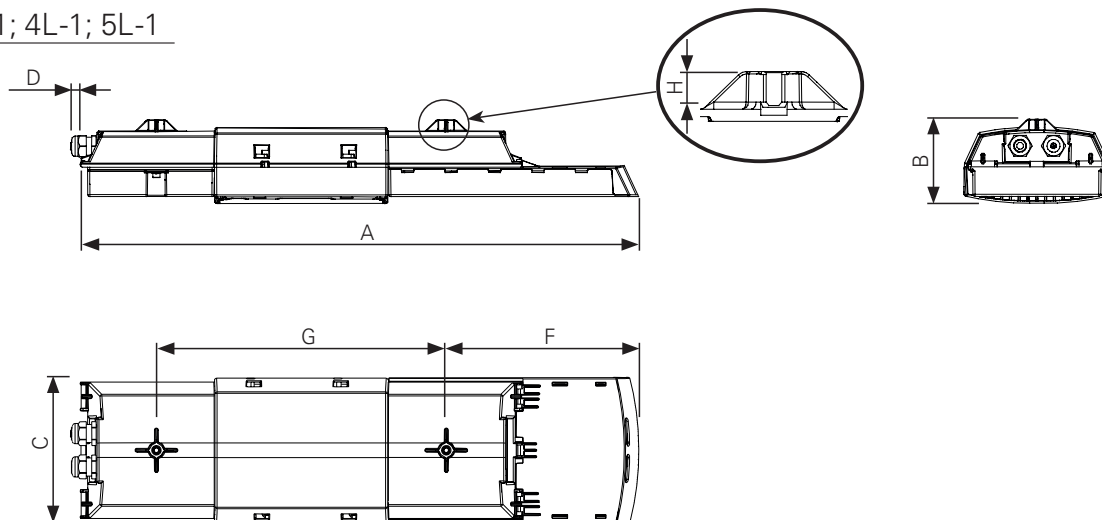


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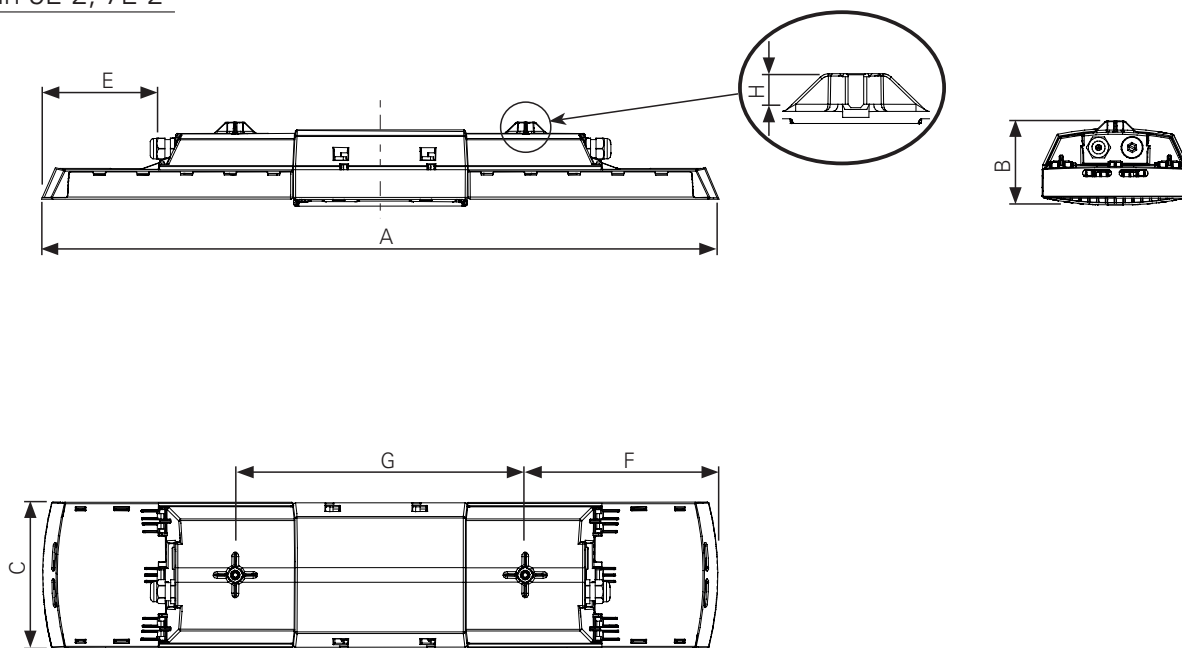
EATON

Powering Business Worldwide

Ex Lin 3L-1; 4L-1; 5L-1



Ex Lin 5L-2; 7L-2








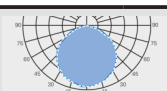
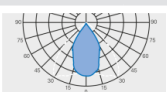

