CEAG Products
Main Catalogue Part 1:
Explosion Protected Luminaires

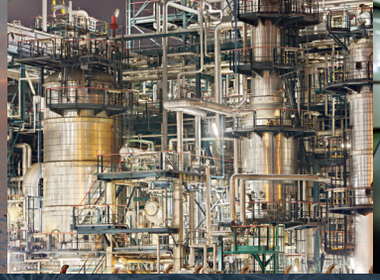
CROUSE-HINDS SERIES

The safety you rely on.

The leader in electrical products for hazardous, industrial and commercial applications world wide.

EATON
Powering Business Worldwide






The safety you rely on.

Delivering world-class reliability and safety in high consequence harsh and hazardous environments

Only Eaton's Crouse-Hinds can deliver...

- Protection and safety of people and assets around the world with unsurpassed reliability and quality in every product we offer
- Industry leading innovation and product efficiency
- Product solutions designed and certified for global specifications
- Best-in-class, global sales, and customer service teams that provide local support

The Eaton advantage.

Crouse-Hinds series remains the brand that stands for safety in the harshest of environments when power management is most critical. While it all began with the Condulet®, the Crouse-Hinds brand has grown into the premier name for a comprehensive portfolio of solutions for high-consequence harsh and hazardous environments.

And now, the next phase in the evolution of the brand you trust: Crouse-Hinds joins the leading Eaton portfolio of reliable, efficient and safe electrical power management solutions.

More protection. More technology. Expect more.

EATON

Powering Business Worldwide

Table of Contents

Explosion-Protected Solutions - Worldwide-

With the brand of **CEAG** we develop and manufacture electrical products that provide safety, productivity, innovation and labour savings in hazardous, industrial and commercial environments- for more than 100 years.

We design, configure and manufacture explosion-protected electrical equipment for your safety. Of course we are certified for all functional areas according to the latest quality standards ISO 9001:2015 and in addition for the necessary explosion protection according to ISO/IEC 80079-34. We will implement consistently your specifications according to current national directives and standards at the application site.

In addition to systems and components built to ATEX Directive 2014/34/EU and European Standards, we also provide products with international approvals like IECEx (IEC Ex Scheme), UL and CSA (USA, Canada), INMETRO (Brazil) and NEPSI (China) as well as certifications of Eastern Europe testing and certification organisations and the new TR-CU Customs Union (EAC).

Global Support & Manufacturing

Our sales support and manufacturing facilities are strategically positioned around the world to deliver products close to your project. Whenever required we are there on-site during construction, commissioning and training.

Eaton's Crouse-Hinds Division manufactures in 5 continents and sells into more than 100 countries. We have dedicated sales support in every major location with local technical sales and engineering teams to support your immediate needs. As one of the largest oil & gas bulk electrical and instrument material suppliers, we can easily provide you a single source for all the components to complete your project on time and on budget.

EATON

Powering Business Worldwide

A Powerful Transformation

Rely on the names you trust for the safety you need

The CEAG brand you know is evolving. Our products, part of Eaton's Crouse-Hinds portfolio, are now united with Eaton's leading range of reliable, efficient and safe electrical power management solutions. Combined, we provide the world's largest portfolio of electrical equipment for explosive, classified, and industrial areas.

With unsurpassed product reliability and quality, industry-leading innovation and product efficiency, and products designed and certified for global specifications, Eaton's Crouse-Hinds solutions, including CEAG products, delivers proven solutions for harsh and hazardous environments.

CEAG have a new look as Crouse-Hinds by Eaton, but the products and technology you trust remain unchanged. From explosion-proof panelboards and lighting to connectivity and cable glands, the broadest offering of solutions for harsh and hazardous environments is now available from Crouse-Hinds by Eaton.

More protection. More technology.
Expect more.

0.1 Principles of Explosion-Protection

Overview

0

We like to offer you a one-day or multi-day seminars about the Principles of Explosion-Protection to get more detailed information on this important matter. Please see our web to find a seminar in your proximity. www.Crouse-Hinds.de.

The following overview about the Explosion Protection is only a small extract from our comprehensive brochure, which you can also download from our web-page www.Crouse-Hinds.de.

Overview

Hazardous area

Definition:

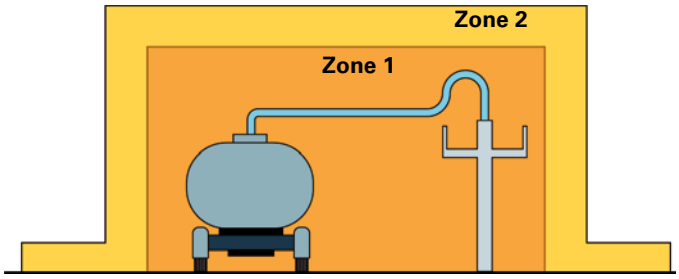
An area in which an explosive atmosphere is present, or may be expected to be present, in quantities such as to require special precautions for the construction, installation and use of electrical equipment (IEV 426-03-01).

NOTE:

A hazardous area is a three-dimensional region or space (EN 60079-14).

Zone classification

In accordance with EC-Directive 1999/92, hazardous areas are divided into six zones. The classification is based on the probability of the occurrence of an explosive atmosphere. In addition, distinction is made between flammable gases, vapours and mists on the one hand, and combustible dusts on the other. Information on the zone classification can also be found in the Explosion-Protection Rules of the Employers' Liability Insurance Association for the Chemical Industry and EN 60079-10.



Zone classification example: Loading/discharging flammable liquids from a road transport tanker without stand-alone ventilation.

Classification of hazardous areas

Zone 0

An area in which an explosive atmosphere consisting of a mixture of air with flammable substances in the form of gas, vapour or mist is present continuously or for long periods or frequently (EN 60079-14).

Zone 1

An area in which an explosive atmosphere consisting of a mixture of air with flammable substances in the form of gas, vapour or mist is likely to occur in normal operation occasionally (EN 60079-14).

Zone 2

An area in which an explosive atmosphere consisting of a mixture of air with flammable substances in the form of gas, vapour or mist is not likely to occur in normal operation, but if it does occur, will persist for a short period only (EN 60079-14).

Zone 20

An area in which an explosive atmosphere in the form of a cloud of combustible dust in air is present continuously or for long periods or frequently (EN 60079-14).

Zone 21

An area in which an explosive atmosphere in the form of a cloud of combustible dust in air is likely to occur occasionally in normal operation (EN 60079-14).

Zone 22

An area in which an explosive atmosphere in the form of a cloud of combustible dust in air is not likely to occur in normal operation, but, if it does occur, will persist for a short period only (EN 60079-14).

NOTE:

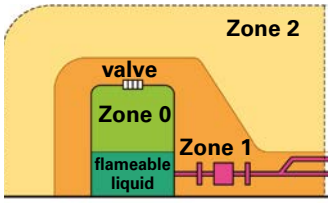
Layers, deposits and accumulations of combustible dust are to be considered in the same way as any other source that forms an explosive atmosphere. Normal operation is understood as being the state where installations are being used within their design parameters.

Examples of applications and the classification of suitable equipment:

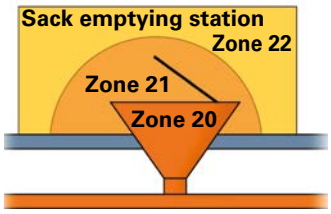
Zone 0

Zone 0 mainly encompasses areas such as the inside of enclosed containers, pipes and apparatus that contain flammable liquids. Here the respective operating temperature lies above the flash point. The potentially explosive atmosphere is above the surface of the liquid and not in the liquid. Most gases of flammable liquids are heavier than air and spread in a similar way to liquids. Cavities such as pits or pump sumps can usually accommodate these explosive gases for longer periods, so that it is also necessary to expect a Zone 0 area here. With equipment for Zone 0, ignition sources shall be protected against explosion even if the occurrence of failures is only rare. Hence, the equipment shall satisfy the following requirements:

Should one type of protection fail or should two faults occur simultaneously, sufficient protection against explosion shall still be ensured.



Example of the zone classification of explosive gas atmospheres to EN 60079-10-1



Example of the zone classification of explosive dust atmospheres according to EN 60079-10-2

The constructional requirements EN 60079-26 state that the necessary explosion-protection is attained if the equipment

- is built in accordance with the type of protection "ia" to EN 60079-11, Intrinsic Safety, or
- satisfies the requirements of two types of protection of the series EN 60079, which are effective independently of each other.

Thus, for example, flameproof luminaires were additionally pressurized or intrinsically safe apparatus in the type of protection „ib" were additionally potted. According to Directive 2014/34/EU, equipment for Zone 0 shall satisfy the requirements for Category 1G. In Zone 0 the hazard of an ignition due to electrostatic charges, even on rare occasions, shall be safely excluded. For this reason, the requirements according to

EN 60079-0 for equipment for use in Zone 0 exceed by far those for equipment for Zone 1.

Zone 1

Flammable or explosive substances are made, processed or stored in Zone 1. This includes the proximity of loading flap or filling and discharging facilities, the vicinity of fragile equipment, pipes and glands on pumps and slides that do not seal adequately. It is likely that an ignitable concentration will occur during normal operation.

Ignition sources that occur during normal, trouble-free operation and those that usually occur in the event of operating disturbances shall be safely prevented.

The chapter „Electrical equipment for use in hazardous areas" describes the individual types of protection. According to Directive 2014/34/EU, Zone 1 equipment that shall satisfy the requirements for Category 2G.

Zone 2

Zone 2 encompasses areas around Zone 0 and Zone 1, as well as areas around flanged joints on pipes in enclosed rooms. Furthermore, it includes such areas in which, due to natural or forced ventilation, the lower explosive limit is only attained in exceptional cases, such as the environment of outdoor installations. Flammable or explosive substances are manufactured or stored in Zone 2. The probability of the occurrence of an ignitable concentration is rare and, if one occurs, it only persists for a short period.

During normal, trouble-free operation, ignition sources shall be safely prevented.

According to Directive 2014/34/EU, apparatus for Zone 2 shall satisfy the requirements for Category 3 G. In addition, all equipment that satisfies the requirements for equipment for use in Zone 0 and Zone 1 is permitted.

Zone 20

Zone 20 mainly encompasses areas inside closed containers, pipes and apparatus in which combustible dust in the form of a cloud is present continuously or for long periods or frequently.

With equipment for Zone 20, ignition sources shall be protected against explosions, even if the occurrence of a malfunction is rare.

For this reason, equipment shall fulfil the following requirement:

In the event of the failure of one type of protection or the simultaneous occurrence of two malfunctions, it is necessary to ensure adequate explosion-protection. According to Directive 2014/34/EU, equipment for use in Zone 20 shall satisfy the requirements for Category 1D.

Zone 21

Among others, Zone 21 encompasses mills, warehouses for coal or grain, and the area surrounding filling stations. Here explosive clouds of dust can develop due, for example, to the occasional escaping of dust from the opening. The risk of hazards due to dust deposits is often underestimated. Explosive dust/air mixtures can develop due to the formation of a smoulder spot or of a low temperature carbonization gas, as well as due to the deflagration of a low temperature carbonization gas or the whirling-up of gas caused by glowing combustion.

Ignition sources that occur during normal, trouble-free operation and those that normally occur in the event of malfunctions shall be safely prevented.

The individual types of protection are described in the chapter „Electrical equipment for use in hazardous areas".

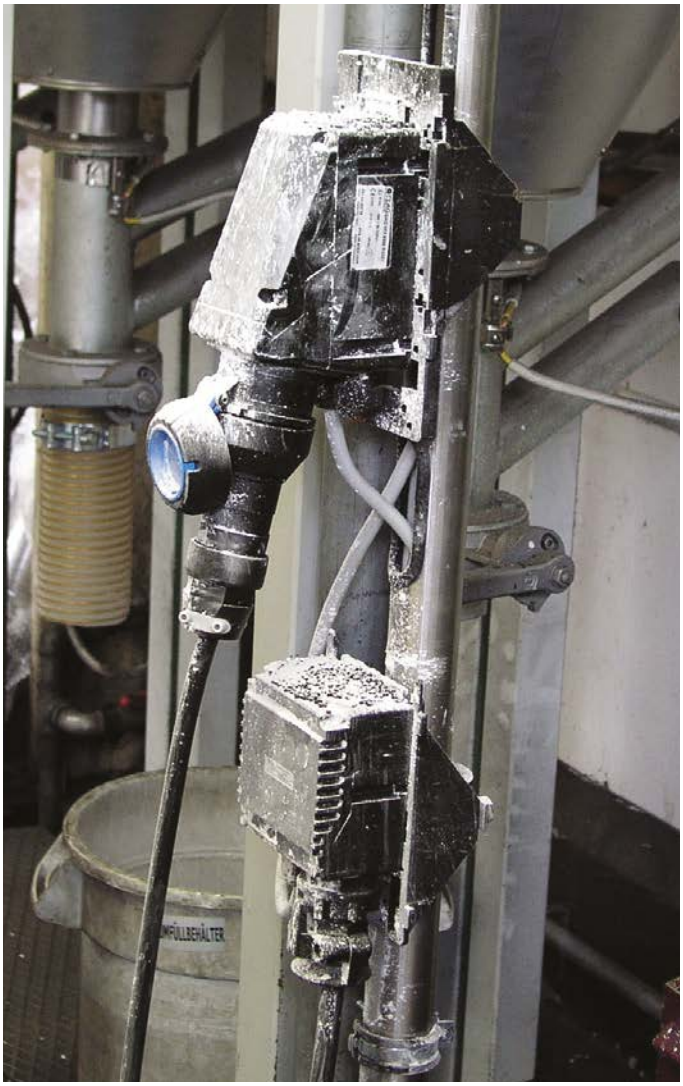
According to Directive 2014/34/EU, equipment for Zone 21 shall satisfy the requirements for Category 2D.

Zone 22

In Zone 22, under normal operating conditions it is unlikely that an explosive dust/air mixture will occur, but can occur, if there is a process failure and dust is lifted into the air.

Ignition sources shall be safely prevented during normal, trouble-free operation.

According to Directive 2014/34/EU, equipment for Zone 22 shall satisfy the requirements for Category 3D. Detailed information on all zones can be found in the chapter "Construction and operation of electrical installations in hazardous areas" of the separate brochure.



Example of dust Ex zone 21:
Explosion-protected plug and socket and terminal box in the field

Classification of explosion protected apparatus in equipment groups and categories

Cat.	Equipment Group I (for use in mines liable to be endangered by firedamp)
M 1	Equipment Group I is subdivided into the Categories M1 and M2. The equipment must continue to work even in the event of infrequent failures coinciding with an existing explosive atmosphere and must feature such protective measures against explosion so that • if one constructional protective measure fails, at least one other independent constructional measure will ensure the required safety,or • if two independent faults occur in combination, the required safety is still ensured.
M2	If an explosive atmosphere occurs, it must be possible to switch off the equipment. The constructional explosion-protection measures ensure the required degree of safety during normal operation, even under severe operating conditions and, in particular, in cases of rough handling and changing environmental influences.
Cat	**Equipment Group II (for use in all other places liable to be endangered by explosive atmospheres)**
1	Equipment Group II is subdivided into the Categories 1, 2 and 3. The equipment is intended for use in areas in which an explosive atmosphere is present continuously or for long periods or frequently. Even if equipment failures only occur infrequently, the equipment must ensure the required degree of safety and feature such explosion-protection measures that • if one constructional protective measure fails, at least one other independent constructional protective measure ensures the required degree of safety, or • if two independent faults occur in combination, the required degree of safety is still ensured.
2	The equipment is intended for use in areas in which an explosive atmosphere occurs occasionally. Even in the case of frequent equipment failures or faulty conditions that are normally to be expected, the constructional explosion-protection measures ensure the required degree of safety.
3	The equipment is intended for use in areas in which no occurrence of an explosive atmosphere due to gases, vapours, mists or whirled-up dust is to be expected. If, however, it occurs, then in all probability only rarely or for a short period. During normal operation the equipment ensures the required degree of safety.

Equipment groups and equipment categories

Equipment is classified in groups and categories:

1. Equipment group

- **Equipment group I**

applies to equipment intended for use in underground parts of mines and to those parts of surface installations of mines liable to be endangered by firedamp and/or combustible dust.

- **Equipment group II**

applies to equipment intended for use in other places liable to be endangered by explosive atmospheres.

2. Categories

See adjacent table

Marking

Each piece of equipment and each protective system shall be marked in a clear and indelible manner with the following minimum data:

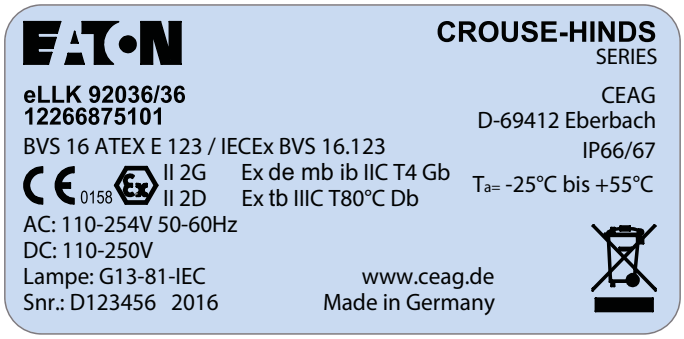
- **manufacturer's name and address**
- **CE marking and number of Notified Body, responsible for the monitoring of the quality system**
- **designation of the series and type**
- **serial number, if required**
- **the year of construction**
- **the special marking for explosion protected equipment together with the marking showing the category**
- **the letter "G" for apparatus group II for areas in which explosive mixtures of gas, vapour or mist with air mixtures are present**
- **and/or the letter "D" for areas where an explosive atmosphere can form due to dust.**

In addition and where required, any details that are indispensable for the safety of operation also have to be affixed.

Products that fall within the scope of given directives shall be provided with the **CE mark** by the manufacturer. This applies to products that are covered by the directives according to the new concept and include requirements relating to the technical properties of products.

These EC directives constitute binding regulations of the

Examples of markings:	
Ⓔx **II 1G**	Equipment group II Category 1 (Zone 0 equipment) (G = gases, vapours, mists)
Ⓔx **II 2G**	Equipment group II Category 2 (Zone 1 equipment) (G = gases, vapours, mists)
Ⓔx **II 3G**	Equipment group II Category 3 (Zone 2 equipment) (G = gases, vapours, mists)
Ⓔx **II 1D**	Equipment group II Category 1 (Zone 20 equipment) D = dust)
Ⓔx **II 2D**	Equipment group II Category 2 (Zone 21 equipment) D = dust)
Ⓔx **II 3D**	Equipment group II Category 3 (Zone 22 equipment) D = dust)



Example of a type label according to the latest standards and Directive 2014/34/EU

„European Union". This means that compliance with these requirements is the condition for marketing the products in Europe. When a product is provided with the CE marking, the conformity of the product with the relevant basic requirements of all directives applicable to the products is confirmed. The marking is, therefore, an imperative requirement for the placing on the market of products within the Community, as well as in the country of origin.

The CE marking is only meant as evidence of conformity with the directives for the supervising authorities and is not a quality mark.

Declaration of Conformity

In addition to marking products with the CE mark, the manufacturer shall issue a Declaration of Conformity for the product. This Declaration of Conformity shall clearly state which directive was applied and according to which standards the tests were carried out.

Conformity assessment procedures for equipment according to Directive 2014/34/EU

Depending upon the conformity assessment procedure to be applied, a notified body can be active during the design and engineering phase, during the production phase or during both phases. The applicable evaluation procedure is laid down in Directive 2014/34/EU according to the product, the group and the **equipment category.**

Equipment Groups I and II, Equipment Categories M1 and 1

In order to be permitted to affix the CE mark to his product, the manufacturer must arrange for the following procedures to be carried out:

- EC-type examination by a notified body and either
- an audit of the quality assurance for the production process or
- an audit of the products.

Equipment Groups I and II, Equipment Categories M2 and 2

With internal combustion motors and electrical apparatus, in order to be permitted to affix the CE mark on the product, the manufacturer must arrange for the following procedures to be carried out and/or ensure the following measures:

- **EC-type examination by a notified body and**
- **either guarantee of constructional conformity or**
- **verification of the required quality level by means of the quality assurance procedure for the products.**

The internal production control procedure shall be applied for all other equipment in these groups and categories.

Conformity assessment procedure				
Equipment Group	I and II	I and II	I and II	II
Category	M 1 and 1	M 2 and 2	M 2 and 2	3
Field of Application	• any apparatus • if applicable safety and control devices • components (*) • independent protective systems	• electrical apparatus • if applicable, safety and control devices • components (*) • I.C. engines	• other apparatus • components (*)	• any apparatus • safety and control devices • components (*)
Combination of procedures acc. to Annexes III to IX	EC type sample test to Annex III plus quality assurance of production acc. to Annex IV or inspection of products acc. to Annex V	EC type sample test to Annex III plus quality assurance of product acc. to Annex VIII or conformity with design IV	Internal production control acc. to Annex VIII plus submitting of technical documents to the designated test lab	Internal production control acc. to Annex VIII
Alternative: Individual EC test acc. to Annex IX				
(*) Components without affixed CE marking				

Equipment Group II, Equipment Category 3

In order to be permitted to affix the CE mark to the product, the manufacturer shall apply the internal production control procedure.

In order to place products on the market within the EU, the EC Declaration of Conformity shall be included with all products or batches of identical products. This does not apply to the report issued by the notified body as part of the audit of the quality assurance system of the manufacturer or the EC-Type Examination Certificate.

EATON
Powering Business Worldwide

EU-Konformitätserklärung
EU-Declaration of conformity
UE-Déclaration de conformité

BVS 09 ATEX E 034 (1)
GHG 900 1000 P0133 P

Wir / We / Nous

Cooper Crouse-Hinds GmbH
Neuer Weg-Nord 49
D-69412 Eberbach

erklären in alleiniger Verantwortung, dass das Produkt
hereby declare in our sole responsibility, that the product
déclarons de notre seule responsabilité, que le produit

Leuchte mit Leuchtstofflampen / LED-Modul
Luminaire with fluorescent lamps / LED-Module
Luminaire avec lampes fluorescentes / LED-Module

⟨Ex⟩ II 2 G / ⟨Ex⟩ II 2 D

eLL* ** ***/** *

den folgenden EU-Richtlinien, den entsprechenden harmonisierten Normen, und weiteren normativen Dokumenten entspricht.
complies with the following EU directives, their corresponding harmonised standards, and other normative documents.
correspond aux directives européennes suivantes, à leurs normes harmonisées, et aux autres documents normatifs suivants.

Bestimmungen der Richtlinie Terms of the directive Prescription de la directive		Titel und / oder Nr. sowie Ausgabedatum der Norm *Title and / or No. and date of issue of the standard* *Titre et / ou No. ainsi que date d'émission des normes:*
2014/34/EU: 2014/34/EU: 2014/34/UE:	Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen. *Equipment and protective systems intended for use in potentially explosive atmospheres.* *Appareils et systèmes de protection destinés à être utilisés en atmosphères explosibles.* *(OJ L 96, 29.3.2014, p. 309–356)*	EN 60 079-0: 2012 + A11: 2013 EN 60 079-1: 2014 EN 60 079-7: 2015 EN 60 079-11: 2012 (x) EN 60 079-18: 2015 (x) EN 60 079-28: 2015 (x) EN 60 079-31: 2014 (x) je nach angewandter Zündschutzart, acc. to type of protection, selon type de protection
		EN 60 598-1: 2008 + A11: 2009 EN 60 598-2-22: 1999 +A1 : 2003 + A2 : 2008 EN 60 529: 1991 + A1: 2000 + A2: 2013
2014/30/EU: 2014/30/EU: 2014/30/UE:	Elektromagnetische Verträglichkeit *Electromagnetic compatibility* *Compatibilité électromagnétique* *(OJ L 96, 29.3.2014, p. 79–106)*	EN 61 547: 2009 EN 55 015: 2013 EN 61 000-3-2: 2006 + A1: 2009 + A2: 2009 EN 61 000-6-2: 2005 EN 61 000-6-4: 2007 + A1: 2011
2011/65/EU: 2011/65/UE:	*RoHS –Richtlinie , RoHS – directive* *Directive RoHS* *(OJ L 174, 01.7.2011, p. 88–110)*	EN 50 581: 2012

Eberbach, den 17.05.2017

Ort und Datum
Place and date
Lieu et date

Dr. Matthias Stelzer
Geschäftsführer
Managing Director
Président-directeur général

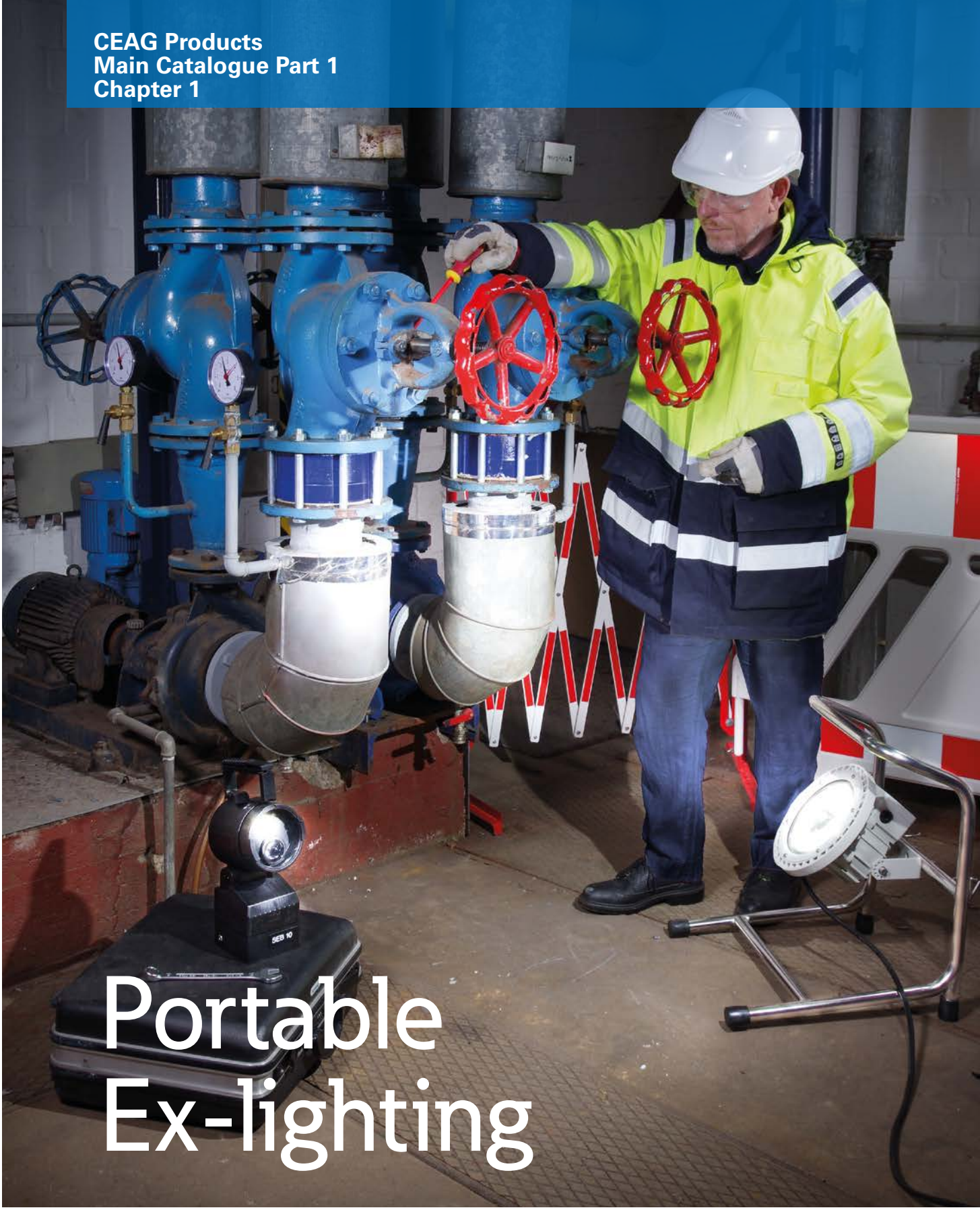
(1) Benannte Stelle (EU-Baumusterprüfbescheinigung)
Notified body (EU-type examination certificate)
Organisme notifié (Examen UE de type)

DEKRA EXAM GmbH (0158)
Dinnendahlstraße 9
D-44809 Bochum

BVS 14 ATEX ZQS/E332 (2)

(2) Benannte Stelle (Qualitätssicherung Produktion)
Notified body (Production Quality Assurance)
Organisme notifié (Assurance Qualité de Production)

DEKRA EXAM GmbH (0158)
Dinnendahlstraße 9
D-44809 Bochum



Portable Ex-lighting

Portable Ex-lighting

For your personal safety

From bright, safe and reliable lighting, even in confined spaces to flexible power provision, we know you face a myriad of challenges when servicing & maintenance your facility.

You are challenged with increasing efficiency and flexibility, reducing downtime and ensuring workplace safety, all while maintaining compliance with new and existing Ex regulatory requirements.

Eaton's Crouse-Hinds Ex portable solutions are specifically designed for the harshest environments where oils, chemicals, detergents and wash downs are commonplace.

Our products are designed to withstand extreme working conditions such as aggressive atmospheres, dust, heat or coldness in the most demanding environments.

Our field-proven Ex portable solutions put the safety of personnel and equipment in the first place.

Maintenance of industrial plants in hazardous areas

With the growing complexity of industrial plants, requirements also grow for safe operations and related to this, safer and more efficient maintenance.

The latter must be able to guarantee the safe functioning of a plant at any time, and hence to minimise the downtime.

This is a task which demands a lot of the servicing team.
It can become particularly difficult when service work is to be carried out in hazardous areas during operation, as the issuing of a hot work permit generally costs a considerable amount of effort and an inevitable stop in operations.
When selecting equipment, user's priority are on:

- Longevity
- Low maintenance effort
- Simple maintenance

Minimum Zone 1

Special attention has to be paid to portable electrical apparatus since there are no physical barriers between the hazardous areas, which are subdivided into zones.

For this reason, all portable solutions of our CEAG™ brand have been approved for Zone 1 hazardous areas. Zone 2 is automatically included.

Eaton's Crouse-Hinds Division also offers solutions for Zone 0 (which exists, for example in closed tanks), Zone 21 and Zone 22 hazardous dust Ex-areas.

Robustness for your safety

The portable solutions are mainly made of copper-free aluminium or high-quality impact resistant plastic (e.g. polyamide or polycarbonate). To reduce the surface resistance of the enclosures, conductive substances are added, thus preventing electrostatic charges.

You also do not need to pay extra care when transporting and installing the products. As for example our portable LEL is designed for portable use.

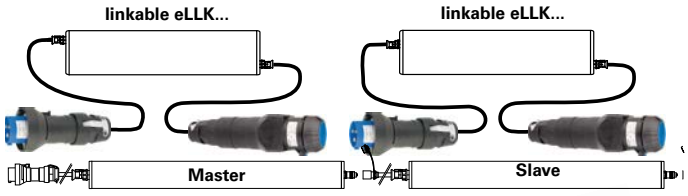
Advanced and most reliable lighting technology

All portable solutions are available with LED modules. The high-power LEDs with low energy requirement provide a uniform, pin-sharp light cone and, as a result, an optimal illumination of the working area.

In addition to this well proven light solutions with fluorescent lamps are also available.

Temporary Lighting

Equipped with the appropriate accessories such as hooks, pipe clamps or magnets the eLLK and machine lamp range can be used for temporary lighting. They can even be linked together up to 7 light fittings, which provide a spotless light chain without reducing light output.



Do not get left in the dark

In the event of a power failure or emergency situation you can rely on our battery backed up portable lighting. For example the portable Ex searchlight SEB 10 provides you with approximated 6 hours with 230 lumen guiding you the way out.

Portable Ex-floodlight

The light weight Zone 1 and 21 LEL LED floodlight with its high lumen output is ideal for the illumination in harsh & hazardous areas.

Hand- & machine lamps

Mains powered linear light fittings with a wide variety of lumen output from 200 up to 4780 lm for every lighting need, in 180° (indirect illumination) or 360° (all-round illumination) light output available.

Ex-torchlights

Reliable and safe,the Stabex series is particularly suitable for use during rescue and emergency operations, as well as for control and inspection patrols. Stabceag 0* is suitable with matching accessories even as a helmet lamp.

Ex-searchlights

Extremely robust and bright searchlights, the SEB 10 and HE9 Basic LED are ideally suited for use in all work areas with high mechanical requirements and a harsh & hazardous environment.

Portable Ex-torches and searchlights

For your personal safety

Field of application

Wherever a reliable, safe and flexible light source is needed, explosion-protected portable CEAG lamps used for industrial applications such as security patrols, inspections and repair work. The police and fire brigade use explosion-protected lamps to ensure safety at the scene of an accident, in case explosive substances are present. Besides reliability and safety, explosion-protected portable lamps must meet the standard requirements of handling, weight, lighting properties and operating time. Explosion-protected portable lamps must not be opened in explosive atmospheres. Similarly, batteries may only be charged outside the hazardous area and only specified batteries shall be used.

Minimum safety standard: minimum requirement is Zone 1

Since there are no physical barriers between the hazardous areas, which are subdivided into zones, special attention has to be paid to portable electrical apparatus. For this reason, all portable lamps of our "CEAG" brand have been approved minimum for Zone 1 hazardous areas. Zone 2 is automatically included. Eaton's Crouse-Hinds Division also offers solutions for Zone 0 (which exists, for example in closed tanks), Zone 21 and Zone 22.

Material choice

The light fittings described in this catalogue are mainly made of high-quality impact resistant plastic (e.g. polyamide or polycarbonate). To reduce the surface resistance of the housings, conductive substances are added, thus preventing electrostatic charges. All plastics used can be recycled. Housings of explosion-protected electrical equipment shall have a minimum degree of protection of IP54, whereby CEAG portable lamps normally meet the requirements for the degrees of protection IP65 and IP66.
We also offer a torch in the high degree of protection IP68; this is designed especially for use under extreme conditions, e.g. in flood areas.

Scratchproof mineral glass is used for the light aperture. This ensures that, even in harsh conditions, the light aperture remains clear for the duration of its use.

Battery technology

Our explosion-protected portable lamps can be fitted with rechargeable (secondary cells) or non-rechargeable (primary cells) batteries. Which battery is best from an economical point of view depends on the respective application. If lamps are used on an irregular basis, high-quality primary cells (alkaline manganese batteries) to IEC 60086 should be used. If the lamps are used frequently, it is preferable to use gas-tight, rechargeable lithium-ion (LiIon), nickel-metal hybrid (NiMH) or nickel cadmium (NiCd) batteries. In addition to the fact that they are extremely economical, the outstanding characteristics of these batteries are the constant voltage, the high energy density and the suitability for use in hazardous areas. Batteries have to be recycled and are almost 100 % reusable.

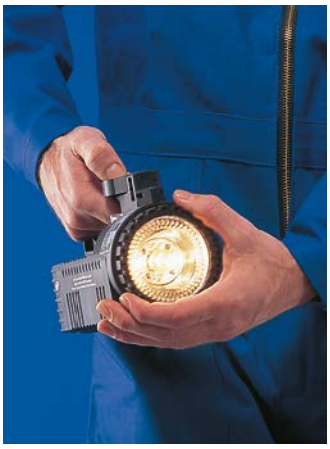
Ergonomics: Single-handed operation

All portable lamps are designed for "single-handed operation". This means they can be switched on and off with one hand (even when wearing safety gloves), while the other hand is free for other tasks.

Guidance of light

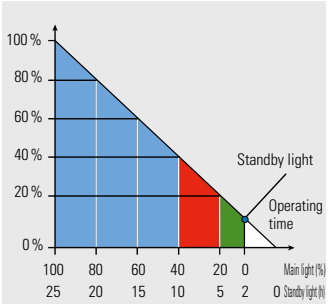
In order to achieve optimum lighting properties, all components are analysed, calculated and measured. The development and manufacture of the series are based on the results of our in-house light laboratory. The range diagrams for our portable lamps are based on the polar curves established by our own state of the art in-house lighting laboratory.

These diagrams provide information on the average illuminance of the light beam in relation to the distance.

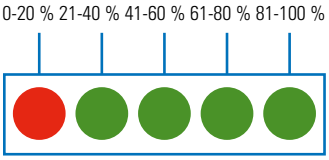


Charge state indication and safety functions

Depending on the type of lamp, the state of charge of the energy storage devices used is determined by means of a customised microprocessor techonology and is indicated by coloured LEDs. When a minimum capacity is reached, certain lamp types switch over automatically to an energy-saving secondary light to allow the user to leave the hazardous area safely before the batteries are fully discharged. The lighting electronics monitor the charging parameters and ensure a gentle and life-prolonging charging of the battery. As a basic high quality approach the CEAG lamps have deep-discharge protection.



Function „Indication for residual operating time" SEB 8/SEB 9/SEB 10

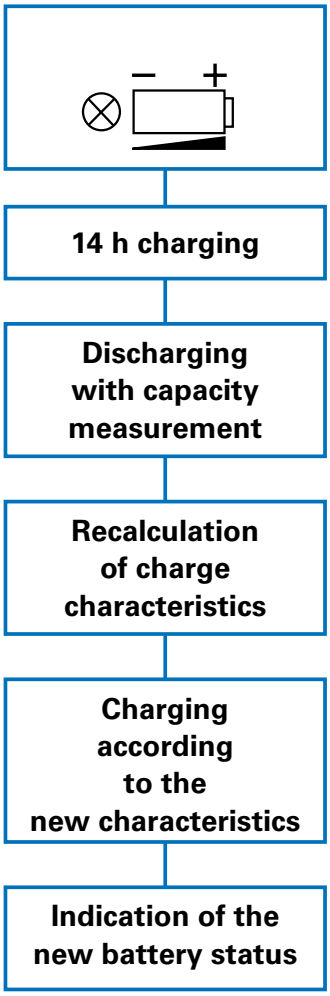


Function

Service operation of SEB 8/ SEB 9 portable searchlights:

– for conditioning the battery and the regeneration of the battery capacity.

This leads to the optimisation of the battery life and a high reliability, performance and service life of the lamp.



Service operation workflow of an SEB8/9

The right light for every type of operation

Each type of operation calls for a specially selected light. The requirements for lights for inspection work, where a searchlight is rarely needed or is only needed for a short time, are different to those for lights for repair work, where a powerful, robust light with a long operating time is needed all the time. Our hand lamp product range provides a suitable light for almost every application.

Due to their size and the use of primary cells, the Stabex series and Stabceag 0 torches are suitable for inspections on a regular basis and as a constant companion for the personnel security.

The powerful HE 9 Basic LED hand lamp with its powerful lithium-ion battery can be used as a work light or searchlight.

The robust SEB searchlight series is used by the mobile task forces of fire brigades and rescue services, as well as for maintenance and repair work in all hazardous areas. It meets the requirements of the fire brigade standard DIN 14642. A luminous intensity of up to 19,000 cd allows light to be projected up to 150 m. A consistent working light can be achieved with a diffusing lens, which is supplied with the lamp for the SEB 8/9. The SEB 10 provides a similar working light without an additional lens.

Due to the battery capacity, long operation times of up to 7 hours do not pose a problem. The special SEB 8-ADR can be used for hazard warning during the transportation of hazardous goods.

Features of explosion protected hand-lamps

Type	Zone	Power supply	Page	Features	Lighting technology
Torches					
Stabex mini	1, 2, 21, 22	Primary cells 2 x R6/LR6	1.1.9	Single-handed operation	Incandescent lamp
Stabex mini LED	1, 2, 21, 22	Primary cells 3 x R6/LR6	1.1.9	Single-handed operation	LED
Stabex HF	1, 2, 21, 22	Primary cells 2 x LR20	1.1.9	Single-handed operation, can be focussed	Halogen lamp
Stabex HF LED	0, 1, 2, 21, 22	Primary cells 2 x LR20	1.1.9	Single-handed operation	LED
Stabceag 0	0, 1, 2, 21, 22	Primary cells 4 x R6/LR6	1.1.9	Single-handed operation	LED
Searchlight basic					
HE 9 Basic LED	1, 2	Battery insert with Li-Io battery, 4.8 Ah, plug-in charger	1.1.19	Plug-in charger	LED power module
Searchlights premium					
SEB 8	1, 2, 21, 22	Integrated NC battery 4x7Ah, LG 443 charger, motor vehicle charger 90	1.1.24	Capacity indication, can be focussed, secondary light, servicing circuit	Halogen lamp with double bulb
SEB 8 L	1, 2, 21, 22	Build-in charger with NC-Accu 4 x 7 Ah LG 443 charger, motor vehicle charger 90	1.1.24	Capacity indication, can be focussed, secondary light, servicing circuit, mains charger cable with plug	Halogen lamp with double bulb
SEB 9	1, 2, 21, 22	Integrated NC battery 4 x 9.5 Ah, LG 443 charger, motor vehicle charger 90	1.1.24	Capacity indication, can be focussed, secondary light, servicing circuit	Halogen lamp with double bulb
SEB 9 L	1, 2, 21, 22	Build-in charger with NiMh-battery 4 x 9.5 Ah LG 443 charger, Motor vehicle charger 90	1.1.24	Capacity indication, can be focussed, secondary light, servicing circuit, mains charger cable with plug	Halogen lamp with double bulb
SEB 10	1, 2, 21, 22	Build-in $LiFePO_4$-battery 9.9 V 2.5 Ah, LG 443 charger, motor vehicle charger 90	1.1.24	Capacity indication, searchlight, boost function	2 high power-LED lens systems
SEB 10 L	1, 2, 21, 22	Build-in charger with $LiFePO_4$-battery 9.9 V 2.5 Ah, LG 443 charger, motor vehicle charger 90	1.1.24	Capacity indication, searchlight, boost function, mains charger cable with plug	2 high power-LED lens systems
Hand- and machine lamps					
Handlamp HL d 43 d ..	1, 2, 21, 22	5 m mains cord	1.1.34	Mains light fitting, robust protective tube	Fluorescent lamps
Handlamp HL d 43 .. LED	1, 2, 21, 22	5 m mains cord	1.1.34	Mains light fitting, robust protective tube	LED
Machine lamp ML .. d ..	1, 2, 21, 22	5 m mains cord	1.1.34	Mains light fitting, robust protective tube	Fluorescent lamps
Machine lamp ML .. d LED	1, 2, 21, 22	5 m mains cord	1.1.34	Mains light fitting, robust protective tube	LED
Temporary linear light fittings type eLLK and machine lamps					
Temporary eLLK 92018/18	1, 2, 21, 22	mains cord 10 m H07RN-F 3 with Ex-plug 16 A 3-pole	1.1.33	with trumpet shaped cable gland and 2 eye bolts A2 M8 stainless steel A2	Fluorescent lamps
Temporary eLLK LED 400	1, 2, 21, 22	mains cord 10 m H07RN-F 3 with Ex-plug 16 A 3-pole	1.1.33	with trumpet shaped cable gland and 2 eye bolts A2 M8 stainless steel A2	LED
Temporary Basic ML 60d LED36	1, 2, 21, 22	mains cord 5 m H07RN-F 3 without plug	1.1.33	with trumpet shaped cable gland	LED
Explosion protected portable Floodlight LEL Portable					
LEL Portable 5L, LED-system 50 W	1, 2, 21, 22	mains-cord 5 m with CEE Ex-plug 3-pole 6h	1.1.36	with trumpet shaped cable gland and with floor stand	LED

Ex-torchlight Series Stabex & Stabceag 0

(Zone 0, 1, 2, 21, 22)

The lights for all kinds of application

Compact and powerful, these torches are particularly suitable for use during rescue and emergency operations, as well as for control and inspection patrols. Depending on the type, it has been approved for all explosive gas atmospheres and explosive dust atmospheres in Zones 21 and 22 and provides optimum safety, even in unpredictable situations.

Zone 0 for tank inspection

With its Zone 0 approval the Stabex HF LED or Stabceag 0 is the ideal portable torchlight for tank inspection. With a powerful LED light source even large tanks can be inspected within Zone 0.

Always ready to hand

The particularly handy Stabex mini torch light series with fastening clip is a perfect personal light source for all inspection tasks. This torch light series is available with incandescent lamps or as LED version. The larger Stabex HF series features a wrist strap and can be worn and operated comfortably and securely with only one hand- even while wearing working gloves. This series is available with both halogen lamp and LED technology. The Stabceag 0 is delivered with batteries according the ATEX certificate and ready to use immediately. A highlight presents the helmet holder accessories, which makes Stabceag 0 suitable as an helmet torch.

Features

- Single-handed operation even with work gloves
- High degree of protection IP 65/66/68
- LED technology: Stabex mini LED, Stabex HF LED and Stabceag 0
- Stabceag 0 even suitable as helmet light
- Scratchproof mineral glass

Ordering details





Type	Scope of delivery	Order unit	Order No.
Stabex mini	with incandescent lamp, without battery	10	**1 1358 000 001**
Stabex mini LED	with LED, without battery	10	**1 1360 000 006**
Stabex HF	with halogen-incandescent lamp, without battery	1	**1 1359 000 001**
Stabex HF LED	with 2 W LED, without battery	1	**1 1359 001 001**
Stabceag 0	with 3 W LED, incl. battery	1	**1 1380 100 001**

Accessories





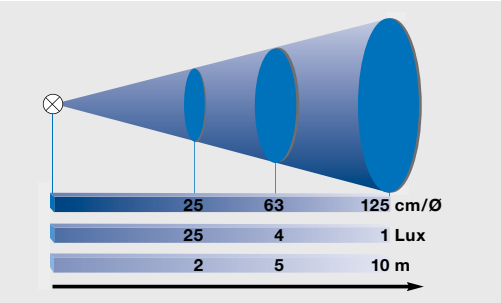


Type	Scope of delivery	Order unit	Order No.
Incandescent lamp 2.2 V/0.4 A	for Stabex mini	10	**1 1358 000 070**
Halogen lamp 2.8 V/ 0.5 A	for Stabex HF	10	**1 1359 000 070**
Bumbag	for Stabex mini LED	1	**3 1360 006 900**
Helm accessories: mounting clip left/right	for Stabceag 0: Glass-fibre reinforced polyamide, weight approx. 11 g, dimensions 50 x 40 mm (please order helmet holder or mounting strap separately)	10	**3 1380 100 103**
Helmet accessories : Helmet holder for right side use	for Stabceag 0: Polyamide, PA 66, weight approx. 50 g, dimensions 65 x 45 mm (please order mounting clip separately)	10	**3 1380 100 102**
Helmet accessories: Helmet holder for left side use	for Stabceag 0: Polyamide, PA 66, weight approx. 50 g, dimensions 65 x 45 mm (please order mounting clip separately)	10	**3 1380 100 101**
Helmet accessories: Helmet mounting fastening strap with inegrated lamp holder (for helmet without edge)	for Stabceag 0: Polyamide, EMD, weight approx. 60 g, dimensions 35 x 60 mm (please order mounting clip separately)	10	**3 1380 100 105**
Bumbag	for Stabceag 0	10	**3 1380 100 106**

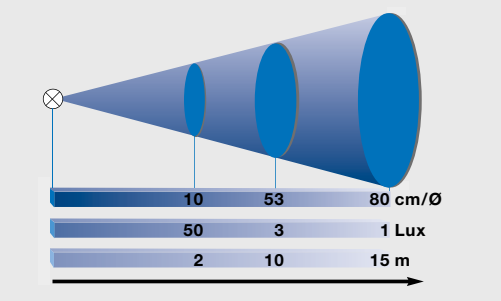
Dimension drawing / Range-diagram

Ex-torchlight Stabex

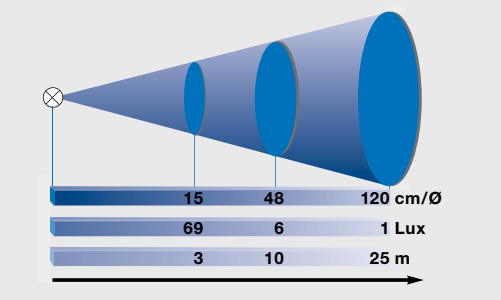
Range-diagram Stabex mini



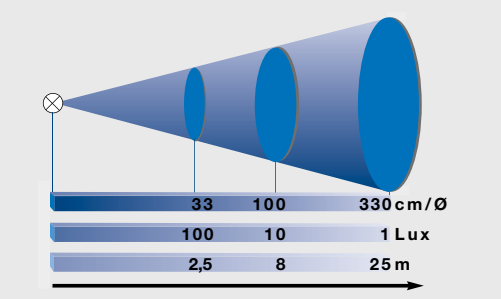
Range-diagram Stabex mini LED



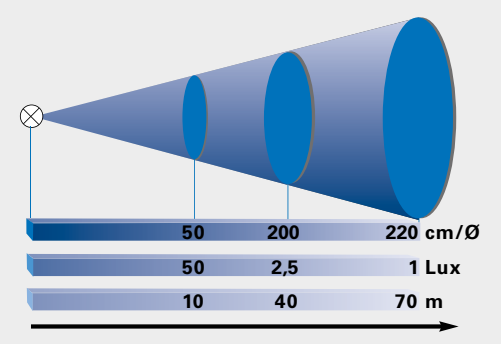
Range-diagram Stabex HF



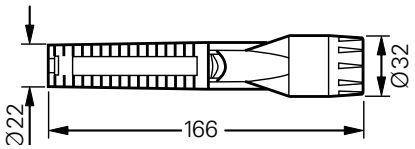
Range-diagram Stabex HF-LED



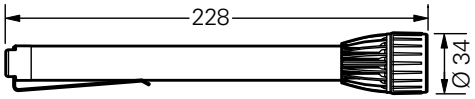
Range diagram Stabceag 0



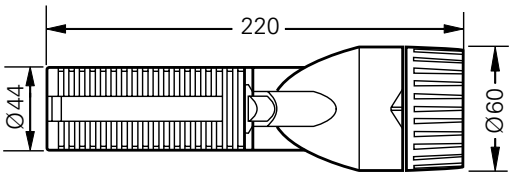
Dimension drawing Stabex mini



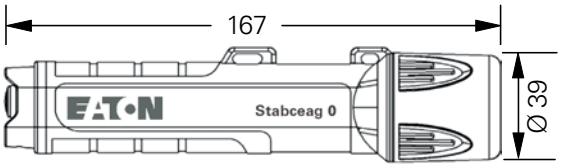
Dimension drawing Stabex mini LED



Dimension drawing Stabex HF/HF-LED



Dimension drawing Stabceag 0



Dimensions in mm

Technical data

	Stabex mini	Stabex mini LED	Stabex HF	Stabex HF LED	Stabceag 0
EC-Type Examination Certificate	PTB 98 ATEX 2061	BVS 08 ATEX E 158	BVS 11 ATEX E 174	BVS 11 ATEX E 174	BVS 13 ATEX E 021 X
IECEx Certificate of Conformity		IECEx BVS 11.0001	IECEx BVS 14.0072	IECEx BVS 14.0072	IECEx BVS 13.0034X
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex e ib IIC T4 Gb	Ⓔx II 2 G Ex e ib IIC T4/ Ⓔx II 2 D Ex tD A21 IP66 T85 °C	Ⓔx II 2 G Ex e ib IIC T4 Gb Ⓔx II 2 D Ex tb IIIC T57 °C Db	Ⓔx II 1 G Ex ia IIC T4 Ga Ⓔx II 2 D Ex tb IIIC T80 °C Db	Ⓔx II 1 G Ex ia IIC T4 Ga Ⓔx II 2 D Ex ib IIIC T105 °C Db IP68
Marking accd. to IECEx		Ex ib IIC T4 Gb Ex tb IIIC T85°C Db IP66	Ex e ib IIC T4 / Ex tb A21 IP65 T57 °C Db	Ex ia IIC T4 Ga / Ex tb IIIC T80 °C Db	Ex ia IIC T4 Ga / Ex ib IIIC T105 °C Db IP68
Permissible ambient temperature	-20 °C up to +40 °C; specified data: 0 °C up to +30 °C (battery)	-20 °C up to +40 °C; specified data: 0 °C up to +30 °C (battery)	-20 °C up to +40 °C; specified data: 0 °C up to +30 °C (battery)	-20 °C up to +40 °C; specified data: 0 °C up to +30 °C (battery)	20 °C up to +40 °C; specified data: 0 °C up to +40 °C (battery)
Battery	2 dry cell AA-size IEC 60086 R 6/LR 6	3 dry cell AA-size IEC 60086 R 6/LR 6	2 batteries IEC 60086 LR 20	2 batteries IEC 60086 LR 20	4 dry cell AA-size IEC 60086 R 6/LR 6
Rated operating duration	approx. 8 h	approx. 8 h	12 h	9 h	approx. 15 h
Switch	ON - OFF	ON - OFF (focusable)	ON - OFF (focusable)	ON - OFF	ON - OFF
Protection class	III	III	III	III	III
Lamp / Illuminant	2.2 V/0.4 A incandescent lamp	1 W Power LED	2.8 V/0.5 A halogene lamp	2 W Power LED	3 W Power LED module (120 lm)
Rated luminous flux	approx. 7 lm	approx. 20 lm	17 lm	approx. 70 lm (luminous flux of the luminaire)	approx. 70 lm (luminous flux of the luminaire)
Lamp cap	E10		PX 13.5s		
Dimensions (L x W x H)	166 x Ø 32 mm	208 x Ø 34 mm	220 x Ø 60 mm	220 x Ø 60 mm	167 x 39 mm
Diameter	32 mm	34 mm	60 mm	60 mm	39 mm
Enclosure colour	black	black	black	black	red
Enclosure material	Polycarbonate	Aluminium	Polyamide	Polyamide	XAG (plastic)
Weight	approx. 0.07 kg (without battery)	approx. 0.12 kg (without battery)	approx. 0.25 kg (without battery)	approx. 0.29 kg (without battery)	80 g without battery / 200 g with battery
Light aperture	Ø 23 mm, mineral glass	Ø 24 mm, mineral glass	Ø 48 mm, mineral glass	Ø 48 mm, mineral glass	Ø 26 mm, mineral glass
Degree of protection accd. to EN 60529	IP65	IP66	IP65	IP65	IP68
Scope of delivery	with incandescent lamp, without battery (order unit 10 pcs.)	with LED, without battery (order unit 10 pcs.)	with incandescent lamp, without battery	with LED, without battery	with LED, including batteries

Ex-searchlight HE 9 Basic LED

(Zone 1, 2)

Lots of light, little weight

This extremely robust and bright searchlight HE 9 Basic LED with the high degree of protection IP 65 is ideally suited for use in all work areas with high mechanical requirements and a humid environment.

Approved for Zones 1 and 2, the HE 9 Basic LED is the ideal hand lamps for security and inspection patrols, as well for inspection maintenance and repair work where an explosive atmosphere is to be expected.

Light weight and powerful

Weighting merely 780 grams, the explosion-protected hand lamp HE 9 Basic LED can be used for approx. 8 hours without causing performance loss and allows the optimal illumination of your working area.

Perfectly prepared

The powerful and environmentally friendly lithium-ion battery of the HE 9 Basic LED impresses with its high energy density and low weight, which allows an improved handling.

Without a memory effect, it always provides a reliable power supply. The integrated electronics ensure reliable protection against deep discharge and overcharge. As a result, you will always have the optimum operating time available.

Simple handling - bright light

Despite of the low power requirement, the highly efficient and impact resistant LED lighting technology provides a very high luminous intensity. Together with a lens and a reflector, the 3 W power LED produces a bright and uniform light distribution, thus ensuring an optimum illumination of the work area.

The rotary switch of the HE 9 Basic LED can be operated conveniently with one hand, regardless if left or right hand - even when wearing work gloves.

Features

- 3 W power LED provides high light output
- Operation time 8 h
- Light weight, compact design for improved handling
- Scratch-proof mineral glass lens guarantees optimum light
- High degree of protection IP65
- Li-Ion battery - no memory effect
- With integrated deep-discharge and overcharge protection
- Compact plug-in charger of HE 9 Basic Series
- Compatible with existing accessories of the HE 9 Basic (charger, battery)

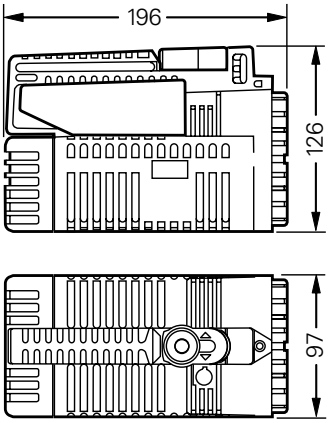
Ordering details

Type	Scope of delivery	OU	Order No.
HE 9 Basic LED incl. Charger plug	Package deal Lamp HE 9 Basic LED 11118009410 and Plug In charger11518009111	1	**1 1118 800 800**
HE 9 Basic LED	with 3 W LED module, with accumulator	1	**1 1118 009 410**

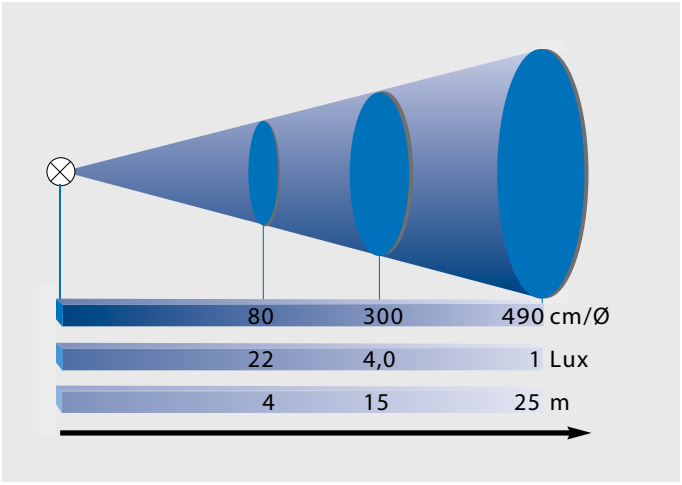
Accessories

Type	Scope of delivery	Application	OU	Order No.
Charger plug 100 - 240 V AC with charging indication	line cord 1.8 m with plug	for HE 9 Basic LED	1	**1 1518 009 111**
Battery insert with Li-Ion-accumulator 3.75 V/4.8 Ah		for HE 9 Basic LED	1	**2 1118 910 001**

Dimension drawing HE 9 Basic LED



Range-diagram HE 9 Basic LED



Technical data

	HE 9 Basic LED
EC-Type Examination Certificate	BVS 11 ATEX E 087
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex ib IIC T4 Gb
Permissible ambient temperature	-20 °C up to +40 °C; specified data: 0 °C up to +40 °C (battery)
Battery	Li-Ion-accumulator 3.75 V / 4.8 Ah
Rated operating duration	approx. 8 h
Switch	3 positions „main light - Off - main light“
Protection class	III
Lamp / Illuminant	3 W LED module
Luminous flux of the luminaire	92 lm
Dimensions (L x W x H)	196 x 97 x 126 mm
Function	– Easily replaceable battery insert – with deep-discharge and overcharge protection
Enclosure colour	black
Enclosure material	Polyamide
Weight	0.78 kg (with battery)
Light aperture	Ø 71 mm, mineral glass
Degree of protection accd. to EN 60529	IP65

Ex-Searchlight series SEB 8 .., SEB 9 .. and SEB 10

(Zone 1, 2, 21, 22)

Portable searchlights for harsh conditions

The explosion-protected portable searchlight series SEB 8/9/10 provides a strong and reliable light source for inspection, maintenance and repair work in almost all explosive gas and dust atmospheres. In addition to this, these searchlights with their integrated emergency lighting function can also be used for safety lighting, in the ADR version as a warning light in accordance with the traffic regulations and in the DIN version as the preferred fire service light.

Technique for your safety

This extremely robust and bright series of searchlights with the high degree of protection IP 65 is ideally suited for use in all work areas with high mechanical requirements and a humid environment. They reliably supply a light intensity of up to 19,000 cd. Depending on the used type this is ensured by the bright 5.5 W halogen main bulb or the two high-power LEDs of SEB 10 series together with the corresponding maintenance-free, high-performance battery.

Don't get left in the dark

Five LEDs supply information on the current operation and charge status at all times. Thus, the SEB 8/SEB 9/SEB 10 shows you in good time whether the battery is discharged or charged, or if it needs to be replaced. In addition, the circuit protects the electronics against deep discharge and overcharge - only the energy actually consumed is recharged. This increases the lifetime of the battery. So that the user does not get left in the dark, the searchlight automatically turns on the secondary light in the event of a filament break of the main bulb or before the end of the battery capacity.

Search and working light

The explosion-protected portable SEB 8/SEB 9/SEB 10 searchlights are suitable for control and rescue operations of fire departments and emergency services. The electronics of the lights is protected fully against electromagnetic fields (EMV) that occur, for example during the operation of radio equipment. They also comply with the EU Directive 95/54/EC concerning EMC requirements for radio interference suppression for use in motor vehicles (e1 certificate). Especially for applications where a consistent working light is required, the slip-on prismatic lens (SEB8 / 9) or the separate work light of the SEB 10 provides automatically a square-shaped illumination with an even light distribution- without significant losses. By fitting coloured slip-on filters they can be used also for signalling and warning purposes (red, green, orange).

Features

- Operational safety due to the indication of the available duration
- Innovative LED lens system with optimised light power (SEB 10) up to 365 lm
- Broken filament detection and automatic switch over to secondary light for halogen version
- Focussing beam- from searchlight to work light (SEB 8/9) or 2-lens system with search and work light (SEB 10)
- No overcharging of the battery due to a recharge dependent on the used capacity
- High degree of protection IP65

SEB 10 - the LED solution

The new SEB 10 / SEB 10 L series with innovative LED technology offers several innovations:

- 2-lens system for optimised light distribution (search / work light)
- Lithium iron phosphate battery with excellent energy density for long life
- Searchlight boost circuit for temporary increase of the light flow to approx. 150 %
- Safety circuit for low battery capacity, the current is reduced to 50%, resulting in a safety margin of approx. 30 - 60 min.
- Shock and vibration resistant construction- no broken filament possible.

Of course, all relevant standards of the latest generations are met. The use in fire brigade vehicles is possible due to the compliance with the latest DIN 14642.

Tailor-made charging technique

Depending on the application, we offer different charging options for our searchlights. All versions can be charged by connecting them to the 10-33 V vehicle supply with our vibration-proof Kfz.90 vehicle charger, or the mains supply (230 V ~) with the LG 443 charge. The types SEB 8 L / SEB 8 L / SEB 9 L / SEB 10 L can also be charged directly at 230 V ~ mains by an integrated power supply with a connection cable in the head of the luminaire.

Approved searchlight for public forces

Thanks to the universal application possibilities and the compliance with all relevant standards, the complete SEB series is suitable for control and rescue operations of fire departments and emergency services of all kinds.

Therefore, it is listed at almost all professional and volunteer fire brigades in Germany and has been very successfully for many years.

The robust, tried and tested technology in the high degree of protection IP 65 ensures reliable operation even under high mechanical stress and in a humid environment. The ergonomic one-hand operation ensures a user-friendly handling.

With the NiCd or NiMh battery and an operating time of 5.5 resp. 7 hours, the SEB 8/9 provides reassuring safety reserves on site and surpasses the requirements of the relevant standard by far. The SEB 10 has a powerful lithium iron phosphate battery and ensures 6 hours of operation.

Depending on the type of luminaire, the focussing from search to work light and a max. luminous intensity of 19,000 cd/ 12,000 cd or the new two-lens technology of the LED version is available. Thus, all required lighting tasks are met exactly according to the standard.

Approvals and test certificates

These searchlights are the only ones of this kind to meet the construction and test standards listed below; they have been issued with the following approvals and test certificates:

- DIN14642 (German Institute for Standardisation) for explosion protected hand lamps with motor vehicle charger, edition 7/2011, for equipping fire brigade vehicles.
- EC Type Examination Certificate for explosion protection in explosive gas and dust atmospheres (ATEX Certificate)
- ECC type approval of the Federal Office for Motor Vehicles for meeting the requirements of the EMC Directive 95/54/EC for use in motor vehicles (e1 certificate)
- Shock test report according to DIN EN 60068-2-27 for the use of the light fittings in fire brigade vehicles (DIN 1846-2:2001)
- General design approval of the Federal Office for Motor Vehicles for the use of the SEB 8 as a warning light (type SEB 8 ADR).

Ordering details

Serie SEB 8 / SEB 9 / SEB 10

Ordering details

Type	Scope of delivery	Order unit	Order No.
SEB 10 incl. LG 443	Package unit lamp SEB 10 - 1 1147 000 820 and LG 443 1 1540 000 443	1	**1 1147 443 820**
SEB 10 incl. Motor vehicle charger 90	Package unit lamp SEB 10 - 1 1147 000 820 and Vehicle charger 1 1145 000 792	1	**1 1147 792 820**
SEB 10 incl. signal discs (red/orange/green)	Package SEB 10 incl. coloured signal discs 1 red, 1 orange, 1 green 2 1147 300 000	1	**1 1147 300 820**
SEB 10	with twin-lens high power LED system Lithium-Iron-Phosphate battery (rechargeable with LG 443 or motor vehicle charger 90)	1	**1 1147 000 820**
SEB 10 L	with twin-lens high power LED system Lithium-Iron-Phosphate battery (rechargeable rechargeable directly about mains lead, with LG 443 or motor vehicle charger 90)	1	**1 1147 000 810**
SEB 9	with halogen lamp with double bulb, pilot, diffusing lens and battery (rechargeable with LG 443 or motor vehicle charger)	1	**1 1147 009 002**
SEB 9 L	with halogen lamp with double bulb, pilot, diffusing lens and battery (rechargeable directly about mains lead, with LG 443 or motor vehicle charger 90)	1	**1 1147 009 001**
SEB 8	with halogen lamp with double bulb, pilot, diffusing lens and battery (rechargeable with LG 443 or motor vehicle charger)	1	**1 1147 000 002**
SEB 8 L	with halogen lamp with double bulb, pilot, diffusing lens and battery (rechargeable directly about mains lead, LG 443 or motor vehicle charger 90)	1	**1 1147 000 001**

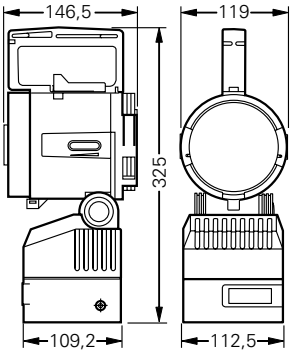
Accessories

	Type	Content	Application	Order unit	Order No.
	Halogen lamp with double bulb 5.5 V/ 5.5 W		for SEB 8 and SEB 9	1	**1 2061 000 040**
	Incandescent lamp 4.8 V/ 0.3 A (pilot lamp)		for SEB 8/9	10	**1 2041 450 000**
	Motor vehicle charger 90	Charger 10 V - 33 V DC	for SEB 8/9/10	1	**1 1145 000 792**
	Wall bracket SW	console without charging module	for SEB 8/9/10	1	**1 1145 000 795**
	LG 443	220 V - 250 V AC	for SEB 8/9/10	1	**1 1540 000 443**
	Signal discs	coloured signal discs 1 red, 1 orange, 1 green	for SEB 8/9/10	1	**2 1147 300 000**
	Battery set with LiFe P04 battery set 9.6 V/ 3 Ah, rechargeable		for SEB 10/ 10L	1	**2 1147 904 012**
	Battery set with NC battery 4.8 V/ 5 Ah, rechargeable		for SEB 8/8L DIN	1	**2 1147 512 000**
	Battery set with NC battery 4.8 V/ 7 Ah, rechargeable		for SEB 8/ 8L	1	**2 1147 701 000**
	Battery set with NiMH battery 4.8 V/ 9.5 Ah, rechargeable		for SEB 9/ 9L	1	**2 1147 791 000**

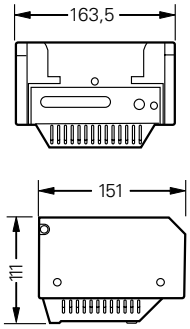
Dimension drawing / Range-diagram / Indication of residual operating time

Series SEB 8 / SEB 9 / SEB 10

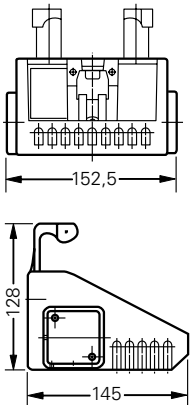
Dimension drawing SEB 8/ SEB 9/ SEB 10



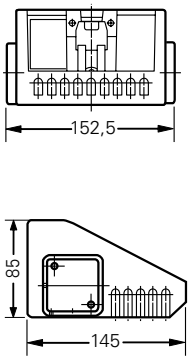
Dimension drawing LG 443



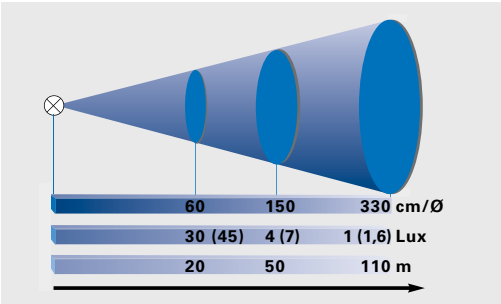
Dimension drawing motor vehicle charger 90



Dimension drawing wall bracket SW

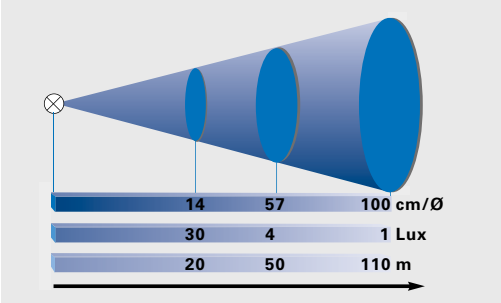


Range-diagram SEB 10

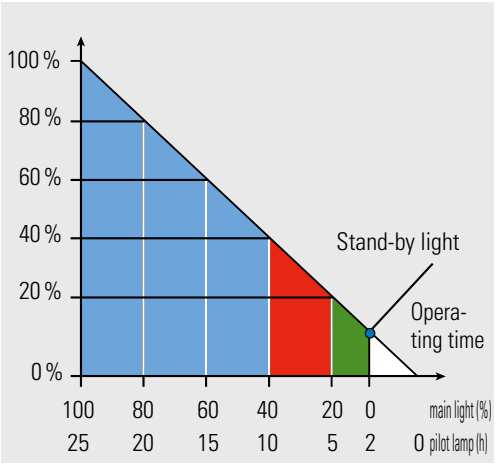


Values in brackets for boost operation

Range-diagram SEB 9 / 8



Indication of residual operating time (SEB 8 / SEB 9 only)



Dimensions in mm

Technical data

	SEB 10	SEB 10 L
EC-Type Examination Certificate	BVS 15 ATEX E 122 X	BVS 15 ATEX E 122 X
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex e ib mb IIC T4 Gb Ⓔx II 2 D Ex tb IIIC T85 °C Db	Ⓔx II 2 G Ex e ib mb IIC T4 Gb Ⓔx II 2 D Ex tb IIIC T85 °C Db
EC-Type approval acc. guideline 2009/19/EG (EMV in vehicles)	e1 058129	e1 058129
Permissible ambient temperature	-20 °C up to +40 °C, specified data 0 °C up to +30 °C (battery)	-20 °C up to +40 °C, specified data 0 °C up to +30 °C (battery)
Battery	9.6 V 3 Ah rechargeable $LiFePO_4$ battery	9.6 V 3 Ah rechargeable $LiFePO_4$ battery
Rated voltage (charger)	–	220 - 250 V AC
Frequency (charger)	–	50 - 60 Hz
Charging duration	max. 8 h (depends on the state of charge)	max. 8 h (depends on the state of charge)
Rated operating duration (main light)	5.5 h up to 6 h	5.5 h up to 6 h
Switch	Flashing light – Working light – OFF – Search light – Boost function search light (max. 10 min)	Flashing light – Working light – OFF – Search light – Boost function search light (max. 10 min)
Protection class	III	III / II
Lamp / Illuminant	2 high efficiency LED-Systems	2 high efficiency LED-Systems
Rated luminous flux	230 lm (search light)/ 365 lm (search light boost function)	230 lm (search light)/ 365 lm (search light boost function)
Max. luminous intensity	12000 cd (search light) 19000 cd (search light boost function) 1000 cd (working light)	12000 cd (search light) 19000 cd (search light boost function) 1000 cd (working light)
Dimensions (L x W x H)	325 x 119 x 146.5 mm	325 x 119 x 146.5 mm
Function	microprocessor-controlled operating period indication, capacity-dependent charge flashing light, emergency light, back-up light when low capacity, rechargeable with LG 443 or motor vehicle charger 90)	microprocessor-controlled operating period indication, capacity-dependent charge flashing light, emergency light, back-up light when low capacity,rechargeable directly with mains cord, with LG 443 or motor vehicle charger 90)
Enclosure colour	black	black
Enclosure material	Polyamide	Polyamide
Weight	1.55 kg	2.1 kg
Light aperture	Ø 98 mm, mineral glass	Ø 98 mm, mineral glass
Degree of protection accd. to EN 60529	IP65	IP65
Scope of delivery	with twin-lens LED-system, battery	with twin-lens LED-system, battery, internal charger unit,

Technical data

SEB 9 / SEB 9 L

Technical data

	SEB 9	SEB 9 L
EC-Type Examination Certificate	BVS 09 ATEX E 005	BVS 08 ATEX E 116
EC-Type approval acc. guideline 2009/49/EC EMV in vehicles	e1 035969	e1 035969
Marking accd. to 2014/34/EU	Ex II 2 G Ex e ib IIC T4 Gb Ex II 2 D Ex tb IIIC T85 °C Db	Ex II 2 G Ex e ib IIC T4 Gb Ex II 2 D Ex tb IIIC T85 °C Db
Permissible ambient temperature	-20 °C up to +40 °C, specified data 0 °C up to +30 °C (battery)	-20 °C up to +40 °C, specified data 0 °C up to +30 °C (battery)
Battery	4.8 V/ 9.0 Ah rechargeable NiMH battery	4.8 V/ 9.0 Ah rechargeable NiMH battery
Rated voltage (charger)	–	230 V AC
Frequency (charger)	–	50 - 60 Hz
Charging duration	max. 14 h (dep. on the state of charge)	max. 14 h (dep. on the state of charge)
Rated operating duration (main light)	7 h	7 h
Switch	Service – pilot lamp – OFF – main light – signal light	Service – pilot lamp – OFF – main light – signal light
Protection class	III	II/III
Lamp / Illuminant	5.5 V / 5.5 W halogen lamp with double bulb	5.5 V / 5.5 W halogen lamp with double bulb
Rated luminous flux	approx. 100 lm	approx. 100 lm
Lamp cap	BA 15d	BA 15d
Lamp cap pilot lamp	BA 9s	BA 9s
Max. luminous intensity	15000 cd	15000 cd
Pilot lamp	4.8 V/0.3 A	4.8 V/0.3 A
Dimensions (L x W x H)	325 x 119 x 146.5 mm	325 x 119 x 146.5 mm
Function	microprocessor-controlled operating period indication, capacity-dependent charge flashing light, emergency light, switching for standby light or in case of broken filament, (re-chargeable with LG 443 or motor vehicle charger)	microprocessor-controlled operating period indication, capacity-dependent charge flashing light, emergency light, switching for standby light or in case of broken filament, internal charger unit, rechargeable with LG 443 or motor vehicle charger
Enclosure colour	black	black
Enclosure material	Polyamide	Polyamide
Weight	1.9 kg	2.2 kg
Light aperture	Ø 98 mm, mineral glass	Ø 98 mm, mineral glass
Degree of protection accd. to EN 60529	IP65	IP65
Scope of delivery	with halogen lamp with double bulb, pilot, diffusing lens and battery	with halogen lamp with double bulb, pilot, diffusing lens and battery, internal charger unit,

Technical data

	SEB 8	SEB 8 L
EC-Type Examination Certificate	BVS 08 ATEX E 116	BVS 08 ATEX E 116
EC-Type approval acc. guideline 2009/19/EG (EMV in vehicles)	e1 035969	e1 035969
Marking accd. to 2014/34/EU	Ex II 2 G Ex e ib IIC T4 Gb Ex II 2 D Ex tb IIIC T85 °C Db	Ex II 2 G Ex e ib IIC T4 Gb Ex II 2 D Ex tb IIIC T85 °C Db
Permissible ambient temperature	-20 °C up to +40 °C, specified data 0 °C up to +30 °C (battery)	-20 °C up to +40 °C, specified data 0 °C up to +30 °C (battery)
Battery	4.8 V/ 7 Ah rechargeable NC battery	4.8 V/ 7 Ah rechargeable NC battery
Rated voltage (charger)	–	230 V AC
Frequency (charger)	–	50 - 60 Hz
Charging duration	max. 14 h (dep. on the state of charge)	max. 14 h (dep. on the state of charge)
Rated operating duration (main light)	5.5 h	5.5 h
Switch	Service – pilot lamp – OFF – main light – signal light	Service – pilot lamp – OFF – main light – signal light
Protection class	III	II/III
Lamp / Illuminant	5.5 V / 5.5 W halogen lamp with double bulb	5.5 V / 5.5 W halogen lamp with double bulb
Rated luminous flux	approx. 100 lm	approx. 100 lm
Lamp cap	BA 15d	BA 15d
Lamp cap pilot lamp	BA 9s	BA 9s
Max. luminous intensity	15000 cd	15000 cd
Pilot lamp	4.8 V/0.3 A	4.8 V/0.3 A
Dimensions (L x W x H)	325 x 119 x 146.5 mm	325 x 119 x 146.5 mm
Function	microprocessor-controlled operating period indication, capacity-dependent charge flashing light, emergency light, switching for standby light or in case of broken filament, (re-chargeable with LG 443 or motor vehicle charger)	microprocessor-controlled operating period indication, capacity-dependent charge flashing light, emergency light, switching for standby light or in case of broken filament, internal charger unit, rechargeable with LG 443 or motor vehicle charger
Enclosure colour	black	black
Enclosure material	Polyamide	Polyamide
Weight	2.2 kg	2.5 kg
Light aperture	Ø 98 mm, mineral glass	Ø 98 mm, mineral glass
Degree of protection accd. to EN 60529	IP65	IP65
Scope of delivery	with halogen lamp with double bulb, pilot, diffusing lens and battery	with halogen lamp with double bulb, pilot, diffusing lens and battery, internal charger unit,

Technical data

Charger LG443 / Motor vehicle charger 90 / Wall bracket SW

Technical data

	Charger LG443 for SEB 10/9/8..	Motor vehicle charger 90 for SEB 10/9/8..	Wall bracket SW for SEB 10/9/8..
Permissible ambient temperature	-0 °C up to +30 C	-0 °C up to +30 C	-20 °C up to +40 C
Rated voltage	220 - 250 V AC	10 - 33 V DC	
Frequency	50 - 60 Hz		
Protection class	II	III	III
Dimensions (L x W x H)	163.5 x 151 x 111	152.5 x 145 x 128	152.5 x 145 x 85
Enclosure colour	black	black	black
Enclosure material	ABS	ABS	ABS
Weight	1.3 kg	0.65 kg	0.55 kg
Degree of protection accd. to EN 60529	IP31	IP31	

Ex-protected hand and machine lamps HL/ML

(Zone 1, 2, 21, 22)

Mains powered and still flexible

These powerful explosion-protected hand lamps with fluorescent lamps and LEDs were developed especially for use during inspection and maintenance work in hazardous areas. Typical applications are found, for example in the chemical industry, offshore, in the automotive sector, in the aircraft industry or in shipyards. Due to their small size and high light output, these rugged lights are especially suited for lighting in tight spaces, the interior of machinery, silos, etc. wherever a reliable portable light source is required. With the appropriate accessories (optional) the machine lights can also be used, for example, for lighting sampling ports or as tube gauge lights or they can easily be mounted on railing pipes.

Light technology

All hand and machine lamps feature a protective polycarbonate tube with a reflector. They are available as single and twin two-pin fluorescent lamp versions with integrated electronic ballast (EVG) as well as in LED technology. The outstanding features of the white LED technology are the insensitivity to shock and vibration, as well as the enormous longevity that makes a lamp change over the lifetime of the LED hand lamp superfluous.

Application

Because they are small in size and, at the same time, have a high light output and a high degree of protection IP 68, these rugged lights are particularly suitable for sewage treatment plants where flooding is possible, and wherever a reliable, robust and portable light source is required. The hand and machine lamps are used in engineering, printing machines, in the petrochemical and process industries as well as in the food industry (dusts). They are also suitable for temporary installations where maintenance, alteration and maintenance work are carried out in facilities in the oil and gas industry, for plant construction, in shipyards, or during the cleaning of tanks. Thanks to the special accessories, the lamps can be mounted by clamps on pipes (railing in the chemical and oil rigs) or with magnets directly to the machine housing or tank walls. At petrol stations, machine lamps can be installed in the illuminated ram protection around fuel pumps. Explosion-protected hand and machine lamps contribute to the operational safety during the construction of airplanes as well as during maintenance work in shipyards work. Here various people are at work in confined spaces in the cargo hold or in the cabin, cleaning parts with solvents, painting or preserving surfaces. During maintenance, the area surrounding the aircraft hull is normally declared as Zone 2, while empty and vented tanks are normally declared as Zone 1.

Features

- Single and twin-lamp versions from 6 W to 58 W or with LED-technique from 6 W to 36 W
- Lumen output from 200 lm up to 4780 lm, with directional (180°) or all round lighting (360°)
- Wide voltage range 85 V - 264 V AC/DC for general applications 12 V - 24 V AC/DC for confined spaces (e. g. metal tanks)
- Robust protective tube made of polycarbonate
- Suited for use in explosive gas and dust atmospheres, acc. ATEX & IECEx
- High degree of protection IP68

Safe handling

For applications where, in accordance with the installation regulations, personal protection is required, hand lamps for low voltages or in the "TR" version with an integrated isolation transformer in the supply line or with a residual current circuit breaker with a rated tripping current of 10 mA are available. These protective devices in explosion-protected design can be placed in the immediate vicinity of the lamps or beside the sockets. The hand lamp has a ribbed neoprene rubber handle with a trumpet-shaped cable gland made of metal and a neoprene rubber end cap with attachment hook for hanging up the light in the workplace. The end caps of the machine lamps are also made of durable neoprene rubber. The machine lamps are mounted directly on the machine using suitable clamps. Optionally, all hand and machine lamps can also be fitted with an eXLink connector for the quick and easy disconnection of the power cord at the lamp.