Maßangaben in mm

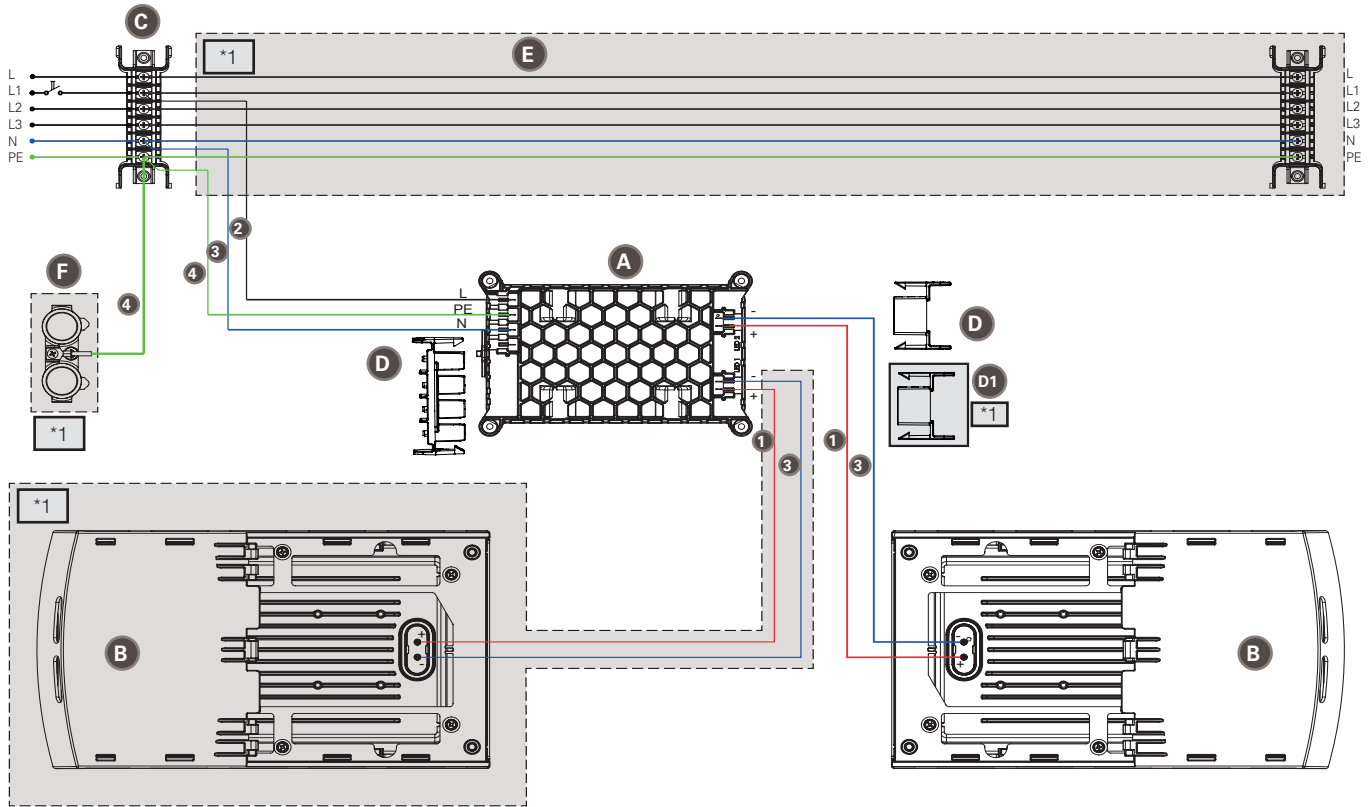
Dimensions in mm

	Ex Lin 3L-1; 4L-1; 5L-1	Ex Lin 5L-2; 7L-2
A	770	932
B	116	116
C	201	201
D	13	---
E	---	162
F	266	266
G	400	400
H	15,5	15,5

Typenschlüssel

Type code


				ExLin	**_*	*	*	*	*	**	**
Benennung / Name											
ExLin											
Typen / Versions											
3L-1	2400 lm										
4L-1	3600 lm										
5L-1	4800 lm										
5L-2	4800 lm										
7L-2	7200 lm										
Scheibenmaterial / Front Material											
G	= Glas	Glass									
P*	= Kunststoff	Polycarbonate									
Transparenz											
C	= Klar	clear									
F	= matt	frosted									
Reflektor											
S	= ohne Reflektor	Standard									
N*	= Reflektor engstrahlend	Narrow									
W*	= Reflektor breitstrahlend	Wide									
CRI											
7	= > 70										
8	= > 80										
CCT											
50	= 5000 K										
40	= 4000 K										
...	= K										
XX	= auf Anfrage / on request										
Durchgangsverdrahtung / Through wiring											
1/6	= einseitig / single ended										
2/6	= zweiseitig / twin ended										
* in Vorbereitung / * in preparation / * en cours											




*1 optional/optional/en option

A	Treibermodul qTEK	Driver qTEK
B	ExLin LED Modul	ExLin LED unit
C	Klemmenblock	Terminals block
D	Stecker	Plug
D1	Abschlussstecker bei Leuchten mit einem ExLin LED Modul	Terminating plug for luminaires with one LED unit ExLin
E	Durchgangsverdrahtung optional	Through wiring optional
F	Metalldoppelmutter	Metal double nut
1	rot	red
2	schwarz	black
3	blau	blue
4	gnye	gnye

1

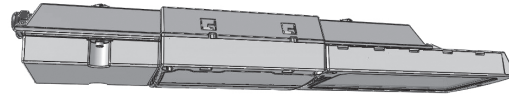


EN/IEC 60079-14

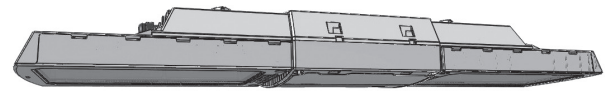


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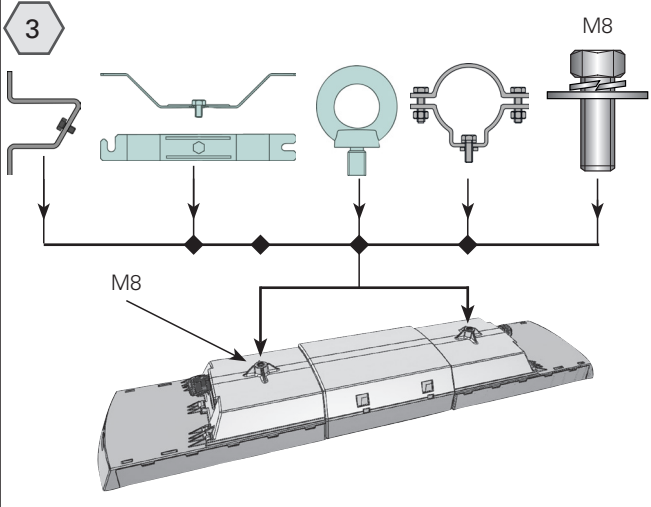
Ex Lin 3L-1; 4L-1; 5L-1