Ordering Details / Dimension Drawing

HL 43 d / LEDM 100 / ML 43/60/70 d / ML 43/60 LED

Ordering details hand lamps

Type	Lamp power	Voltage	Luminous flux	A	Ø B	Ø C	Order No.
HL43d LED6 460	6 W LED	12 - 24 V DC	315 lm	640 mm	66 mm	43 mm	**1 1700 000 003**
HL43d LED6 460	6 W LED	24 - 50 V AC/DC	315 lm	640 mm	66 mm	43 mm	**1 1700 000 004**
HL43d LED6 460	6 W LED	85 - 265 V AC;120 - 370 V DC	315 lm	640 mm	66 mm	43 mm	**1 1700 000 107**
HL43d 8 460	1 x 8 W T5	24 V AC/DC	448 lm	640 mm	66 mm	43 mm	**1 1700 000 001**
HL43d 8 460	1 x 8 W T5	230 V AC/DC	448 lm	640 mm	66 mm	43 mm	**1 1700 000 201**
HL43d 8/2 460	2 x 8 W T5	24 V AC/DC	896 lm	640 mm	66 mm	43 mm	**1 1700 000 006**
HL43d 8/2 460	2 x 8 W T5	230 V AC/DC	896 lm	640 mm	66 mm	43 mm	**1 1700 000 206**

Ordering details machine lamps

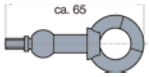
Ordering details ML... LED	Lamp power	Voltage	Luminous flux	A	Ø B/B'	Ø C	Order No.
ML43d LED6 460	6 W LED	12 - 24 V DC	315 lm	581 mm	66 mm	43 mm	**1 1700 000 012**
ML43d LED6 460	6 W LED	24 - 50 V AC/DC	315 lm	581 mm	66 mm	43 mm	**1 1700 000 013**
ML60d LED25 1480	25 W LED	24 V AC/DC	2,200 lm	1,601 mm	66 mm	43 mm	**1 1700 000 017**
ML60d LED25 1480	25 W LED	85 - 265 V AC; 120 - 370 V DC	2,200 lm	1,601 mm	66 mm	43 mm	**1 1700 000 520**
ML60d LED36 1780	36 W LED	24 V AC/DC	3,200 lm	1,901 mm	66 mm	43 mm	**1 1700 000 018**
ML60d LED36 1780	36 W LED	85 - 265 V AC; 120 - 370 V DC	3,200 lm	1,901 mm	66 mm	43 mm	**1 1700 000 521**
LEDM100de36940	2 x 18 W LED	24 - 50 V AC/DC	3,520 lm	985 mm	100 mm	100 mm	**1 1700 100 002**
LEDM100de36940	2 x 18 W LED	85 - 265 V AC; 120 - 370 V DC	3,520 lm	985 mm	100 mm	100 mm	**1 1700 100 009**
LEDM100de441245	2 x 22 W LED	24 - 50 V AC/DC	4,310 lm	1,290 mm	100 mm	100 mm	**1 1700 100 003**
LEDM100de441245	2 x 22 W LED	85 - 265 V AC; 120 - 370 V DC	4,310 lm	1,290 mm	100 mm	100 mm	**1 1700 100 010**
LEDM100de54940	2 x 18 W LED	24 - 50 V AC/DC	3,840 lm	985 mm	100 mm	100 mm	**1 1700 100 001**
LEDM100de501550	2 x 25 W LED	24 - 50 V AC/DC	5,100 lm	1,610 mm	100 mm	100 mm	**1 1700 100 005**
LEDM100de721850	2 x 36 W LED	24 - 50 V AC/DC	7,400 lm	1,895 mm	100 mm	100 mm	**1 1700 100 007**
LEDM100de54940	3 x 18 W LED	85 - 265 V AC	3,840 lm	985 mm	100 mm	100 mm	**1 1700 100 008**
LEDM100de501550	2 x 25 W LED	85 - 265 V AC	5,100 lm	1,595 mm	100 mm	100 mm	**1 1700 100 012**
LEDM100de721850	2 x 36 W LED	85 - 265 V AC	7,400 lm	1,895 mm	100 mm	100 mm	**1 1700 100 014**

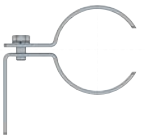
Ordering details ML... fluorescent	Lamp power	Voltage	Luminous flux	A	Ø B	Ø C	Order No.
ML43d 8 460	1 x 8 W T5	230 V AC/DC	448 lm	581 mm	66 mm	43 mm	**1 1700 000 211**
ML43d 8 460	1 x 8 W T5	24 V AC/DC	448 lm	581 mm	66 mm	43 mm	**1 1700 000 011**
ML43d 8/2 460	2 x 8 W T5	230 V AC/DC	896 lm	581 mm	66 mm	43 mm	**1 1700 000 216**
ML43d 8/2 460	2 x 8 W T5	24 V AC/DC	896 lm	581 mm	66 mm	43 mm	**1 1700 000 016**
ML60d 18 870	1 x 18 W T8	110 - 240 V AC/DC	1296 lm	991mm	72 mm	50 mm	**1 1700 000 510**
ML60d 36 1480	1 x 36 W T8	110 - 240 V AC/DC	3348 lm	1601 mm	72 mm	50 mm	**1 1700 000 512**
ML70d 55 833 (PL)	1 x 55 W TC-L	110 - 240 V AC/DC	4780 lm	954 mm	92 mm	50 mm	**1 1700 000 514**
ML60d 18 918	1 x 18 W T8	24 - 50 V AC/DC	1296 lm	1041 mm	72 mm	50 mm	**1 1700 000 310**
ML60d 36 1528	1 x 36 W T8	24 V AC/DC	3348 lm	1651 mm	82 mm	60 mm	**1 1700 000 312**
ML60d 55 881 (PL)	1 x 55 W TC-L	24 - 50 V AC/DC	4780 lm	1002 mm	92 mm	70 mm	**1 1700 000 314**

Accessories





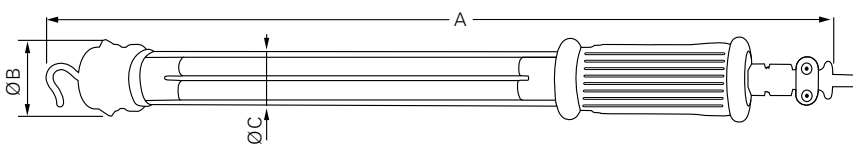



Type	Scope of delivery	Height A in mm	Weight kg	Diameter mm	Order unit	Order No.
Clamp	KFV 3	265	0.26	Ø 40	1	**1 1700 000 900**
Clamp	KFV 4	280	0.26	Ø 50	1	**1 1700 000 901**
Permanent magnet (adhesion 100 N) [1]	PM 1	130	0.21	Ø 50	1	**1 1700 000 911**
Permanent magnet (adhesion 500 N) [1]	PM 2	190	0.68	Ø 40	1	**1 1700 000 915**
Permanent magnet (adhesion 500 N) [1]	PM 2	205	0.68	Ø 50	1	**1 1700 000 916**
Permanent magnet (adhesion 500 N) [1]	PM 2	215	0.68	Ø 60	1	**1 1700 000 918**
Permanent magnet (adhesion 500 N) [1]	PM 2	225	0.68	Ø 70	1	**1 1700 000 919**
Permanent magnet (adhesion 500 N) [1]	PM 2	235	0.68	Ø 80	1	**1 1700 000 920**
Suspension hook with ball joint	KH 4	183	0.115	Ø 50	1	**1 1700 000 921**
Suspension hook with ball joint	KH 6	195	0.120	Ø 60	1	**1 1700 000 923**
Suspension hook with ball joint	KH 7	205	0.123	Ø 70	1	**1 1700 000 924**
Suspension hook with ball joint	KH 8	215	0.127	Ø 80	1	**1 1700 000 925**
Spring clip	FE 3	62	0.02	Ø 40	1	**1 1700 000 930**
Spring clip	FE 4	78	0.02	Ø 50	1	**1 1700 000 931**
Luminaire key 30-50 mm	SCH 2				1	**1 1700 000 940**
Eye bolt with ball joint M5 stainless steel	RS 4	58	0.034		1	**1 1700 000 950**
Plastic pipe clamp	CILC 63	115		Ø 63 - 71	1	**1 1700 000 960**
Plastic pipe clamp	CILC 71	124		Ø 71 - 80	1	**1 1700 000 961**
Plastic pipe clamp	CILC 80	136		Ø 80 - 90	1	**1 1700 000 962**
Fixing clip	BS 70		0.012	Ø 70	1	**1 1700 000 951**

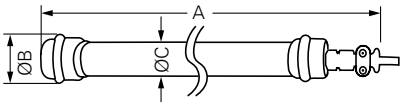
[1] Note: dispatch only by see freight or road freight!

Other accessories/sizes on request

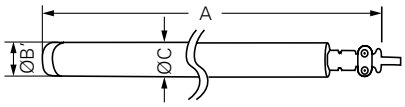
HL



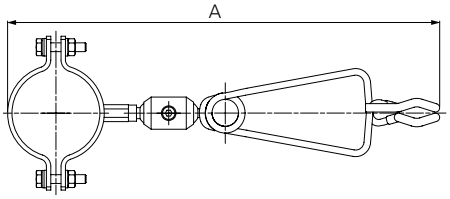
ML



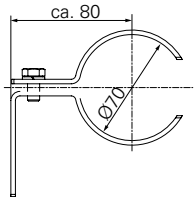
LEDM



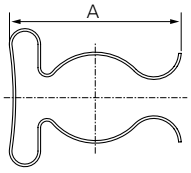
KFV...



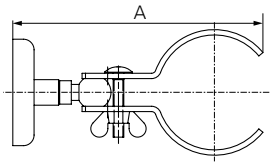
BS 70



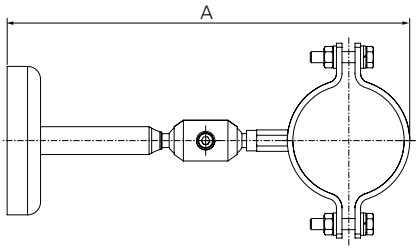
FE...



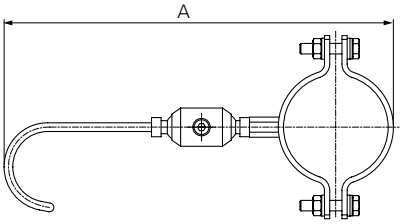
PM 1



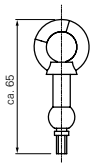
PM 2



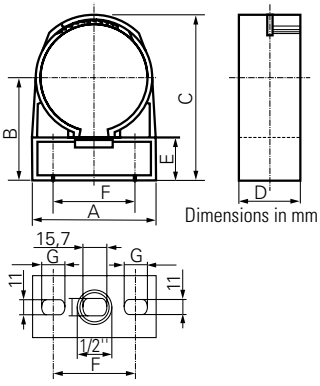
KH...



RS4



CLIC

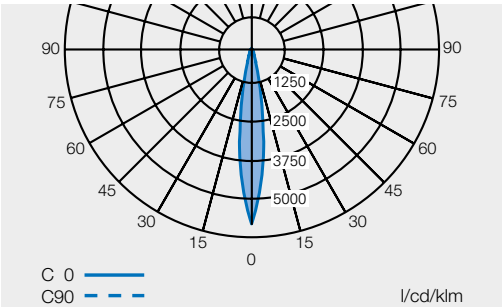


Technical data

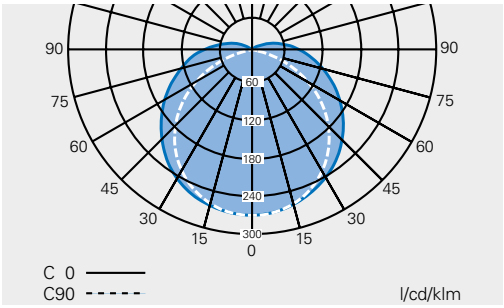
	HL 43 d / ML 43 d	ML 50/60/70 d	ML 43/60 LED	ML LED M 100 de...
EC-Type Examination Certificate	BVS 14 ATEX E 106 X	BVS 14 ATEX E 106 X	BVS 14 ATEX E 106 X	BVS 15 ATEX E 003 X
IECEx Certificate of Conformity	IECEx BVS 14.0068X	IECEx BVS 14.0068X	IECEx BVS 14.0068X	IECEx BVS 15.0014X
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex d IIC T5 Gb Ⓔx II 2 D Ex tb IIIC T95 °C Db	Ⓔx II 2 G Ex d IIC T5 Gb Ⓔx II 2 D Ex tb IIIC T95 °C Db	Ⓔx II 2 G Ex d IIC T5 Gb Ⓔx II 2 D Ex tb IIIC T95 °C Db	Ⓔx II 2 G Ex db e IIB T5 Gb / Ⓔx II 2 D Ex tb IIIB T95 °C Db
Marking accd. to IECEx	Ex d IIC T5 Gb Ex t IIIC T95°C Db	Ex d IIC T5 Gb Ex t IIIC IP68 T95°C Db	Ex d IIC T5 Gb Ex t IIIC IP68 T95°C Db	
Permissible ambient temperature	-20 °C up to +40 °C (PL-lamps) -20 °C up to +60 °C	-20 °C up to +60 °C	-20 °C up to +60 °C	-20 °C up to +60 °C
Rated voltage	[2]	[2]	[2]	[2]
Power	max. 13 W [2]	max. 58 W [2]	max. 36 W [2]	max. 72 W [2]
Power factor cos φ	> 0.95	> 0.95	> 0.95	> 0.95
Circuit	EVG integrated	EVG integrated	EVG integrated	EVG integrated
Protection class	I bzw. III	I	I	I
Standard cable length	5 m cable 3 x 1 mm² without plug[1]			5 m cable 3 x 1.5 mm² without plug[1]
Lamp / Illuminant	T5[2]	T8/TC-L[2]	LED[2]	LED[2]
Rated luminous flux	[2]	[2]	[2]	[2]
Lamp cap	G5	2G11 (PL-lamps) / G13 (18 - 58 W) –		-
Dimensions	[2]	[2]	[2]	[2]
Degree of protection accd. to EN 60529	IP68[3]	IP68[3]	IP68[3]	IP68[3]
Protection tube	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate

[1] Ex-protected plugs see catalogue 2 part 1 electrical connectivity
[2] see ordering details
[3] 2.5 m for 24 h

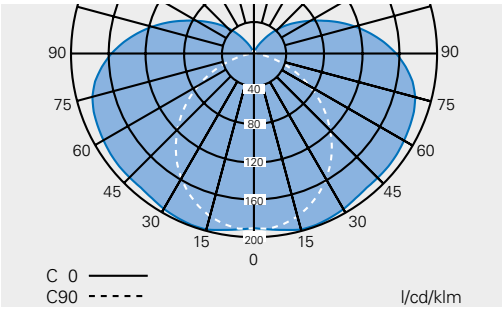
Polar curve HL43d/ML43d ... LED



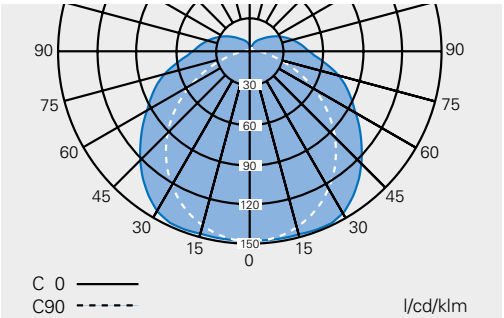
Polar curve ML60d ... LED



Polar curve HL/ML single lamp T5 /T8



Polar curve HL/ML (TC-L-lamp) twin lamp



Ex-Protected Temporary Lighting Solutions

Temporary linear light fittings type eLLK and machine lamps

Temporary light solutions

Equipped with the necessary trumpet-shaped cable gland, they offer all advantages of a stationary lighting system and can be installed quickly and flexibly.

Also the robust machine lights are available as temporary lighting.

Using the various mounting accessories, these luminaires can be securely installed to a wide variety of building structure elements

Product features

- Machine lamps and linear light fittings type eLLK equipped for short term temporary fixed illumination. Time saving solution as plug in and use when the Ex atmosphere is still present.
- Ideal for maintenance works and demanding lighting applications (confined spaces, difficult to access) in Ex areas.
- Robust but light mounting accessories allow a quick and easy installation of the versatile lighting fixtures on various surfaces (e.g. with magnet inside tank/ vessels; suspension hook for railing pipes)
- Up to seven linkable linear light fittings provide a spotless light chain without reducing light output (e.g. lighting broad dark tunnel) or delivered on a transportable trolley (e.g. confined space in paint shop)
- Exclusive complete temporary lighting package (fixture, cable, mounting accessories, plug) for ease of mind
- Wide range of machine lamps and eLLKs (LED/FL, different light colour, high/low temperature) for temporary lighting package available
- Easy to move around and not sensitive in handling with the promise of flawless lighting, exactly where you need it

Ordering details

Type [4]	Power	Rated voltage	Light output	OU	Order No.
Temporary eLLK FL 2x18 W [2]	2 x 18 W	110 - 254 V AC 110 - 250 V DC	2700 lm	1	**1 2265 755 101**
Temporary eLLK LED 400 [2]	2 x 13 W	110 - 254 V AC; 110 - 250 V DC	2300 lm (5600 K)	1	**1 2265 555 101**
Suspension hook BMU 5x16x8, steel, galvanised				2	**2 2480 001 000**
2 pcs. pipe clamps R22 (1 1/2''), Ø 47 - 51 mm, with screws and polyamide washer, stainless steel				1	**2 2480 472 000**

[2]) with trumpet shaped cable gland, mains cord 10 m H07RN-F 3 with Ex-plug 16 A 3-pole and 2 eye bolts A2 M8 stainless steel A2

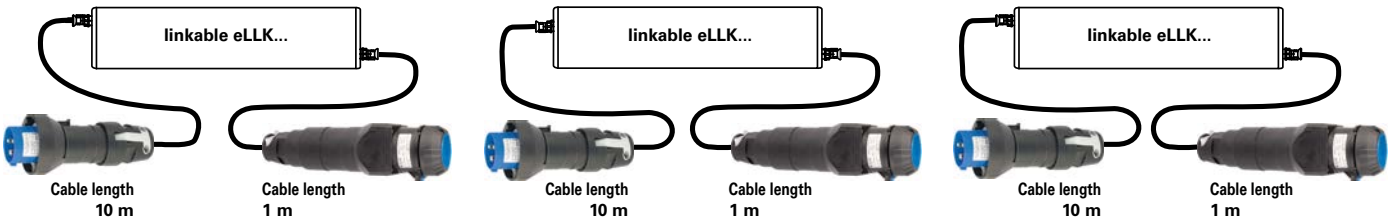
Technical data eLLK	eLLK 92018/18	eLLK 92 LED 400
EC-Type Examination Certificate	BVS 09 ATEX E 034	
IECEx Certificate of Conformity	IECEx BVS 09 0033	
Marking accd. to 2014/34/EU	Ex II 2 G Ex de mb IIC T4 Gb / Ex II 2 D Ex tb IIIC T80 °C Db	
Permissible ambient temperature	-25 °C up to +55 °C (+50 °C $U_n \leq$ 220 V)	-25 °C up to +45 °C
Degree of protection accd. to EN 60529	IP 66	

Ordering details [4]	Power	Rated voltage	Light output	OU	Order No.
Temporary Basic ML 60d LED36	36 W	85 - 264 V AC; 120 - 370 V DC	5220 lm	1	**1 1700 000 521**
Temporary Basic ML 60d LED36	36 W	24 V AC/DC)	5220 lm	1	**1 1700 000 018**
PM 2 permanent magnet (215 mm height, 60 mm Ø, 500 N adhesion, 2/lamp needed)				1	**1 1700 000 918**
KH 6 suspension hook with ball joint (195 height, 60 mm Ø, 2/lamp needed)				1	**1 1700 000 923**

[2]) 2,5 m 24 h
[3]) with trumpet shaped cable gland, mains cord 5 m H07RN-F 3 without plug
[4]) further versions available. Please contact our customer service.

Technical data	ML LED M 100 de...
EC-Type Examination Certificate	BVS 15 ATEX E 003 X
IECEx Certificate of Conformity	IECEx BVS 15.0014X
Marking accd. to 2014/34/EU	Ex II 2 G Ex db e IIB T5 Gb / Ex II 2 D Ex tb IIIB T95 °C Db
Permissible ambient temperature	-20 °C up to +60 °C
Degree of protection accd. to EN 60529	IP 68 [2])

Linkable eLLK luminaires

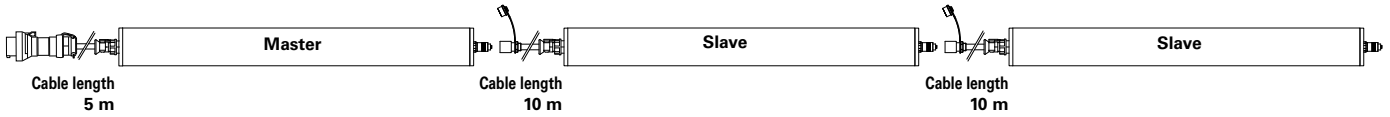


Linkable eLLK (up to 7 luminaires can be linked together)

Linkable eLLK

Type	Content	Order No.
eLLK FL / 2x18W (2700 lm)	Light fitting incl. Ex-plug 3-pole, 10 m cable 3x2,5 mmm² and Ex-coupler 3-pole, 1 m cable 3x2,5 mmm²)	**1 2265 755 103**
eLLK LED 400 / 2x13W (2150 lm / 5600 k)	Light fitting incl. Ex-plug 3-pole, 10 m cable 3x2,5 mmm² and Ex-coupler 3-pole, 1 m cable 3x2,5 mmm²)	**1 2265 555 103**

Linkable machine lamps



Linkable machine lamps (up to 7 lamps can be linked together)

LEDM100 de ...Master

LEDM100 de ...Slave

Linkable machine lamps

Master Machine Lamp (incl. Ex-plug 3-pole, 5 m cable 3 x 1 mm² and eXLink-flange socket)		Order No.
LEDM100de36940 / 2x18 W (2560 lm)	Mains voltage (230 V)	**1 1700 102 009**
LEDM100de36940 / 2x18 W (2560 lm)	Low voltage (24 V)	**1 1700 102 002**
LEDM100de441245 / 2x22 W (4200 lm)	Mains voltage (230 V)	**1 1700 102 010**
LEDM100de441245 / 2x22 W (4200 lm)	Low voltage (24 V)	**1 1700 102 003**

Slave Machine Lamp (incl. eXLink-plug 3-pole, 10 m cable 3 x 1 mm² and eXLink-flange socket)		Order No.
LEDM100de36940 / 2x18 W (2560 lm)	Mains voltage (230 V)	**1 1700 101 009**
LEDM100de36940 / 2x18 W (2560 lm)	Low voltage (24 V)	**1 1700 101 002**
LEDM100de441245 / 2x 44 W (4200 lm)	Mains voltage (230 V)	**1 1700 101 010**
LEDM100de441245 / 2x 44 W (4200 lm)	Low voltage (24 V)	**1 1700 101 003**

Ex-Protected Temporary Lighting Solutions

Explosion protected portable Floodlight LEL Portable

Temporary light solutions

When a portable lighting solution is required (Ex-approval certified by the certificate), which can be conveniently transported by the attached bracket.

Light weight Floodlight

Guarantees a high luminous flux (5000 lm) for the illumination of larger working areas.

No tripping hazard

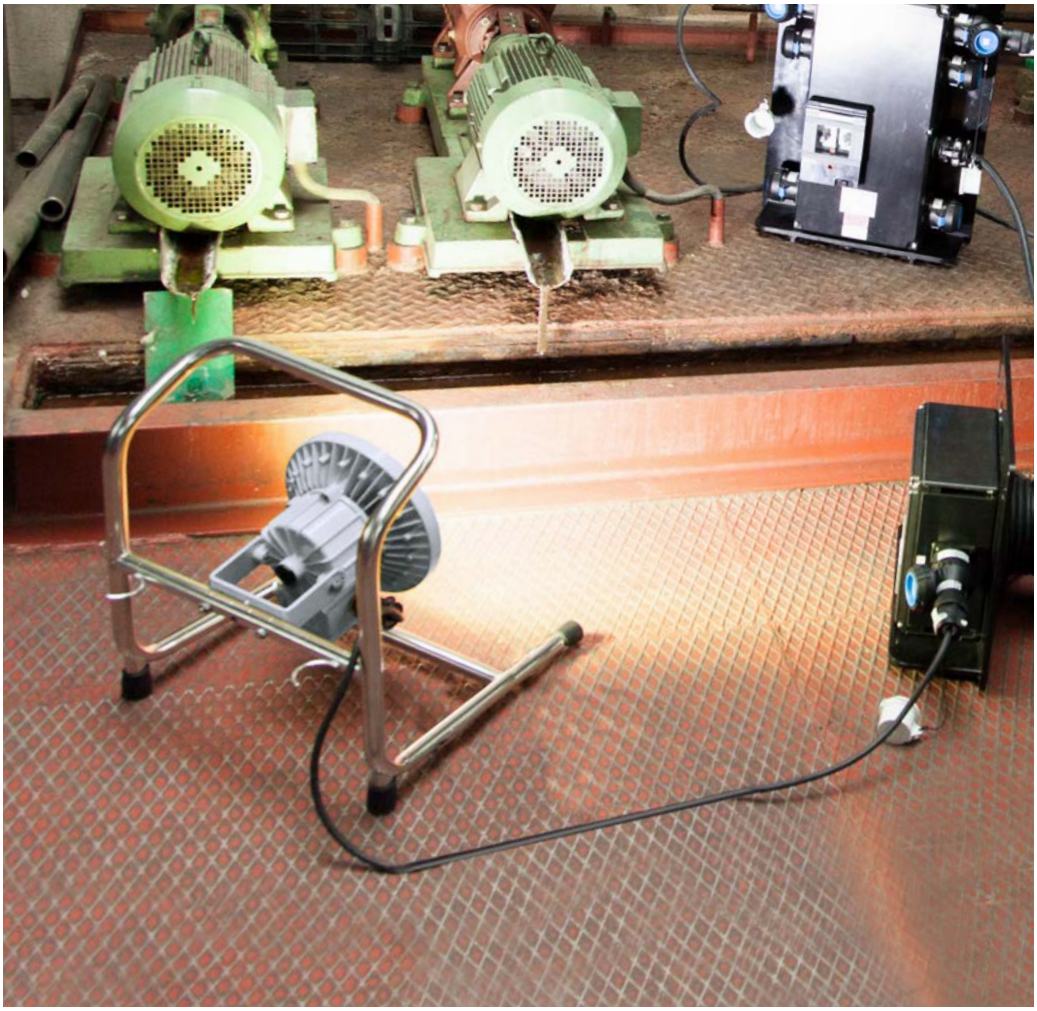
The flexible 10 m mains cord with its 3-pole plug included can be easily stored at the swivel bracket.

Immediate availability

The portable LEL is immediately ready for use as all necessary accessories, such as cable, trumpet shaped cable gland and plugs, have already been connected by us.

Flexible light control

Through the construction of floodlight and support brackets, you can adjust the light in the direction you want to illuminate (eg up to galleries).



Ex-Protected Temporary Lighting Solutions

Explosion protected portable Floodlight LEL Portable

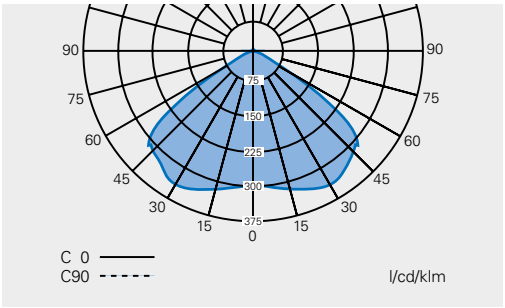
Ordering details

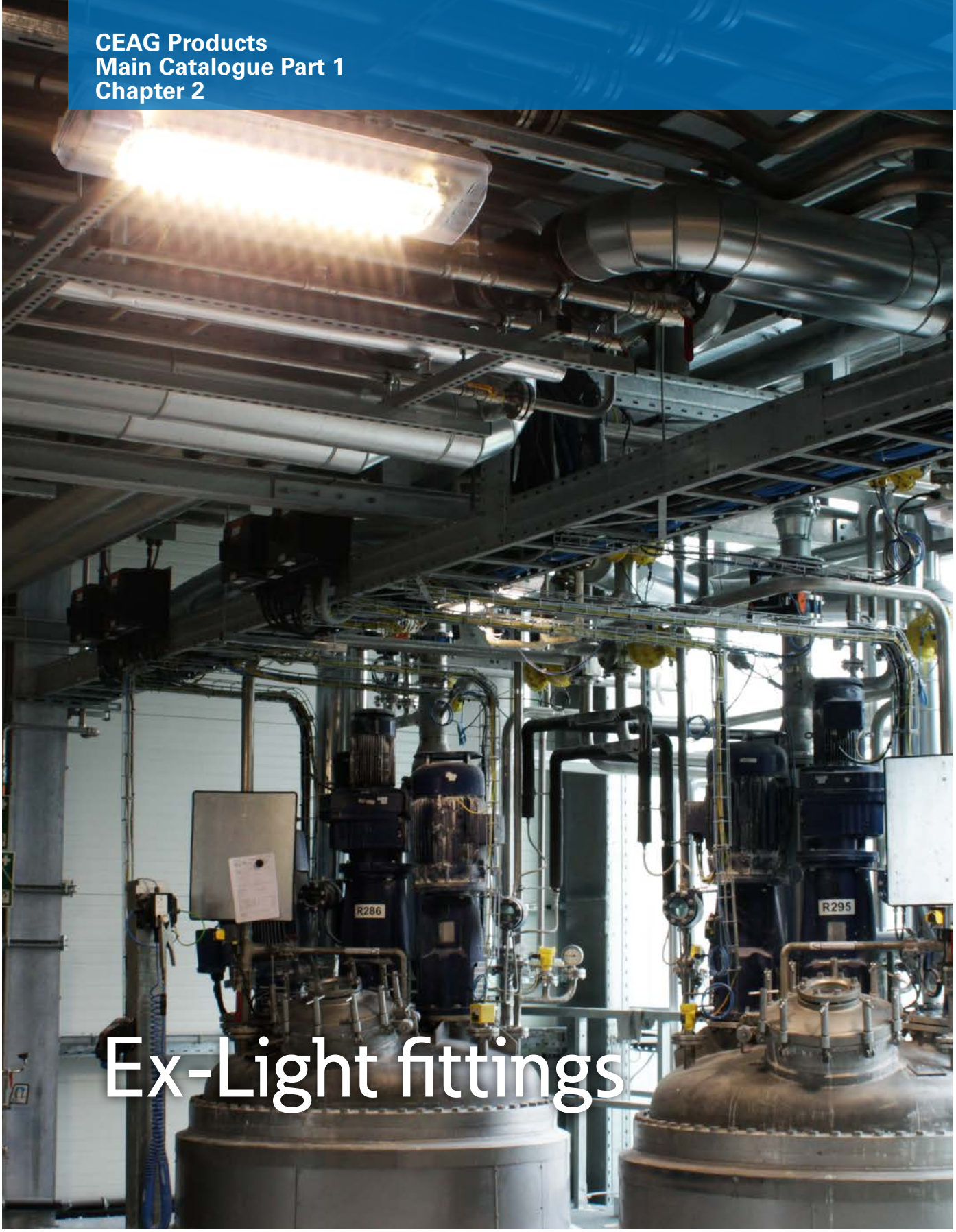
Type	Lamp / illuminant	Content	Order No.
LEL Portable 5L	LED system 50 W [1])	LED floodlight with floor stand and mains-cord 5 m with CEE Ex-plug 3-pole 6h	**NOR 000 007 000 001**

Technical data

	LEL Portable
EC-Type Examination Certificate	EPT 16ATEX 2405
IECEx Certificate of Conformity	IECEx CQM 15.0054 X
Marking accd. to 2014/34/EU	Ex II 2 G Ex db e mb op is IIC T6 Gb Ex II 2 D Ex tb IIIC T80 °C Db IP 66
Permissible ambient temperature	-40 °C up to +45 °C
Rated voltage	100 - 240 V AC / 108 - 250 DC
Lamp/illuminant	LED system 50 W / 5,000 lm
Enclosure material	light alloy, powder coated
Weight	5 kg
Dimensions LxWxH	250x250x147 mm
Degree of protection accd. to EN 60529	IP 66

Polar curve LEL portable 5L





Ex-Light fittings

Ex-Linear light fittings

The classical solution

Fluorescent light fittings with their tried and tested technology are the best choice for many illumination tasks in hazardous environments.

The advantages:

- worldwide availability
- cost efficient
- very good colour rendering
- easy handling
- long service life with EVG technology
- immediate restart
- regulated disposal of fluorescent lamps

The innovative solution

In response to the requests of operators for robust and high-efficient lighting solutions, linear LED lighting concepts are being used more and more in hazardous areas.

The advantages:

- High energy efficiency (>20% savings compared to fluorescent lamps)
- Additional energy savings due to on-demand operation (day/night mode)
- Reduced maintenance and operation costs
- Particularly suitable for low ambient temperatures, e.g. in outdoor areas
- Immediate start with max. luminous intensity
- Shock and vibration resistant
- Extremely long lifespan without shortening due to switching cycles
- Environmentally friendly, no mercury
- Reduced disposal costs

The best luminaire for every application

Whether for use with LED lamps or fluorescent lamps, there is a variety to choose from:

- eLLK/M 92...: Surface and pole mounted for use in Zones 1, 2, 21 and 22

- nLLK 08 & 15 ...: Surface and pole mounted for use in Zones 2, 21 and 22

- nLLK 09 for increased ambient temperatures up to +60 °C / nLLK 10 for energy-saving high efficient T5 HE lamps: nLLK 15 for high efficient LED tubes Surface mounted for use in Zones 2 and 22

- eLLB 20... and RLF LED and RLF 250...: Recessed ceiling mounting for use in Zones 1, 2, 21 and 22

- AB 12.: Flameproof surface mounted for use in Zones 1, 2, 21 and 22

Carefully designed - down to the last detail: the eLLK / nLLK series of linear luminaires with plastic enclosures

Our robust series of fluorescent light fittings with plastic enclosures and their tried and tested technology have been in use under tough conditions for more than 20 years. They are adapted continuously to keep them up-to-date with the latest technological developments. The lamps feature a variety of innovations and have set global standards with regard to safety and reliability in a harsh environment.

Simple and cost effective installation

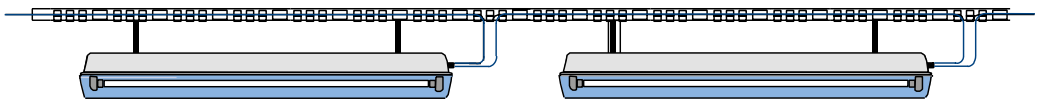
According to an independent assessment, the standard, single-ended through wiring installation with the generously dimensioned terminal compartment can reduce installation times by up to 30% compared to light fittings with a conventional through-wiring! With this method, two lines can always be connected at one end. The standard light fitting is fitted with two cable glands M25, one of which is sealed with a certified plug (red stopper). The version with twin-ended through-wiring includes one cable gland M25 and one certified threaded plug M25 at both ends. There are up to 6 screw terminals for wires up to 2 x 6 mm² (solid) or up to 2 x 4 mm² (stranded) for the connection of cables, thus making it easy to connect all conventional types of wiring (L, L1, L2, L3, N and PE, 3/5/6 pole).

The through-wired (2/6) version is fitted with a second mains terminal block with 6 terminals on the opposite side. The internal wiring of the light fitting has been rated for 16 A. The standard screw terminals allow single-ended connection without having to bend the wire. After connection simply push the cover shut and you have already protection against contact.

Single-ended through-wiring, type 1/6

Double-ended through-wiring Type 2/6

Cost-savings using single-ended through-wiring

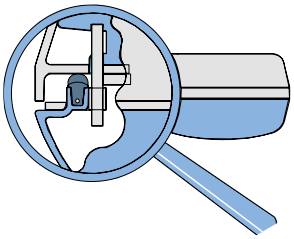


Technical features exemplified at the eLLK 92

The example of the eLLK 92 series is particularly well suited for highlighting the common design features of these fluorescent light fittings series.

Materials

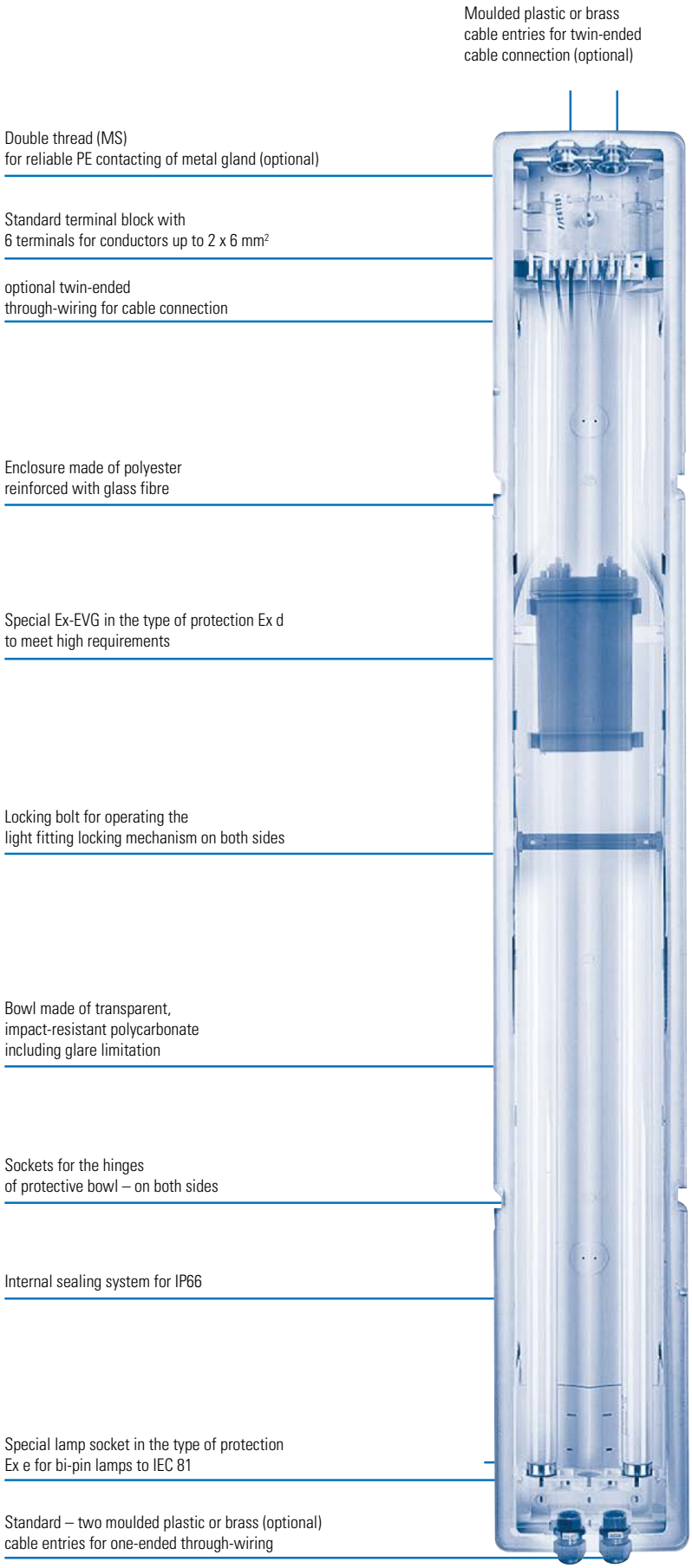
The eLLK 92 light fitting is made of high-grade plastics that, in addition to the excellent mechanical properties Also it features a high stability against many chemicals found in industrial plants. All the materials used for the light fitting provide are effective protection against corrosion and have already been successfully tried and tested in chemical and off-shore installations.



Optimized sealing system

Sealing system

The edges of the bowl and the enclosure form a labyrinth that protects the seal against jet water. The continuous seal is extremely elastic and, in conjunction with the 24-locking bolt mechanism, ensures that the light fitting is sealed tightly for a long time. As was also confirmed by an ERA test[1)], this is the only way to maintain reliably the degree of protection IP66 for a longer period.



Offshore-Proof

Bad weather is not a problem for the eLLK/M 92. It passed the wind tests with lateral thrusts up to 12 Bft and the ERA1) test specified for British off-shore installations brilliantly. Here, among other things, the sealing qualities and the resistance to vibration are tested.

1) ERA-Test = UK test institute for offshore technology

Installation of light fittings

Whether it is mounted on rails or suspended from the sealing, the biggest part of the overall costs is taken up by the installation and electrical connection of the light fitting. Here, due to the standardized fixing clearances and the generously dimensioned terminal compartments, the eLLK 92 provides a high saving potential. The terminal compartment can be opened without removing covers or reflectors, thus allowing the easy connection of cables.

Three ways – one solution

Depending on the type of installation, different cable entries are required for the connection of the light fitting.
Available for all types are the following:

- M25 x 1.5 Plastic cable entries
- M20 x 1.5 Earthed metal thread for metal cable entries
- Non-metric threads, for example Myer Hubs 3/4" NPT-Thread

Lamp replacement made easy

Irrespective of how the light fitting is installed, the locking mechanism can be operated on either side. The bowl can simply be swung open in the respective direction without tools – this is made possible by the hinge fasteners fitted on both sides of the light fitting housing. A quarter turn of the locking bolt and the bowl opens up downwards. The hinges on the cover are fixed in such a way that the replacement lamps can be safely deposited in the bowl, thus saving time when replacing lamps. The bowl cannot fall down, even in wind and rain.

Plastic cable glands

Metal thread for metal cable glands

Myer Hubs (for Conduit-System)

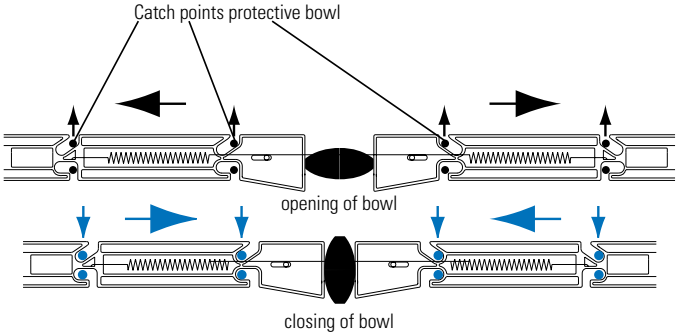
Locking mechanism

The housing and the protective bowl are securely locked by means of a locking mechanism according to the „strongbox principle" on both sides, which features up to 24 latch points. This new type of locking system features stainless steel springs that regulate the pressure applied to the seal, thus guaranteeing the tightness of the light fittings, even in the event of changes due to the ageing of the sealing material and variable climatic influences.

Photo Bayer Leverkusen

Double safety is better

The regulations require the automatic disconnection of the supply voltage when the light fitting is opened. The built-in compulsory NC contact is safeguarded against inadvertent operation and, as soon as the locking mechanism of the light fitting is operated, it de-energizes all parts that can be touched. A second interlock switch increases the safety level for the operator. Therefore, even if the lock of the light fitting is actuated while the protective bowl is still open, the switch cannot be operated, as, in this case, the circuit for the light fitting remains disconnected.



Closing system using the "strongbox principle guarantees a correct sealing

Principles of Ex-linear light fittings

Lighting engineering, LED and electronic ballast (EVG)

Optimized lighting technology

Depending on the application, the light fittings can be equipped with a large variety of lamps and reflectors. The criteria for the selection of the types of lamps and reflectors are basically determined by the type of lighting required (illumination of surfaces or objects, etc.) and the economic efficiency. When planning a lighting installation, the polar curves of the luminous intensity of the light fittings being used are required in order to calculate the illumination distribution.

Polar curves

During the development phase the lighting properties of all explosion-protected light fittings are tested in our lighting laboratory. In the case of the linear light fittings with fluorescent lamps, we have succeeded in optimizing both the illumination of surfaces with the largest possible light distribution and the illumination of objects with the highest possible axial light intensity. The polar curve of each light fitting can be found in the technical data and can be used together with the other lighting values to calculate the illuminance. All lighting design data can be downloaded from our Web page: www.crouse-hinds.de/.

Fluorescent lamps as light source

All light fittings of the eLLK 92 / nLLK 08 / eLLB 20 and RLF 250.. series have been developed and certified for Ø 26 mm bi-pin fluorescent lamps with a G 13 lamp cap and the nLLK 10 for T5-lamps in accordance with IEC 60081. This means that the lamps, which are available all over the world, can be used for both hazardous and non-hazardous areas. Not only does this simplify stock-keeping, but the operator also benefits from all the technical advantages in conjunction with EVG operation. Special thermo-lamps with 38 mm diameter can be used in all bi-pin lamp holders of CEAG fluorescent light fittings. This allows an economical use of fluorescent lamps even below ambient temperatures of-5 °C.

The LED module

As a leading manufacturer of explosion-protected light fittings, we have now designed a revolutionary module with an LED light source to fit into existing eLLK/M 92018/18 and eLLK/M 92036/36 as well as into the emergency variants V-CG-S and NIB. The LED system design and certification allow the use in the well proven Ex e technology of eLLK/M 92. Thus, it can be used in all corresponding fluorescent light fittings as an alternative to the 18 W and 36 W lamps.

Combined with our electronic ballast EVG 09 as the driver, we can rely on more than 20 years of reliable and successful operation in harsh and hazardous environments.

A specially designed reflector system directs the light output of the high power LED module to the working area and there is no multi-shadowing and light pollution.

International Ø 26 mm bi-pin fluorescent lamp

LED-module 400

CEAG products are constanly being advanced and tested in the company's own lighting laboratory

The advantages of the LED Module:

- Environmentally friendly, no mercury
- Shock and vibration resistant, no filament or glass to break
- Immediate start, instant full illumination
- No life time reduction due to switching cycles
- Reduced disposal costs
- Energy and cost savings: 20% energy savings compared to fluorescent lamps
- Additional energy savings by operating on demand (night/day and presence-mode)
- Reduced maintenance costs compared to standard fluorescent lamps
- Lower overall cost of ownership

Operating life

- The expected operating life of a CEAG LED module is 60,000 hours. This is a significant improvement compared to traditional light sources.
- Heat sinks are specifically engineered to remove heat from the LEDs to ensure a longer life, better lumen output and accurate colour temperature.

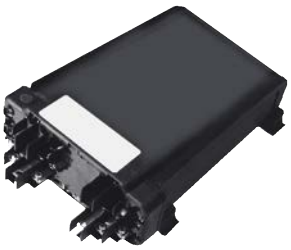
Versatile

- Unrestricted use with V-CG-S module for connection to a CEAG Central Battery Systems and with self-contained emergency light fittings eLLK 92 ... NIB .