Ex Lin 5L-2; 7L-2



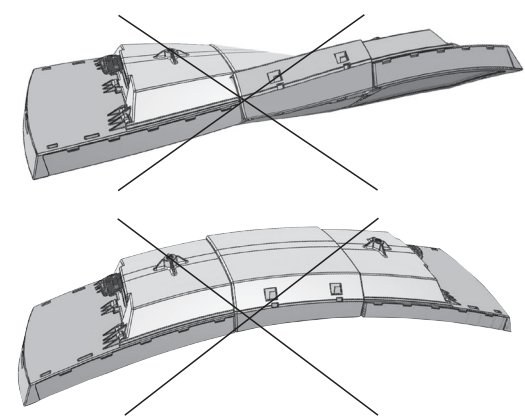
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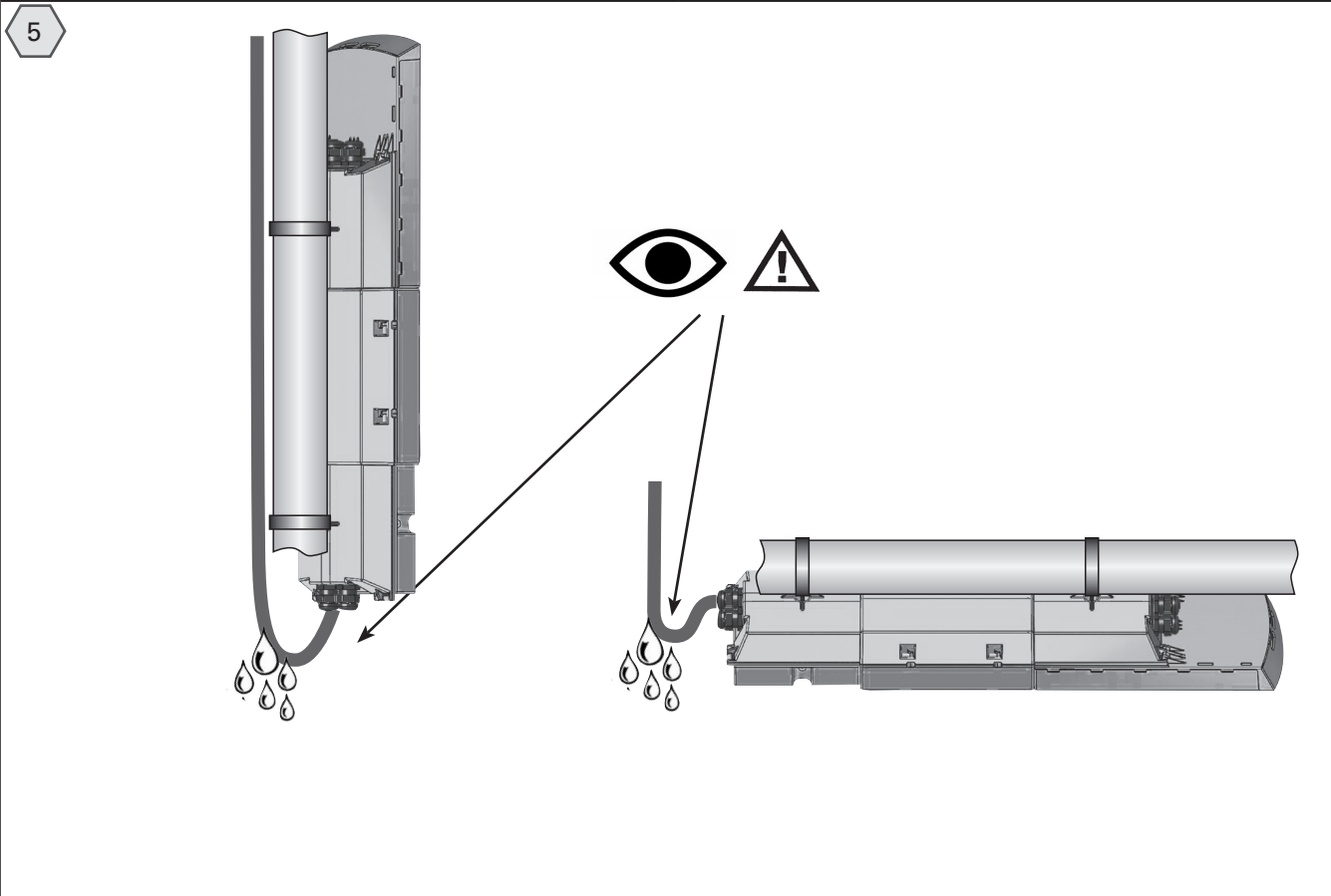
M8