Electronic ballasts (EVG)

Nowadays it is not possible to imagine modern light fittings for fluorescent lamps without the EVG technology. Features such as immediate starting, the absence of flickering during operation or the minimal heat rise are only possible with this technology. With the CEAG EVG technology, fluorescent light fittings for use in hazardous areas also provide decisive advantages:

- Use with various mains voltages from 110 V up to 254 V ± 10 %
- Regulation of luminous flux with fluctuating mains voltage
- Safe lamp ignition at low and high ambient temperatures
- Longer service life for lamps
- AC/DC operation possible
- Standard dual channel ballast, that means on failure when one lamp fails the second lamp will continue in operation independent from the failed one.



Electronic ballasts EVG 09

- Use as drivers for LED modules or bi-pin lamps, Ø 26 mm

EOL issue solved

All the EVGs (electronic ballasts) supplied by CEAG since 1988 feature monitoring of the lamp circuit, detection of the rectifier effect, as well as a shutdown of the circuit in the event that the lamp does not strike. Therefore, the CEAG EVGs already ensures a high level of safety at the end of the service life of the lamps long before the discussions on EOL even starts. The CEAG EVG 09 also fulfils the relevant EOL requirements of the industrial standard IEC 61347-2-3 (§ 17.2 and 17.3), as well as those laid down in the IEC 60079-7 (Electrical equipment in the type of protection Increased Safety). Thus, the CEAG EVG 09, which is certified to BVS 09 ATEX E 054 U, meets the latest findings and the newest standards.

What protective circuits does the new EVG 09 have?

The standard DIN EN 61347-2-3 (VDE 0712-33), which was issued in February 2005, only stipulates a permanent monitoring of the lamp circuit for EOL effects for T4 and T5 lamps (16 mm and thinner). The standard IEC 60079-7, which was derived from this standard, lays down the test requirements for Ex-e

light fittings with cold start EVGs for T6 (26 mm) fluorescent lamps. Unlike industrial luminaires with EVGs, Ex-e luminaires have to meet all the relevant conditions of this standard. The CEAG EVG 09 meets all these requirements and, thanks to the continuous lamp-monitoring, it ensures the safe operation of all functions.

The advantages for you:

- Time-tested and reliable technology
- Latest lamp circuit monitoring as an additional safety factor
- Meets all requirements of the IEC 60079-7 for luminaires with fluorescent lamps in "Increased Safety" (EOL)
- EVG designed specially for rough operating conditions in Zone 1 – not just an "encapsulated industrial EVG"
- Thermally optimized circuitry for long service life, even in high ambient temperatures
- Wide input voltage range and DC operation for universal use
- Two separate lamp circuits (autarkic switching) provide more safety for your employees and installations
- Practically insensitive to network harmonics and over-voltage influences
- Isolation of one lamp circuit for use in emergency lighting installations (economic battery use)

The EVG 09 in practice: Explosion-protected luminaires with the CEAG trademark

All these functions are only one aspect of the extensive safety concept of the CEAG EVG 09. The use of highly impact resistant plastic materials for the encapsulation in the type of protection Ex-d e, as well as the additional unit fuses for the event that a fault occurs, completes the whole package.

The CEAG EVG 09 is standard for our fluorescent light fittings of the series: eLLK 92 .../.., eLLM 92 .../…. NE and the recessed ceiling luminaires eLLB 20… and RLF 250.
It is suitable for the operation of LED-modules and fluorescent lamps.

Robust technology for use under extreme conditions

The operation of explosion-protected light fittings places high requirements on the reliability and durability of the circuits being used. In addition to temperatures, moisture and mechanical stress, mains contamination or voltage peaks can affect the light fittings. Here specially developed CEAG EVGs provide safe protection against harmful influences. Whereas conventional industrial EVGs are designed for an ambient temperature of the light fittings of up to +30 °C, the CEAG EVGs are designed for an ambient temperature of +55 °C. The large-scale printed circuit board layouts ensure an even heat distribution, through-connections and encapsulation of sensitive components provide mechanical protection. A hermetically sealed enclosure provides protection against undesirable substances that could cause damage to the PCB.

Direct or alternating voltage?

Conventional ballasts only work with an alternating voltage and can only be used with group or central battery installations under certain conditions. In combination with the leading manufacturer of CEAG emergency lighting installations, we offer an explosion-protected ballast that can be operated with alternating and direct voltages.

Quality cannot be left to chance

Ensuring a consistently high quality requires extensive testing and a largely automated production process. With our decades of experience in the manufacture of electronic ballasts, in addition to the routine testing of all equipment, we also carry out stress tests on individual batches, whereby we also obtain reliable data relating to component specifications.

Computer-aided final inspections

The uncompromising safety of the explosion-protected eLLK/ M 92 ... light fittings is maintained throughout the various production stages and includes the final inspection. Each light fitting is tested in detail by a computer test program. All data relating to the manufacture and safety is stored and can still be called up years later. This is where our quality assurance system, that is certified to ISO 9001:2008, clearly makes it mark.

Emergency lighting – central or decentral

With regard to emergency lighting in hazardous areas, there are two general philosophies, which are based on the reliability of the supply source, the costs and efforts required for testing and maintenance work and the economic efficiency.

Emergency light fittings with a self-contained battery system

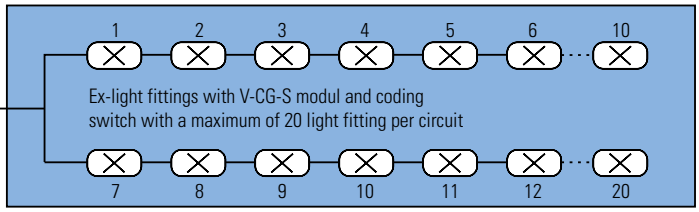
Emergency light fittings with self-contained battery systems provide the required emergency lighting decentrally, independent of central systems. This means that the battery, the charger and the electronics are integrated in the light fitting. With regard to the availability and the redundancy, this system meets the highest requirements when considering the reliability of the supply source, in particular in safety-engineering sensitive areas. However, with regard to economic efficiency, the costs and efforts involved in the testing and maintenance of of each self-contained battery system and the influence of the ambient conditions on the battery life span have to be taken into account. Taking the above safety aspects into consideration, the use of emergency light fittings with a self-contained battery system is undoubtedly the best solution for applications in large and spacious hazardous areas where the number of fittings used is limited.

The CEAG series of emergency light fittings with self-contained battery systems eLLK 92 NE, eLLB 20... NE feature all the requisite monitoring functions and perform the required functionality and operating time tests automatically, whereby the battery lifespan is optimized.

Centrally controlled emergency lighting systems with CG modules

A centrally controlled emergency lighting supply using the CEAG group supply and a central battery system is installed when a large number of emergency lighting are joined together and can be operated as system light fittings. As a rule, these battery systems are not installed in the hazardous areas and therefore do not have to cope with the same environmental conditions as the light fittings themselves. This usually results in an extended life span of the batteries with a minimized maintenance effort. One must of course take the increased effort and costs involved in laying cables from the central battery system to the light fittings in the hazardous areas into consideration. For operation in CEAG emergency lighting systems, we can supply versions of our explosion-protected light fittings of the series eLLK 92, nLLK 08, eLLB 20 and RLF 250 with "V-CG-S modules". Among other things, this monitoring module controls the data exchange between the main emergency lighting unit via the power supply cable and reports the operating status and any functional errors. In conjunction
with the V-CG-S modules, it is now possible to connect individually monitored emergency light fittings to a CEAG emergency lighting installation with monitoring system. This means that it is now possible to integrate explosion-protected light fittings as system light fittings into the practical monitoring system of CEAG group or central battery installations.

CEAG emergency lighting
supply unit for non-hazardous areas



This combination offers the following advantages:

- Automatic performance of the requisite function and duration tests with central record-keeping of all operation status and functional error reports
- Enormous cost savings as manual testing is no longer necessary
- Two-lamp operation with mains supply, single lamp operation with emergency power supply. Therefore cost savings for batteries and apparatus
- High degree of safety of emergency lighting due to constant display of availability
- Simplified installation by using line supply for data communication
- Mains and emergency power supply have a common connection
- A separate data line is not required
- A maximum of 20 light fittings can be connected to one circuit
- Individual switching of all emergency light fittings in a circuit possible

Ex-Linear LED light fittings

2 eLLK/M 92 LED 400/800 / eLLK/M 92 LED 400/800 V-CG-S / NE / NE-HT / NIB-CSA (Zone 1, 2, 21, 22)

The efficient solution for your explosion-protected lighting concept

The explosion-protected linear light fittings series eLLK / M 92 LED 400/800 combines the latest LED technology with the protection of a reliable housing solution. As a result, this light fitting series is the ideal solution for lighting tasks in harsh and hazardous environments.

Latest lighting technology for a proven lighting concept

As a leading manufacturer of explosion-protected luminaires, we have designed a revolutionary LED module to fit into the existing eLLK/M 92018/18 and eLLK/M 92036/36. The linear LED module can also be used for converting existing eLLK/M 92 light fittings with fluorescent lamps and an electronic ballast electronic ballast (EVG 09) into LED linear light fittings in just few simple steps. A special designed reflector system directs the light output of the high power LEDs to the working area without any multi-shadowing or light pollution.

The LED system design and certification allow the use in the tried and tested Ex e technology of the eLLK/M 92 light fittings. With the use of our electronic ballast EVG 09 as the driver, we can rely on more than 20 years successful and safe operation in harsh and hazardous environments.

The advantages of the LED module:

- Environmentally friendly, no mercury
- Shock and vibration resistant, no filament or glass to break
- Immediate start, instant full illumination
- No life time reduction due to switching cycles
- Reduced disposal costs
-

Energy and cost savings

- >20% energy savings compared to fluorescent lamps
- Additional energy savings due to operation on demand (night/day and presence-mode)
- Reduced maintenance costs compared to standard fluorescent lamps
- Lower overall cost of ownership

Operating life

- The expected operating life of this LED module is up to 100,000 hours. This is a significant improvement compared to traditional light sources.
- Heat sinks are specifically engineered to remove heat from the LEDs to ensure a longer life, better lumen output and accurate colour temperature.
- Fully operational with V-CG-S modules for connection to CEAG central battery emergency lighting systems.
- Also available as self-contained emergency luminaire eLLK 92 LED ... NE /NIB see chapter 2.4 for NE-features

Easy and cost-effective installation

Like all the luminaires in the eLLK lighting family, our standard LED linear luminaires feature a single-ended through-wiring, which, in conjunction with the generously dimensioned terminal compartment, allows a cost-effective installation. The double-sided locking facility with 10 or 20 latch points allows the protective bowl to be hinged on both sides, meaning that the fitting can be mounted on either side.

International certification

Special versions according to the NEC standards are available for the use on the American market.

Features

- >20 % energy savings compared to similar fluorescent luminaires
- Special reflector design with indirect light distribution prevents undue glare and multi-shadowing
- Tried and tested technology; the EVG 09 has been used as a driver for more than 20 years
- Various light colours available - 4000 K / 5600 K
- Selected LED chips with perfect binning, low power loss and long life
- Ex-e technology for easy maintenance
- For ambient temperatures from -25 °C up to +45 °C / +55°C (HT)
- Special version to NEC standards (CSA)

Ordering details

Type	Version	Terminals	Through-wiring single-ended	Through-wiring twin-ended	Cable gland/ thread	Threaded plug	Blanking plug	Order No. for 4000 K	Order No. for 5600 K
eLLK 92 LED 400 - 4000 K / 5600 K									
eLLK 92 LED 400	1/6-1K	1 x 6	x	–	2 x M25, Plastic		1	**1 2265 500 101**	**1 2265 502 101**
eLLK 92 LED 400	2/6-2K	2 x 6	–	x	2 x M25, Plastic	2 x M25		**1 2265 500 103**	**1 2265 502 103**
eLLK 92 LED 400	1/6-1M [1]	1 x 6	x	–	2 x M20, metal thread	1 x M20		**1 2265 500 109**	**1 2265 502 109**
eLLK 92 LED 400	2/6-2M [1]	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 2265 500 111**	**1 2265 502 111**
eLLK 92 LED 400 **CSA**[3]	1/6- NPT	1 x 6	x	–	2 x M25 - 3/4'' Myers hub	2 x M25		**1 2265 500 309**	**1 2265 502 309**
eLLK 92 LED 400 **CSA**[3]	1/6- NPT	1 x 6	x	–	2 x M25 - 1/2'' Myers hub	2 x M25		**1 2265 500 310**	**1 2265 502 310**
eLLK 92 LED 400 **CSA**[3]	2/6- NPT	2 x 6	–	x	2 x M25 - 3/4'' Myers hub	2 x M25		**1 2265 500 311**	**1 2265 502 311**
eLLK 92 LED 800 - 4000 K / 5600 K									
eLLK 92 LED 800	1/6-1K	1 x 6	x	–	2 x M25, Plastic		1	**1 2266 500 101**	**1 2266 502 101**
eLLK 92 LED 800	2/6-2K	2 x 6	–	x	2 x M25, Plastic	2 x M25		**1 2266 500 103**	**1 2266 502 103**
eLLK 92 LED 800	1/6-1M [1]	1 x 6	x	–	2 x M20, metal thread	1 x M20		**1 2266 500 109**	**1 2266 502 109**
eLLK 92 LED 800	2/6-2M [1]	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 2266 500 111**	**1 2266 502 111**
eLLK 92 LED 800 **CSA**[3]	1/6- NPT	1 x 6	x	–	2 x M25 - 3/4'' Myers hub	2 x M25		**1 2266 500 309**	**1 2266 502 309**
eLLK 92 LED 800 **CSA**[3]	1/6- NPT	1 x 6	x	–	2 x M25 - 1/2'' Myers hub	2 x M25		**1 2266 500 310**	**1 2266 502 310**
eLLK 92 LED 800 **CSA**[3]	2/6- NPT	2 x 6	–	x	2 x M25 - 3/4'' Myers hub	2 x M25		**1 2266 500 311**	**1 2266 502 311**
eLLM 92 LED - 4000 K / 5600 K									
eLLM 92 LED 400	1/3-1K	1 x 3	–	–	1 x M25, Plastic			**1 2268 500 101**	**1 2268 502 101**
eLLM 92 LED 800	1/3-1K	1 x 3	–	–	1 x M25, Plastic			**1 2269 500 101**	**1 2269 502 101**
eLLK 92 LED 400 V-CG-S - 4000 K / 5600 K [2]									
eLLK 92 LED 400 V-CG-S	2/6-2K	2 x 6	–	x	2 x M25, Plastic	2 x M25		**1 2265 510 103**	**1 2265 512 103**
eLLK 92 LED 400 V-CG-S	2/6-2M [1]	2 x 6	–	x	4 x M20, metal thread	2 x M25		**1 2265 510 111**	**1 2265 512 111**
eLLK 92 LED 800 V-CG-S - 4000 K / 5600 K [2]									
eLLK 92 LED 800 V-CG-S	2/6-2K	2 x 6	–	x	2 x M25, Plastic	2 x M25		**1 2266 510 103**	**1 2266 512 103**
eLLK 92 LED 800 V-CG-S	2/6-2M [1]	2 x 6	–	x	4 x M20, metal thread	2 x M25		**1 2266 510 111**	**1 2266 512 111**
eLLK 92 LED 400 HT für Tu ≤ +55 °C - 4000 K / 5600 K									
eLLK 92 LED 400 HT	1/6-1K	1 x 6	x	–	2 x M25, Plastic		1	**1 2265 550 101**	**1 2265 552 101**
eLLK 92 LED 400 HT	2/6-2K	2 x 6	–	x	2 x M25, Plastic	2 x M25		**1 2265 550 103**	**1 2265 552 103**
eLLK 92 LED 400 HT	1/6-1M [1]	1 x 6	x	–	2 x M20, metal thread	1 x M20		**1 2265 550 109**	**1 2265 552 109**
eLLK 92 LED 400 HT	2/6-2M	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 2265 550 111**	**1 2265 552 111**
eLLK 92 LED 800 HT für Tu ≤ +55 °C - 4000 K / 5600 K									
eLLK 92 LED 800 HT	1/6-1K	1 x 6	x	–	2 x M25, Plastic		1	**1 2266 550 101**	**1 2266 552 101**
eLLK 92 LED 800 HT	2/6-2K	2 x 6	–	x	2 x M25, Plastic	2 x M25		**1 2266 550 103**	**1 2266 552 103**
eLLK 92 LED 800 HT	1/6-1M [1]	1 x 6	x	–	2 x M20, metal thread	1 x M20		**1 2266 550 109**	**1 2266 552 109**
eLLK 92 LED 800 HT	2/6-2M [1]	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 2266 550 111**	**1 2266 552 111**

Scope of delivery including LED-module, without fixing material

Metal cable glands see catalogue part 2: 2.3.12 ff

[1] with metal thread, without cable gland

[2] for operation with CEAG-emergency supply system

[3] for use according to NEC-standards

Ordering details

eLLK/M 92 LED 400/800 NE / NE-HT /NIB-

Ordering details

Type	Version	Terminals	Through-wiring single-ended	Through-wiring twin-ended	Cable gland/ thread	Threaded plug	Blanking plug	Order No. for 4000 K	for 5600 K
eLLK 92 LED 400 NE [2]									
eLLK 92 LED 400 NE	1/6-1K	1 x 6	x	–	2 x M25, plastic		1	**1 2260 585 101**	**1 2260 586 101**
eLLK 92 LED 400 NE	2/6-2K	2 x 6	–	x	2 x M25, plastic	2 x M25		**1 2260 585 103**	**1 2260 586 103**
eLLK 92 LED 400 NE	1/6-1M [1]	1 x 6	x	–	2 x M20, metal thread	1 x M20		**1 2260 585 109**	**1 2260 586 109**
eLLK 92 LED 400 NE	2/6-2M [1]	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 2260 585 111**	**1 2260 586 111**
eLLK 92 LED 400 NE	1/6-1M [1]	1 x 6	–	x	2 x M25, metal thread	2 x M25		**1 2260 585 609**	**1 2260 586 609**
eLLK 92 LED 400 NE	2/6-2M [1]	2 x 6	–	x	4 x M25, metal thread	4 x M25		**1 2260 585 611**	**1 2260 586 611**
eLLK 92 LED 800 NE [2]									
eLLK 92 LED 800 NE	1/6-1K	1 x 6	x	–	2 x M25, plastic		1	**1 2261 585 101**	**1 2261 586 101**
eLLK 92 LED 800 NE	2/6-2K	2 x 6	–	x	2 x M25, plastic	2 x M25		**1 2261 585 103**	**1 2261 586 103**
eLLK 92 LED 800 NE	1/6-1M [1]	1 x 6	x	–	2 x M20, metal thread	1 x M20		**1 2261 585 109**	**1 2261 586 109**
eLLK 92 LED 800 NE	2/6-2M [1]	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 2261 585 111**	**1 2261 586 111**
eLLK 92 LED 800 NE	1/6-1M [1]	1 x 6	–	x	2 x M25, metal thread	2 x M25		**1 2261 585 609**	**1 2261 586 609**
eLLK 92 LED 800 NE	2/6-2M [1]	2 x 6	–	x	4 x M25, metal thread	4 x M25		**1 2261 585 611**	**1 2261 586 611**
eLLM 92 LED 400 NE [2]									
eLLM 92 LED 400 NE	1/3-1K	1 x 3	–	–	1 x M25, plastic			**1 2273 585 101**	**1 2273 586 101**
eLLK 92 LED 400 NE HT for Tu ≤ +55 °C [2]									
eLLK 92 LED 400 NE HT	1/6-1K	1 x 6	x	–	2 x M25, plastic		1	**1 2260 590 101**	**1 2260 591 101**
eLLK 92 LED 400 NE HT	2/6-2K	2 x 6	–	x	2 x M25, plastic	2 x M25		**1 2260 590 103**	**1 2260 591 103**
eLLK 92 LED 400 NE HT	1/6-1M [1]	1 x 6	x	–	2 x M20, metal thread	1 x M20		**1 2260 590 109**	**1 2260 591 109**
eLLK 92 LED 400 NE HT	2/6-2M [1]	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 2260 590 111**	**1 2260 591 111**
eLLK 92 LED 800 NE HT for Tu ≤ +55 °C [2]									
eLLK 92 LED 800 NE HT	1/6-1K	1 x 6	x	–	2 x M25, plastic		1	**1 2261 590 101**	**1 2261 591 101**
eLLK 92 LED 800 NE HT	2/6-2K	2 x 6	–	x	2 x M25, plastic	2 x M25		**1 2261 590 103**	**1 2261 591 103**
eLLK 92 LED 800 NE HT	1/6-1M [1]	1 x 6	x	–	2 x M20, metal thread	1 x M20		**1 2261 590 109**	**1 2261 591 109**
eLLK 92 LED 800 NE HT	2/6-2M [1]	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 2261 590 111**	**1 2261 591 111**

Type	Version	Terminals	Through-wiring single-ended	Through-wiring twin-ended	Cable gland/ thread	Threaded plug	Blanking plug	Order No. for 110-127 V AC	for 220-254 V AC
eLLK 92 LED 400/800 NIB - CSA [2]									
eLLK 92 LED 400 NIB **CSA** [3]	2/6-2 NPT	2 x 6	–	x	2 x M25 - 3/4'' Myers hub	2 x M25		**1 2260 579 333**	**1 2260 579 311**
eLLK 92 LED 800 NIB **CSA** [3]	2/6-2 NPT	2 x 6	–	x	2 x M25 - 3/4'' Myers hub	2 x M25		**1 2261 579 333**	**1 2261 579 311**

Scope of delivery including LED-module, without fixing material

Metal cable glands see catalogue part 2: 2.3.12 ff

[1] with metal thread, without cable gland

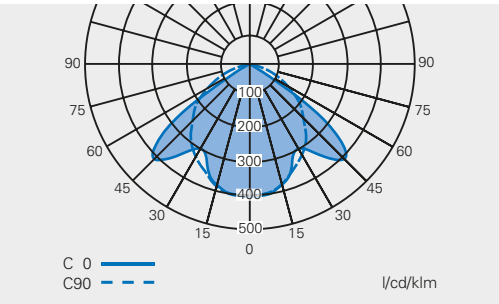
[2] Self-contained emergency light fitting

[3] for use according to NEC-standards

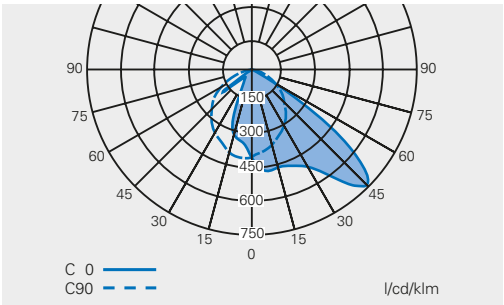
Accessories

Type	Order No.
Battery set Type 2710-3 with LED display and microprocessor-monitoring, complete	**2 2710 904 000**
Single sided through wiring 2/6 with 2 entries M25, incl. terminals and mounting material for eLLM 92 LED 400/800	**2 2218 602 000**
Protective bowl with green filter for eye wash safety shower facilities (eLLK 92 LED 400)	**2 2215 402 018**

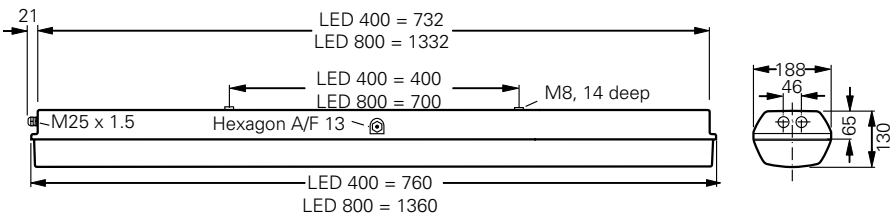
Polar curve eLLK/M 92 LED 400 / 800



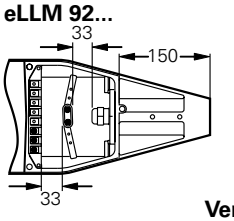
Polar curve eLLK/M 92 LED 400/800 NE / NIB / V-CG-S in emergency operation



eLLK 92 LED 400/800

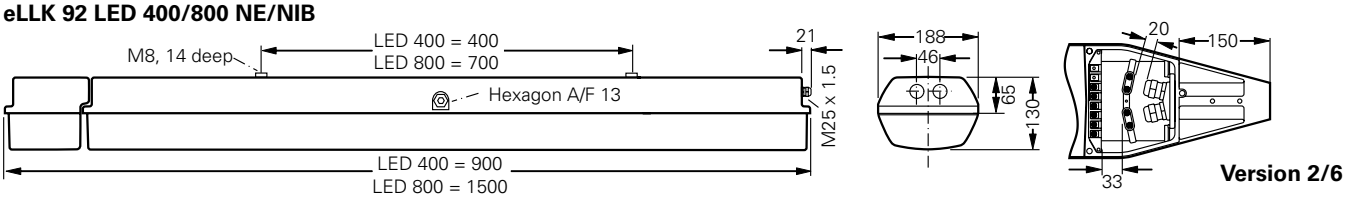


eLLM 92...



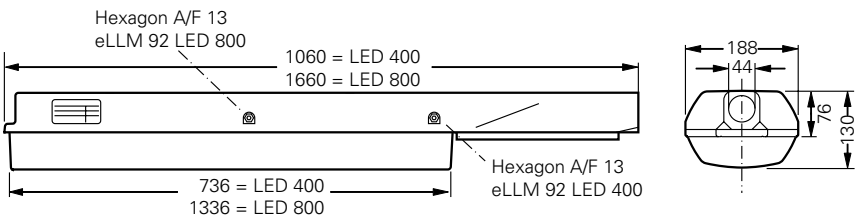
Version 1/3

eLLK 92 LED 400/800 NE/NIB



Version 2/6

eLLM 92 LED 400/800



Dimensions in mm

2.2 Technical data

eLLK 92 LED 400 (HT)/ eLLK 92 LED 800 (HT)

Technical data

	eLLK/M 92 LED 400 / eLLK 92 LED 400 HT	eLLK/M 92 LED 800 / eLLK 92 LED 800 HT
EC-Type Examination Certificate	BVS 09 ATEX E 034	BVS 09 ATEX E 034
IECEx Certificate of Conformity	IECEx BVS 09.0033	IECEx BVS 09.0033
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex db eb mb op is IIC T4 Gb Ⓔx II 2 D Ex tb IIIC T80 °C Db	Ⓔx II 2 G Ex db eb mb op is IIC T4 Gb Ⓔx II 2 D Ex tb IIIC T80 °C Db
Marking accd. to IECEx	Ex db eb mb op is IIC T4 Gb Ex tb IIIC T80 °C Db	Ex db eb mb op is IIC T4 Gb Ex tb IIIC T80 °C Db
Permissible ambient temperature	-25 °C up to +45 °C /-25 °C up to +55 °C (HT)	-25 °C up to +45 °C /-25 °C up to +55 °C (HT)
IK-class according to IEC/EN 62262	IK 10 ≙ 20 J	IK 10 ≙ 20 J
Rated voltage	110 V - 254 V AC 110 V - 250 V DC	110 V - 254 V AC 110 V - 250 V DC
Rated current	0,15 A / 0,11 A (HT)	0,25 A / 0,19 A (HT)
Frequency	50 - 60 Hz	50 - 60 Hz
Life expectancy LED module	L 70 = 90.000 h at Ta = 25 °C / 100.000 h at Ta = 25 °C (HT)	L 70 = 90.000 h at Ta = 25 °C / 100.000 h at Ta = 25 °C (HT)
Power factor cos φ	≥ 0.95	≥ 0.95
Circuit	EVG	EVG
Protection class	I	I
Illuminance at measurement plane	comparable with luminaires for fluorescent lamps	comparable with luminaires for fluorescent lamps
CRI	> 75	> 75
Lamp / Illuminant	LED module 400 - 2 x 13 W / LED module 400 HT - 2 x 11 W	LED module 800 - 2 x 26 W / LED module 800 HT - 2 x 22 W)
Light colour	4000 K, 5600 K	4000 K, 5600 K
Rated luminous flux of the luminaire (typical, ± 10 %)	2300 lm / 1955 lm (HT)	4330 lm / 3680 lm (HT)
Dimensions (L x W x H)	760 x 188 x 130 mm	1360 x 188 x 130 mm
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm² per terminal	L1, L2, L3, L, N, PE; max. 2 x 6 mm² per terminal
Enclosure colour	RAL 7035 light grey	RAL 7035 light grey
Enclosure material	glass-fibre reinforced polyester	glass-fibre reinforced polyester
Weight	6.9 kg	10.7 kg
Cable glands / gland plates / enclosure drilling	Ex-e cable glands M25 x 1.5 (plastic), option: M20 x 1.5 metal thread[1)]	Ex-e cable glands M25 x 1.5 (plastic), option: M20 x 1.5 metal thread[1)]
Degree of protection accd. to EN 60529	IP66	IP66
Protective cover / protective bowl	Polycarbonate	Polycarbonate

[1)] with dustcover if entry/thread is not closed

Technical data

	eLLK 92 LED 400 V-CG-S	eLLK 92 LED 800 V-CG-S
EC-Tye Examination Certificate	BVS 09 ATEX E 034	BVS 09 ATEX E 034
IECEx Certificate of Conformity	IECEx BVS 09.0033	IECEx BVS 09.0033
Marking to 2014/34/EU	Ⓔx II 2 G Ex db eb mb ib op is IIC T4 Gb Ⓔx II 2 D Ex tb IIIC T80 °C Db	Ⓔx II 2 G Ex db eb mb ib op is IIC T4 Gb Ⓔx II 2 D Ex tb IIIC T80 °C Db
Marking to IECEx	Ex db eb mb ib op is IIC T4 Gb Ex tb IIIC T80 °C Db	Ex db eb mb ib op is IIC T4 Gb Ex tb IIIC T80 °C Db
Permissible ambient temperature	-25 °C up to +45 °C	-25 °C up to +45 °C
IK-class according to IEC/EN 62262	IK 10 ≙ 20 J	IK 10 ≙ 20 J
Rated voltage	220 V - 254 V AC 195 V - 250 V DC	220 V - 254 V AC 195 V - 250 V DC
Rated current	0.15 A / 0.08 A (emergency operation)	0.25 A / 0.13 V (emergency operation)
Frequency	50 - 60 Hz	50 - 60 Hz
Battery		
Lifetime LED module	L 70 = 90.000 h at Ta = 25 °C	L 70 = 90.000 h at Ta = 25 °C
Power factor cos φ	≥ 0.95	≥ 0.95
Circuit	EVG/CG-S	EVG/CG-S
Insulation class	I	I
Illuminance at measurement plane	equivalent to related fluorescent tubes	equivalent to related fluorescent tubes
CRI	> 75	> 75
Lamp/Illuminant	LED module 400 - 2 x 13 W	LED module 800 - 2 x 26 W
Light colour	4000 K, 5600 K	4000 K, 5600 K
Rated luminous flux of the luminaire (typical, ± 10 %)	2300 lm	4330 lm
Rated luminous flux in emergency operation of the luminaire (one LED-row)	1150 lm	2165 lm
Rated emergency operating time	-	-
Luminous flux relation normal/ emergency opration (one LED line)	44 %	44 %
Dimensions (L x W x H)	760 x 188 x 130 mm	1360 x 188 x 130 mm
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm^2 per terminal	L1, L2, L3, L, N, PE; max. 2 x 6 mm^2 per terminal
Enclosure colour	RAL 7035 light grey	RAL 7035 light grey
Enclosure material	glass-fibre reinforced polyester	glass-fibre reinforced polyester
Weight	7,4 kg	11,1 kg
Cable glands / Gland plates / Enclosure drilling	Ex-e cable glands M25 x 1.5 (plastic), option: M20 x 1.5 metal thread[1)]	Ex-e cable glands M25 x 1.5 (plastic), option: M20 x 1.5 metal thread[1)]
Degree of protection accd. EN 60529	IP66	IP66
Protective cover / protective bowl	Polycarbonate	Polycarbonate

Technical data

eLLK 92 LED 400 NE (HT)/ eLLK 92 LED 800 NE (HT)

Technical data

	eLLK/M 92 LED 400 NE / eLLK 92 LED 800 NE	eLLK/M 92 LED 400 NE HT / eLLK 92 LED 800 NE HT
EC-Tye Examination Certificate	BVS 09 ATEX E 034	BVS 09 ATEX E 034
IECEx-Certification of conformity	IECEx BVS 09.0033	IECEx BVS 09.0033
Marking to 2014/34/EU	Ⓔx II 2 G Ex db eb mb op is IIC T4 Gb Ⓔx II 2 D Ex tb IIIC T80 °C Db	Ⓔx II 2 G Ex db eb mb ib op is IIC T4 Gb Ⓔx II 2 D Ex tb IIIC T80 °C Db
Marking to IECEx	Ex db eb mb ib op is IIC T4 Gb Ex tb IIIC T80 °C Db	Ex db eb mb ib op is IIC T4 Gb Ex tb IIIC T80 °C Db
Permissible ambient temperature	-25 °C up to +45 °C / specified data -5 °C up to +35 °C	-25 °C up to +55 °C / specified data -5 °C up to +35 °C
IK-class according to IEC/EN 62262	IK 10 ≙ 20 J	IK 10 ≙ 20 J
Battery	Battery set with 7 Ah-NC battery, with LED display and monitoring via microprocessor	Battery set with 7 Ah-NC battery, with LED display and monitoring via microprocessor
Rated voltage	120 V - 254 V AC	120 V - 254 V AC
Rated current	0,2 A / 0,29 A	0,2 A / 0,29 A
Frequency	50 - 60 Hz	50 - 60 Hz
Ladezeit	≥ 14 h	≥ 14 h
Lifetime LED module	L 70 = 90.000 h at Ta = 25 °C	L 70 = 100.000 h at Ta = 25 °C (HT)
Power factor cos φ	≥ 0.95	≥ 0.95
Circuit	electronic supply unit (VE12)	electronic supply unit (VE12)
Insulation class	I	I
Illuminance at measurement plane	equivalent to related fluorescent tubes	equivalent to related fluorescent tubes
CRI	> 75	> 75
Lamp/Illuminant	LED module 400 - 2 x 13 W / LED module 800 - 2 x 26 W	LED module 400 - 2 x 12 W / LED module 800 - 2 x 21 W
Luminous flux ratio in emergency mode of one row of LEDs	95 % (1,5 h) - 65 % (3 h) / 65 % (1,5 h) - 45 % (3 h)	95 % (1,5 h) - 65 % (3 h) / 65 % (1,5 h) - 45 % (3 h)
Light colour	4000 K, 5600 K	4000 K, 5600 K
Rated emergency operating time	1.5 h or 3 h, adjustable	1.5 h or 3 h, adjustable
Rated luminous flux of the luminaire (typical, ± 10 %)	LED 400: 2300 lm LED 800: 4330 lm	LED 400: 2123 lm LED 800: 3680 lm
Rated luminous flux in emergency operation of the luminaire (one LED-row) 1.5 h	LED 400: 1095 lm LED 800: 1400 lm	LED 400: 1010 lm LED 800: 1292 lm
Rated luminous flux in emergency operation of the luminaire (one LED-row) 3 h	LED 400: 750 lm LED 800: 977 lm	LED 400: 690 lm LED 800: 901 lm
Dimensions (L x W x H)	900 x 188 x 130 mm	900 x 188 x 130 mm
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm^2 per terminal	L1, L2, L3, L, N, PE; max. 2 x 6 mm^2 per terminal
Enclosure colour	RAL 7035 light grey	RAL 7035 light grey
Enclosure material	Glass fibre reinforced polyester	Glass fibre reinforced polyester
Weight	LED 400: 9.8 kg LED 800: 12.5 kg	LED 400: 9.8 kg LED 800: 12.5 kg
Cable glands / Gland plates / Enclosure drilling	Ex-e-cable glands M25 x 1,5 (plastic) for cables Ø 8 - 17 mm, Option: M20 x 1,5 metal thread [1)]	Ex-e-cable glands M25 x 1,5 (plastic) for cables Ø 8 - 17 mm, Option: M20 x 1,5 metal thread [1)]
Degree of protection accd. EN 60529	IP66	IP66
Protective cover / protective bowl	Polycarbonate	Polycarbonate

[1)] With dustcover if entry/thread is not closed

Technical data

	eLLK 92 LED 400 / eLLK 92 LED 800	eLLK 92 LED 400 NIB / eLLK 92 LED 800 NIB
Marking accd. to NEC 505/CEC 018	Class I, Zone 1, AEx de mb IIC T4 Gb / Ex de mb IIC T4 Gb Zone 21, AEx tb IIIC T80°C Db/ Ex tb IIIC T80°C Db	Class I, Zone 1, AEx de mb ib IIC T4 Gb / Ex de mb ib IIC T4 Gb Zone 21, AEx tb IIIC T80°C Db/ Ex tb IIIC T80°C Db
Marking accd. to NEC 500	Class I, Division 2, Groups A, B, C, D T4. Class II, Division 1, Groups E, F and G.	Class I, Division 2, Groups A, B, C, D T4. Class II, Division 1, Groups E, F and G.
Certificate of Compliance	CSA 14.700 11905	CSA 14.700 11905
Permissible ambient temperature	-25 °C up to +45 °C	-25 °C up to +45 °C specified data -5 °C up to +35 °C
IK-class according to IEC/EN 62262	IK 10 ≙ 20 J	IK 10 ≙ 20 J
Battery		Battery set with 7 Ah-NC battery, with LED display and monitoring via microprocessor
Rated voltage	110 V - 254 V AC 110 V - 250 V DC	220 V - 254 V AC (type U240) 110 V - 127 V AC (type (U120)
Rated current	0.15 A / 0.25 A	0.2 A / 0.31 A
Frequency	50 - 60 Hz	50 - 60 Hz
Charging duration		≥ 14 h
Lifetime LED module	L 70 = 90.000 h at ta=25 °C	L 70 = 90.000 h at ta=25 °C
Power factor cos φ	≥ 0.95	≥ 0.95
Circuit	EVG	EVG with emergency lighting supply
Insulation class	I	I
Illuminance at measurement plane	equivalent to related fluorescent tubes	equivalent to related fluorescent tubes
CRI	> 75	> 75
Lamp/Illuminant	LED module 400 - 2 x 13 W / LED module 800 - 2 x 26 W	LED module 400 - 2 x 11 W / LED module 800 - 2 x 22 W
Light colour	4000 K, 5600 K (option)	4000 K, 5600 K (option)
Luminous flux ratio in emergency mode of one row of LEDs		98 % (400 NIB) /44 % (800 NIB)
Rated emergency operating time		2.4 h / 3.5 h
Rated luminous flux of the luminaire (typical, ± 10 %)	LED 400: 2300 lm LED 800: 4330 lm	LED 400: 2300 lm LED 800: 4330 lm
Rated luminous flux in emergency operation of the luminaire (one LED-row)		LED 400: 1095 lm LED 800: 1405 lm
Dimensions (L x W x H)	760 x 188 x 130 mm / 1360 x 188 x 130 mm	900 x 188 x 130 mm / 1500 x 188 x 130 mm
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm^2 per terminal	L1, L2, L3, L, N, PE; max. 2 x 6 mm^2 per terminal
Enclosure colour	RAL 7035 light grey	RAL 7035 light grey
Enclosure material	Glass fibre reinforced polyester	Glass fibre reinforced polyester
Weight	6.9 kg / 10.7 kg	10.5 kg / 15.3 kg
Cable glands / Gland plates / Enclosure drilling	1/2 '' or 3/4'' NPT Myers hub metal thread with dustcover	1/2 '' or 3/4'' NPT Myers hub metal thread with dustcover
Degree of protection accd.	EN 60529 : IP66 / NEMA: 4X	EN 60529 : IP66 / NEMA: 4X
Protective cover / protective bowl	Polycarbonate	Polycarbonate

C SA® US

C SA® US

Ex-Linear light fittings for fluorescent lamps

eLLK 92 18 W – 58 W / eLLM 92 18 W – 36 W
(Zone 1, 2, 21, 22)

The classic lighting solution in hazardous areas

The eLLK 92 linear luminaire series for fluorescent lamps combines the latest lighting technology with the requirements of a harsh and hazardous environment. This luminaire series is available in various sizes as a ceiling mounted light fitting (eLLK) and as a pole-mounted light fitting (eLLM).

Long-term safety

The luminaires of this robust lighting series with plastic enclosures are equipped with a highly-efficient electronic ballast that features a reliable EOL circuit. Thus, the lamps are checked for proper operation and shut down safely in the event of a malfunction at the end of their service life. In addition, the dual-channel structure of the electronic ballasts enables the safe operation of the second lamp if one lamp fails.

Versatile

The wide input voltage range and major international approvals enable the worldwide use of this successful luminaire series.

Simple and cost-effective installation

In conjunction with the generously dimensioned terminal compartment, the standard, single-ended through-wiring allows a cost-effective installation. The double-sided locking facility with 10, 20 or 24 latch points allows the protective bowl to be hinged on both sides meaning that the fitting can be mounted on either side.

Just in case: the emergency lighting version

Safety is always our top priority. This is why we also supply the eLLK 92 light fitting series with a built-in V-CG-S module. These luminaires with individual monitoring can be connected to a CEAG emergency lighting supply system.

Another option for operation with central battery emergency lighting systems (ZB) is the DCA version without individual monitoring. In the emergency mode, one lamp is turned off (AC / DC monitoring), thus reducing the required battery power.

The NE variants (Section 2.4) are also available for use as emergency light fittings with a self-contained battery unit.

Ready for LED-use

Our new version "LED-Ready" is equippt with all wiring for use of the LED-module. Those luminaires can

International certification

Special versions according to the NEC standards are available for the use on the American market. CSA certification for the types of luminaires eLLK 92 2217 (2 x 17 W) and eLLK 92 4232 (2 x 32 W) allows their use there.

Other country-specific approvals, such as for Brazil or the new Eurasian Conformity (EAC) for placing them on the market in Russia, Belarus and Kazakhstan, are available.