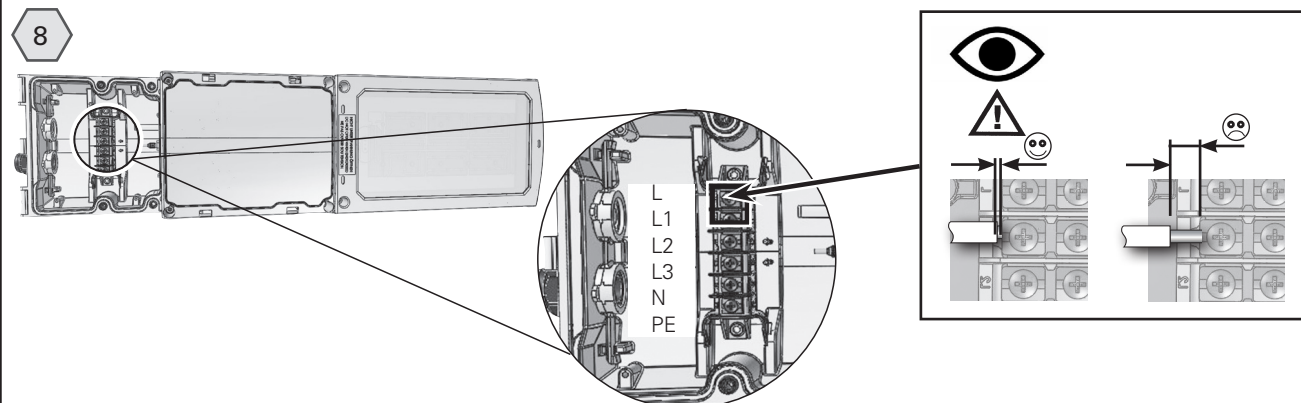
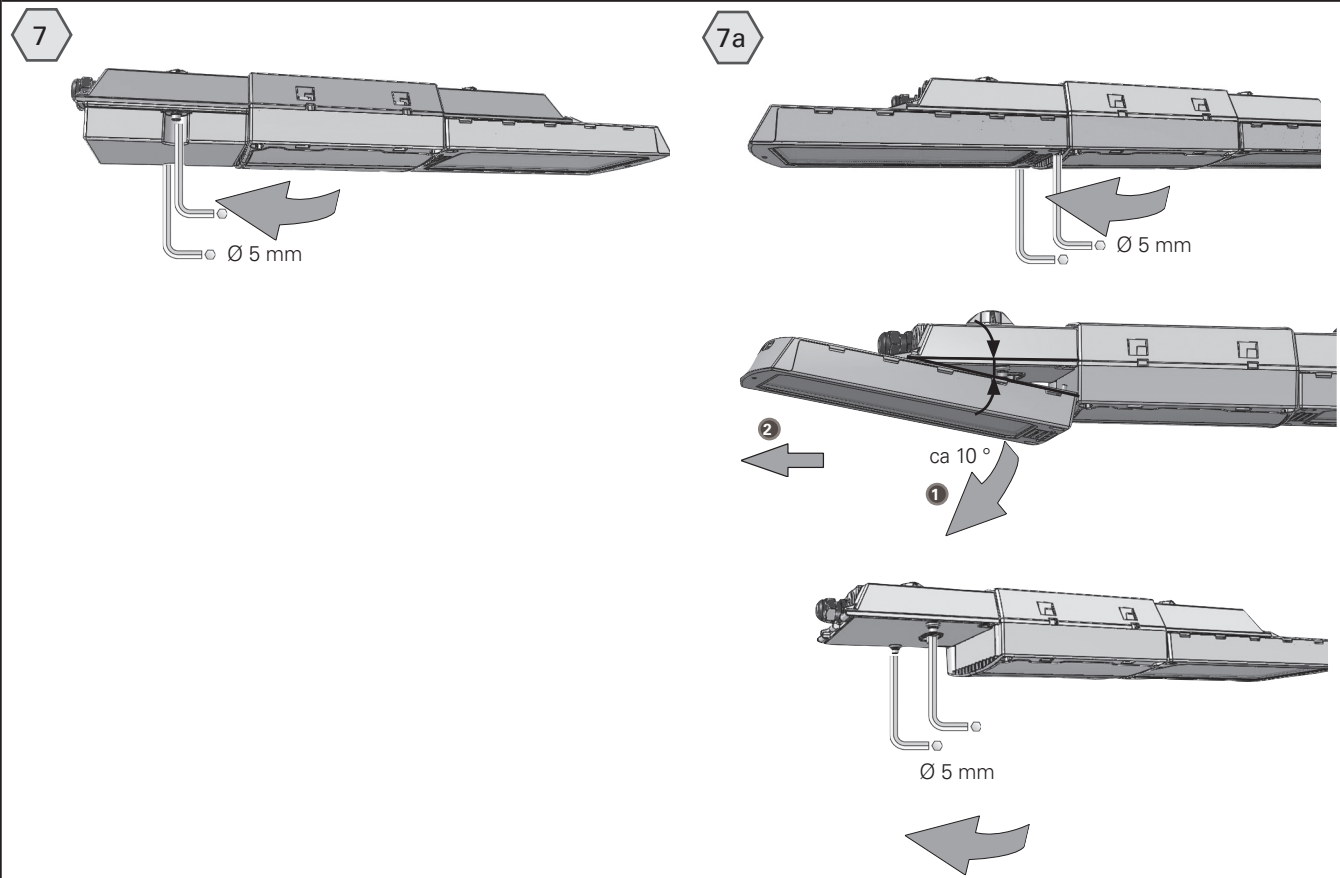
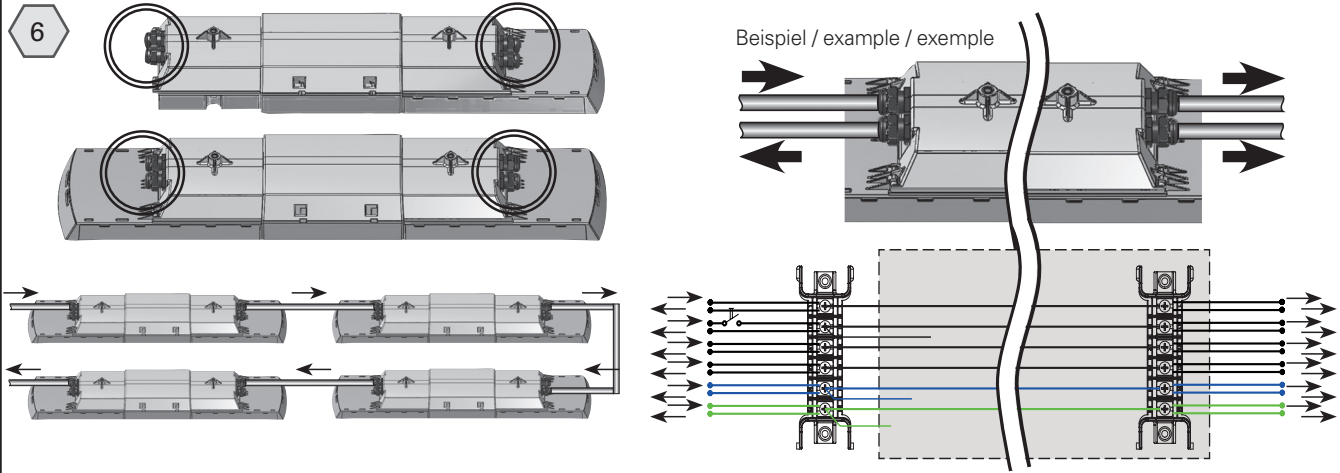
M8

4

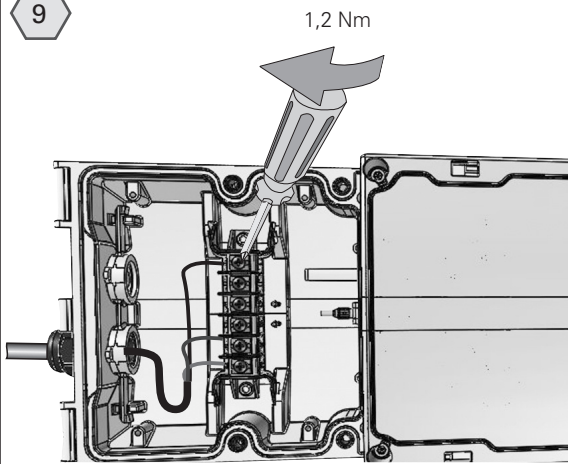


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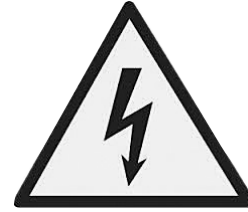




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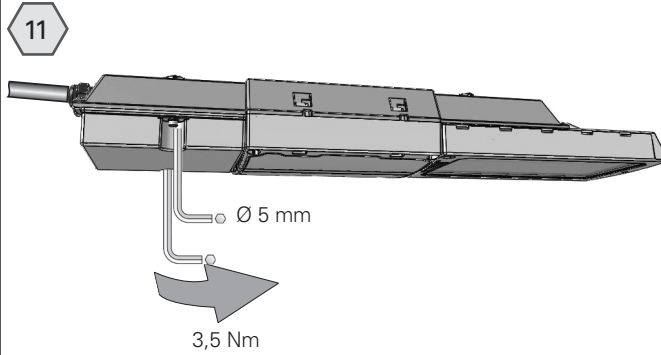
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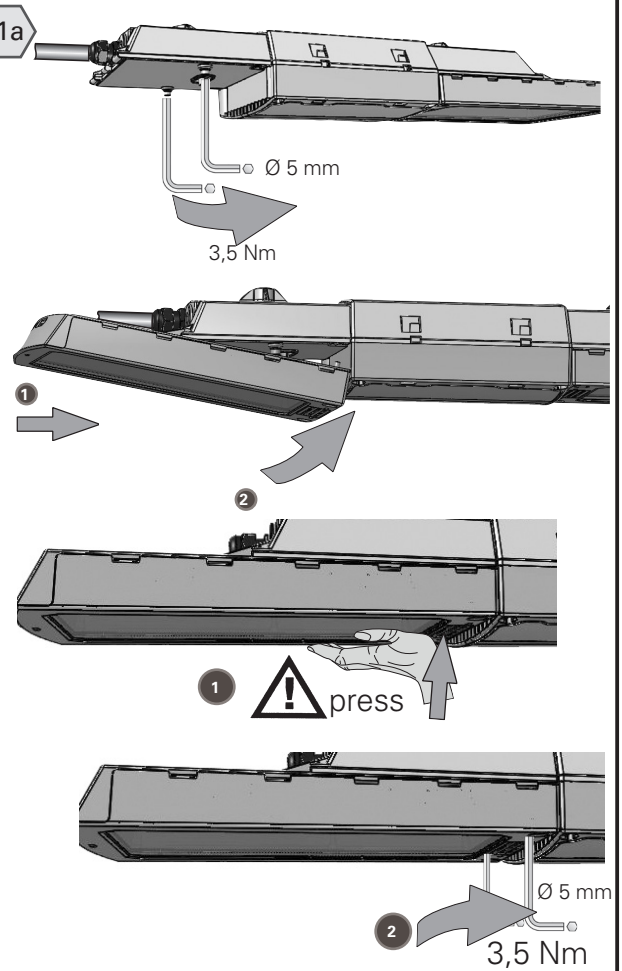
Test

EN/IEC 60079-14



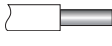
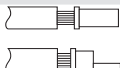
11






11a



1 Technical data

EU-Type Examination Certificate:		BVS 18 ATEX E 037 X				
Marking acc. to 2014/34/EU and standard of series EN 60079:						
Gas:		Ex II 2 G		Ex eb ib op is q IIC T4 Gb		
Dust:		Ex II 2 D		in preparation		
IECEX type examination certificate:		IECEX BVS 18.0028 X				
Category of application IEC 60079						
Gas:		Ex eb ib op is q IIC T4 Gb				
Dust:		in preparation				
Rated voltage:		110 ... 277 V AC / DC				
Rated frequency range:		50 ... 60 Hz / 0 Hz				
Power factor cos φ :		$\geq 0,9$				
Variants		3L- 1	4L- 1	5L- 1	5L- 2	7L- 2
Switch-on currents: for 1 ms		6 A	6 A	6 A	6 A	10 A
Power consumption:		22 W	33 W	45 W	45 W	67 W
Maximum number of luminaires per MCB						
B characteristic	10 A	10	10	10	10	7
	16 A	18	18	18	18	11
C characteristic	10 A	18	18	18	18	11
	16 A	30	30	30	30	18
luminous fluxes	glass clear	2750 lm	4000 lm	5300 lm	5490 lm	8120 lm
	glass frosted	2370 lm	3500 lm	4580 lm	4740 lm	6920 lm
 qTEK Driver unit/ LED- Modu	qTEK 10 *-*	1xLED_M_24*	-	-	-	-
	qTEK 20 *-*;	1xLED_M_24	1xLED_M_36*	1xLED_M_48*	2xLED_M_24*	-
	qTEK 30 *-*;	1xLED_M_24	1xLED_M_36	1xLED_M_48	2xLED_M_24	2xLED_M_36*
		* = Standard driver unit				
Ambient temperature range  ⁽¹⁾						
with glass plate:		-40 °C...+55 °C Observe the information on the ExLin type label.				
Perm. storage temperature in original packing:		-40 °C...+55 °C				
Protection category acc. to IEC/EN 60529:		IP 66 (IP 67 in preparation)				
Insulation class acc. to IEC/EN 61140:		I				
Photobiological safety according to EN/IEC 62471:		RG 1				
Total Harmonic Distortion (THD)	3L- .. ; 4L- .. :	8 %				
	5L- .. ; 7L- .. :	5 %				
Supply terminal clamping capacity 2 x per terminal		single-wire		multi-wire		
min.:		1.5 mm ²		1.5 mm ²		
max.:		6.0 mm ²		4.0 mm ²		