Features

- Retrofitting of existing eLLK/M 92 018/18 or eLLK/M 92036/36 linear luminaires (latest version) is possible
- Standard dual channel ballast with EOL monitoring
- Can be used with CEAG LED module
- Double-sided central locking facility
- Safety interlocking system due to an integrated forced isolating switch
- Safety standard IP66
- Connection to CEAG emergency light monitoring systems possible (V-CG-S/DCA)
- Special version to NEC standards (CSA)

Ordering details

Type	Version	Terminals	Through-wiring single-ended	Through-wiring twin-ended	Cable gland/ thread	Threaded plug	Blank-ing plug	Order No.
 **eLLK 92018/18**								
eLLK 92018/18 (2 x 18 W)	1/6-K	1 x 6	x	–	2 x M25, plastic	-	1	**1 2265 875 101**
eLLK 92018/18 (2 x 18 W)	2/6-K	2 x 6	–	x	2 x M25, plastic	2 x M25		**1 2265 875 103**
eLLK 92018/18 (2 x 18 W)	1/6-M [1]	1 x 6	x	–	2 x M20, metal thread	1 x M20		**1 2265 875 109**
eLLK 92018/18 (2 x 18 W)	2/6-M [1]	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 2265 875 111**
eLLK 92018/18 P2 (2 x 18 W) [2]	1/6-K	1 x 6	x	–	2 x M25, plastic	-	1	**1 2265 875 126**
eLLK 92018/18 (2 x 18 W)	1/6-M [1]	1 x 6	x	–	2 x M25, metal thread	2 x M25		**1 2265 875 609**
eLLK 92018/18 (2 x 18 W)	2/6-M [1]	2 x 6	–	x	4 x M25, metal thread	4 x M25		**1 2265 875 611**
 **eLLK 92036**								
eLLK 92036 (1 x 36 W)	1/6-K	1 x 6	x	–	2 x M25, plastic	-	1	**1 2263 875 101**
eLLK 92036 (1 x 36 W)	2/6-K	2 x 6	–	x	2 x M25, plastic	2 x M25		**1 2263 875 103**
eLLK 92036 (1 x 36 W)	1/6-M	1 x 6	x	–	2 x M20, metal thread	1 x M20		**1 2263 875 109**
eLLK 92036 (1 x 36 W)	2/6-M	2 x 6	x	–	4 x M20, metal thread	2 x M20		**1 2263 875 111**
eLLK 92036 P3 (1 x 36 W) [2]	1/6-K	1 x 6	x	–	2 x M25, plastic	-	1	**1 2263 875 125**
eLLK 92036 (1 x 36 W)	1/6-M	1 x 6	x	–	2 x M25, metal thread	2 x M25		**1 2263 875 609**
eLLK 92036 (1 x 36 W)	2/6-M	2 x 6	x	–	4 x M25, metal thread	2 x M25		**1 2263 875 611**
 **eLLK 92036/36**								
eLLK 92036/36 (2 x 36 W)	1/6-K	1 x 6	x	–	2 x M25, plastic	-	1	**1 2266 875 101**
eLLK 92036/36 (2 x 36 W)	2/6-K	2 x 6	–	x	2 x M25, plastic	2 x M25		**1 2266 875 103**
eLLK 92036/36 (2 x 36 W)	1/6-M	1 x 6	x	–	2 x M20, metal thread	1 x M20		**1 2266 875 109**
eLLK 92036/36 (2 x 36 W)	2/6-M	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 2266 875 111**
eLLK 92036/36 (2 x 36 W)	1/6-M	1 x 6	x	–	2 x M25, metal thread	2 x M25		**1 2266 875 609**
eLLK 92036/36 (2 x 36 W)	2/6-M	2 x 6	–	x	4 x M25, metal thread	4 x M25		**1 2266 875 611**
 **eLLM 920...** [3]								
eLLM 92018/18 (2 x 18 W)	1/3-K	1 x 3	–	–	1 x M25, plastic	-		**1 2268 875 101**
eLLM 92036/36 (2 x 36 W)	1/3-K	1 x 3	–	–	1 x M25, plastic	-		**1 2269 875 101**
eLLM 92036/36 (2 x 36 W)	2/6-K	2 x 6	x	–	2 x M25, plastic	1 x M25		**1 2269 875 103**
 **eLLK 92058**								
eLLK 92058 (1 x 58 W)	1/6-K	1 x 6	x	–	2 x M25, plastic	-	1	**1 2264 875 101**
eLLK 92058 (1 x 58 W)	2/6-K	2 x 6	–	x	2 x M25, plastic	2 x M25		**1 2264 875 103**
eLLK 92058 (1 x 58 W)	1/6-M	1 x 6	x	–	2 x M20, metal thread	1 x M20		**1 2264 875 109**
eLLK 92058 (1 x 58 W)	2/6-M	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 2264 875 111**
eLLK 92058 (1 x 58 W)	2/6-M	2 x 6	–	x	4 x M25, metal thread	2 x M25		**1 2264 875 611**
 **eLLK 92058/58**								
eLLK 92058/58 (2 x 58 W)	1/6-K	1 x 6	x	–	2 x M25, plastic	-	1	**1 2267 875 101**
eLLK 92058/58 (2 x 58 W)	2/6-K	2 x 6	–	x	2 x M25, plastic	2 x M25		**1 2267 875 103**
eLLK 92058/58 (2 x 58 W)	1/6-M	1 x 6	x	–	2 x M20, metal thread	1 x M20		**1 2267 875 109**
eLLK 92058/58 (2 x 58 W)	2/6-M	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 2267 875 111**
eLLK 92058/58 (2 x 58 W)	1/6-M	1 x 6	x	–	2 x M25, metal thread	2 x M25		**1 2267 875 609**
eLLK 92058/58 (2 x 58 W)	2/6-M	2 x 6	–	x	4 x M25, metal thread	4 x M25		**1 2267 875 611**

Scope of delivery without lamp and fixing accessories

Metal cable glands see catalogue part 2: 2.3.12 ff

[1] with metal thread, without cable gland
[2] Level gauge P2/P3
[3] Pole mounted light fitting

Ordering details / Accessories

eLLK 92 ... 18 W - 58 W

Ordering details

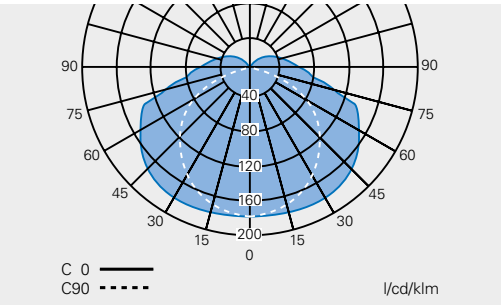
Type	Content	Terminals	Through-wiring single-ended	Through-wiring twin-ended	Cable gland/ thread	Threaded plug	Blank-ing plug	Order No.
eLLK 92018/18 V-CG-S/DCA								
eLLK 92018/18 V-CG-S (2 x 18 W) [2]	2/6-K	2 x 6	–	x	2 x M25, plastic	2 x M25		**1 2265 881 103**
eLLK 92018/18 V-CG-S (2 x 18 W) [2]	2/6-M	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 2265 881 211**
eLLK 92018/18 DCA (2 x 18 W) [3]	2/6-K	2 x 6	–	x	3 x M25, plastic	1 x M25	2	**1 2265 908 000**
eLLK 92036/36 V-CG-S/DCA								
eLLK 92036/36 V-CG-S (2 x 36 W) [2]	2/6-K	2 x 6	–	x	2 x M25, plastic	2 x M25		**1 2266 881 103**
eLLK 92036/36 V-CG-S (2 x 36 W) [2]	2/6-M	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 2266 881 211**
eLLK 92036/36 DCA (2 x 36 W) [3]	2/6-K	2 x 6	–	x	3 x M25, plastic	1 x M25	2	**1 2266 908 000**
eLLK 92058/58 V-CG-S/DCA								
eLLK 92058/58 V-CG-S (2 x 58 W) [2]	2/6-K	2 x 6	–	x	2 x M25, plastic	2 x M25		**1 2267 881 103**
eLLK 92058/58 V-CG-S (2 x 58 W) [2]	2/6-M	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 2267 881 211**
eLLK 92 2217 CSA [4]								
eLLK 92 2217/U240 (2 x 17 W) [4]	1/6-M [1]	1 x 6	x	–	2 x 1/2" NPT Myers Hub Adapter	2 x M25		**1 2265 875 310**
eLLK 92 2217/U240 (2 x 17 W) [4]	2/6-M [1]	2 x 6	–	x	2 x 3/4" NPT Myers Hub Adapter, 2 x metal thread M25	2 x M25		**1 2265 875 311**
eLLK 92 4232 CSA [4]								
eLLK 924232/U240 (2 x 32 W) [4]	1/6-M [1]	1 x 6	x	–	2 x 1/2" NPT Myers Hub Adapter	2 x M25		**1 2266 875 310**
eLLK 924232/U240 (2 x 32 W) [4]	1/6-M [1]	2 x 6	–	x	2 x 3/4" NPT Myers Hub Adapter, 2 x metal thread M25	2 x M25		**1 2266 875 311**
eLLK 92018/18 LED Ready								
eLLK 92018/18 (2 x 18 W)	1/6-K	1 x 6	x	–	2 x M25, plastic		1	**1 2265 600 101**
eLLK 92018/18 (2 x 18 W)	2/6-K	2 x 6	–	x	2 x M25, plastic	2 x M25		**1 2265 600 103**
eLLK 92018/18 (2 x 18 W)	1/6-M [1]	1 x 6	x	–	2 x M20, metal thread	1 x M20		**1 2265 600 109**
eLLK 92018/18 (2 x 18 W)	2/6-M [1]	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 2265 600 111**
eLLK 92036/36 LED Ready								
eLLK 92036/36 (2 x 36 W)	1/6-K	1 x 6	x	–	2 x M25, plastic		1	**1 2266 600 101**
eLLK 92036/36 (2 x 36 W)	2/6-K	2 x 6	–	x	2 x M25, plastic	2 x M25		**1 2266 600 103**
eLLK 92036/36 (2 x 36 W)	1/6-M	1 x 6	x	–	2 x M20, metal thread	1 x M20		**1 2266 600 109**
eLLK 92036/36 (2 x 36 W)	2/6-M	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 2266 600 111**
eLLM 920...[3] LED Ready								
eLLM 92018/18 (2 x 18 W)	1/3-K	1 x 3	–	–	1 x M25, plastic			**1 2268 600 101**
eLLM 92036/36 (2 x 36 W)	1/3-K	1 x 3	–	–	1 x M25, plastic			**1 2269 600 101**

Scope of delivery without lamp and fixing accessories
Metal cable glands see catalogue part 2: 2.3.12 ff
1) with metal thread, without cable gland
2) for operation with CEAG-emergency supply system
3) for operation with CB-emergency supply systems
4) for use according to NEC-standards

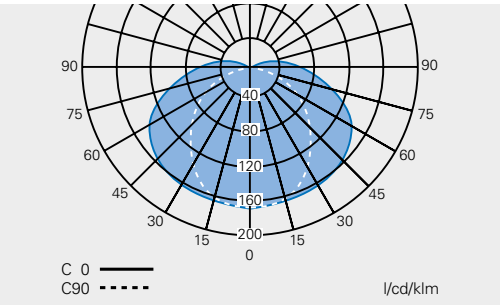
Accessories

Type	Application	Order No. for 4000 K	Order No. for 5600 K
LED module 400	for eLLK 92 018/18 incl. conversion kit	**1 2255 213 501**	**1 2255 213 511**
LED module 800	for eLLK 92 036/36 incl. conversion kit	**1 2256 226 501**	**1 2256 226 511**
LED module 400	for eLLK 92 018/18 LED Ready	**1 2255 213 101**	**1 2255 213 111**
LED module 800	for eLLK 92 036/36 LED Ready	**1 2256 226 101**	**1 2256 226 111**
Single sided through wiring 2/6 with 2 entries M25, incl. terminals and mounting material	eLLM 92 Pole mounting light fitting		**2 2218 602 000**
Protective bowl with green filter for eye wash safety shower facilities	eLLK 92 LED 400		**2 2215 402 018**

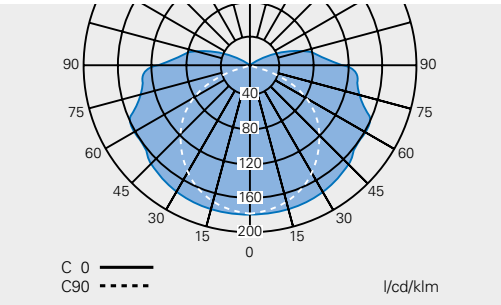
Polar curve eLLK 92018/18 / eLLK 92036/36



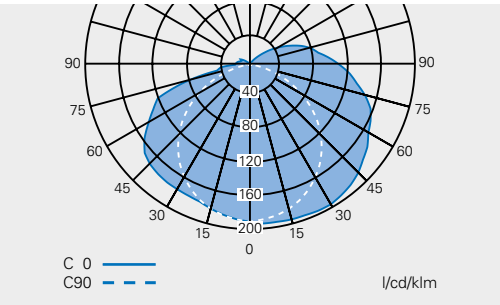
Polar curve eLLK 92058/58



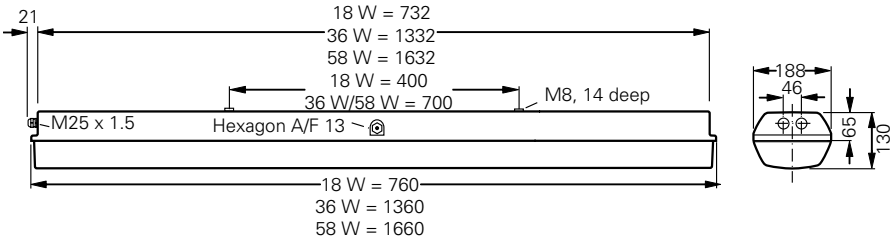
Polar curve eLLK 92036 / eLLK 92058



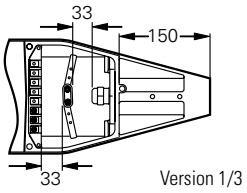
Polar curve eLLK92018/18 V-CG-S /DCA eLLK92036/36 V-CG-S /DCA eLLK92058/58 V-CG-S



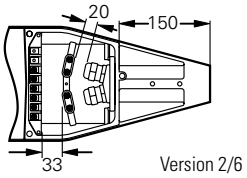
eLLK 92018/18 / eLLK 92036 / eLLK 92036/36 / eLLK 92058 / eLLK 92058/58



eLLM 92...

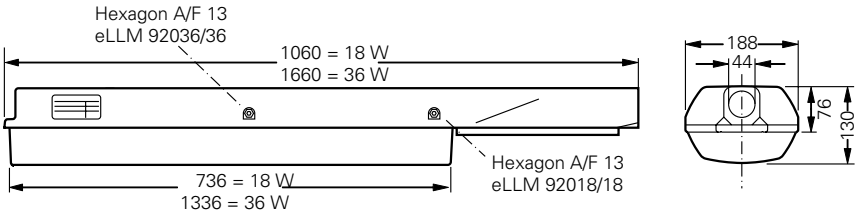


Version 1/3



Version 2/6

eLLM 92018/18 / eLLM 92036/36



Dimensions in mm

Technical data

eLLK 92018/18 (2 x 18 W) / eLLK 92036 (1 x 36 W)

Technical data

	eLLK 92018/18 (2 x 18 W)	eLLK 92036 (1 x 36 W) / eLLK 92036/36 (2 x 36 W)
EC-Type Examination Certificate	BVS 09 ATEX E 034	BVS 09 ATEX E 034
IECEx Certificate of Conformity	IECEx BVS 09.0033	IECEx BVS 09.0033
Marking accd. to 2014/34/EU	Ⓔx II 2G Ex db eb IIC T4 Gb Ⓔx II 2 D Ex tb IIIC T80 °C Db	Ⓔx II 2G Ex db eb IIC T4 Gb Ⓔx II 2 D Ex tb IIIC T80 °C Db
Marking accd. to IECEx	Ex de IIC T4 Gb Ex tb IIIC T80 °C Db	Ex de IIC T4 Gb Ex tb IIIC T80 °C Db
Permissible ambient temperature	-25 °C up to +55 °C ($U_N \geq 220$ V) -25 °C up to +50 °C ($U_N \leq 220$ V)	-25 °C up to +55 °C ($U_N \geq 220$ V) -25 °C up to +50 °C ($U_N \leq 220$ V)
IK-class according to IEC/EN 62262	IK 10 ≙ 20 J	IK 10 ≙ 20 J
Rated voltage	110 - 254 V AC 110 - 250 V DC	110 - 254 V AC 110 - 250 V DC
Rated current	0.18 A	0.18 A / 0.34 A
Frequency	50 - 60 Hz	50 - 60 Hz
Power factor cos φ	≥ 0.95	≥ 0.95
Circuit	EVG	EVG
Protection class	I	I
Lamp / Illuminant	2 x T26 / 18 W (T8)	1 x T26 / 36 W (T8) / 2 x T26 / 36 W (T8)
Rated luminous flux	2700 lm [1]	3350 lm [1] / 6700 lm [1]
Lamp cap	G13 accd. to IEC 60061-1	G13 accd. to IEC 60061-1
Light output ratio	78 %	86 %/ 78 %
Dimensions (L x W x H)	760 x 188 x 130 mm	1360 x 188 x 130 mm
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm^2 per terminal	L1, L2, L3, L, N, PE; max. 2 x 6 mm^2 per terminal
Enclosure colour	RAL 7035 light grey	RAL 7035 light grey
Enclosure material	glass-fibre reinforced polyester	glass-fibre reinforced polyester
Weight	5.2 kg	6.7 kg / 7.4 kg
Cable glands / gland plates / enclosure drilling	Ex-e cable glands M25 x 1.5 (plastic), option: M20 x 1.5 metal thread [2]	Ex-e cable glands M25 x 1.5 (plastic), option: M20 x 1.5 metal thread [2]
Degree of protection accd. to EN 60529	IP66	IP66
Protective cover / protective bowl	Polycarbonate	Polycarbonate

[1] depends on used lamps
[2] with dustcover if entry/thread is not closed

Technical data

	eLLK 92058 (1 x 58 W) / eLLK 92058/58 (2 x 58 W)
EC-Type Examination Certificate	BVS 09 ATEX E 034
IECEx Certificate of Conformity	IECEx BVS 09.0033
Marking accd. to 2014/34/EU	Ⓔx II 2G Ex db eb IIC T4 Gb Ⓔx II 2 D Ex tb IIIC T80 °C Db
Marking accd. to IECEx	Ex de IIC T4 Gb Ex tb IIIC T80 °C Db
Permissible ambient temperature	-25 °C up to +40 °C
IK-class according to IEC/EN 62262	IK 10 ≙ 20 J
Rated voltage	220 - 254 V AC 195 - 250 V DC
Rated current	0.27 A / 0.53 A
Frequency	50 - 60 Hz
Power factor cos φ	≥ 0.95
Circuit	EVG
Protection class	I
Lamp / Illuminant	1 x T26 / 58 W (T8) / 2 x T26 / 58 W (T8)
Rated luminous flux	5200 lm [1] / 10400 lm [1]
Lamp cap	G13 accd. to IEC 60061-1
Light output ratio	83 % / 72 %
Dimensions (L x W x H)	1660 x 188 x 130 mm
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm² per terminal
Enclosure colour	RAL 7035 light grey
Enclosure material	glass-fibre reinforced polyester
Weight	8.2 kg / 8.5 kg
Cable glands / gland plates / enclosure drilling	Ex-e cable glands M25 x 1.5 (plastic), option: M20 x 1.5 metal thread [2]
Degree of protection accd. to EN 60529	IP66
Protective cover / protective bowl	Polycarbonate

[1] depends on used lamps
[2] with dustcover if entry/thread is not closed

Technical data

eLLM 92018/18 / eLLM 92036/36

Technical data

	eLLM 92018/18 (2 x 18 W)	eLLM 92036/36 (2 x 36 W)
EC-Type Examination Certificate	BVS 09 ATEX E 034	BVS 09 ATEX E 034
IECEx Certificate of Conformity	IECEx BVS 09.0033	IECEx BVS 09.0033
Marking accd. to 2014/34/EU	Ⓔx II 2G Ex db eb IIC T4 Gb Ⓔx II 2 D Ex tb IIIC T80 °C Db	Ⓔx II 2G Ex db eb IIC T4 Gb Ⓔx II 2 D Ex tb IIIC T80 °C Db
Marking accd. to IECEx	Ex de IIC T4 Gb Ex tb IIIC T80 °C Db	Ex de IIC T4 Gb Ex tb IIIC T80 °C Db
Permissible ambient temperature	-25 °C up to +55 °C ($U_N \geq$ 220 V) -25 °C up to +50 °C ($U_N \leq$ 220 V)	-25 °C up to +55 °C ($U_N \geq$ 220 V) -25 °C up to +50 °C ($U_N \leq$ 220 V)
IK-class according to IEC/EN 62262	IK 10 ≙ 20 J	IK 10 ≙ 20 J
Rated voltage	110 - 254 V AC 110 - 250 V DC	110 - 254 V AC 110 - 250 V DC
Rated current	0.18 A	0.18 A / 0.34 A
Frequency	50 - 60 Hz	50 - 60 Hz
Power factor cos φ	≥ 0.95	≥ 0.95
Circuit	EVG	EVG
Protection class	I	I
Lamp / Illuminant	2 x T26 / 18 W (T8)	2 x T26 / 36 W (T8)
Rated luminous flux	2700 lm [1]	6700 lm [1]
Lamp cap	G13 accd. to IEC 60061-1	G13 accd. to IEC 60061-1
Light output ratio	78 %	86 %/ 78 %
Dimensions (L x W x H)	1060 x 188 x 130 mm	1660 x 188 x 130 mm
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm² per terminal	L1, L2, L3, L, N, PE; max. 2 x 6 mm² per terminal
Enclosure colour	RAL 7035 light grey	RAL 7035 light grey
Enclosure material	glass-fibre reinforced polyester	glass-fibre reinforced polyester
Weight	7.0 kg	9.0 kg
Cable glands / gland plates / enclosure drilling	Ex-e cable glands M25 x 1.5 (plastic)	Ex-e cable glands M25 x 1.5 (plastic)
Pole socket	Ø 44 mm x150 mm	Ø 44 mm x150 mm
Degree of protection accd. to EN 60529	IP66	IP66
Protective cover / protective bowl	Polycarbonate	Polycarbonate

[1] depends on used lamps
[2] with dustcover if entry/thread is not closed

Technical data

	eLLK 92018/18 V-CG-S / DCA	eLLK 92036/36 V-CG-S / DCA
EC-Type Examination Certificate	BVS 09 ATEX E 034	BVS 09 ATEX E 034
IECEx Certificate of Conformity	IECEx BVS 09.0033	IECEx BVS 09.0033
Marking accd. to 2014/34/EU	Ⓔx II 2G Ex db eb mb ib IIC T4 Gb Ⓔx II 2 D Ex tb IIIC T80 °C Db	Ⓔx II 2G Ex db eb mb ib IIC T4 Gb Ⓔx II 2 D Ex tb IIIC T80 °C Db
Marking accd. to IECEx	Ex de mb IIC T4 Gb Ex tb IIIC T80 °C Db	Ex de mb IIC T4 Gb Ex tb IIIC T80 °C Db
Permissible ambient temperature	-25 °C up to +50 °C / -25 °C up to +55 °C (DCA)	-25 °C up to +50 °C / -25 °C up to +55 °C (DCA)
IK-class according to IEC/EN 62262	IK 10 ≙ 20 J	IK 10 ≙ 20 J
Rated voltage	220 - 254 V AC 195 - 250 V DC	220 - 254 V AC 195 - 250 V DC
Rated current	0.19 A	0.35 A
Frequency	50 - 60 Hz	50 - 60 Hz
Power factor cos φ	≥ 0.95	≥ 0.95
Circuit	EVG/CG-S / DCA	EVG/CG-S / DCA
Protection class	I	I
Lamp / Illuminant	2 x T26 / 18 W (T8)	2 x T26 / 36 W (T8)
Rated luminous flux	2700 lm [1)]	6700 lm [1)]
Lamp cap	G13 accd. to IEC 60061-1	G13 accd. to IEC 60061-1
Light output ratio	78%	78%
Luminous flux in emergency operation	1350 lm [1)]	3350 lm [1)]
Dimensions (L x W x H)	760 x 188 x 130 mm	1360 x 188 x 130 mm
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm^2 per terminal	L1, L2, L3, L, N, PE; max. 2 x 6 mm^2 per terminal
Enclosure colour	RAL 7035 light grey	RAL 7035 light grey
Enclosure material	glass-fibre reinforced polyester	glass-fibre reinforced polyester
Weight	5.6 kg	7.7 kg
Cable glands / gland plates / enclosure drilling	Ex-e cable glands M25 x 1.5 (plastic), option: M20 x 1.5 metal thread [2)]	Ex-e cable glands M25 x 1.5 (plastic), option: M20 x 1.5 metal thread [2)]
Degree of protection accd. to EN 60529	IP66	IP66
Protective cover / protective bowl	Polycarbonate	Polycarbonate

[1)] depends on used lamps
[2)] with dustcover if entry/thread is not closed

Technical data

eLLK 92058/58 V-CG-S

Technical data

	eLLK 92058/58 V-CG-S
EC-Type Examination Certificate	BVS 09 ATEX E 034
IECEx Certificate of Conformity	IECEx BVS 09.0033
Marking accd. to 2014/34/EU	Ⓔx II 2G Ex db eb mb ib IIC T4 Gb Ⓔx II 2 D Ex tb IIIC T80 °C Db
Marking accd. to IECEx	Ex de mb IIC T4 Gb Ex tb IIIC T80 °C Db
Permissible ambient temperature	-25 °C up to +40 °C
IK-class according to IEC/EN 62262	IK 10 ≙ 20 J
Rated voltage	220 - 254 V AC 195 - 250 V DC
Rated current	0.54 A
Frequency	50 - 60 Hz
Power factor cos φ	≥ 0.95
Circuit	EVG/CG-S
Protection class	I
Lamp / Illuminant	2 x T26 / 58 W (T8)
Rated luminous flux	10400 lm [1]
Lamp cap	G13 accd. to IEC 60061-1
Light output ratio	72 %
Luminous flux in emergency operation	5200 lm [2]
Dimensions (L x W x H)	1660 x 188 x 130 mm
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm^2 per terminal
Enclosure colour	RAL 7035 light grey
Enclosure material	glass-fibre reinforced polyester
Weight	8.9 kg
Cable glands / gland plates / enclosure drilling	Ex-e cable glands M25 x 1.5 (plastic), option: M20 x 1.5 metal thread [3]
Degree of protection accd. to EN 60529	IP66
Protective cover / protective bowl	Polycarbonate

[1] depends on used lamps
[2] with dustcover if entry/thread is not closed

Technical data

	eLLK 92 2217/U240 (2 x 17 W)	eLLK 92 4232/U240 (2 x 32 W)
Marking accd. to CEC 018	Ex ed IIC T4 Class I Div. 2 Gr. A, B, C, D Class II Div. 1 Gr. E, F and G	Ex ed IIC T4 Class I Div. 2 Gr. A, B, C, D Class II Div. 1 Gr. E, F and G
Marking accd. to NEC 500/505	Class I Zone 1 AEx de IIC T4 Class I Div. 2 Gr. A, B, C, D Class II Div. 2 Gr. F and G	Class I Zone 1 AEx de IIC T4 Class I Div. 2 Gr. A, B, C, D Class II Div. 2 Gr. F and G
Certificate of Compliance	CSA 10.2325079	CSA 10.2325079
Permissible ambient temperature	-25 °C up to +55 °C	-25 °C up to +55 °C
IK-class according to IEC/EN 62262	IK 10 ≙ 20 J	IK 10 ≙ 20 J
Rated voltage	120 - 240 V	120 - 240 V
Rated current	0.38 / 0.18 A	0.7 / 0.34 A
Frequency	50 - 60 Hz	50 - 60 Hz
Power factor cos φ	≥ 0.95	≥ 0.95
Circuit	EVG	EVG
Protection class	I	I
Lamp / Illuminant	2 x F17 T8	2 x F32 T8
Rated luminous flux	2600 lm [1)]	6600 lm [1)]
Lamp cap	G13 accd. to IEC 60061	G13 accd. to IEC 60061
Light output ratio	78 %	78 %
Dimensions (L x W x H)	760 x 188 x 130 mm	1360 x 188 x 130 mm
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm² per terminal	L1, L2, L3, L, N, PE; max. 2 x 6 mm² per terminal
Enclosure colour	RAL 7035 light grey	RAL 7035 light grey
Enclosure material	glass-fibre reinforced polyester	glass-fibre reinforced polyester
Weight	5.4 kg	7.4 kg
Cable glands / gland plates / enclosure drilling	3/4'' NPT metal thread with dustcover	3/4'' NPT metal thread with dustcover
Degree of protection accd. to EN 60529	IP66	IP66
Protective cover / protective bowl	Polycarbonate	Polycarbonate

[1)] depends on used lamps

C SA® US

C SA® US

Ex-Emergency light fittings with a self-contained battery system for fluorescent lamps

eLLK 92018/18 NE / eLLK 92036/36 NE / eLLM 92018/18 NE
(Zone 1, 2, 21, 22)

If you need a reliable and decentralized emergency lighting

Emergency lighting luminaires with a self-contained battery system provide a decentralised solution for the mandatory emergency lighting, independent of central systems. In large plants, in particular, these luminaires offer significant cost benefits.

More safety due to sophisticated micro-electronics

Thanks to a new charging and monitoring technology with intelligent micro-electronics, the NE emergency lighting luminaires provide reliable safety and reduced maintenance costs. A function test lasting 5 minutes, that is carried out automatically on a weekly basis, even during mains operation, and a quarterly, partial duty-cycle test provide additional safety and drastically reduce the necessary amount of manual tests. The charging and discharging functions are monitored constantly by the micro-processor and are indicated via a diode display. Only the spent energy is recharged – therefore, overcharging is not possible. The so-called memory effect cannot occur – the service life of the battery is optimized. The need to replace a battery, a fault in the emergency lighting circuit or a faulty battery is indicated by the LED display. Due to a new type of battery connection, the battery can be replaced in the hazardous area. The emergency lighting cycle can be set locally for 1.5 or 3 hours. A remote switch inquiry is standard.

Maintenance possible even in hazardous areas

The battery is installed in a separate, certified housing and Ex-d connectors link the battery unit and the luminaire. After loosening the locking screws, the battery can be taken away, whereby the Ex-d switching contact in the flameproof compartment is cut-off, thus disconnecting the battery circuit. As a result, the battery is cut off completely from the charging circuit of the luminaire and it can therefore, also be replaced in the hazardous area at every time. A detachable strap protects the insert from being dropped inadvertently.

Simple and cost-effective installation

In conjunction with the generously dimensioned terminal compartment, the standard single-ended through-wiring allows a cost-effective installation. The double-sided locking facility with 10 or 20 latch points allows the protective bowl to be hinged on both sides, meaning that the fitting can be mounted on either side.

International certification

Special versions according to the NEC standards are available for use on the American market. CSA certification for the types of luminaires eLLK 92 NE 2217 (2 x 17 W) and eLLK 92 NE 4232 (2 x 32 W) allows their use there.

Other country-specific approvals, such as for Brazil or the new Eurasian Conformity (EAC) for placing them on the market in Russia, Belarus and Kazakhstan, are available.

Features

- Standard dual channel ballast with EOL monitoring
- Automatic weekly 5 minute function test
- Automatic quarterly partial duty cycle test
- LED display for indication of the charging, operation or fault status
- Capacity-dependent charging of the battery
- Easy replacement of battery, even in Ex-area
- Double-sided central locking facility
- Safety interlocking system due to an integrated forced isolating switch
- Safety standard IP66

Ordering details

Type	Content	Terminals	Through-wiring single-ended	Through-wiring twin-ended	Cable gland/ thread	Threaded plug	Blanking plug	Order No.	Order No.
 **eLLK 92018/18 NE**									**for 120 - 254 V**
eLLK 92018/18 NE (2 x 18 W)	1/6-1K	1 x 6	x	–	2 x M25, plastic		1		**1 2260 885 101**
eLLK 92018/18 NE (2 x 18 W)	2/6-2K	2 x 6	–	x	2 x M25, plastic	2 x M25			**1 2260 885 103**
eLLK 92018/18 NE (2 x 18 W)	1/6-1M [1]	1 x 6	x	–	2 x M20, metal thread	1 x M20			**1 2260 885 109**
eLLK 92018/18 NE (2 x 18 W)	2/6-2M [1]	2 x 6	–	x	4 x M20, metal thread	3 x M20			**1 2260 885 111**
eLLK 92018/18 NE (2 x 18 W)	1/6-1M [1]	1 x 6	x	–	2 x M25, metal thread	2 x M25			**1 2260 885 609**
eLLK 92018/18 NE (2 x 18 W)	2/6-2M [1]	2 x 6	–	x	4 x M25, metal thread	4 x M25			**1 2260 885 611**
 **eLLM 92018/18 NE [2]**									**for 120 - 254 V**
eLLM 92018/18 NE (2 x 18 W)	2/6-2K	1 x 8	–	–	2 x M25, plastic		1		**1 2273 885 101**
 **eLLK 92036/36 NE**								**for 120 V**	**for 220 - 254 V**
eLLK 92036/36 NE (2 x 36 W)	1/6-1K	1 x 6	x	–	2 x M25, plastic		1	**1 2261 885 401**	**1 2261 885 101**
eLLK 92036/36 NE (2 x 36 W)	2/6-2K	2 x 6	–	x	2 x M25, plastic	2 x M25		**1 2261 885 403**	**1 2261 885 103**
eLLK 92036/36 NE (2 x 36 W)	1/6-1M [1]	1 x 6	x	–	2 x M20, metal thread	1 x M20		**1 2261 885 409**	**1 2261 885 109**
eLLK 92036/36 NE (2 x 36 W)	2/6-2M [1]	2 x 6	–	x	4 x M20, metal thread	3 x M20		**1 2261 885 411**	**1 2261 885 111**
eLLK 92036/36 NE (2 x 36 W)	1/6-1M [1]	1 x 6	x	–	2 x M25, metal thread	2 x M25			**1 2261 885 609**
eLLK 92036/36 NE (2 x 36 W)	2/6-2M [1]	2 x 6	–	x	4 x M25, metal thread	4 x M25			**1 2261 885 611**
 **eLLK 92 NIB 2217 CSA [3]**								**for 120 V**	**for 220 - 254 V**
eLLK 92 NIB 2217/U240 (2 x 17 W)	2/6-2M	2 x 6	–	x	2 x 3/4" NPT Myers Hub Adapter, 2 x metal thread	2 x M25			**1 2260 879 311**
eLLK 92 NIB 2217/U120 (2 x 17 W)	2/6-2M	2 x 6	–	x	2 x 3/4" NPT Myers Hub Adapter, 2 x M25 metal thread	2 x M25		**1 2260 879 333**	
 **eLLK 92 NIB 4232 CSA [3]**								**for 120 V**	**for 220 - 254 V**
eLLK 92 NIB 4232/U240 (2 x 32 W)	2/6-2M	2 x 6	–	x	2 x 3/4" NPT Myers Hub Adapter, 2 x M25 metal thread	2 x M25			**1 2261 879 311**
eLLK 92 NIB 2432/U120 (2 x 32 W)	2/6-2M	2 x 6	–	x	2 x 3/4" NPT Myers Hub Adapter, 2 x M25 metal thread	2 x M25		**1 2261 879 333**	

[1] with metal thread, without cable gland; [2] Pole mounting light fitting; [3] for use according to NEC-standards
Scope of delivery without lamp and fixing accessories
Metal cable glands see catalogue part 2: 2.3.12 ff

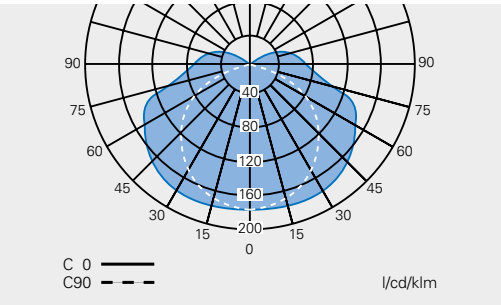
Accessories

Type	Application	Order No.
 LED module 400	for eLLK 92 018/18 / eLLK 92 LED 400 with conversion kit	**1 2255 213 501**
LED module 800	for eLLK 92 036/36 / eLLK 92 LED 800 with conversion kit	**1 2256 226 501**
 Single sided through wiring 2/6 with 2 entries M25, incl. terminals and mounting material	for eLLM 92 018/18 NE	**2 2218 602 000**

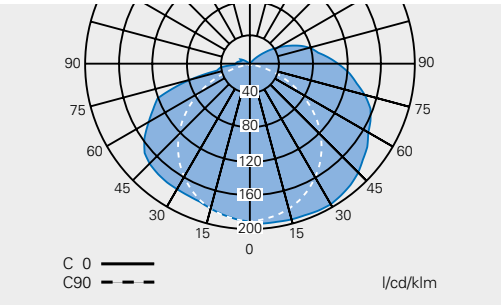
Dimension drawing / Polar curve

eLLK 92018/18 NE / eLLK 92036/36 NE / eLLM 92018/18 NE / eLLK 92 NIB 2217/ eLLK 92 NIB 4232

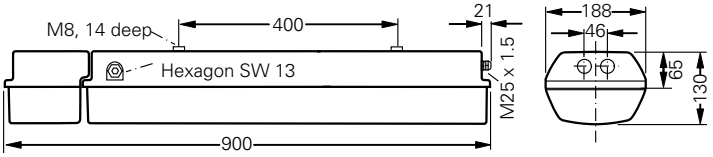
Polar curve eLLK 92018/18 NE / eLLK 92 NIB 2217
eLLK 92036/36 NE/ eLLK 92 NIB 4232



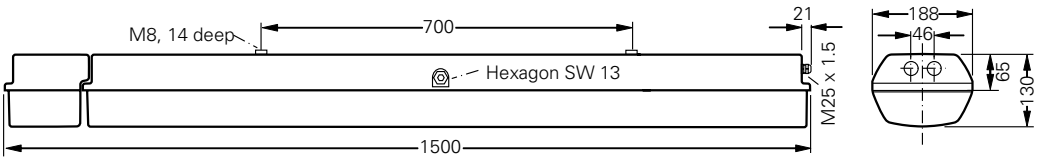
Polar curve eLLK/eLLM 920../.. NE / NIB in emergency operation



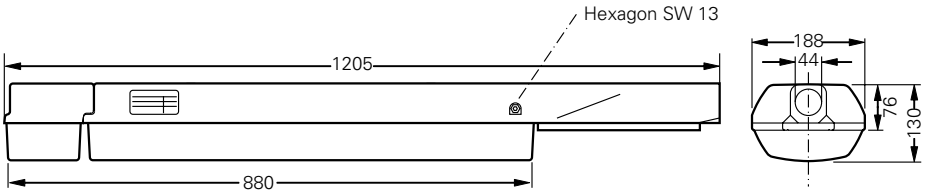
eLLK 92018/18 NE / eLLK 92 NIB 2217



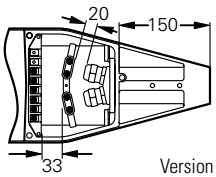
eLLK 92036/36 NE / eLLK 92 NIB 4232



eLLM 92018/18 NE



eLLM 92...



Version 2/6

Dimensions in mm

Technical data

	eLLK 92018/18 NE (2 x 18 W)	eLLK 92036/36 NE (2 x 36 W)
EC-Type Examination Certificate	BVS 09 ATEX E 034	BVS 09 ATEX E 034
IECEx Certificate of Conformity	IECEx BVS 09.0033	IECEx BVS 09.0033
Marking accd. to 2014/34/EU	Ⓔx II 2G Ex db eb mb ib IIC T4 Gb Ⓔx II 2 D Ex tb IIIC T80 °C Db	Ⓔx II 2G Ex db eb mb ib IIC T4 Gb Ⓔx II 2 D Ex tb IIIC T80 °C Db
Marking accd. to IECEx	Ex de mb ib IIC T4 Gb Ex tb IIIC T80 °C Db	Ex de mb ib IIC T4 Gb Ex tb IIIC T80 °C Db
Permissible ambient temperature	-25 °C up to +55 °C (specified data: -5 °C up to +35 °C)	-25 °C up to +55 °C (220 - 254 V) -25 °C up to +40 °C (120 V) (specified data: -5 °C up to +35 °C)
IK-class according to IEC/EN 62262	IK 10 ≙ 20 J	IK 10 ≙ 20 J
Rated voltage	120 - 254 V AC	220 - 254 V AC / optional 120 V AC
Rated current	0.23 A	0.4 A
Frequency	50 - 60 Hz	50 - 60 Hz
Charging duration	≥ 14 h	≥ 14 h
Power factor cos φ	≥ 0.95	≥ 0.95
Circuit	EVG with emergency lighting supply	EVG with emergency lighting supply
Protection class	I	I
Lamp / Illuminant	2 x T26 / 18 W (T8)	2 x T26 / 36 W (T8)
Rated luminous flux	2700 lm [1]	6700 lm [1]
Lamp cap	G13 accd. to IEC 60061-1	G13 accd. to IEC 60061-1
Light output ratio	78 %	78 %
Luminous flux in emergency operation (1.5 h, one lamp)	1215 lm (90 %)	1507 lm (45 %)
Luminous flux in emergency operation (3 h, one lamp)	607 lm (45 %)	837 lm (25 %)
Rated emergency lighting duration	Lamps can be set on site for an emergency lighting duration of 1.5 or 3 hours (single lamp)	Lamps can be set on site for an emergency lighting duration of 1.5 or 3 hours (single lamp)
Dimensions (L x W x H)	900 x 188 x 130 mm	1500 x 188 x 130 mm
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm² per terminal	L1, L2, L3, L, N, PE; max. 2 x 6 mm² per terminal
Enclosure colour	RAL 7035 light grey	RAL 7035 light grey
Enclosure material	glass-fibre reinforced polyester	glass-fibre reinforced polyester
Weight	8.8 kg	12 kg
Cable glands / gland plates / enclosure drilling	Ex-e cable glands M25 x 1.5 (plastic), option: M20 x 1.5 metal thread [2]	Ex-e cable glands M25 x 1.5 (plastic), option: M20 x 1.5 metal thread [2]
Degree of protection accd. to EN 60529	IP66	IP66
Protective cover / protective bowl	Polycarbonate	Polycarbonate

[1] depends on used lamps
[2] with dustcover if entry/thread is not closed

2.4 Technical data

eLLM 92018/18 NE

Technical data

	eLLM 92018/18 NE (2 x 18 W)
EC-Type Examination Certificate	BVS 09 ATEX E 034
IECEx Certificate of Conformity	IECEx BVS 09.0033
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de mb ib IIC T4 Ⓔx II 2 D Ex tb IIIC T80 °C Db
Marking accd. to IECEx	Ex de mb ib IIC T4 Gb Ex tb IIIC T80 °C Db
Permissible ambient temperature	-20 °C up to +55 °C (specified data: -5 °C up to +35 °C)
IK-class according to IEC/EN 62262	IK 10 ≙ 20 J
Rated voltage	120 - 254 V AC
Rated current	0.23 A
Frequency	50 - 60 Hz
Charging duration	≥ 14 h
Power factor cos φ	≥ 0.95
Circuit	EVG with emergency lighting supply
Protection class	I
Lamp / Illuminant	2 x T26 / 18 W (T8)
Rated luminous flux	2700 lm [1)]
Lamp cap	G13 accd. to IEC 60061-1
Light output ratio	78 %
Luminous flux in emergency operation (1.5 h, one lamp)	1215 lm (90 %)
Luminous flux in emergency operation (3 h, one lamp)	607 lm (45 %)
Rated emergency lighting duration	Lamps can be set on site for an emergency lighting duration of 1.5 or 3 hours (single lamp)
Dimensions (L x W x H)	1205 x 188 x 130 mm
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm^2 per terminal
Enclosure colour	RAL 7035 light grey
Enclosure material	glass-fibre reinforced polyester
Weight	10.5 kg
Pole socket	Ø 44 x 150 mm
Cable glands / gland plates / enclosure drilling	Ex-e cable glands M25 x 1.5 (plastic)
Degree of protection accd. to EN 60529	IP66
Protective cover / protective bowl	Polycarbonate

[1)] depends on used lamps

Technical data

	eLLK 92 NIB 2217/U120/240 (2 x 17 W)	eLLK 92 NIB 4232/U120/240 (2 x 32 W)
Marking accd. to CEC 018	Ex d e ib m IIC T4 Class II Div. 1 Gr. E, F and G	Ex d e ib m IIC T4 Class II Div. 1 Gr. E, F and G
Marking accd. to NEC 500/505	Class I Zone 1 AEx de ib m IIC T4 Class I Div. 2 Gr. A, B, C, D Class II Div. 2 Gr. F and G	Class I Zone 1 AEx de ib m IIC T4 Class I Div. 2 Gr. A, B, C, D Class II Div. 2 Gr. F and G
Certificate of Compliance	CSA 10.2325079	CSA 10.2325079
Permissible ambient temperature	-20 °C up to +50 °C (specified data: -5 °C up to +35 °C)	-20 °C up to +50 °C (specified data: -5 °C up to +35 °C)
IK-class according to IEC/EN 62262	IK 10 ≙ 20 J	IK 10 ≙ 20 J
Rated voltage	120 V / 240 V AC	120 V / 240 V AC
Rated current	0.38 A / 0.18 A	0.70 A / 0.34 A
Frequency	50 - 60 Hz	50 - 60 Hz
Charging duration	≥ 14 h	≥ 14 h
Power factor cos φ	≥ 0.95	≥ 0.95
Circuit	EVG with emergency lighting supply	EVG with emergency lighting supply
Protection class	I	I
Lamp / Illuminant	2 x F17 T8	2 x F32 T8
Rated luminous flux	2600 lm [1)]	6600 lm [1)]
Lamp cap	G13 accd. to IEC 60061-1	G13 accd. to IEC 60061-1
Light output ratio	78 %	78 %
Luminous flux in emergency operation (1.5 h, one lamp)	1170 lm (90 %)	1485 lm (45 %)
Luminous flux in emergency operation (3 h, one lamp)	585 lm (45 %)	825 lm (25 %)
Rated emergency lighting duration	Lamps can be set on site for an emergency lighting duration of 1.5 or 3 hours	Lamps can be set on site for an emergency lighting duration of 1.5 or 3 hours
Dimensions (L x W x H)	900 x 188 x 130 mm	1500 x 188 x 130 mm
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm² per terminal	L1, L2, L3, L, N, PE; max. 2 x 6 mm² per terminal
Enclosure colour	RAL 7035 light grey	RAL 7035 light grey
Enclosure material	glass-fibre reinforced polyester	glass-fibre reinforced polyester
Weight	10.2 kg	12.2 kg
Cable glands / gland plates / enclosure drilling	3/4" NPT metal thread with dustcover	3/4" NPT metal thread with dustcover
Degree of protection accd. to EN 60529	IP66	IP66
Protective cover / protective bowl	Polycarbonate	Polycarbonate

[1)] depends on used lamps

C SA® US

C SA® US

Ex-Recessed, ceiling light fittings in metal design

eLLB 20...
(Zone 1, 2, 21, 22)

The explosion-protected lighting concept for clean rooms

The Ex-recessed ceiling light fittings of the series eLLB 20 are equipped with EVG 09 electronic ballasts and are suitable for two-pin fluorescent lamps. These lamps are used for surface and flush mounting in ceilings, in particular in clean rooms where smooth, flush surfaces, are very important. They are often used in the pharmaceutical and chemical industries, and experimental facilities, as well as in paint shops and spraying cabinets.