Ex-e cable entry	Observe the specifications of the ambient temperature range on the ExLin type label.					
Standard version (plastic)	M25 x 1,5					
Suitable cables and test torques of the pressure screw		Ø cable	Nm pressure screw			
Seal 1+2+3		min.	8.0	1.5		
		max. ⁽²⁾	10.0	2.0		
Seal 1+2		min.	10.0	2.3		
		max. ⁽²⁾	13.0	2.6		
Seal 1		min.	13.5	1.3		
		max. ⁽²⁾	17.5	2.3		
Testtorque:						
	Fixing- screws	3.5 Nm				
Wight:		3L- 1	4L- 1	5L- 1	5L- 2	7L- 2
		6.7 kg	6.7 kg	6.7 kg	8.0 kg	8.0 kg

⁽¹⁾ Intensive sun radiation in areas of high ambient temperatures may cause inadmissible temperature rise inside of the luminaire. This may result a decrease in lifetime. Therefore those light fittings should be switched off during daytime by a photocell control.

⁽²⁾ The tests of clamping ranges and torque values were performed with metal mandrel. The clamping range can vary by using cables with different manufacturing tolerances and material properties. Please use a suitable combination of seals in the intermediate area, so that the cap nut can be tightened in future maintenance work on the cable entry.

2 Legend



Warning:

This symbol indicates a serious hazard. Ignoring this warning can result in death or the destruction of the installation.



Attention:

This symbol indicates a possible failure. Ignoring this warning can lead to the total failure of the device, system or operation to which it is connected.



Note:

This symbol stresses important information.



Special conditions

This symbol shows Highlights for safe use in accordance to EU-Type-Examination Certificate/ IEC Ex-Certificate of Conformity.

2.1. Safety instructions



Target group:

For skilled electricians and suitable qualified, instructed personnel in accordance with national legislation, including the relevant standards and, where applicable, in acc. with IEC/EN 60079-14 on electrical apparatus for explosive atmospheres.

- *The light fitting must not be operated in zone 0 hazardous areas!*
- *The technical data indicated on the light fitting are to be observed!*
- *Changes of the design and modifications to the light fitting are not permitted!*
- *The light fitting shall be operated as intended and only in undamaged and perfect condition!*
- *Do not keep these operating instructions inside the light fitting during operation!*

The national safety rules and regulations for prevention of accidents and the following safety instructions which are marked with an (Δ) in these operating instruction, will have to be observed!

3 Conformity with standards

The explosion protected light fitting ExLin is conform to the standards specified in the EC-Declaration of conformity, enclosed separately.

References to standards and directives in these operating instructions always relate to the latest version. Other additions (e.g. details relating to the year) shall be observed.

4 Field of application

The light fitting ExLin is suitable for use in zone 1 or 2 hazardous areas acc. to IEC/EN 60079-10-1.

The materials used, including any external metal parts, are high quality materials which ensure a corrosion protection and resistance to chemical substances corresponding to the requirements in a "normal industrial atmosphere":


- glass-fibre reinforced polyester
- polycarbonate / glass

In case of use in an extremely aggressive atmosphere, you can obtain information concerning the chemical resistance of the materials used from your Cooper Crouse-Hinds (CCH) / EATON branch.


5 Application / Properties


The light fitting ExLin is suitable for special operating conditions such as on offshore platforms or in chemical or pharmaceutical plants.


The operator is not permitted to modify the modular light fitting to other light intensity as original delivered.

 The ExLin luminaire have not be used in areas where intensive electrostatic charging processes may be present.

 **The data as per point 3 and 4 shall be taken into account with the use.**

 **Applications other than those described are not permitted without Cooper Crouse-Hinds / EATON's prior written consent.**

 **The instructions stated in section 7 of the operating instructions shall be observed during operation.**

 **The user alone is responsible for the appropriate use of the light fitting ExLin in consideration of the basic conditions existing at the plant (see technical data).**

The product is protected by patents. For more information, please contact your local Cooper Crouse-Hinds / EATON representative.

6 Installation

For the mounting and operation, the respective national regulations as well as the general rules of engineering will have to be observed (IEC/EN 60079-14).

 **The improper installation and operation of the light fitting ExLin may result in the explosion protection and invalidation of the guarantee.**

Transport and storage only in original packaging in a closed and dry room!

Observe for any cracks or damage in housing and glass during installation or repair! Abrasions, sanding, etc. can weaken the mechanical functions.

6.1 Montage

See fig. 1 ... 6

The light fitting ExLin can be mounted without opening their enclosure.

Fig. 3

Additional mounting material see CCH / EATON catalogue or annex.

The chosen screw shall match the fastening hole (see dimensional drawing) and it must not damage the hole (e. g. use of a washer).

 **If the screws are overtightened, the apparatus can be damaged.**

Fig. 4

The light fitting ExLin LED may rest evenly only at the respective fastening points.


Mounting surfaces, e.g. walls, ceilings or parts of frameworks, have to be flat.

Fig. 5

If cable entries are used from the top, mount only in dry rooms or attach where protected from moisture.

! For wall assembly Cable entry from below.

6.1.1 Cable entries

 **The cables and cable entries must correspond with the minimum temperature resistance depending on the lamp (see technical data).**

Connecting cable exposed to strain must be relieved by suitable measures.

When assembling the cable entries for the mains connection, please observe the manufacturer's specifications for the used seals and cable entries!

– Introduce the cable through the Ex cable entry.

When using plastic KLEs use

sealing inserts 1,2 and 3 for cables from 8 to 10 mm Ø,

sealing inserts 1 and 2 for cables from 10 to 13 mm Ø

and sealing insert 1 for cables from 13.5 to 17.5 mm Ø.

Pay attention to the proper fit of the remaining sealing insert in the cable gland.

For metal KLE see additional KLE instruction.

Unused cable entries have to be closed by a suitable certified blanking plug.

The cable entries and sealing stoppers must be approved for the light fitting ExLin type of protection!

In order to ensure the required minimum protection category, the cable glands shall be tightened down (test torque) .

 **Overtightening might impair the protection category.**

Fig. 6

The ExLin luminaire offers various through-wiring options.

6.2 Opening light fitting ExLin LED

See fig 7



Warning against electric shock.

Ensure and take suitable precautions before opening the housing.



Warning of explosion.

Before opening the housing to make sure that no explosive atmosphere environment.

6.2.1 Electrical connection



The electrical connection of the equipment must be performed by qualified electricians (IEC/EN 60079-14).

See wiring diagram and fig. 8 ... 9.

All screws and/or nuts of the connection terminals, including those not in use, shall be tightened securely.

⚠ To maintain the explosion protection, the connection of conductors shall be carried out with special care.



If the light fitting ExLin is operated with optional through-wiring, the conductors may be loaded with max. 16 A. Higher temperatures may occur at the entries and at the cable junction. The cable glands and connection cables are used have to be fulfil the following conditions:

Light fitting ExLin 3L-1...2/6; 5L-2...2/6:

- Connecting cables and cable entries have to be suitable for at least 80 °C.

Light fitting ExLin 4L-1...2/6; 5L-1...2/6; 7L-2...2/6:

- Connecting cables and cable entries have to be suitable for at least 90 °C.

⚠ The minimum and maximum conductor cross sections shall be taken in account (see technical data).

The respective regulations shall be taken into account when connecting the correctly stripped connection conductors of the cables.

Only carry out insulation measurements between PE and the external conductor L1 (L, L2, L3) as well as between PE and N.

- measuring voltage: max. 1 kV DC

- measuring current: max. 10 mA

6.3 Closing light fitting ExLin LED

Fig 10 ... 11

⚠ Remove all foreign bodies from the device.

- Pay attention to the correct fit of the enclosure top part and the seals.

- All seals must be clean and undamaged.

- The light fitting ExLin may not be damaged.

- Tighten all enclosure combi-screws (test torque see technical data).

⚠ Overtightening might impair the pull-relief effect!

7 Function test



Prior to taking the ExLin light fitting into operation, check its correct function in accordance with these instructions and with other applicable regulations!

The following is to be checked:

- whether any gasket is damaged
- whether there are any cracks or damages on the housing and protection screen
- whether the terminals, fastening screws and blanking plugs are firmly tightened.

The Explosion protected ExLin LED is to be used in perfect condition and without any damages.

7.1 Taking into operating

Prior to taking the apparatus into operation, the tests specified in the relevant national regulations will have to be carried out.

Apart from that, the correct functioning and installation of the apparatus in accordance with these operating instructions and other applicable regulations will have to be checked (IEC/EN 60079-14).

Please observe the following before closing the light fitting:

- All seals must be clean and undamaged.
- The light fitting may not be damaged.

Improper installation and operation of the lamp leads to loss of the guarantee.

8 Maintenance/Serviceing

⚠ The relevant national regulations which apply to the maintenance/ servicing of electrical apparatus in explosive atmospheres, shall be observed (IEC/EN 60079-17).



Warning against electric shock.

Before opening the enclosure make sure that the apparatus is disconnected from the voltage, or take the appropriate protective measures.

⚠ Make sure that there is no explosive ambient atmosphere when opening the equipment.

The required maintenance intervals are set according to their application and should therefore be determined depending on the conditions of use.



Because of the risk of an electrostatic charge, the light fitting shall only be cleaned with a damp cloth or sponge! Only use customary household washing-up liquid diluted in water as specified! The water temperature may be max. 50°C. After that, rinse with clear water.

Within the scope of the maintenance / inspection, terminals must be checked for secure fitting

If during servicing repairs prove to be necessary, section 9 of these operating instructions will have to be observed.

9 Repairs / Overhaul / Modification

⚠ Repairs that affect the explosion protection, may only be carried out by COOPER CROUSE-HINDS or a qualified electrician (Competent person) in compliance with the applicable national rules (IEC/EN 60079-19).

For replacement and repair only original parts from COOPER CROUSE HINDS-/ EATON may be used.

If it is necessary to replace the LED module, it have to be replaced with a new LED module that is assigned to the respective ExLin luminaire type.

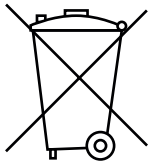
If the built-in qTEK driver must be replaced, have to be used the qTEK driver assigned as standard driver for the ExLin luminaire in question (see Technical Data).

Alternatively a qTEC driver with higher power can be used (e.g. qTEK 10 ... will be replaced by qTEK 20).

Modifications to the device or changes of its design are not permitted.

They shall be used for their intended purpose and in perfect and clean condition.

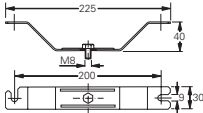
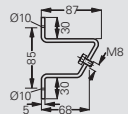

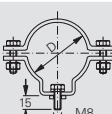

10 Disposal/Recycling



When the apparatus is disposed of, the respective national regulations on waste disposal will have to be observed.

In case of disposal you can obtain additional information from your Cooper Crouse-Hinds /EATON branch.

Subject to modifications or supplement of the product range.