Designed for easy installation

The housing is made of white-painted steel sheet with an integrally moulded cover frame or, optionally, of polished stainless steel. It is installed securely in the ceiling by means of special fixing elements that allow a universal and simple mounting in recessed clean room ceilings that are 25 to 90 mm thick. In addition, it can also be fixed by means of two M8 drilled holes in the top of the housing. The hinged, frameless pane made of 6 mm thick safety glass is fixed with captive screws and has inside hinges. The sealing material is guaranteed silicone-leak-proof. Together with the generously dimensioned terminal compartment, the standard, twin-ended through-wiring allows a cost-saving installation.

Long-term safety

The luminaires of this robust lighting series with plastic enclosure are equipped with a highly-efficient electronic ballast that features a reliable EOL circuit. Thus, the lamps are checked for proper operation and shut down safely in the event of a malfunction at the end of the service life. In addition, the dual-channel structure of the electronic ballasts allows the safe operation of the second lamp if one lamp fails.

Versatile

The wide input voltage range and important national and international approvals allow the global use of this successful series of light fittings.

Special versions according to the NEC standards are available for use on the American market. CSA certification for the types of luminaires eLLB 202217 (2 x 17 W) and eLLB 204232 (2 x 32 W) allows their use there.

Features

- Standard dual channel ballast with EOL monitoring
- Flush installation, specially for clean rooms
- Available in painted sheet steel or stainless steel
- Safety interlocking due to integral automatic disconnector
- Suitable for B15 fire-resistant ceilings
- High degree of protection IP66

Ordering details

	Type	Content	Terminals	Through-wiring single-ended	Through-wiring twin-ended	Cable gland/ thread	Threaded plug	Blanking plug	Order No.
	**eLLB 20018/18**								
	eLLB 20018/18 (2 x 18 W)	2/6-2K painted	2 x 6	–	x	2 x M25, plastic	2 x M25		**1 2190 218 001**
	eLLB 20018/18 (2 x 18 W)	2/6-2M [1] painted	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 2190 218 101**
	**eLLB 20036/36**								
	eLLB 20036/36 (2 x 36 W)	2/6-2K [1] painted	2 x 6	–	x	2 x M25, plastic	2 x M25	1	**1 2190 236 001**
	eLLB 20036/36 (2 x 36 W)	2/6-2M [1] painted	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 2190 236 101**
	**eLLB 20058/58**								
	eLLB 20058/58 (2 x 36 W)	2/6-2K [1] painted	2 x 6	–	x	2 x M25, plastic	2 x M25	1	**1 2190 258 001**
	eLLB 20058/58 (2 x 36 W)	2/6-2M [1] painted	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 2190 258 101**
	**eLLB 20418**								
	eLLB 20418 (4 x 18 W)	2/6-2K [1] painted	2 x 6	–	x	2 x M25, plastic	2 x M25	1	**1 2190 418 001**
	eLLB 20418 (4 x 18 W)	2/6-2M [1] painted	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 2190 418 101**
	**eLLB 20436**								
	eLLB 20436 (4 x 36 W)	2/6-2K [1] painted	2 x 6	–	x	2 x M25, plastic	2 x M25	1	**1 2190 436 001**
	eLLB 20436 (4 x 36 W)	2/6-2M [1] painted	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 2190 436 101**
	**eLLB 202217**								
	eLLB 202217/U240 (2 x 17 W) [2]	2/6-2M [1] NPT - painted	2 x 6	–	x	2 x 3/4" NPT Myers Hub Adapter, 2 x metal thread	2 x M25		**1 2190 217 101**
	**eLLB 204232**								
	eLLB 204232/U240 (2 x 32 W) [2]	2/6-2M [1] NPT - painted	2 x 6	–	x	2 x 3/4" NPT Myers Hub Adapter, 2 x metal thread	2 x M25		**1 2190 232 101**

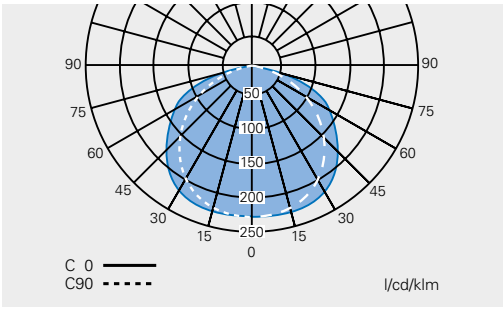
[1] with metal thread, without cable gland / [2] for use according to NEC-standards
Scope of delivery without lamp and fixing accessories
Metal cable glands see catalogue part 2: 2.3.12 ff

Stainless steel enclosure on request

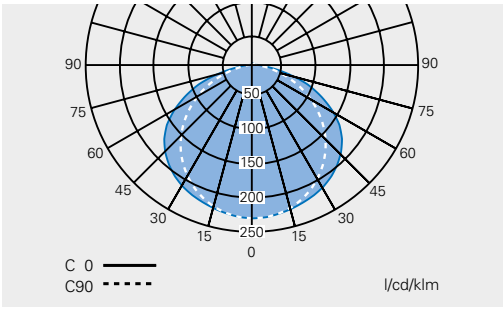
Dimension drawing / Polar curve

eLLB 20 ...

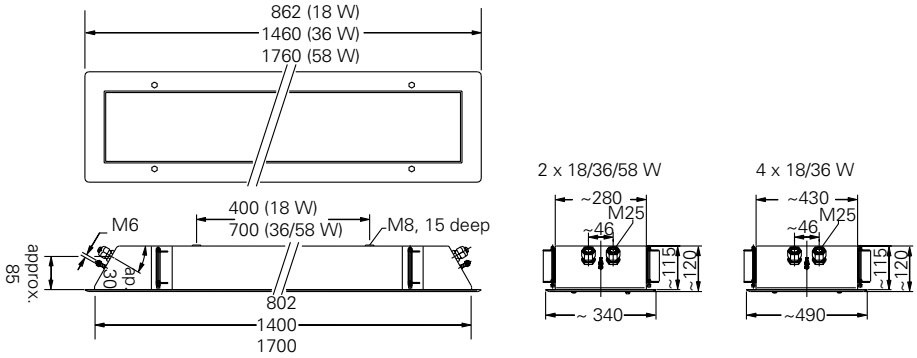
Polar curve eLLB 20018/18 /
eLLB 20036/36 /
eLLB 20058/58



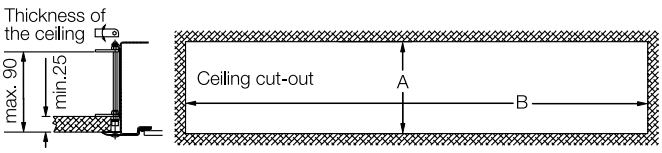
Polar curve eLLB 20418
eLLB 20436



eLLB ...



eLLB ...



	A	B
eLLB 20018/18	315+3	832+5
eLLB 20036/36	315+3	1432+5
eLLB 20058/58	315+3	1732+5
eLLB 20418	465+3	832+5
eLLB 20436	465+3	1432+5

Dimensions in mm

Technical data

	eLLB 20018/18	eLLB 20036/36
EC-Type Examination Certificate	DMT 02 ATEX E 069	DMT 02 ATEX E 069
IECEx Certificate of Conformity	IECEx-BVS14.0091	IECEx-BVS14.0091
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex d e mb IIC T4 Gb Ⓔx II 2 D tb IIIC T80 °C Db	Ⓔx II 2 G Ex d e mb IIC T4 Gb Ⓔx II 2 D tb IIIC T80 °C Db
Marking accd. to IECEx	Ex d e mb IIC T 4 Gb Ex tb IIIC T 80 °C Db	Ex d e mb IIC T 4 Gb Ex tb IIIC T 80 °C Db
Permissible ambient temperature	-25 °C up to +50 °C	-25 °C up to +50 °C
IK-class according to IEC/EN 62262	IK 10 ≙ 20 J	IK 10 ≙ 20 J
Rated voltage	110 - 254 V AC 110 - 250 V DC	110 - 254 V AC 110 - 250 V DC
Rated current	0.18 A	0.34 A
Frequency	50 - 60 Hz	50 - 60 Hz
Power factor cos φ	≥ 0.95	≥ 0.95
Circuit	EVG	EVG
Protection class	I	I
Lamp / Illuminant	2 x T26 / 18 W (T8)	2 x T26 / 36 W (T8)
Rated luminous flux	2700 lm [1]	6700 lm [1]
Lamp cap	G13 accd. to IEC 60061-1	G13 accd. to IEC 60061-1
Light output ratio	70%	70%
Dimensions (L x W x H)	862 x 340 x 120 mm	1460 x 340 x 120 mm
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm² per terminal, through-wiring twin-ended	L1, L2, L3, L, N, PE; max. 2 x 6 mm² per terminal, through-wiring twin-ended
Enclosure colour	white RAL 9010	white RAL 9010
Enclosure material	painted steel sheet, white, optional polished stainless steel	painted steel sheet, white, optional polished stainless steel
Weight	15 kg	22 kg
Cable glands / gland plates / enclosure drilling	Ex-e cable glands M25 x 1.5 (plastic), option: M20 x 1.5 metal thread [2]	Ex-e cable glands M25 x 1.5 (plastic), option: M20 x 1.5 metal thread [2]
Degree of protection accd. to EN 60529	IP66	IP66
Protective cover / protective bowl	single-safety glass pane of 6 mm thick	single-safety glass pane of 6 mm thick
Permissible ceiling tickness for fixing accessories	min. 25 mm to max. 90 mm	min. 25 mm to max. 90 mm

[1] depends on used lamps
[2] with dustcover if entry/thread is not closed

Technical data

eLLB 20058/58 / eLLB 20418

Technical data

	eLLB 20058/58	eLLB 20418
EC-Type Examination Certificate	DMT 02 ATEX E 069	DMT 02 ATEX E 069
IECEx Certificate of Conformity	IECEx-BVS14.0091	IECEx-BVS14.0091
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex d e mb IIC T4 Gb Ⓔx II 2 D tb IIIC T80 °C Db	Ⓔx II 2 G Ex d e mb IIC T4 Gb Ⓔx II 2 D tb IIIC T80 °C Db
Marking accd. to IECEx	Ex d e mb IIC T 4 Gb Ex tb IIIC T 80 °C Db	Ex d e mb IIC T 4 Gb Ex tb IIIC T 80 °C Db
Permissible ambient temperature	-25 °C up to +40 °C	-25 °C up to +50 °C
IK-class according to IEC/EN 62262	IK 10 ≙ 20 J	IK 10 ≙ 20 J
Rated voltage	220 - 254 V AC 195 - 250 V DC	110 - 254 V AC 110 - 250 V DC
Rated current	0.53 A	0.36 A
Frequency	50 - 60 Hz	50 - 60 Hz
Power factor cos φ	≥ 0.95	≥ 0.95
Circuit	EVG	EVG
Protection class	I	I
Lamp / Illuminant	2 x T26 / 58 W (T8)	4 x T26 / 18 W (T8)
Rated luminous flux	10400 lm [1]	5400 lm [1]
Lamp cap	G13 accd. to IEC 60061-1	G13 accd. to IEC 60061-1
Light output ratio	68%	69%
Dimensions (L x W x H)	1760 x 340 x 120 mm	862 x 430 x 120 mm
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm² per terminal, through-wiring twin-ended	L1, L2, L3, L, N, PE; max. 2 x 6 mm² per terminal, through-wiring twin-ended
Enclosure colour	white RAL 9010	white RAL 9010
Enclosure material	Painted steel sheet, white, optional polished stainless steel	Painted steel sheet, white, optional polished stainless steel
Weight	26 kg	25 kg
Cable glands / gland plates / enclosure drilling	Ex-e cable glands M25 x 1.5 (plastic), option: M20 x 1.5 metal thread [2]	Ex-e cable glands M25 x 1.5 (plastic), option: M20 x 1.5 metal thread [2]
Degree of protection accd. to EN 60529	IP66	IP66
Protective cover / protective bowl	single-safety glass pane of 6 mm thick	single-safety glass pane of 6 mm thick
Permissible ceiling tickness for fixing accessories	min. 25 mm to max. 90 mm	min. 25 mm to max. 90 mm

[1] depends on used lamps
[2] with dustcover if entry/thread is not closed

Technical data

	eLLB 20436
EC-Type Examination Certificate	DMT 02 ATEX E 069
IECEx Certificate of Conformity	IECEx-BVS14.0091
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex d e mb IIC T4 Gb Ⓔx II 2 D tb IIIC T80 °C Db
Marking accd. to IECEx	Ex d e mb IIC T 4 Gb Ex tb IIIC T 80 °C Db
Permissible ambient temperature	-25 °C up to +50 °C
IK-class according to IEC/EN 62262	IK 10 ≙ 20 J
Rated voltage	110 - 254 V AC 110 - 250 V DC
Rated current	0.68 A
Frequency	50 - 60 Hz
Power factor cos φ	≥ 0.95
Circuit	EVG
Protection class	I
Lamp / Illuminant	4 x T26 / 36 W (T8)
Rated luminous flux	13400 lm [1]
Lamp cap	G13 accd. to IEC 60061-1
Light output ratio	69%
Dimensions (L x W x H)	1460 x 430 x 120 mm
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm² [2] per terminal, through-wiring twin-ended
Enclosure colour	white RAL 9010
Enclosure material	Painted steel sheet, white, optional polished stainless steel
Weight	34 kg
Cable glands / gland plates / enclosure drilling	Ex-e cable glands M25 x 1.5 (plastic), option: M20 x 1.5 metal thread [2]
Degree of protection accd. to EN 60529	IP66
Protective cover / protective bowl	single-safety glass pane of 6 mm thick
Permissible ceiling tickness for fixing accessories	min. 25 mm to max. 90 mm

[1] depends on used lamps
[2] with dustcover if entry/thread is not closed

Technical data

eLLB 202217/U 240 (2 x 17 W) / eLLB 204232/U 240 (2 x 32 W)

Technical data

	eLLB 202217/U 240 (2 x 17 W)	eLLB 204232/U 240 (2 x 32 W)
Marking accd. to CEC 018	Ex d e ib m IIC T4 Class I Div. 2 Gr. A, B, C, D Class II Div. 1 Gr. E, F and G	Ex d e ib m IIC T4 Class I Div. 2 Gr. A, B, C, D Class II Div. 1 Gr. E, F and G
Marking accd. to NEC 500/505	Class I Zone 1 AEx de IIC T4 Class I Div. 2 Gr. A, B, C, D Class II Div. 2 Gr. F and G	Class I Zone 1 AEx de IIC T4 Class I Div. 2 Gr. A, B, C, D Class II Div. 2 Gr. F and G
Certificate of Compliance	CSA 10.2325079	CSA 10.2325079
Permissible ambient temperature	-25 °C up to +50 °C	-25 °C up to +50 °C
Rated voltage	120 - 240 V	120 - 240 V
Rated current	0.38/0.18 A	0.70/0.34 A
Frequency	50 - 60 Hz	50 - 60 Hz
Power factor cos φ	≥ 0.95	≥ 0.95
Circuit	EVG	EVG
Protection class	I	I
Lamp / Illuminant	2 x F17 T8	2 x F32 T8
Rated luminous flux	2600 lm [1)]	6600 lm [1)]
Lamp cap	G13 accd. to IEC 60061-1	G13 accd. to IEC 60061-1
Dimensions (L x W x H)	862 x 340 x 120 mm	1460 x 340 x 120 mm
Enclosure colour	white RAL 9010	white RAL 9010
Enclosure material	Painted steel sheet, white, optional polished stainless steel	Painted steel sheet, white, optional polished stainless steel
Weight	15.2 kg	22.2 kg
Cable glands / gland plates / enclosure drilling	3/4" NPT metal thread with dustcover	3/4" NPT metal thread with dustcover
Degree of protection accd. to EN 60529	IP66	IP66
Protective cover / protective bowl	single-safety glass pane of 6 mm thick	single-safety glass pane of 6 mm thick
Permissible ceiling tickness for fixing accessories	min. 25 mm to max. 90 mm	min. 25 mm to max. 90 mm

[1)] depends on used lamps

C SA® US

C SA® US


EMERGENCY
SHEET OF DOUGH SPEED
SHEET OF DOUGH BELT
MOULD SPEED
MOULD
STUFFING SPEED
STUFFING
MOULD ADVANCE
VOLTAGE PRESENCE

Ex-Recess-mounted ceiling emergency light fittings in metal design

eLLB 20... V-CG-S / eLLB 20... NIB
(Zone 1, 2, 21, 22)

The explosion-protection lighting concept for clean rooms

The Ex recess-mounted ceiling emergency lighting eLLB 20 fittings are equipped with EVG 09 electronic ballasts and are suitable for two-pin fluorescent lamps. These light fittings are used for surface and flush mounting in ceilings, in particular in clean rooms where smooth, flush surfaces are very important. They are often used in the pharmaceutical and chemical industries, and experimental facilities, as well as in paint shops and spraying cabinets.

Designed for easy installation

The housing is made of white-painted steel sheet with an integrally moulded cover frame or, optionally, of polished stainless steel. It is installed securely in the ceiling by means of special fixing elements that allow a universal and simple mounting in recessed clean room ceilings that are 25 to 90 mm thick. In addition, it can also be fixed by means of two M8 drilled holes in the top of the housing. The hinged, frameless pane made of safety glass is fixed with captive screws and has inside hinges. The sealing material is guaranteed silicone-leak-proof. Together with the generously dimensioned terminal compartment, the standard, double-ended through-wiring allows a cost-saving installation.

With central monitoring

Safety is always our top priority. This is why we also supply the eLLB 20 recessed ceiling mounting light fitting series with a built-in V-CG-S module. These luminaires with individual monitoring can be connected to a CEAG emergency lighting supply system and, in the event of an emergency, they provide a reliable illumination of your safety and escape routes.

If you need a reliable and decentralised emergency lighting

Emergency lighting eLLB 20 NIB luminaires with a self-contained battery system provide a decentralised solution for the mandatory emergency lighting, independent of central systems. In large plants, in particular, these luminaires offer significant cost benefits.

More safety due to sophisticated micro-electronics

Thanks to a new charging and monitoring technology with intelligent microelectronics, the NIB emergency lighting luminaires provide reliable safety and reduced maintenance costs. A function test lasting 5 minutes, that is carried out automatically on a weekly basis, even during mains operation, and a quarterly partial duty-cycle test provide additional safety.

Features

- Standard dual channel ballast with EOL monitoring
- Flush installation, specially for clean rooms
- Available in painted sheet steel or stainless steel
- Safety interlocking due to integral automatic disconnector
- Automatic function test and partial duty cycle test
- LED display for indication of charging, operation or fault status
- Easy replacement of battery, even in Ex-area
- High degree of protection IP66
- Connection to CEAG emergency light monitoring systems possible (V-CG-S)
- Suitable for ceiling B15 fire resistance

and drastically reduce the necessary amount of manual tests. The charging and discharging functions are monitored constantly by the micro-processor and are indicated via a diode display. Only the spent energy is recharged – therefore, overcharging is not possible. The so-called memory effect cannot occur – the service life of the battery is optimized.

The need to replace a battery, a fault in the emergency lighting circuit or a faulty battery is indicated by the LED display. Due to a new type of battery connection, the battery can be replaced in the hazardous area. The emergency lighting cycle can be set locally for 1.5 or 3 hours. A remote switch inquiry is possible in conjunction with the twin-ended through-wiring. The separate battery housing can be mounted directly onto the light fitting or it can be recess-mounted up to 1.5 m away, depending on the ceiling raster. Connection is made using eXLink connectors and no tools are required.

Long-term safety

The recess-mounted ceiling luminaires of this robust lighting series with plastic enclosure are equipped with a highly-efficient electronic ballast, which has a reliable EOL circuit. Thus, the lamps are checked for proper operation and shut down safely in the event of a malfunction at the end of the service life. In addition, the dual-channel structure of the electronic ballasts allows the safe operation of the second lamp if one lamp fails.

Battery set NIB

Ordering details

eLLB 20 ... V-CG-S

Ordering details

Type	Content	Terminals	Through-wiring single-ended	Through-wiring twin-ended	Cable gland/ thread	Threaded plug	Blanking plug	Order No.
 **eLLB 20018/18 V-CG-S**								
eLLB 20018/18 V-CG-S (2 x 18 W)	2/6-2K painted	2 x 6	–	x	2 x M25, plastic	2 x M25	1	**1 2190 218 703**
eLLB 20018/18 V-CG-S (2 x 18 W)	2/6-2M [1] painted	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 2190 218 713**
 **eLLB 20036/36 V-CG-S**								
eLLB 20036/36 V-CG-S (2 x 36 W)	2/6-2K painted	2 x 6	–	x	2 x M25, plastic	2 x M25	1	**1 2190 236 703**
eLLB 20036/36 V-CG-S (2 x 36 W)	2/6-2M [1] painted	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 2190 236 713**
 **eLLB 20058/58 V-CG-S**								
eLLB 20058/58 V-CG-S (2 x 58 W)	2/6-2K painted	2 x 6	–	x	2 x M25, plastic	2 x M25	1	**1 2190 258 703**
eLLB 20058/58 V-CG-S (2 x 58 W)	2/6-2M [1] painted	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 2190 258 713**
 **eLLB 20418 V-CG-S**								
eLLB 20418 V-CG-S (4 x 18 W)	2/6-2K painted	2 x 6	–	x	2 x M25, plastic	2 x M25	1	**1 2190 418 703**
eLLB 20418 V-CG-S (4 x 18 W)	2/6-2M [1] painted	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 2190 418 713**
 **eLLB 20436 V-CG-S**								
eLLB 20436 V-CG-S (4 x 36 W)	2/6-2K painted	2 x 6	–	x	2 x M25, plastic	2 x M25	1	**1 2190 436 703**
eLLB 20436 V-CG-S (4 x 36 W)	2/6-2M [1] painted	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 2190 436 713**

[1] with metal thread, without cable gland

Scope of delivery without lamp and fixing accessories
Metal cable glands see catalogue part 2: 2.3.12 ff

Stainless steel enclosures on request.

Ordering details

Type	Content	Terminals	Through-wiring single-ended	Through-wiring twin-ended	Cable gland/ thread	Threaded plug	Blanking plug	Order No.
eLLB 20018/18 NIB								
eLLB 20018/18 NIB (2 x 18 W)	2/6-2K painted	2 x 6	–	x	2 x M25, plastic	2 x M25	1	**1 2190 218 002**
eLLB 20018/18 NIB (2 x 18 W)	2/6-2M [1] painted	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 2190 218 102**
eLLB 20036/36 NIB								
eLLB 20036/36 NIB (2 x 36 W)	2/6-2K painted	2 x 6	–	x	2 x M25, plastic	2 x M25	1	**1 2190 236 002**
eLLB 20036/36 NIB (2 x 36 W)	2/6-2M [1] painted	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 2190 236 102**
eLLB 20418 NIB								
eLLB 20418 NIB (4 x 18 W)	2/6-2K painted	2 x 6	–	x	2 x M25, plastic	2 x M25	1	**1 2190 418 002**
eLLB 20418 NIB (4 x 18 W)	2/6-2M [1] painted	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 2190 418 102**
eLLB 20436 NIB								
eLLB 20436 NIB (4 x 36 W)	2/6-2K painted	2 x 6	–	x	2 x M25, plastic	2 x M25	1	**1 2190 436 002**
eLLB 20436 NIB (4 x 36 W)	2/6-2M [1] painted	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 2190 436 102**

[1] with metal thread, without cable gland

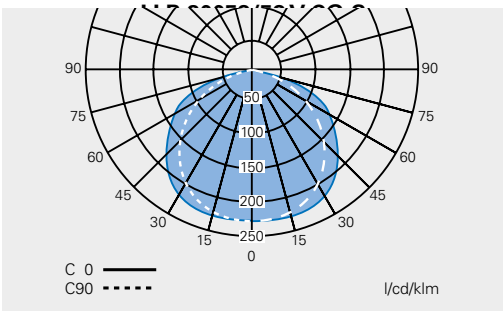
Scope of delivery without lamp and fixing accessories
Metal cable glands see catalogue part 2: 2.3.12 ff

Stainless steel enclosures on request.

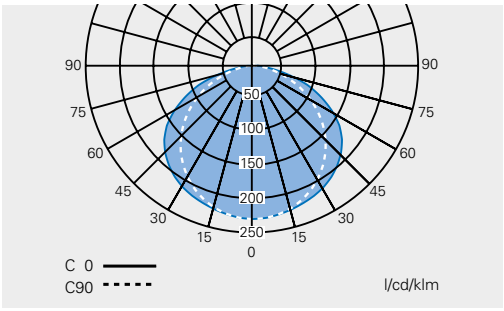
Dimension drawing / Polar curve

eLLB 20 ... V-CG-S / eLLB 20 ... NIB

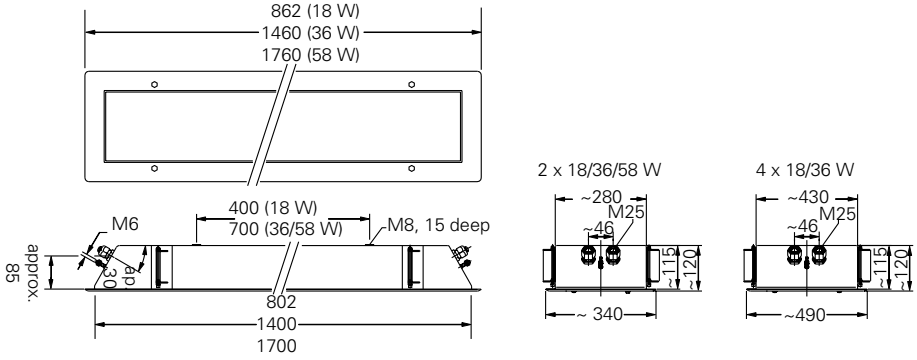
Polar curve eLLB 20018/18 NIB / V-CG-S
eLLB 20036/36 NIB / V-CG-S



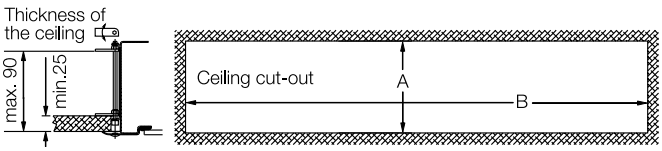
Polar curve eLLB 20418 V-CG-S / NIB
eLLB 20436 V-CG-S / NIB



eLLB 20...

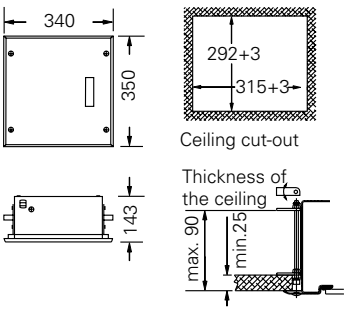


eLLB 20...



	A	B
eLLB 20018/18 V-CG-S/NIB	315+3	832+5
eLLB 20036/36 V-CG-S/NIB	315+3	1432+5
eLLB 20058/58 CG	315+3	1732+5
eLLB 20418 V-CG-S/NIB	465+3	832+5
eLLB 20436 V-CG-S/NIB	465+3	1432+5

Battery housing



Dimensions in mm

Technical data

	eLLB 20018/18 V-CG-S
EC-Type Examination Certificate	DMT 02 ATEX E 069
IECEx Certificate of Conformity	IECEx-BVS14.0091
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex d e mb ib IIC T4 Gb Ⓔx II 2 D tb IIIC T80 °C Db
Marking accd. to IECEx	Ex d e mb ib IIC T 4 Gb Ex tb IIIC T 80 °C Db
Permissible ambient temperature	-25 °C up to +50 °C
Rated voltage	220 - 254 V AC 195 - 250 V DC
Rated current	0.19 A
Frequency	50 - 60 Hz
Power factor cos φ	≥ 0.95
Circuit	EVG/CG-S
Protection class	I
Lamp / Illuminant	2 x T26 / 18 W (T8)
Rated luminous flux	2700 lm [1]
Lamp cap	G13 accd. to IEC 60061-1
Light output ratio	70%
Luminous flux in emergency operation	1350 lm [1]
Dimensions (L x W x H)	862 x 280 x 120 mm
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm² per terminal, through-wiring twin-ended
Enclosure colour	white RAL 9010
Enclosure material	painted steel sheet, white, optional polished stainless steel
Weight	15.5 kg
Cable glands / gland plates / enclosure drilling	Ex-e cable glands M25 x 1.5 (plastic), option: M20 x 1.5 metal thread [2]
Degree of protection accd. to EN 60529	IP66
Protective cover / protective bowl	single-safety glass pane of 6 mm thick
Permissible ceiling tickness for fixing accessories	min. 25 mm to max. 90 mm

[1] depends on used lamps
[2] with dustcover if entry/thread is not closed

Technical data

eLLB 20036/36 V-CG-S / eLLB 20058/58 V-CG-S

Technical data

	eLLB 20036/36 V-CG-S	eLLB 20058/58 V-CG-S
EC-Type Examination Certificate	DMT 02 ATEX E 069	DMT 02 ATEX E 069
IECEx Certificate of Conformity	IECEx-BVS14.0091	IECEx-BVS14.0091
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex d e mb ib IIC T4 Gb Ⓔx II 2 D tb IIIC T80 °C Db	Ⓔx II 2 G Ex d e mb ib IIC T4 Gb Ⓔx II 2 D tb IIIC T80 °C Db
Marking accd. to IECEx	Ex d e mb ib IIC T 4 Gb Ex tb IIIC T 80 °C Db	Ex d e mb ib IIC T 4 Gb Ex tb IIIC T 80 °C Db
Permissible ambient temperature	-25 °C up to +50 °C	-25 °C up to +50 °C
Rated voltage	220 - 254 V AC 195 - 250 V DC	220 - 254 V AC 195 - 250 V DC
Rated current	0.35 A	0.54 A
Frequency	50 - 60 Hz	50 - 60 Hz
Power factor cos φ	≥ 0.95	≥ 0.95
Circuit	EVG/CG-S	EVG/CG-S
Protection class	I	I
Lamp / Illuminant	2 x T26 / 36 W (T8)	2 x T26 / 58 W (T8)
Rated luminous flux	6700 lm [1]	10400 lm [1]
Lamp cap	G13 accd. to IEC 60061-1	G13 accd. to IEC 60061-1
Light output ratio	70%	68%
Luminous flux in emergency operation	3350 lm [1]	5200 lm [1]
Dimensions (L x W x H)	1460 x 280 x 120 mm	1760 x 280 x 120 mm
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm² per terminal, through-wiring twin-ended	L1, L2, L3, L, N, PE; max. 2 x 6 mm² per terminal, through-wiring twin-ended
Enclosure colour	white RAL 9010	white RAL 9010
Enclosure material	painted steel sheet, white, optional polished stainless steel	painted steel sheet, white, optional polished stainless steel
Weight	22.5 kg	26.5 kg
Cable glands / gland plates / enclosure drilling	Ex-e cable glands M25 x 1.5 (plastic), option: M20 x 1.5 metal thread [2]	Ex-e cable glands M25 x 1.5 (plastic), option: M20 x 1.5 metal thread [2]
Degree of protection accd. to EN 60529	IP66	IP66
Protective cover / protective bowl	single-safety glass pane of 6 mm thick	single-safety glass pane of 6 mm thick
Permissible ceiling tickness for fixing accessories	min. 25 mm to max. 90 mm	min. 25 mm to max. 90 mm

[1] depends on used lamps
[2] with dustcover if entry/thread is not closed

Technical data

	eLLB 20418 V-CG-S	eLLB 20436 V-CG-S
EC-Type Examination Certificate	DMT 02 ATEX E 069	DMT 02 ATEX E 069
IECEx Certificate of Conformity	IECEx-BVS14.0091	IECEx-BVS14.0091
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex d e mb ib IIC T4 Gb Ⓔx II 2 D tb IIIC T80 °C Db	Ⓔx II 2 G Ex d e mb ib IIC T4 Gb Ⓔx II 2 D tb IIIC T80 °C Db
Marking accd. to IECEx	Ex d e mb ib IIC T 4 Gb Ex tb IIIC T 80 °C Db	Ex d e mb ib IIC T 4 Gb Ex tb IIIC T 80 °C Db
Permissible ambient temperature	-25 °C up to +50 °C	-25 °C up to +50 °C
Rated voltage	220 - 254 V AC 195 - 250 V DC	220 - 254 V AC 195 - 250 V DC
Rated current	0.37 A	0.69 A
Frequency	50 - 60 Hz	50 - 60 Hz
Power factor cos φ	≥ 0.95	≥ 0.95
Circuit	EVG/CG-S	EVG/CG-S
Protection class	I	I
Lamp / Illuminant	4 x T26 / 18 W (T8)	4 x T26 / 36 W (T8)
Rated luminous flux	5400 lm [1]	13400 lm [1]
Lamp cap	G13 accd. to IEC 60061-1	G13 accd. to IEC 60061-1
Light output ratio	69%	69%
Luminous flux in emergency operation	1350 lm [1]	3350 lm [1]
Dimensions (L x W x H)	862 x 430 x 120 mm	1460 x 430 x 120 mm
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm² per terminal, through-wiring twin-ended	L1, L2, L3, L, N, PE; max. 2 x 6 mm² per terminal, through-wiring twin-ended
Enclosure colour	white RAL 9010	white RAL 9010
Enclosure material	painted steel sheet, white, optional polished stainless steel	painted steel sheet, white, optional polished stainless steel
Weight	25.5 kg	34.5 kg
Cable glands / gland plates / enclosure drilling	Ex-e cable glands M25 x 1.5 (plastic), option: M20 x 1.5 metal thread [2]	Ex-e cable glands M25 x 1.5 (plastic), option: M20 x 1.5 metal thread [2]
Degree of protection accd. to EN 60529	IP66	IP66
Protective cover / protective bowl	single-safety glass pane of 6 mm thick	single-safety glass pane of 6 mm thick
Permissible ceiling tickness for fixing accessories	min. 25 mm to max. 90 mm	min. 25 mm to max. 90 mm

[1] depends on used lamps
[2] with dustcover if entry/thread is not closed

Technical data

eLLB 20018/18 NIB / eLLB 20036/36 NIB

Technical data

	eLLB 20018/18 NIB	eLLB 20036/36 NIB
EC-Type Examination Certificate	DMT 02 ATEX E 069	DMT 02 ATEX E 069
IECEx Certificate of Conformity	IECEx-BVS14.0091	IECEx-BVS14.0091
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex d e mb ib IIC T4 Gb Ⓔx II 2 D tb IIIC T80 °C Db	Ⓔx II 2 G Ex d e mb ib IIC T4 Gb Ⓔx II 2 D tb IIIC T80 °C Db
Marking accd. to IECEx	Ex d e mb ib IIC T 4 Gb Ex tb IIIC T 80 °C Db	Ex d e mb ib IIC T 4 Gb Ex tb IIIC T 80 °C Db
Permissible ambient temperature	-20 °C up to +50 °C (specified data: -5 °C up to +35 °C)	-20 °C up to +50 °C (specified data: -5 °C up to +35 °C)
Battery	battery set with 7 Ah-NC battery, with LED display and monitoring via microprocessor	battery set with 7 Ah-NC battery, with LED display and monitoring via microprocessor
Rated voltage	220 - 254 V AC	220 - 254 V AC
Rated voltage (optional)	110 - 127 V AC	110 - 127 V AC
Rated current	0.23 A	0.40 A
Frequency	50 - 60 Hz	50 - 60 Hz
Charging duration	≥ 14 h	≥ 14 h
Power factor cos φ	≥ 0.95	≥ 0.95
Circuit	EVG with emergency lighting supply	EVG with emergency lighting supply
Protection class	I	I
Lamp / Illuminant	2 x T26 / 18 W (T8)	2 x T26 / 36 W (T8)
Rated luminous flux	2600 lm [1]	6700 lm [1]
Lamp cap	G13 accd. to IEC 60061-1	G13 accd. to IEC 60061-1
Light output ratio	70%	70%
Luminous flux in emergency operation (1.5 h, one lamp)	1215 lm (90 %)	1507 lm (45 %)
Luminous flux in emergency operation (3 h, one lamp)	607 lm (45 %)	837 lm (25 %)
Rated emergency lighting duration	1-lamps can be set on site for an emergency lighting duration of 1.5 or 3 hours	1-lamps can be set on site for an emergency lighting duration of 1.5 or 3 hours
Dimensions (L x W x H)	862 x 280 x 120 mm	1460 x 280 x 120 mm
Battery housing dimensions (L x W x H)	305 x 340 x 143 mm	305 x 340 x 143 mm
Connection battery enclosure	connection via 1.5 m long connection lead with plugs	connection via 1.5 m long connection lead with plugs
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm^2 per terminal	L1, L2, L3, L, N, PE; max. 2 x 6 mm^2 per terminal
Enclosure colour	white RAL 9010	white RAL 9010
Enclosure material	painted steel sheet, white, optional polished stainless steel	painted steel sheet, white, optional polished stainless steel
Weight	18 kg	25 kg
Battery housing weight	5.7 kg	5.7 kg
Cable glands / gland plates / enclosure drilling	Ex-e cable glands M25 x 1.5 (plastic), option: M20 x 1.5 metal thread [2]	Ex-e cable glands M25 x 1.5 (plastic), option: M20 x 1.5 metal thread [2]
Degree of protection accd. to EN 60529	IP66	IP66
Protective cover / protective bowl	single-safety glass pane of 6 mm thick	single-safety glass pane of 6 mm thick
Permissible ceiling tickness for fixing accessories	min. 25 mm to max. 90 mm	min. 25 mm to max. 90 mm

[1] depends on used lamps
[2] with dustcover if entry/thread is not closed

Technical data

	eLLB 20418 NIB	eLLB 20436 NIB
EC-Type Examination Certificate	DMT 02 ATEX E 069	DMT 02 ATEX E 069
IECEx Certificate of Conformity	IECEx-BVS14.0091	IECEx-BVS14.0091
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex d e mb ib IIC T4 Gb Ⓔx II 2 D tb IIIC T80 °C Db	Ⓔx II 2 G Ex d e mb ib IIC T4 Gb Ⓔx II 2 D tb IIIC T80 °C Db
Marking accd. to IECEx	Ex d e mb ib IIC T 4 Gb Ex tb IIIC T 80 °C Db	Ex d e mb ib IIC T 4 Gb Ex tb IIIC T 80 °C Db
Permissible ambient temperature	-20 °C up to +50 °C (specified data: -5 °C up to +35 °C)	-20 °C up to +50 °C (specified data: -5 °C up to +35 °C)
Battery	battery set with 7 Ah-NC battery, with LED display and monitoring via microprocessor	battery set with 7 Ah-NC battery, with LED display and monitoring via microprocessor
Rated voltage	220 - 254 V AC	220 - 254 V AC
Rated voltage (optional)	110 - 127 V AC	110 - 127 V AC
Rated current	0.41 A	0.74 A
Frequency	50 - 60 Hz	50 - 60 Hz
Charging duration	≥ 14 h	≥ 14 h
Power factor cos φ	≥ 0.95	≥ 0.95
Circuit	EVG with emergency lighting supply	EVG with emergency lighting supply
Protection class	I	I
Lamp / Illuminant	4 x T26 / 18 W (T8)	4 x T26 / 36 W (T8)
Rated luminous flux	5400 lm [1]	13400 lm [1]
Lamp cap	G13 accd. to IEC 60061-1	G13 accd. to IEC 60061-1
Light output ratio	69%	69%
Luminous flux in emergency operation (1.5 h, one lamp)	1215 lm (90 %)	1507 lm (45 %)
Luminous flux in emergency operation (3 h, one lamp)	607 lm (45 %)	837 lm (25 %)
Rated emergency lighting duration	1-lamps can be set on site for an emergency lighting duration of 1.5 or 3 hours	1-lamps can be set on site for an emergency lighting duration of 1.5 or 3 hours
Dimensions (L x W x H)	862 x 430 x 120 mm	1460 x 430 x 120 mm
Battery housing dimensions (L x W x H)	305 x 340 x 143 mm	305 x 340 x 143 mm
Connection battery enclosure	connection via 1.5 m long connection lead with plugs	connection via 1.5 m long connection lead with plugs
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm^2 per terminal	L1, L2, L3, L, N, PE; max. 2 x 6 mm^2 per terminal
Enclosure colour	white RAL 9010	white RAL 9010
Enclosure material	painted steel sheet, white, optional polished stainless steel	painted steel sheet, white, optional polished stainless steel
Weight	29 kg	38 kg
Battery housing weight	5.7 kg	5.7 kg
Cable glands / gland plates / enclosure drilling	Ex-e cable glands M25 x 1.5 (plastic), option: M20 x 1.5 metal thread [2]	Ex-e cable glands M25 x 1.5 (plastic), option: M20 x 1.5 metal thread [2]
Degree of protection accd. to EN 60529	IP66	IP66
Protective cover / protective bowl	single-safety glass pane of 6 mm thick	single-safety glass pane of 6 mm thick
Permissible ceiling tickness for fixing accessories	min. 25 mm to max. 90 mm	min. 25 mm to max. 90 mm

[1] depends on used lamps
[2] with dustcover if entry/thread is not closed

Explosion-protected recessed ceiling LED-light and fluorescent light fittings

LED 600, RLF LED 1200 and self-contained emergency luminaire RLF LED 600 N, RLF LED 1200 N
RLF/RLF-INOX 250 18 - 58 W / RLF/RLF-INOX 250... N 18 - 36 W (Zone 1, 2, 21, 22)

The explosion-protected lighting concept for recessed ceiling light fittings.

The new Ex recessed-ceiling light fittings RLF ..LED completes the portfolio together with the RLF 250... for spraying cabinets and paint shops for installation in ceilings where smooth and flush surfaces are important. The glass pane, which is installed with a metal hinge, allows the use of cleaning solvents, if necessary, in order to remove easily spray mist and paintbrushes. Similar requirements are also encountered in the pharmaceutical and chemical industries as well as in technology labs, where simple cleaning and smooth design are essential.

Designed for easy installation

The housing comprises white-painted steel sheet with an optional cover frame for ceiling mounting. In addition, it can also be fixed by means of two M8 drilled holes on the top of the housing.
Optional a **stainless steel enclosure** is available on request. For an external PE-connection two screw terminals up to 6 mm² are available.

The hinged, frameless pane made of 5 mm thick safety glass is fixed with 2 resp. 3 captive screws and has inside hinges. The EPDM sealing ensures the high degree of protection IP65.

Long-term safety

Thanks to its large input voltage range the electronic driver (110- 254 A AC / 220- 250 V DC) can be used internationally. Due to the low self-heating, ambient temperatures up to +60 ° C are possible. The fluorescent version RLF 250 .. contains a wide range voltage dual-channel electronic ballast with EOL circuit.

Versatile light

Depending on the application, three luminous flux versions are available in efficient LED technology (2500/5000/10000 lm) in various sizes. Through their variety even demanding lighting tasks can be faced. In addition, the light colour 6000K ensures an illumination similar to daylight, which is a high priority, for example, in paint shops. Using traditional fluorescent lamps the RLF 250... series combines light output with easy re-lamping.

Using optional mounting brackets the luminaires can be installed adjustable on walls or ceilings

Easy to install

The double-sided through-wiring in combination with the generous connecting space provides a cost-saving installation.

If you need a reliable and decentralised emergency lighting

The self-contained emergency light fitting RLF LED... N or RLF 250 ... N ensures decentralised emergency lighting, independent of central systems. These luminaires offers in particular significant cost advantages, particularly in large-scale installations.

The self-contained emergency light fitting with integrated battery allows an autonomous emergency lighting with 1.5 h or 3 h rated operating time.

Features

- Universal electronic driver for 110 - 254 V AC / 220 - 250 V DC (LED) and electronic ballast for fluorescent lamps
- Various lumen packages for LED up to 9180 lm in different sizes available
- Suitable for high ambient temperatures up to +60 °C (LED)
- Flush installation, especially for spraying cabinets and paint shops with optional mounting bracket
- Toughened safety glass
- Stainless steel enclosure on request
- With self-contained battery unit (RLF LED...N and RLF 250... N)
- Suitable for B15 fire resistance ceilings

Ordering details








Type	Content	Luminous flux	Emergency lighting duration	Cable gland/ thread	Screw plugs	Order No.
RLF LED 600						
RLF LED 600 2L	2/5-2K	2490 lm		1 x M25, Plastic cable gland	1 x M25	**1 2285 006 001**
RLF LED 600 2L	2/5-2M[1)]	2490 lm		2 x M20, Metal thread	1 x M20	**1 2285 006 003**
RLF LED 600 5L	2/5-2K	4540 lm		1 x M25, Plastic cable gland	1 x M25	**1 2285 006 002**
RLF LED 600 5L	2/5-2M[1)]	4540 lm		2 x M20, Metal thread	1 x M20	**1 2285 006 004**
RLF LED 1200						
RLF LED 1200 5L	2/5-2K	4860 lm		1 x M25, Plastic cable gland	1 x M25	**1 2285 012 001**
RLF LED 1200 5L	2/5-2M[1)]	4860 lm		2 x M20, Metal thread	1 x M20	**1 2285 012 003**
RLF LED 1200 10L	2/5-2K	9180 lm		1 x M20, Plastic cable gland	1 x M25	**1 2285 012 002**
RLF LED 1200 10L	2/5-2M[1)]	9180 lm		2 x M20, Metal thread	1 x M20	**1 2285 012 004**
RLF LED 600 N (self-contained emergency light fitting)						
RLF LED 600 N 2L	2/4-2K	2490 lm	1.5 h	1 x M25, plastic cable gland	1 x M25	**1 2285 006 201**
RLF LED 600 N 2L	2/5-2M[1)]	2490 lm	1.5 h	2 x M20, Metal thread	1 x M20	**1 2285 006 202**
RLF LED 600 N 2L	2/5-2K	2490 lm	3 h	1 x M25, Plastic cable gland	1 x M25	**1 2285 006 301**
RLF LED 600 N 2L	2/5-2M[1)]	2490 lm	3 h	2 x M20, Metal thread	1 x M20	**1 2285 006 302**
RLF LED 600 N 5L	2/5-2K	4540 lm	1.5 h	1 x M25, Plastic cable gland	1 x M25	**1 2285 006 203**
RLF LED 600 N 5L	2/5-2M[1)]	4540 lm	1.5 h	2 x M20, Metal thread	1 x M20	**1 2285 006 204**
RLF LED 600 N 5L	2/5-2K	4540 lm	3 h	1 x M25, Plastic cable gland	1 x M25	**1 2285 006 303**
RLFLED 600 N 5L	2/5-2M[1)]	4540 lm	3 h	2 x M20, Metal thread	1 x M20	**1 2285 006 304**
RLF LED 1200 N (self-contained emergency light fitting)						
RLF LED 1200 N 5L	2/5-2K	4860 lm	1.5 h	1 x M25, Plastic cable gland	1 x M25	**1 2285 012 201**
RLF LED 1200 N 5L	2/5-2M[1)]	4860 lm	1.5 h	2 x M20, Metal thread	1 x M20	**1 2285 012 202**
RLF LED 1200 N 5L	2/5-2K	4860 lm	3 h	1 x M25, Plastic cable gland	1 x M25	**1 2285 012 301**
RLF LED 1200 N 5L	2/5-2M[1)]	4860 lm	3 h	2 x M20, Metal thread	1 x M20	**1 2285 012 302**
RLF LED 1200 N 10L	2/5-2K	9180 lm	1.5 h	1 x M25, Plastic cable gland	1 x M25	**1 2285 012 203**
RLF LED 1200 N 10L	2/5-2M[1)]	9180 lm	1.5 h	2 x M20, Metal thread	1 x M20	**1 2285 012 204**
RLF LED 1200 N 10L	2/5-2K	9180 lm	3 h	1 x M25, Plastic cable gland	1 x M25	**1 2285 012 303**
RLF LED 1200 N 10L	2/5-2M[1)]	9180 lm	3 h	2 x M20, Metal thread	1 x M20	**1 2285 012 304**

Scope of delivery with LED and without fixing accessories
Metal cable glands see catalogue part 2: 2.3.12 ff

Ordering details

RLF 250 ... / RLF 250 ...N

Ordering details

Type	Content	Terminals	Through-wiring single-ended	Through-wiring twin-ended	Cable gland/ thread	Screw plugs	Blanking plug	Order No.
RLF 250../.. (twin lamp)								
RLF 25018/18 (2 x 18 W)	2/5-2K	2 x 5	–	x	2 x M25, plastic		1	**1 2283 218 001**
RLF 25018/18 (2 x 18 W)	2/5-2M[1)]	2 x 5	–	x	2 x M20, metal thread	1 x M20		**1 2283 218 002**
RLF 25036/36 (2 x 36 W)	2/5-2K	2 x 5	–	x	2 x M25, plastic		1	**1 2283 236 001**
RLF 25036/36 (2 x 36 W)	2/5-2M[1)]	2 x 5	–	x	2 x M20, metal thread	1 x M20		**1 2283 236 002**
RLF 25058/58 (2 x 58 W)	2/5-2K	2 x 5	–	x	2 x M25, plastic		1	**1 2283 258 001**
RLF 25058/58 (2 x 58 W)	2/5-2M[1)]	2 x 5	–	x	2 x M20, metal thread	1 x M20		**1 2283 258 002**
RLF 2503.. (three lamps)								
RLF 250336 (3 x 36 W)	2/5-2K	2 x 5	–	x	2 x M25, plastic		1	**1 2283 336 011**
RLF 250336 (3 x 36 W)	2/5-2M[1)]	2 x 5	–	x	2 x M20, metal thread	1 x M20		**1 2283 336 012**
RLF 250358 (3 x 58 W)	2/5-2K	2 x 5	–	x	2 x M25, plastic		1	**1 2283 358 011**
RLF 250358 (3 x 58 W)	2/5-2M[1)]	2 x 5	–	x	2 x M20, metal thread	1 x M20		**1 2283 358 012**
RLF 2504.. (four lamps)								
RLF 250418 (4 x 18 W)	2/5-2K	2 x 5	–	x	2 x M25, plastic		1	**1 2283 418 011**
RLF 250418 (4 x 18 W)	2/5-2M[1)]	2 x 5	–	x	2 x M20, metal thread	1 x M20		**1 2283 418 012**
RLF 250436 (4 x 36 W)	2/5-2K	2 x 5	–	x	2 x M25, plastic		1	**1 2283 436 011**
RLF 250436 (4 x 36 W)	2/5-2M[1)]	2 x 5	–	x	2 x M20, metal thread	1 x M20		**1 2283 436 012**
RLF 250458 (4 x 58 W)	2/5-2K	2 x 5	–	x	2 x M25, plastic		1	**1 2283 458 011**
RLF 250458 (4 x 58 W)	2/5-2M[1)]	2 x 5	–	x	2 x M20, metal thread	1 x M20		**1 2283 458 012**

Ordering details

Type	Content	Emergency lighting duration	Terminals	Through-wiring single-ended	Through-wiring twin-ended	Cable gland/ thread	Screw plugs	Order No.
RLF 250../.. N (twin lamp)								
RLF 25018/18 N (2 x 18 W)	2/6-2K	1.5 h	2 x 6	–	x	2 x M25, plastic	1 x M25	**1 2283 218 201**
RLF 25018/18 N (2 x 18 W)	2/6-2M	1.5 h	2 x 6	–	x	2 x M20 x 1.5, metal thread	1 x M20	**1 2283 218 202**
RLF 25018/18 N (2 x 18 W)	2/6-2K	3 h	2 x 6	–	x	2 x M25, plastic	1 x M25	**1 2283 218 301**
RLF 25018/18 N (2 x 18 W)	2/6-2M	3 h	2 x 6	–	x	2 x M20 x 1.5, metal thread	1 x M20	**1 2283 218 302**
RLF 25036/36 N (2 x 36 W)	2/6-2K	1.5 h	2 x 6	–	x	2 x M25, plastic	1 x M25	**1 2283 236 201**
RLF 25036/36 N (2 x 36 W)	2/6-2M	1.5 h	2 x 6	–	x	2 x M20 x 1.5, metal thread	1 x M20	**1 2283 236 202**
RLF 25036/36 N (2 x 36 W)	2/6-2K	3 h	2 x 6	–	x	2 x M25, plastic	1 x M25	**1 2283 236 301**
RLF 25036/36 N (2 x 36 W)	2/6-2M	3 h	2 x 6	–	x	2 x M20 x 1.5, metal thread	1 x M20	**1 2283 236 302**
RLF 2504.. N (four lamps)								
RLF 250418 N (4 x 18 W)	2/6-2K	1.5 h	2 x 6	–	x	2 x M25, plastic	1 x M25	**1 2283 418 201**
RLF 250418 N (4 x 18 W)	2/6-2M	1.5 h	2 x 6	–	x	2 x M20 x 1.5, metal thread	1 x M20	**1 2283 418 202**
RLF 250418 N (4 x 18 W)	2/6-2K	3 h	2 x 6	–	x	2 x M25, plastic	1 x M25	**1 2283 418 301**
RLF 250418 N (4 x 18 W)	2/6-2M	3 h	2 x 6	–	x	2 x M20 x 1.5, metal thread	1 x M20	**1 2283 418 302**
RLF 250436 N (4 x 36 W)	2/6-2K	1.5 h	2 x 6	–	x	2 x M25, plastic	1 x M25	**1 2283 436 201**
RLF 250436 N (4 x 36 W)	2/6-2M	1.5 h	2 x 6	–	x	2 x M20 x 1.5, metal thread	1 x M20	**1 2283 436 202**
RLF 250436 N (4 x 36 W)	2/6-2K	3 h	2 x 6	–	x	2 x M25, plastic	1 x M25	**1 2283 436 301**
RLF 250436 N (4 x 36 W)	2/6-2M	3 h	2 x 6	–	x	2 x M20 x 1.5, metal thread	1 x M20	**1 2283 436 302**

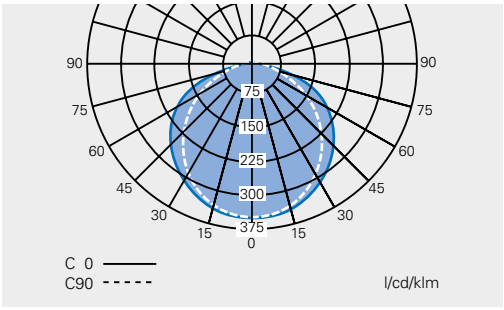
Scope of delivery without lamp and fixing accessories
Metal cable glands see catalogue part 2: 2.3.12 ff

Accessories

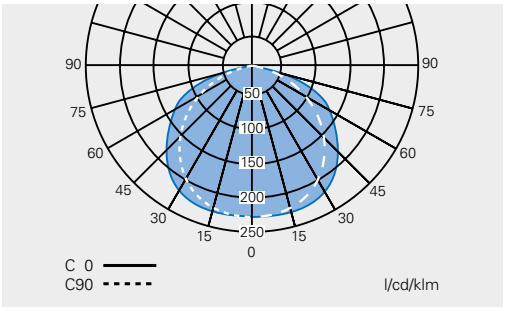
Type	Application	Order No.
Mounting frame for recessed ceiling mounting	for RLF LED 600 / 600 N 2L, RLF 25018/18, 2 x 18W	**3 2283 000 001**
Mounting frame for recessed ceiling mounting	for RLF LED 600 / 600 N 5L / RLF 250418, 4 x 18 W	**3 2283 000 002**
Mounting frame for recessed ceiling mounting	for RLF LED 1200 / 1200 N 5L / RLF 250, 2/3 x 36 W,	**3 2283 000 003**
Mounting frame for recessed ceiling mounting	for RLF LED 1200 / 1200 N 10L / RLF 250436, 4 x 36 W	**3 2283 000 004**
Mounting frame for recessed ceiling mounting	for RLF 250, 2/3 x 58 W	**3 2283 000 005**
Mounting frame for recessed ceiling mounting	for RLF 250458, 4 x 58 W	**3 2283 000 006**
Set of wall bracket adjustable (2 pcs.)	for RLF 250..	**3 2283 000 007**

2

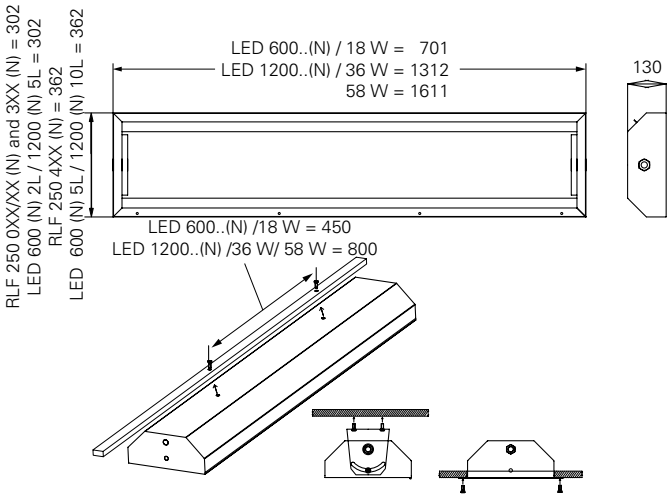
Polar curve RLF... LED

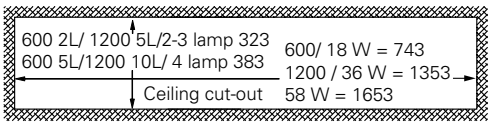


Polar curve RLF...

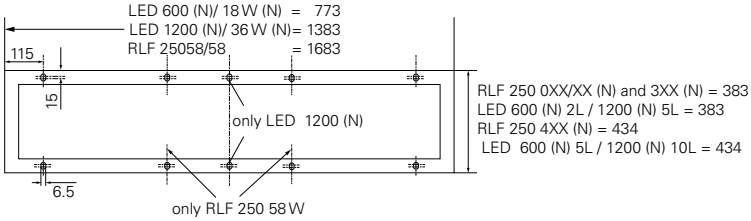


RLF LED 600 / 1200..(N) / RLF 250 ... (N)





Mounting frame RLF



Dimensions in mm

Technical data

RLF LED 600 / RLF LED 1200

Technical data

	RLF LED 600 2L / 5L	RLF LED 1200 5L / 10L
EU-Type Examination Certificate	FTZÚ 17 ATEX 0002X	FTZÚ 17 ATEX 0002X
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex eb mb op is IIC T4 Gb Ⓔx II 2 D Ex tb IIIC T67°C Db	Ⓔx II 2 G Ex eb mb op is IIC T4 Gb Ⓔx II 2 D Ex tb IIIC T67°C Db
Permissible ambient temperature	-20 °C up to +60 °C	-20 °C up to +55 °C
Rated voltage	110 - 254 V AC / 220 - 250 V DC	110 - 254 V AC / 220 - 250 V DC
Rated current	0.13 A / 0.26 A at 230 V	0.24 A / 0.48 A at 230 V
Frequency	50 - 60 Hz	50 - 60 Hz
Power factor cos φ	≥ 0.95	≥ 0.95
Circuit	electronic LED-driver	electronic LED-driver
Protection class	I	I
Lamp / Illuminant	LED module 1 x 25 W / 2 x 25 W	LED module 1 x 50 W / 2 x 50 W
Rated luminous flux of the luminaire	2490 lm (2L) / 4540 lm (5L)	4860 lm (5L) / 9180 lm (10L)
Light colour/ CRI	6000 K / R_a >70 [2)]	6000 K / R_a >70 [2)]
Dimensions (L x W x H)	701 x 302 x 130 mm / 701 x 362 x 130 mm	1312 x 302 x 130 mm / 1312 x 362 x 130 mm
Connecting terminals	L1, L2, L3, N, PE; max. 2 x 2.5 mm^2 twin-ended through-wiring	L1, L2, L3, N, PE; max. 2 x 2.5 mm^2 twin-ended through-wiring
Enclosure colour	white RAL 9010	white RAL 9010
Enclosure material	painted steel sheet, white optional: polished stainless steel 304 (1.4301)	painted steel sheet, white optional: polished stainless steel 304 (1.4301)
Weight	9.5 kg (2L) / 11.9 kg (5L)	15.6 kg (5L)/ 18.4 kg (10 L)
Cable glands / gland plates / enclosure drilling	Ex-e cable glands M25 x 1.5 (plastic), option: M20 x 1.5 metal thread [1)]	Ex-e cable glands M25 x 1.5 (plastic), option: M20 x 1.5 metal thread [1)]
Degree of protection accd. to EN 60529	IP65	IP65
Protective cover / protective bowl	single-safety glass pane of 5 mm thick	single-safety glass pane of 5 mm thick

1) with dustcover if entry/thread is not closed
2) 4000 K on request

Technical data

	RLF LED 600 N 2L / 5L	RLF LED 1200 N 5L / 10L
EU-Type Examination Certificate	FTZÚ 17 ATEX 0002X	FTZÚ 17 ATEX 0002X
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex eb mb op is IIC T4 Gb Ⓔx II 2 D Ex tb IIIC T67°C Db	Ⓔx II 2 G Ex eb mb op is IIC T4 Gb Ⓔx II 2 D Ex tb IIIC T67°C Db
Permissible ambient temperature	0 °C up to +40 °C	0 °C up to +35 °C
Rated voltage	110 - 254 V AC / 220 - 250 V DC	110 - 254 V AC / 220 - 250 V DC
Rated current	0.14 A / 0.26 A at 230 V	0.25 A / 0.49 A at 230 V
Frequency	50 - 60 Hz	50 - 60 Hz
Power factor cos φ	≥ 0.95	≥ 0.95
Circuit	electronic LED-driver	electronic LED-driver
Protection class	I	I
Lamp / Illuminant	LED module 1 x 25 W / 2 x 25 W	LED module 1 x 50 W / 2 x 50 W
Rated luminous flux of the luminaire	2490 lm (2L) / 4540 lm (5L)	4860 lm (5L) / 9180 lm (10L)
Light colour/ CRI	6000 K / R_a >70 [2]	6000 K / R_a >70 [2]
luminous flux in emergecy mode 1.5 h, one LED module 3 h, one LED module	 375 lm 249 lm	 534 lm 291 lm
Emergency lighting duration	1.5 h or 3 h	1.5 h or 3 h
Dimensions (L x W x H)	701 x 302 x 130 mm / 701 x 362 x 130 mm	1312 x 302 x 130 mm / 1312 x 362 x 130 mm
Connecting terminals	L, L1,L2, L3, N, PE; max. 2 x 2.5 mm² twin-ended through-wiring	L, L1,L2, L3, N, PE; max. 2 x 2.5 mm² twin-ended through-wiring
Enclosure colour	white RAL 9010	white RAL 9010
Enclosure material	painted steel sheet, white optional: polished stainless steel 304 (1.4301)	painted steel sheet, white optional: polished stainless steel 304 (1.4301)
Weight	11,50 kg 2L (1,5h)/ 12,10 kg 2L (3h) 13,60 kg 5L (1,5h)/ 14,80 kg 5L (3h)	16,40 kg 5L (1,5h)/ 18,40 kg 5L (3h) 18,50 kg 10L (1,5h)/ 19,10 kg 10L (3h)
Cable glands / gland plates / enclosure drilling	Ex-e cable glands M25 x 1.5 (plastic) , option: M20 x 1.5 metal thread [1]	Ex-e cable glands M25 x 1.5 (plastic) , option: M20 x 1.5 metal thread [1]
Degree of protection accd. to EN 60529	IP65	IP65
Protective cover / protective bowl	single-safety glass pane of 5 mm thick	single-safety glass pane of 5 mm thick

1) with dustcover if entry/thread is not closed
2) 4000 K on request

Technical data

RLF 25018/18 / RLF 250418 / RLF 25036/36 / RLF 250336

Technical data

	RLF 25018/18 / RLF 250418	RLF 25036/36 / RLF 250336
EC-Type Examination Certificate	FTZU 06 ATEX 0050 X	FTZU 06 ATEX 0050 X
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex ed IIC T4 Gb Ⓔx II 2 D Ex tb IIIC T60 °C Db	Ⓔx II 2 G Ex ed IIC T4 Ⓔx II 2 D Ex tb IIIC T60 °C Db
Permissible ambient temperature	-20 °C up to +40 °C	-20 °C up to +40 °C
Rated voltage	110 - 250 V AC / 110 - 250 V DC	110 - 250 V AC / 110 - 250 V DC
Rated current	0.18 A / 0.36 A	0.34 A / 0.51 A
Frequency	50 - 60 Hz	50 - 60 Hz
Power factor cos φ	≥ 0.95	≥ 0.95
Circuit	EVG	EVG
Protection class	I	I
Lamp / Illuminant	2 x T26 / 18 W (T8) / 4 x T26 / 18 W (T8)	2 x T26 / 36 W (T8) / 3 x T26 / 36 W (T8)
Rated luminous flux	2700 lm [1] / 5400 lm [1]	6700 lm [1] / 10050 lm [1]
Lamp cap	G13 accd. to IEC 60061-1	G13 accd. to IEC 60061
Light output ratio	70 % / 69 %	70 % / 68 %
Dimensions (L x W x H)	701 x 302 x 130 mm / 701 x 362 x 130 mm	1312 x 302 x 130 mm
Connecting terminals	L1, L2, L3, N, PE; max. 2 x 2.5 mm² through-wiring twin-ended	L1, L2, L3, N, PE; max. 2 x 2.5 mm² through-wiring twin-ended
Enclosure colour	white RAL 9010	white RAL 9010
Enclosure material	painted steel sheet, white optional: polished stainless steel 304 (1.4301)	painted steel sheet, white optional: polished stainless steel 304 (1.4301)
Weight	6.9 kg / 9.5 kg	12.9 kg / 13.4 kg
Cable glands / gland plates / enclosure drilling	Ex-e cable glands M25 x 1.5 (plastic) , option: M20 x 1.5 metal thread[2]	Ex-e cable glands M25 x 1.5 (plastic) , option: M20 x 1.5 metal thread[2]
Degree of protection accd. to EN 60529	IP65	IP65
Protective cover / protective bowl	single-safety glass pane of 5 mm thick	single-safety glass pane of 5 mm thick

[1] depends on used lamps
[2] with dustcover if entry/thread is not closed

Technical data

	RLF 250436	RLF 25058/58
EC-Type Examination Certificate	FTZU 06 ATEX 0050 X	FTZU 06 ATEX 0050 X
Marking accd. to 2014/34/EU	Ex II 2 G Ex ed IIC T4 Ex II 2 D Ex tb II IC T60 °C Db	Ex II 2 G Ex ed IIC T4 Ex II 2 D Ex tb IIIC T60 °C Db
Permissible ambient temperature	-20 °C up to +40 °C	-20 °C up to +40 °C
Rated voltage	110 - 250 V AC / 110 - 250 V DC	220 - 250 V AC / 195 - 250 V DC
Rated current	0.68 A	0.53 A
Frequency	50 - 60 Hz	50 - 60 Hz
Power factor cos φ	≥ 0.95	≥ 0.95
Circuit	EVG	EVG
Protection class	I	I
Lamp / Illuminant	4 x T26 / 36 W (T8)	2 x T26 / 58 W (T8)
Rated luminous flux	13400 lm [1]	10400 lm [1]
Lamp cap	G13 accd. to IEC 60061-1	G13 accd. to IEC 60061-1
Light output ratio	69 %	68 %
Dimensions (L x W x H)	1312 x 362 x 130 mm	1611 x 302 x 130 mm
Connecting terminals	L1, L2, L3, N, PE; max. 2 x 2.5 mm² through-wiring twin-ended	L1, L2, L3, N, PE; max. 2 x 2.5 mm² through-wiring twin-ended
Enclosure colour	white RAL 9010	white RAL 9010
Enclosure material	painted steel sheet, white optional: polished stainless steel 304 (1.4301)	painted steel sheet, white optional: polished stainless steel 304 (1.4301)
Weight	16.5 kg	17.2 kg
Cable glands / gland plates / enclosure drilling	Ex-e cable glands M25 x 1.5 (plastic) , option: M20 x 1.5 metal thread[2]	Ex-e cable glands M25 x 1.5 (plastic) , option: M20 x 1.5 metal thread[2]
Degree of protection accd. to EN 60529	IP65	IP65
Protective cover / protective bowl	single-safety glass pane of 5 mm thick	single-safety glass pane of 5 mm thick

[1] depends on used lamps
[2] with dustcover if entry/thread is not closed

Technical data

RLF 250358 / RLF 250458

Technical data

	RLF 250358	RLF 250458
EC-Type Examination Certificate	FTZU 06 ATEX 0050 X	FTZU 06 ATEX 0050 X
Marking accd. to 2014/34/EU	Ex II 2 G Ex ed IIC T4 Ex II 2 D Ex tb IIIC T60 °C Db	Ex II 2 G Ex ed IIC T4 Gb Ex II 2 D Ex tb IIIC T60 °C Db
Permissible ambient temperature	-20 °C up to +40 °C	-20 °C up to +40 °C
Rated voltage	220 - 250 V AC / 195 - 250 V DC	220 - 250 V AC / 195 - 250 V DC
Rated current	0.80 A	1.06 A
Frequency	50 - 60 Hz	50 - 60 Hz
Power factor cos φ	≥ 0.95	≥ 0.95
Circuit	EVG	EVG
Protection class	I	I
Lamp / Illuminant	3 x T26 / 58 W (T8)	4 x T26 / 58 W (T8)
Rated luminous flux	15600 lm [1]	20800 lm [1]
Lamp cap	G13 accd. to IEC 60061-1	G13 accd. to IEC 60061-1
Light output ratio	66 %	67 %
Dimensions (L x W x H)	1611 x 302 x 130 mm	1611 x 362 x 130 mm
Connecting terminals	L1, L2, L3, N, PE; max. 2 x 2.5 mm^2 through-wiring twin-ended	L1, L2, L3, N, PE; max. 2 x 2.5 mm^2 through-wiring twin-ended
Enclosure colour	white RAL 9010	white RAL 9010
Enclosure material	painted steel sheet, white optional: polished stainless steel 304 (1.4301)	painted steel sheet, white optional: polished stainless steel 304 (1.4301)
Weight	17.8 kg	19.8 Kg
Cable glands / gland plates / enclosure drilling	Ex-e cable glands M25 x 1.5 (plastic) , option: M20 x 1.5 metal thread[2]	Ex-e cable glands M25 x 1.5 (plastic) , option: M20 x 1.5 metal thread[2]
Degree of protection accd. to EN 60529	IP65	IP65
Protective cover / protective bowl	single-safety glass pane of 5 mm thick	single-safety glass pane of 5 mm thick

[1] depends on used lamps
[2] with dustcover if entry/thread is not closed

Technical data

	RLF 25018/18 N / RLF 25036/36 N	RLF 250418 N / RLF 250436 N
EC-Type Examination Certificate	FTZU 06 ATEX 0050 X	FTZU 06 ATEX 0050 X
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex d e ib mb IIC T4 Gb Ⓔx II 2 D Ex tb IIIC T60 °C Db	Ⓔx II 2 G Ex d e ib mb IIC T4 Gb Ⓔx II 2 D Ex tb IIIC T60 °C Db
Permissible ambient temperature	0 °C up to +40 °C (specified data)	0 °C up to +40 °C
Battery	3.6 V/4 Ah NC-Accu / 6 V/4 Ah NC-Accu	3.6 V/4 Ah NC-Accu / 6 V/4 Ah NC-Accu
Rated voltage	230 - 240 V AC	230 - 240 V AC
Rated current	0.20 A / 0.36 A	0.36 A / 0.68 A
Frequency	50 - 60 Hz	50 - 60 Hz
Charging duration	≥ 24 h	≥ 24 h
Power factor cos φ	≥ 0.95	≥ 0.95
Circuit	EVG with emergency lighting supply	EVG with emergency lighting supply
Protection class	I	I
Lamp / Illuminant	2 x T26 / 18 W (T8) / 2 x T26 / 36 W (T8)	4 x T26 / 18 W (T8) / 4 x T26 / 36 W (T8)
Rated luminous flux	2700 lm [1] / 6700 lm [1]	5400 lm [1] / 13400 lm [1]
Lamp cap	G13 accd. to IEC 60061-1	G13 accd. to IEC 60061-1
Light output ratio	70 %	70 %
Luminous flux in emergency operation (1.5 h, one lamp)	270 lm (20 %) / 603 lm (18 %)	270 lm (20 %) / 603 lm (18 %)
Luminous flux in emergency operation (3 h, one lamp)	216 lm (16 %) / 436 lm (13 %)	216 lm (16 %) / 436 lm (13 %)
Rated emergency lighting duration	1.5 h / 3 h	1.5 h / 3 h
Dimensions (L x W x H)	701 x 302 x 130 mm / 1312 x 302 x 130 mm	701 x 362 x 130 mm / 1312 x 362 x 130 mm
Connecting terminals	L, L1, L2, L3, N, PE; max. 2 x 2.5 mm² through-wiring twin-ended	L, L1, L2, L3, N, PE; max. 2 x 2.5 mm² through-wiring twin-ended
Enclosure colour	white RAL 9010	white RAL 9010
Enclosure material	painted steel sheet, white optional polished stainless steel	painted steel sheet, white optional polished stainless steel
Weight	8.9 kg / 14.9 kg	11.5 kg / 18.5 kg
Cable glands / gland plates / enclosure drilling	Ex-e cable glands M25 x 1.5 (plastic), option: M20 x 1.5 metal thread[2]	Ex-e cable glands M25 x 1.5 (plastic), option: M20 x 1.5 metal thread[2]
Degree of protection accd. to EN 60529	IP65	IP65
Protective cover / protective bowl	single-safety glass pane of 5 mm thick	single-safety glass pane of 5 mm thick

[1] depends on used lamps
[2] with dustcover if entry/thread is not closed

Ex-Linear light fitting with metal housing for surface mounting

AB 12...LED / AB 12...E / AB 12...C
(Zone 1, 2, 21, 22)

The robust lighting concept for hazardous areas

With its flameproof housing made of copper free aluminium (Cu < 0.1 %), high degree of protection IP67 and a protective tube made of borosilicate glass with a high mechanical and thermal stability, this luminaire is the ideal solution for harsh and hazardous environments.

The luminaire for all types of applications

The AB 12 luminaire series with G13 sockets for fluorescent lamps are either fitted with electronic (AB 12 .. E) or electromagnetic ballasts (AB 12 .. C).
The AB12LED series is intended for use with LED tubes for direct connection without ballast operation. The easy-to-open threaded cover, the large terminal compartment and the lamp assembly on a guide carriage facilitate servicing.

An optional external reflector ensures an application-specific light distribution. The optional protective wire guard made of stainless steel provides added safety.

Features

- Robust Ex-d housing
- For fluorescent lamps or LED-tubes
- Easy opening due to screw cover on end
- 2 individual circuits (double lamp version with conventional ballast)
- Large terminal compartment
- High degree of protection IP67

Ordering details

Type	Content	Terminals	Through-wiring single-ended	Cable gland/ thread	Threaded plug	Order No.
AB 12... LED for retrofit LED-tubes						
AB 12220 LED1EF		2 x 3	x	2 x 3/4'' NPT, metal thread	1 x 3/4'' Ex-d	**NOR 000 005 060 331**
AB 12240 LED1EF		2 x 3	x	2 x 3/4'' NPT, metal thread	1 x 3/4'' Ex-d	**NOR 000 005 060 332**
AB 12265 LED1EF		2 x 3	x	2 x 3/4'' NPT, metal thread	1 x 3/4'' Ex-d	**NOR 000 005 060 333**
AB 12220 LED1EF		2 x 3	x	2 x M25, metal thread	1 x M25 Ex-d	**NOR 000 005 060 431**
AB 12240 LED1EF		2 x 3	x	2 x M25, metal thread	1 x M25 Ex-d	**NOR 000 005 060 432**
AB 12265 LED1EF		2 x 3	x	2 x M25, metal thread	1 x M25 Ex-d	**NOR 000 005 060 433**

AB 12... E with electronic ballast (EVG)						
AB 12220 E (2 x 18 W)		2 x 3	x	2 x 3/4'' NPT, metal thread	1 x 3/4'' Ex-d	**NOR 000 005 060 300**
AB 12240 E (2 x 36 W)		2 x 3	x	2 x 3/4'' NPT, metal thread	1 x 3/4'' Ex-d	**NOR 000 005 060 308**
AB 12265 E (2 x 58 W)		2 x 3	x	2 x 3/4'' NPT, metal thread	1 x 3/4'' Ex-d	**NOR 000 005 060 316**
AB 12220 E (2 x 18 W)		2 x 3	x	2 x M25, metal thread	1 x M25 Ex-d	**NOR 000 005 060 500**
AB 12240 E (2 x 36 W)		2 x 3	x	2 x M25, metal thread	1 x M25 Ex-d	**NOR 000 005 060 508**
AB 12265 E (2 x 58 W)		2 x 3	x	2 x M25, metal thread	1 x M25 Ex-d	**NOR 000 005 060 516**

Scope of delivery without lamp and fixing accessories
Metal cable glands see catalogue part 2: 2.3.12 ff

Ordering details / Accessories

AB12

Ordering details

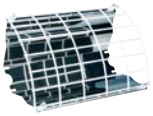
Type	Content	Terminals	Through-wiring single-ended	Cable gland/ thread	Threaded plug	Order No.
AB 12... C with electro-magnetic ballast						
AB 12220 C (2 x 18/20 W)		2 x 3	x	2 x 3/4'' NPT, metal thread	1 x 3/4'' Ex-d	**NOR 000 005 060 346**
AB 12240 C (2 x 36/40 W)		2 x 3	x	2 x 3/4'' NPT, metal thread	1 x 3/4'' Ex-d	**NOR 000 005 060 354**
AB 12265 C (2 x 58/65 W)		2 x 3	x	2 x 3/4'' NPT, metal thread	1 x 3/4'' Ex-d	**NOR 000 005 060 362**
AB 12220 C (2 x 18/20 W)		2 x 3	x	2 x M25, metal thread	1 x M25 Ex-d	**NOR 000 005 060 546**
AB 12240 C (2 x 36/40 W)		2 x 3	x	2 x M25, metal thread	1 x M25 Ex-d	**NOR 000 005 060 554**
AB 12265 C (2 x 58/65 W)		2 x 3	x	2 x M25, metal thread	1 x M25 Ex-d	**NOR 000 005 060 562**
AB 12... PL for PL-lamps						
AB 12236 PL (2 x 36 W PL)		2 x 3	x	2 x M25, metal thread	1 x M25 Ex-d	**NOR 000 005 060 569**
AB 12236 PL (2 x 36 W PL)		2 x 3	x	2 x 3/4'' NPT, metal thread	1 x 3/4'' Ex-d	**NOR 000 005 060 669**

Scope of delivery without lamp and fixing accessories
Metal cable glands see catalogue part 2: 2.3.12 ff

Accessories

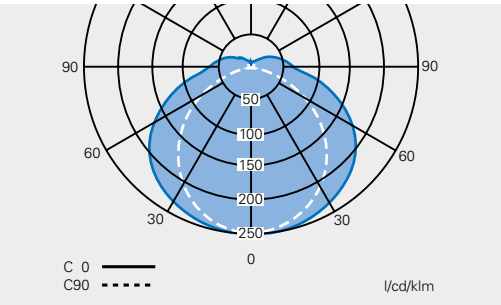
Type	Content	Application	Order No.
LED tube 9 W 600 mm	1100 lm / 840	AB 12220 LED 1EF	**3 2475 901 012**
LED tube 18 W 1200 mm	2300 lm / 840	AB 12240 LED 1EF	**3 2475 901 015**
LED tube 27 W 1500 mm	3400 lm / 840	AB 12265 LED 1EF	**3 2475 901 018**

Accessories

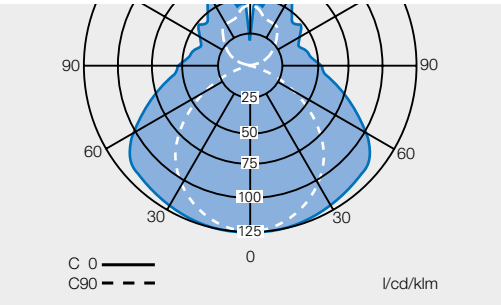


Type	Content	Application	Order No.
Reflector RAB 220	Reflector, AISI 304	for AB 12220 . / AB 12236 PL	**NOR 003 045 060 403**
Reflector RAB 240	Reflector, AISI 304	for AB 12240..	**NOR 003 045 060 411**
Reflector RAB 265	Reflector, AISI 304	for AB 12265..	**NOR 003 045 060 429**
Reflector GRAB 220	Reflector + wire guard ANSI 304	for AB 12220../AB 12236 PL	**NOR 003 045 060 479**
Reflector GRAB 240	Reflector + wire guard ANSI 304	for AB 12240..	**NOR 003 045 060 487**
Reflector GRAB 265	Reflector + wire guard ANSI 304	for AB 12265..	**NOR 003 045 060 495**
Reflector RAB 220	Reflector, AISI 316	for AB 12220../AB 12236 PL	**NOR 003 165 060 403**
Reflector RAB 240	Reflector, AISI 316	for AB 12240	**NOR 003 165 060 411**
Reflector RAB 265	Reflector, AISI 316	for AB 12265	**NOR 003 165 060 429**
Reflector GRAB 220	Reflector + wire guard ANSI 316	for AB 12220../AB 12236 PL	**NOR 003 165 060 479**
Reflector GRAB 240	Reflector + wire guard ANSI 316	for AB 12240..	**NOR 003 165 060 487**
Reflector GRAB 265	Reflector + wire guard ANSI 316	for AB 12265	**NOR 003 165 060 495**

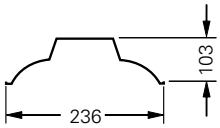
Polar curve AB 12...LED



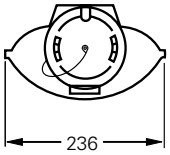
Polar curve AB 12...E/C



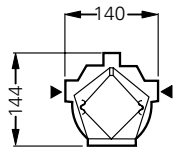
AB 12...