	Zubehör	Accessories	Accessoires
	2 Stück, Deckenbügel D 92 mit Schrauben und Polyamidscheiben, Edelstahl	2 pcs. ceiling mounting bracket D 92 with screws and polyamide washer, stainless steel	Paire d'étriers de fixation plafond D92 en inox 304L, pour montage sur surface plane. 2 2480 092 000
	2 Stück, Wandmontagebügel 30°, feuerverzinkt	2 pcs. wall mounting bracket with 30° angle, hot-dip galvanized	Paire d'étriers en acier galvanisé pour fixation murale à 30° 2 2480 000 122
	2 Stück, Wandmontagebügel 45°, feuerverzinkt	2 pcs. wall mounting bracket with 45° angle, hot-dip galvanized	Paire de pattes en acier galvanisé pour fixation murale à 45° 2 2480 550 014
	2 Stück, Ringschraube M8 für Leuchtenbefestigung, feuerverzinkt	2 pcs. eye bolt M8 for luminaire mounting, hot-dip galvanized	Paire d'anneaux de suspension M8 en acier galvanisé pour montage suspendu 2 2480 002 000
	2 Stück, Ringschraube M8 für Leuchtenbefestigung, Edelstahl	2 pcs. eye bolt M8 for luminaire mounting, stainless steel	Paire d'anneaux de suspension M8 en inox 304L pour montage suspendu 2 2480 004 000
	2 Stück, Rohrschellen R12 (1 1/4"), Ø 38-42 mm, feuerverzinkt	2 pcs. pipe clamps R12 (1 1/4"), Ø 38- 42 mm, hot-dip galvanized	Paire de colliers de fixation R12 (1 1/4") en acier galvanisé pour tube diam. Ø 38-42mm 2 2480 462 000
	2 Stück, Rohrschellen R22 (1 1/2"), Ø 47-51 mm, feuerverzinkt	2 pcs. pipe clamps R22 (1 1/2"), Ø 47- 51 mm, hot-dip galvanized	Paire de colliers de fixation R22 en acier galvanisé pour tube diam. Ø 47-51mm 2 2480 472 000
	2 Stück, Rohrschellen R32 (2"), Ø 56- 60 mm, feuerverzinkt	2 pcs. pipe clamps R32 (2"), Ø 56- 60 mm, hot-dip galvanized	Paire de colliers de fixation R32 en acier galvanisé pour tube diam. Ø 56-60mm 2 2480 482 000
	2 Stück, Rohrschellen R14 (1 1/4"), Ø 38-42 mm, Edelstahl	2 pcs. pipe clamps R14 (1 1/4"), Ø 38- 42 mm, stainless steel	Paire de colliers de fixation R14 en inox pour tube diam. Ø 38-42mm 2 2480 464 000
	2 Stück, Rohrschellen R24 (1 1/2"), Ø 47-51 mm, Edelstahl	2 pcs. pipe clamps R24 (1 1/2"), Ø 47- 51 mm, stainless steel	Paire de colliers de fixation R24 en inox pour tube diam. Ø 47-51mm 2 2480 474 000
	2 Stück, Rohrschellen R34 (2"), Ø 56- 60 mm, Edelstahl	2 pcs. pipe clamps R34 (2"), Ø 56- 60 mm, stainless steel	Paire de colliers de fixation R34 en inox pour tube diam. Ø 56-60mm 2 2480 484 000
	2 Stück, Sechskantschraube M8 x 20 zur Leuchtenbefestigung, Edelstahl	2 pcs. hexagon screw M8 x 20 for luminaire mounting, stainless steel	Lot de 2 boulons M8 x 20 en inox 304L, avec rondelles polyamide 2 2480 054 000

CZ: "Tento návod k použití si můžete vyžádat ve svém mateřském jazyce u příslušného zastoupení společnosti Cooper Crouse-Hinds/CEAG ve vaší zemi."

DK: "Montagevejledningen kan oversættes til andre EU-sprog og rekvireres hos Deres Cooper Crouse-Hinds/CEAG leverandør"

E: "En caso necesario podrá solicitar de su representante Cooper Crouse-Hinds/CEAG estas instrucciones de servicio en otro idioma de la Union Europea"

EST: "Seda kasutusjuhendit oma riigikeeles võite küsida oma riigis asuvast asjaomastest Cooper Crouse-Hinds/CEAG esindustest."

FIN: "Tarvittaessa tämän käyttöohjeen käännös on saatavissa toisella EU:n kielellä Teidän Cooper Crouse-Hinds/CEAG - edustajaltanne"

GR: *Εάν χρειασθεί, μεταφράση των οδηγιών χρήσεως σε άλλη γλώσσα της ΕΕ, μπορεί να ζητηθεί από τον Αντιπρόσωπο της Cooper Crouse-Hinds/CEAG*

H: "A kezelési útmutatót az adott országnyelvén a Cooper Crouse-Hinds/CEAG cég helyi képviselőtől igényelheti meg."

I: "Se desiderate la traduzione del manuale operativo in un'altra lingua della Comunità Europea potete richiederla al vostro rappresentante Cooper Crouse-Hinds/CEAG"

LT: Šios naudojimo instrukcijos, išverstos į Jūsų gimtąją kalbą, galite pareikalauti atsakingoje "Cooper Crouse-Hinds/CEAG" atstovybėje savo šalyje.

LV: "Šo ekspluatācijas instrukciju valsts valodā varat pieprasīt jūsu valsts atbildīgajā Cooper Crouse-Hinds/CEAG pārstāvēniecībā."

M: Jistghu jitolbu dan il-manwal fil-lingwa nazzjonali tagħhom minghand ir-rappreżentant ta' Cooper Crouse Hinds/CEAG f'pajjiżhom.

NL: "Indien noodzakelijk kan de vertaling van deze gebruiksinstructie in een andere EU-taal worden opgevraagd bij Uw Cooper Crouse-Hinds/CEAG - vertegenwoordiging"

P: "Se for necessária a tradução destas instruções de operação para outro idioma da União Europeia, pode solicita-la junto do seu representante Cooper Crouse-Hinds/CEAG"

PL: Niniejszą instrukcję obsługi w odpowiedniej wersji językowej można zamówić w przedstawicielstwie firmy Cooper-Crouse-Hinds/CEAG na dany kraj.

S: "En översättning av denna montage- och skötselinstruktion till annat EU - språk kan vid behov beställas från Er Cooper Crouse-Hinds/CEAG- representant"

SK: "Tento návod na obsluhu Vám vo Vašom rodnom jazyku poskytne zastúpenie spoločnosti Cooper Crouse-Hinds/CEAG vo Vašej krajine."

SLO: "Navodila za uporabo v Vašem jeziku lahko zahtevate pri pristojnem zastopništvu podjetja Cooper Crouse-Hinds/CEAG v Vaši državi."

RUS: "При необходимости, вы можете запрашивать перевод данного руководства на другом языке ЕС или на русском от вашего Cooper Crouse-Хиндс / CEAG - представителей."

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