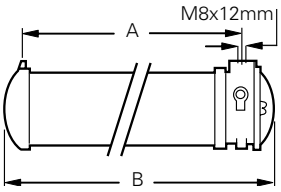
Reflector RAB



Reflector with wire guard GRAB

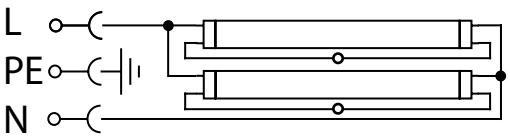


► entries



	A	B
AB 12220 ...	652	707
AB 12240 ...	1265	1320
AB 12265 ...	1565	1620
AB 12236 PL	652	707

Wiring diagram AB 12 ... LED 1 EF



Type AB 12 LED 1 EF

Dimensions in mm

Technical data

AB12 / AB 12 LED

Technical data

	AB 12 LED 1EF	AB12 E
EC-Type Examination Certificate	LOM 02 ATEX 2013 X	LOM 02 ATEX 2013 X
IECEx Certificate of Conformity		IECEx BKI 07.0008 X
Marking accd. to 2014/34/EU	Ex II 2 G Ex d IIB T6 Gb Ex II 2 D Ex t IIIC T85°C Db	Ex II 2 G Ex d IIB T5 Gb Ex II 2 D Ex t IIIC T78°C/T93°C Db
Marking accd. to IECEx		Ex d IIB T5 Ex tD A21 IP67 T78°C/ T93°C
Permissible ambient temperature	-20 °C up to +40 °C (T6)	-20 °C up to + 55 °C (specified data -20 °C up to +40 °C
Rated voltage	max. 277 V [1]	198 V - 254 V AC 175 V - 280 V DC
Frequency	50 - 60 Hz [1]	50/60 Hz
Power factor cos φ	≥ 0.9 [1]	≥ 0.9
Circuit	direct	EVG
Protection class	I	I
Lamp / Illuminant	2 x T8 LED-tube up to 56 W, both ends supply voltage (Retrofit) [1]	2 x T26 / 18 - 58 W
Lamp cap	G13 accd. to IEC 60061-1	G13 accd. to IEC 60061-1
Light output ratio	100 %	73%
Connecting terminals	L, N and PE: 2 x 2, 5 mm² / PE ext. 2 x 6 mm²	L1, N and PE: 2 x 2.5 mm² / PE ext. 2 x 6 mm²
Enclosure colour	grey RAL 7032 (body), RAL 7016 (cover)	RAL 7032 (body), RAL 7016 (cover)
Enclosure material	copper-free aluminium with powder coating	copper-free aluminium with powder coating
Cable glands / gland plates / enclosure drilling	direct entry: 2 x 3/4" NPT or 2 x M25 1 x Ex-d blanking plug 3/4" or M25	direct entry: 2 x 3/4" NPT or 2 x M25 1 x Ex-d blanking plug 3/4" or M25
Degree of protection accd. to EN 60529	IP67	IP67
Protective cover / protective bowl	borosilicate glass	borosilicate glass

[1] depends on the used LED-tubes

Technical data

	AB12 C
EC-Type Examination Certificate	LOM 02 ATEX 2013 X
IECEx Certificate of Conformity	IECEx BKI 07.0008 X
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex d IIB T5 Gb Ⓔx II 2 D Ex t IIIC T78°C/T93°C Db
Marking accd. to IECEx	Ex d IIB T5 Ex tD A21 IP67 T78°C/T93°C Db
Permissible ambient temperature	-20 °C up to +55 °C
Rated voltage	230 V
Frequency	50 Hz
Power factor cos φ	≥ 0.9
Circuit	conventional ballast with ignitor
Protection class	I
Lamp / Illuminant	2 x T26 / 18 - 58 W
Lamp cap	G13 accd. to IEC 60061-1
Light output ratio	70 %
Connecting terminals	L1, N and PE: 2 x 2.5 mm^2 / PE ext. 2 x 6 mm^2
Enclosure colour	grey RAL 7032 (body), RAL 7016 (cover)
Enclosure material	copper-free aluminium with powder coating
Cable glands / gland plates / enclosure drilling	direct entry: 2 x 3/4" NPT or 2 x M 25 1 x Ex-d blanking plug 3/4" or M25
Degree of protection accd. to EN 60529	IP67
Protective cover / protective bowl	borosilicate glass

Ex-Fluorescent emergency light fitting with metal housing

AB 12...Ni
(Zone 1, 2, 21, 22)

fluorescent emergency light fitting with metal housing

With its flameproof housing made of copper free aluminium (Cu < 0.1 %), high degree of protection IP67 and protective tube made of borosilicate glass with a high mechanical and thermal stability, this luminaire is the ideal solution for harsh and hazardous environments.

More safety with compact electronics

Thanks to its EVG with charging unit and its micro-electronics for an automatic switchover to the emergency lighting mode and battery monitoring, the AB 12 .. NI emergency light luminaire provides a reliable safety and reduced maintenance costs. In the event of a power failure, the luminaire switches over automatically to the emergency lighting mode, whereby only one of the two lamps is lit. You can chose between two versions with 1.5 h or 3 h emergency operation. The luminaires are equipped with an electronic ballast, which has a reliable EOL circuit. Thus, the lamps are monitored for their correct function and shut down safely in the event of a malfunction at the end of their service life. The charge/discharge and lighting functions are continuously monitored and displayed via an LED-indication. All components are mounted compactly on a removable carrier plate inside the Ex-d housing.

The luminaire for all types of applications

The easy-to-open threaded cover, the large terminal compartment and the lamp assembly on a guide carriage facilitate servicing. An optional external reflector ensures an application-specific light distribution. The optional protective wire guard made of stainless steel providers added safety.

Features

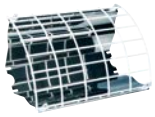
- Robust Ex-d housing
- Two-channel EVG with EOL monitoring
- Operating status indication via LED
- Easy opening due to screw cover on end
- Large terminal compartment
- High degree of protection IP67

Ordering details

Type	Emergency light duration	Terminals	Through-wiring single-ended	Entry / thread	Threaded plug	Order No.
AB 12 Ni 18/18 1.5h (2 x 18 W)	1.5 h	2 x 3	x	2 x 3/4" NPT, metal thread	1 x 3/4" Ex-d	**NOR 000 005 060 302**
AB 12 Ni 36/36 1.5h (2 x 36 W)	1.5 h	2 x 3	x	2 x 3/4" NPT, metal thread	1 x 3/4" Ex-d	**NOR 000 005 060 310**
AB 12 Ni 18/18 3h (2 x 18 W)	3 h	2 x 3	x	2 x 3/4" NPT, metal thread	1 x 3/4" Ex-d	**NOR 000 005 060 318**
AB 12 Ni 36/36 3h (2 x 36 W)	3 h	2 x 3	x	2 x 3/4" NPT, metal thread	1 x 3/4" Ex-d	**NOR 000 005 060 348**
AB 12 Ni 18/18 1.5h (2 x 18 W)	1.5 h	2 x 3	x	2 x M25, metal thread	1 x M25 Ex-d	**NOR 000 005 060 580**
AB 12 Ni 36/36 1.5h (2 x 36 W)	1.5 h	2 x 3	x	2 x M25, metal thread	1 x M25 Ex-d	**NOR 000 005 060 582**
AB 12 Ni 18/18 3h (2 x 18 W)	3 h	2 x 3	x	2 x M25, metal thread	1 x M25 Ex-d	**NOR 000 005 060 581**
AB 12 Ni 36/36 3h (2 x 36 W)	3 h	2 x 3	x	2 x M25, metal thread	1 x M25 Ex-d	**NOR 000 005 060 583**

Scope of delivery without lamp and fixing accessories
Metal cable glands see catalogue part 2: 2.3.12 ff

Accessories

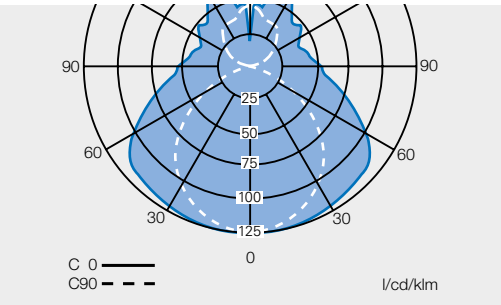


Type	Content	Application	Order No.
Reflector RAB 220	Reflector, AISI 304	for AB 12 Ni 18/18	**NOR 003 045 060 403**
Reflector RAB 240	Reflector, AISI 304	for AB 12 Ni 36/36	**NOR 003 045 060 411**
Reflector GRAB 220	Reflector + wire guard ANSI 304	for AB 12 Ni 18/18	**NOR 003 045 060 479**
Reflector GRAB 240	Reflector + wire guard ANSI 304	for AB 12 Ni 36/36	**NOR 003 045 060 487**
Reflector RAB 220	Reflector, AISI 316	for AB 12 Ni 18/18	**NOR 003 165 060 403**
Reflector RAB 240	Reflector, AISI 316	for AB 12 Ni 36/36	**NOR 003 165 060 411**
Reflector GRAB 220	Reflector + wire guard ANSI 316	for AB 12 Ni 18/18	**NOR 003 165 060 479**
Reflector GRAB 240	Reflector + wire guard ANSI 316	for AB 12 Ni 36/36	**NOR 003 165 060 487**

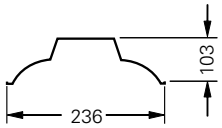
Dimension drawing / Polar curve

AB 12...Ni

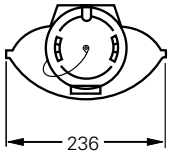
Polar curve AB 12...Ni



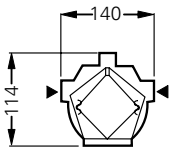
AB 12...



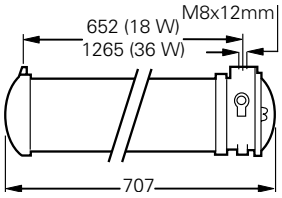
Reflector RAB



Reflector with wire guard GRAB



► entries



Dimensions in mm

Technical data

	AB 12 Ni 18/18	AB 12 Ni 36/36
EC-Type Examination Certificate	LOM 09 ATEX 2062X	LOM 09 ATEX 2062X
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex d e ib IIB T5/T6 Ⓔx II 2 D Ex tb IIIC T85 °C...T100°C Db	Ⓔx II 2 G Ex d e ib IIB T5/T6 Ⓔx II 2 D Ex tb IIIC T85 °C...T100°C Db
Permissible ambient temperature	-20 °C up to +40 °C (T6) -20 °C up to +55 °C (T5) (specified data -5 °C up to +30 °C)	-20 °C up to +40 °C (T6) -20 °C up to +55 °C (T5) (specified data -5 °C up to +30 °C)
Battery	6 V / 4 Ah NiCd	6 V / 4 Ah NiCd
Rated voltage	220 - 240 V AC	220 - 240 V AC
Rated current	0.17 A	0.33 A
Frequency	50 - 60 Hz	50 - 60 Hz
Charging duration	≥ 14 h	≥ 14 h
Power factor cos φ	≥ 0.9	≥ 0.9
Circuit	EVG with emergency lighting supply	EVG with emergency lighting supply
Protection class	I	I
Lamp / Illuminant	2 x T26 / 18 W	2 x T26 / 36 W
Rated luminous flux	2700 lm [1)]	6700 lm [1)]
Lamp cap	G13 accd. to IEC 60061-1	G13 accd. to IEC 60061-1
Light output ratio	73%	73%
Luminous flux in emergency operation (1.5 h, one lamp)	675 lm [1)]	1072 lm [1)]
Luminous flux in emergency operation (3 h, one lamp)	392 lm [1)]	392 lm [1)]
Dimensions (L x W x H)	707 x 140 x 144 mm	1320 x 140 x 144 mm
Connecting terminals	L1, N and PE: 2 x 2.5 mm² / PE ext. 2 x 6 mm²	L1, N and PE: 2 x 2.5 mm² / PE ext. 2 x 6 mm²
Enclosure colour	grey RAL 7032 (body), RAL 7016 (cover)	grey RAL 7032 (body), RAL 7016 (cover)
Enclosure material	copper-free aluminium with powder coating	copper-free aluminium with powder coating
Weight	7 kg	12 kg
Cable glands / gland plates / enclosure drilling	direct entry: 2 x 3/4" NPT or 2 x M 25 1 x Ex-d blanking plug 3/4" or M25	direct entry: 2 x 3/4" NPT or 2 x M 25 1 x Ex-d blanking plug 3/4" or M25
Degree of protection accd. to EN 60529	IP67	IP67
Protective cover / protective bowl	borosilicate glass	borosilicate glass

[1)] depends on used lamps

Ex-Linear light fittings for fluorescent lamps

nLLK 08 18 W - 58 W
(Zone 2, 21, 22)

The lighting solution for hazardous areas in Zones 2, 21 and 22

The linear luminaires series nLLK 08 for fluorescent lamps combines the latest lighting technology with the requirements of a harsh and hazardous environment. This luminaire is available both as a ceiling mounted luminaire (nLLK), as well as a pole mounted light fitting (nLLM) in 3 sizes (18, 36 or 58 W).

Long-term safety

The luminaires of this robust lighting series with plastic enclosure are equipped with a highly-efficient electronic ballast, which has a reliable EOL circuit. Thus, the lamps are checked for proper operation and shut down safely in the event of a malfunction at the end of their service life. With these luminaires, you are always on the safe side.

Simple and cost-effective installation

In conjunction with the generously dimensioned terminal compartment, the standard single-ended through-wiring allows a cost-effective installation. The double-sided locking facility with 10 or 20 latch points allows the protective bowl to be hinged on both sides, meaning that the fitting can be mounted on either side.

Just in case: The emergency lighting version

Safety is always our top priority. That is why we offer the nLLK 08 light fitting series with a built-in V-CG-S module. These luminaires can be connected to a CEAG emergency supply system with individual function monitoring. In the event of an emergency, they provide a reliable illumination of your safety and escape routes. The N variants (Section 1.2.92).are available as emergency light fittings with a self-contained battery unit.

NEC Standards

The tried and tested luminaires of the types nLLK 982217 (2 x 17 W) and nLLK 924232 (2 x 32 W) are available for use according to NEC-standards.

Features

- Cost-effective installation due to single-ended through-wiring
- EVG with EOL monitoring
- Double-sided safety lock
- High degree of protection IP66
- Connection to CEAG emergency light monitoring systems possible (V-CG-S)

Ordering details

Type	Content	Terminals	Through-wiring single-ended	Through-wiring twin-ended	Cable gland/ thread	Threaded plug	Blanking plug	Order No.
 **nLLK 08018/18**								
nLLK 08018/18 (2 x 18 W)	1/6-1K	1 x 6	x	–	1 x M25, plastic	1 x M25		**1 3465 218 001**
nLLK 08018/18 (2 x 18 W)	2/6-2K	2 x 6	–	x	2 x M25, plastic	2 x M25	1	**1 3465 218 011**
nLLK 08018/18 (2 x 18 W)	2/6-2M [1]	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 3465 218 021**
nLLK 08018/18 (2 x 18 W)	1/6-1M [1]	1 x 6	x	–	2 x M20, metal thread	1 x M20		**1 3465 218 031**
 **nLLK 08036**								
nLLK 08036 (1 x 36 W)	1/6-1K	1 x 6	x	–	1 x M25, plastic	1 x M25		**1 3465 136 001**
nLLK 08036 (1 x 36 W)	2/6-2K	2 x 6	–	x	2 x M25, plastic	2 x M25	1	**1 3465 136 011**
nLLK 08036 (1 x 36 W)	2/6-2M [1]	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 3465 136 021**
 **nLLK 08036/36**								
nLLK 08036/36 (2 x 36 W)	1/6-1K	1 x 6	x	–	1 x M25, plastic	1 x M25		**1 3465 236 001**
nLLK 08036/36 (2 x 36 W)	2/6-2K	2 x 6	–	x	2 x M25, plastic	2 x M25	1	**1 3465 236 011**
nLLK 08036/36 (2 x 36 W)	2/6-2M [1]	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 3465 236 021**
nLLK 08036/36 (2 x 36 W)	1/6-1M [1]	1 x 3	x	–	2 x M20 metal thread	1 x M20		**1 3465 236 031**
 **nLLM 080... Pole mounting light fitting**								
nLLM 08018/18 (2 x 18 W)	1/3-1K	1 x 3	–	–	1 x M25, plastic	–		**1 3465 218 101**
nLLM 08036/36 (2 x 36 W)	1/3-1K	1 x 3	–	–	1 x M25, plastic	–		**1 3465 236 101**
 **nLLK 08058**								
nLLK 08058 (1 x 58 W)	1/6-1K	1 x 6	x	–	1 x M25, plastic	1 x M25		**1 3465 158 001**
nLLK 08058 (1 x 58 W)	2/6-2K	2 x 6	–	x	2 x M25, plastic	2 x M25	1	**1 3465 158 011**
nLLK 08058 (1 x 58 W)	2/6-2M [1]	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 3465 158 021**
 **nLLK 08058/58**								
nLLK 08058/58 (2 x 58 W)	1/6-1K	1 x 6	x	–	1 x M25, plastic	1 x M25		**1 3465 258 001**
nLLK 08058/58 (2 x 58 W)	2/6-2K	2 x 6	–	x	2 x M25, plastic	2 x M25	1	**1 3465 258 011**
nLLK 08058/58 (2 x 58 W)	2/6-2M [1]	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 3465 258 021**

Scope of delivery without lamp and fixing accessories
Metal cable glands see catalogue part 2: 2.3.12 ff
[1] with metal thread, without cable gland

Ordering details

nLLK 08 18 W - 58 W / nLLK 98 ...






Ordering details

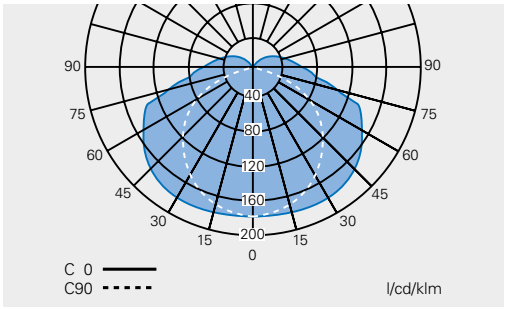
Type	Content	Terminals	Through-wiring single-ended	Through-wiring twin-ended	Cable gland/ thread	Threaded plug	Blanking plug	Order No.
nLLK 08... V-CG-S [2]								
nLLK 08018/18 V-CG-S (2 x 18 W)	2/6-2K	2 x 6	–	x	2 x M25, plastic	2 x M25	1	**1 3465 218 912**
nLLK 08018/18 V-CG-S (2 x 18 W)	2/6-2M [1]	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 3465 218 922**
nLLK 08036/36 V-CG-S (2 x 36 W)	2/6-2K	2 x 6	–	x	2 x M25, plastic	2 x M25	1	**1 3465 236 912**
nLLK 08036/36 V-CG-S (2 x 36 W)	2/6-2M [1]	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 3465 236 922**
nLLK 08058/58 V-CG-S (2 x 58 W)	2/6-2K	2 x 6	–	x	2 x M25, plastic	2 x M25	1	**1 3465 258 912**
nLLK 08058/58 V-CG-S (2 x 58 W)	2/6-2M [1]	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 3465 258 922**
nLLK 98... CSA [3]								
nLLK 98 2217/UNV (2 x 17 W)	2/5-2M [1]	2 x 5	–	x	2 x 3/4" NPT Myers Hub Adapter	4 x M25		**1 3465 217 021**
nLLK 98 2217/347 (2 x 17 W - 347 V AC)	2/5-2M [1]	2 x 5	–	x	2 x 3/4" NPT Myers Hub Adapter	4 x M25		**1 3465 217 347**
nLLK 98 4232/UNV (2 x 32 W)	2/5-2M [1]	2 x 5	–	x	2 x 3/4" NPT Myers Hub Adapter	4 x M25		**1 3465 232 021**
nLLK 98 4232/347 (2 x 32 W - 347 V AC)	2/5-2M [1]	2 x 5	–	x	2 x 3/4" NPT Myers Hub Adapter	4 x M25		**1 3465 232 347**

Scope of delivery without lamp and fixing accessories
Metal cable glands see catalogue part 2: 2.3.12 ff
[1] with metal thread, without cable gland
[2] for operation with CEAG-emergency supply system
[3] for use accord. NEC-standards

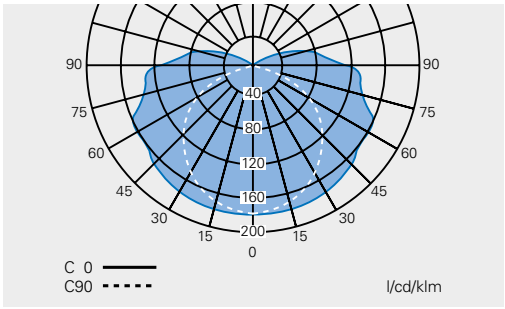
Accessories

Type	Application	Order No.
Single sided through wiring 2/6 with 2 entries M25, incl. terminals and mounting material	for nLLM 08 pole mounting light fitting	**2 2218 602 000**

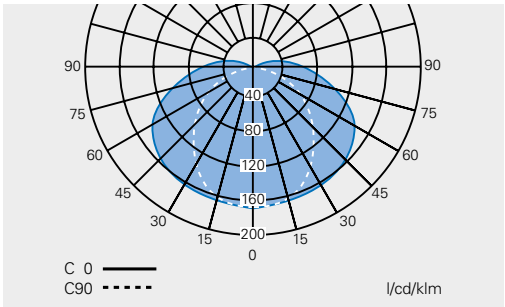
Polar curve nLLK/M 08018/18 / nLLK/M 08036/36



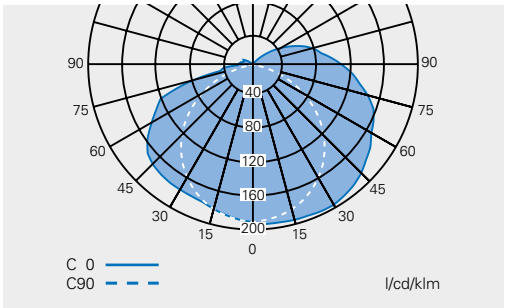
Polar curve nLLK/M 08036 / nLLK 08058



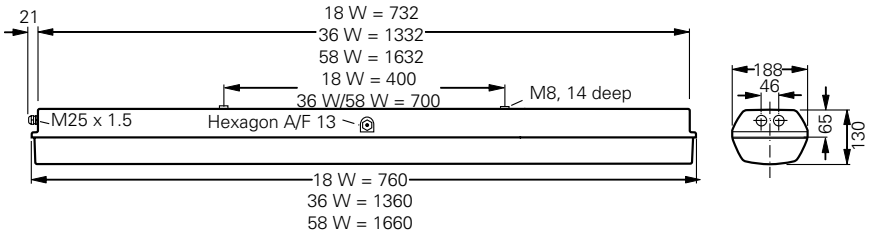
Polar curve nLLK 08058/58



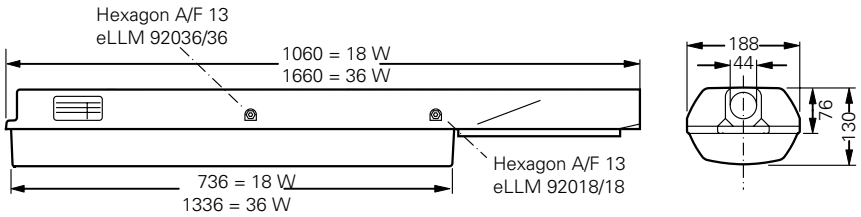
Polar curve nLLK/M 08018/18 V-CG-S/ nLLK/M 08036/36 V-CG-S



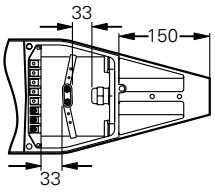
nLLK 08...



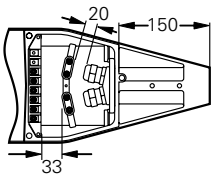
nLLM 08...



nLLM 08...



Version 1/3



Version 2/6

Dimensions in mm

Technical data

nLLK 08018/18 (2 x 18 W) / nLLK 08036 (1 x 36 W) / nLLK 08036/36 (2 x 36 W)

Technical data

	nLLK 08018/18 (2 x 18 W)	nLLK 08036 (1 x 36 W) / nLLK 08036/36 (2 x 36 W)
Type Examination Certificate	BVS 09 ATEX E 147	BVS 09 ATEX E 147
EC-Type Examination Certificate	BVS 09 ATEX E 162	BVS 09 ATEX E 162
IECEx Certificate of Conformity	IECEx BVS 11.0065 IECEx BVS 12.0069	IECEx BVS 11.0065 IECEx BVS 12.0069
Marking accd. to 2014/34/EU	Ⓔx II 3 G Ex nA e IIC T4 Gc Ⓔx II 2 D Ex tb IIIC T80 °C Db	Ⓔx II 3 G Ex nA e IIC T4 Gc Ⓔx II 2 D Ex tb IIIC T80 °C Db
Marking accd. to IECEx	Ex nA e IIC T4 Gc Ex tb IIIC T80°C Db	Ex nA e IIC T4 Gc Ex tb IIIC T80°C Db
Permissible ambient temperature	-25 °C up to +55 °C	-25 °C up to +55 °C
IK-class according to IEC/EN 62262	IK 10 ≙ 20 J	IK 10 ≙ 20 J
Rated voltage	220 - 240 V AC 220 - 240 V DC	220 - 240 V AC 220 - 240 V DC
Rated current	0.16 A	0.16 A / 0.34 A
Frequency	50 - 60 Hz	50 - 60 Hz
Power factor cos φ	≥ 0.95	≥ 0.95
Circuit	EVG	EVG
Protection class	I	I
Lamp / Illuminant	2 x T26 / 18 W (T8)	1 x T26 / 36 W (T8) / 2 x T26 / 36 W (T8)
Rated luminous flux	2700 lm [1]	3350 lm [1] / 6700 lm [1]
Lamp cap	G13 accd. to IEC 60061-1	G13 accd. to IEC 60061-1
Light output ratio	78 %	86 % / 78 %
Dimensions (L x W x H)	760 x 188 x 130 mm	1360 x 188 x 130 mm
Connecting terminals	L1, L2, L3, L, N, PE screw terminal max. 2 x 6 mm^2 single wire	L1, L2, L3, L, N, PE screw terminal max. 2 x 6 mm^2 single wire
Enclosure colour	RAL 7035 light grey	RAL 7035 light grey
Enclosure material	glass-fibre reinforced polyester	glass-fibre reinforced polyester
Weight	3.6 kg	5.6 kg / 5.8 kg
Cable glands / gland plates / enclosure drilling	Ex-e cable glands M25 x 1.5 (plastic), option: M20 x 1.5 metal thread [2]	Ex-e cable glands M25 x 1.5 (plastic), option: M20 x 1.5 metal thread [2]
Degree of protection accd. to EN 60529	IP66	IP66
Protective cover / protective bowl	Polycarbonate	Polycarbonate

[1] depends on used lamps
[2] with dustcover if entry/thread is not closed

Technical data

	nLLK 08058 (1 x 58 W) / nLLK 08058/58 (2 x 58 W)
Type Examination Certificate	BVS 09 ATEX E 147
EC-Type Examination Certificate	BVS 09 ATEX E 162
IECEx Certificate of Conformity	IECEx BVS 11.0065 IECEx BVS 12.0069
Marking accd. to 2014/34/EU	Ex II 3 G Ex nA e IIC T4 Gc Ex II 2 D Ex tb IIIC T80 °C Db
Marking accd. to IECEx	Ex nA e IIC T4 Gc Ex tb IIIC T80°C Db
Permissible ambient temperature	-25 °C up to +50 °C / -25 °C up to +45 °C
IK-class according to IEC/EN 62262	IK 10 ≙ 20 J
Rated voltage	220 - 240 V AC 220 - 240 V DC
Rated current	0.27 A / 0.53 A
Frequency	50 - 60 Hz
Power factor cos φ	≥ 0.95
Circuit	EVG
Protection class	I
Lamp / Illuminant	1 x T26 / 58 W (T8) / 2 x T26 / 58 W (T8)
Rated luminous flux	5200 lm [1] / 10400 lm [1]
Lamp cap	G13 accd. to IEC 60061-1
Light output ratio	83 % / 72 %
Dimensions (L x W x H)	1660 x 188 x 130 mm
Connecting terminals	L1, L2, L3, L, N, PE screw terminal max. 2 x 6 mm^2 single wire
Enclosure colour	RAL 7035 light grey
Enclosure material	glass-fibre reinforced polyester
Weight	6.7 kg / 6.9 kg
Cable glands / gland plates / enclosure drilling	Ex-e cable glands M25 x 1.5 (plastic), option: M20 x 1.5 metal thread [2]
Degree of protection accd. to EN 60529	IP66
Protective cover / protective bowl	Polycarbonate

[1] depends on used lamps
[2] with dustcover if entry/thread is not closed

Technical data

nLLK08018/18 V-CG-S / nLLK08036/36 V-CG-S / nLLK08058/58 V-CG-S

Technical data

	nLLK 08018/18 V-CG-S (2 x 18 W)	nLLK 08036/36 V-CG-S (2 x 36 W) / nLLK 08058/58 V-CG-S (2 x 58 W)
Type Examination Certificate	BVS 09 ATEX E 147	BVS 09 ATEX E 147
EC-Type Examination Certificate	BVS 09 ATEX E 162	BVS 09 ATEX E 162
IECEx Certificate of Conformity	IECEx BVS 11.0065 IECEx BVS 12.0069	IECEx BVS 11.0065 IECEx BVS 12.0069
Marking accd. to 2014/34/EU	Ⓔx II 3 G Ex nA e IIC T4 Gc Ⓔx II 2 D Ex tb IIIC T80 °C Db	Ⓔx II 3 G Ex nA e IIC T4 Gc Ⓔx II 2 D Ex tb IIIC T80 °C Db
Marking accd. to IECEx	Ex nA e IIC T4 Gc Ex tb IIIC T80°C Db	Ex nA e IIC T4 Gc Ex tb IIIC T80°C Db
Permissible ambient temperature	-25 °C up to +50 °C	-25 °C up to +50 °C (2 x 36 W)/ -25 °C up to +45 °C (2 x 58 W) -25 °C up to +40 °C (2 x 58 W with through-wiring)
IK-class according to IEC/EN 62262	IK 10 ≙ 20 J	IK 10 ≙ 20 J
Rated voltage	220 - 254 V AC 195 - 250 V DC	220 - 254 V AC 195 - 250 V DC
Rated current	0.19 A	0.35 A / 0.54 A
Frequency	50 - 60 Hz	50 - 60 Hz
Power factor cos φ	≥ 0.95	≥ 0.95
Circuit	EVG/V-CG-S	EVG/V-CG-S
Protection class	I	I
Lamp / Illuminant	2 x T26 / 18 W (T8)	2 x T26 / 36 W (T8) / 2 x T26 / 58 W (T8)
Rated luminous flux	2700 lm [1]	6700 lm [1] / 10400 lm [1]
Lamp cap	G13 accd. to IEC 60061-1	G13 accd. to IEC 60061-1
Light output ratio	78 %	78 % / 72 %
Luminous flux in emergency operation	1350 lm [1]	3350 lm [1] / 5200 lm [1]
Dimensions (L x W x H)	760 x 188 x 130 mm	1360 x 188 x 130 mm / 1660 x 188 x 130 mm
Connecting terminals	L1, L2, L3, N, PE screw-type terminals max. 2 x 6 mm², single wire	L1, L2, L3, N, PE screw-type terminals max. 2 x 6 mm², single wire
Enclosure colour	RAL 7035 light grey	RAL 7035 light grey
Enclosure material	glass-fibre reinforced polyester	glass-fibre reinforced polyester
Weight	5.6 kg	7.2 kg / 8.9 kg
Cable glands / gland plates / enclosure drilling	Ex-e cable glands M25 x 1.5 (plastic), option: M20 x 1.5 metal thread [2]	Ex-e cable glands M25 x 1.5 (plastic), option: M20 x 1.5 metal thread [2]
Degree of protection accd. to EN 60529	IP66	IP66
Protective cover / protective bowl	Polycarbonate	Polycarbonate

[1] depends on used lamps
[2] with dustcover if entry/thread is not closed

Technical data

	nLLK 98 2217 (2 x 17 W)	nLLK 98 4232 (2 x 32 W)
Marking accd. to CEC 018	Ex nA II T4 Class II Div. 1 Gr. E, F and G	Ex nA II T4 Class II Div. 1 Gr. E, F and G
Marking accd. to NEC 500/505	Class I, Zone 2, AEx nA II T4 Class II, Division 2, Groups F and G	Class I, Zone 2, AEx nA II T4 Class II, Division 2, Groups F and G
Certificate of Compliance	CSA 10.2325079	CSA 10.2325079
Permissible ambient temperature	-25 °C up to +40 °C	-25 °C up to +40 °C
Rated voltage	120 - 277 V AC option: 347 V AC	120 - 277 V AC option: 347 V AC
Rated current	0.21 A / 0.12 A	0.34 A / 0.17 A
Frequency	60 Hz	60 Hz
Power factor cos φ	≥ 0.95	≥ 0.95
Circuit	EVG	EVG
Protection class	I	I
Lamp / Illuminant	2 x F17 T8	2 x F32 T8
Rated luminous flux	2600 lm [1)]	6600 lm [1)]
Lamp cap	G13 accd. to IEC 60061-1	G13 accd. to IEC 60061-1
Light output ratio	78%	78%
Dimensions (L x W x H)	760 x 188 x 130 mm	1360 x 188 x 130 mm
Connecting terminals	L1, L2, L3, L, N, PE screw-type terminals max. 2 x 6 mm² single wire	L1, L2, L3, L, N, PE screw-type terminals max. 2 x 6 mm² single wire
Enclosure colour	RAL 7035 light grey	RAL 7035 light grey
Enclosure material	glass-fibre reinforced polyester	glass-fibre reinforced polyester
Weight	3.8 kg	6 kg
Cable glands / gland plates / enclosure drilling	3/4'' NPT metal thread with dustcover	3/4'' NPT metal thread with dustcover
Degree of protection accd. to EN 60529	IP65	IP65
Protective cover / protective bowl	Polycarbonate	Polycarbonate

[1)] depends on used lamps

C SA® US

C SA® US

Ex-Linear emergency light fittings for fluorescent lamps

nLLK 08018/18 N / nLLK 08036/36 N
(Zone 2, 21, 22)

The lighting solution for hazardous areas in Zones 2, 21 and 22

The linear emergency luminaires series nLLK 08 .. N for fluorescent lamps combines the latest lighting technology with the requirements of a harsh and hazardous environment.

If you need a reliable and decentralized emergency lighting

The emergency luminaires with a self-contained battery system provide a decentralise solution for the mandatory emergency lighting, independent of central systems. In large plants, in particular, these luminaires offer significant cost benefits.

The luminaire nLLK08 ... N with a NC self-contained battery and maintained and non-maintained mode emergency lights provide a reliable safety and reduced maintenance costs. The careful charging optimizes battery lifespan. The variants 1/6 the battery is easy to maintain below the reflector flap. With the variants 2/6 a separate battery enclosure is used and the battery can easily be replaced with a plug in the hazardous area. The emergency lighting duration is 1.5 or 3 h.

Long-term safety

The luminaires of this robust lighting series with plastic housings are equipped with a highly-efficient electronic ballast, which has a reliable EOL circuit. Thus, the lamps are checked for proper operation and shut down safely in the event of a malfunction at the end of the service life. With these luminaires, you are always on the safe side.

Simple and cost-effective installation

In conjunction with the generously dimensioned terminal compartment, the standard single-ended through-wiring allows a cost-effective installation. The double-sided locking facility with 10 or 20 latch points allows the protective bowl to be hinged on both sides, meaning that the fitting can be mounted on either side.

Easy-to-maintain design

The nLLK08 ... N luminaires provide a reliable safety and reduced maintenance costs. The careful charging optimizes battery lifespan. The plug-in connector allows easy disconnection of the battery, which can then be replaced whenever necessary.

Features

- Cost-effective installation due to single-ended through-wiring
- EVG with EOL monitoring
- Double-sided safety lock
- With self-contained NC battery for 1.5 h or 3 h emergency lighting operation
- Battery can be replaced in the hazardous area
- High degree of protection IP66

Ordering details

Type	Content	Rated emergency lighting duration	Terminals	Through-wiring single-ended	Through-wiring twin-ended	Cable gland/ thread	Threaded plug	Blanking plug	Order No.
nLLK 0801818 N									
nLLK 08018/18 N (2 x 18 W)	1/6-1K	3	1 x 6	x	–	2 x M25, plastic		1	**1 3469 218 001**
nLLK 08018/18 N (2 x 18 W)	1/6-1M [1]	3	1 x 6	x	–	2 x M20, metal thread	1 X M20		**1 3469 218 031**
nLLK 08018/18 N (2 x 18 W)	1/6-1K	1.5	1 x 6	x	–	2 x M25, plastic		1	**1 3470 218 001**
nLLK 08018/18 N (2 x 18 W)	1/6-1M [1]	1.5	1 x 6	x	–	2 x M20, metal thread	1 x M20		**1 3470 218 031**
nLLK 08018/18 N (2 x 18 W)	2/6-2K	3	2 x 6	–	x	2 x M25, plastic	2 x M25		**1 3469 218 011**
nLLK 08018/18 N (2 x 18 W)	2/6-2M [1]	3	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 3469 218 131**
nLLK 08018/18 N (2 x 18 W)	2/6-2K	1.5	2 x 6	–	x	2 x M25, plastic	2 x M25		**1 3470 218 011**
nLLK 08018/18 N (2 x 18 W)	2/6-2M [1]	1.5	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 3470 218 131**
nLLK 08036/36 N									
nLLK 08036/36 N (2 x 36 W)	1/6-1K	1.5	1 x 6	x	–	2 x M25, plastic		1	**1 3470 236 001**
nLLK 08036/36 N (2 x 36 W)	1/6-1M [1]	1.5	1 x 6	x	–	2 x M20, metal thread	1 X M20		**1 3470 236 031**
nLLK 08036/36 N (2 x 36 W)	1/6-1K	3	1 x 6	x	–	2 x M25, plastic		1	**1 3469 236 001**
nLLK 08036/36 N (2 x 36 W)	1/6-1M [1]	3	1 x 6	x	–	2 x M20, metal thread	1 X M20		**1 3469 236 031**
nLLK 08036/36 N (2 x 36 W)	2/6-2K	3	2 x 6	–	x	2 x M25, plastic	2 x M25		**1 3469 236 011**
nLLK 08036/36 N (2 x 36 W)	2/6-2M [1]	3	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 3469 236 131**
nLLK 08036/36 N (2 x 36 W)	2/6-2K	1.5	2 x 6	–	x	2 x M25, plastic	2 x M25		**1 3470 236 011**
nLLK 08036/36 N (2 x 36 W)	2/6-2M [1]	1.5	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 3470 236 131**

[1] with metal thread, without cable gland

Scope of delivery without lamp and fixing accessories
Metal cable glands see catalogue part 2: 2.3.12 ff

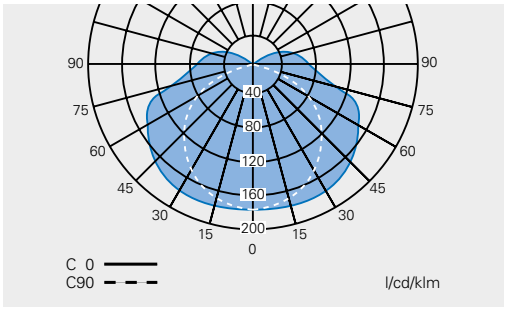
Accessories

Type	Application	Order No.
Battery block 6 V, 4 Ah (internal)	for nLLK 08 N 1/6 (2 x 18 W, 1.5 h and 3 h; 2 x 36 W, 1.5 h)	**2 3468 236 902**
Battery block 6 V, 4 Ah (external)	for nLLK 08 N 2/6 (2 x 18 W, 1.5 h and 3 h; 2 x 36 W, 1.5 h)	**2 3468 236 903**
Battery block 6 V, 7 Ah (external)	for nLLK 08 N 2/6 (2 x 36 W, 3 h)	**2 3468 236 904**

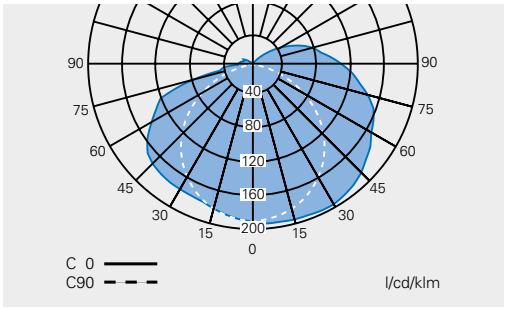
Dimension drawing / Polar curve

nLLK 08 18/18 N / nLLK 0836/36 N

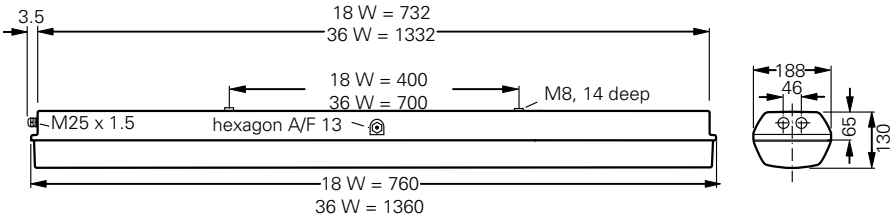
Polar curve nLLK 08018/18 N / nLLK 08036/36 N



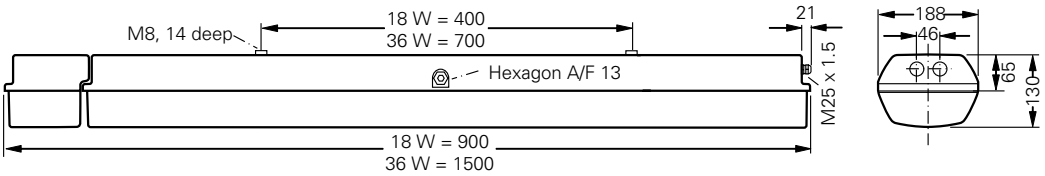
Polar curve nLLK 08018/18 N / nLLK 08036/36 N in emergency operation



nLLK 08018/18 N / nLLK 08036/36 N – 1/6



nLLK 08036/36 N 2/6 + nLLK 08018/18 N 2/6



Dimensions in mm

Technical data

	nLLK 0818/18 N	nLLK 0836/36 N
Type Examination Certificate	BVS 09 ATEX E 147	BVS 09 ATEX E 147
EC-Type Examination Certificate	BVS 09 ATEX E 162	BVS 09 ATEX E 162
Marking accd. to 2014/34/EU	Ⓔx II 3 G Ex nA de IIC T4 Gc Ⓔx II 2 D Ex tb IIIC T80 °C Db	Ⓔx II 3 G Ex nA de IIC T4 Gc Ⓔx II 2 D Ex tb IIIC T80 °C Db
Marking accd. to IECEx	Ex nA de IIC T4 Gc Ex tb IIIC T80°C Db	Ex nA de IIC T4 Gc Ex tb IIIC T80°C Db
Permissible ambient temperature	-25 °C up to +45 °C (specified data: -5 °C up to +35 °C)	-25 °C up to +45 °C -25 °C up to +40 °C (2 x 36 W with through-wiring) (specified data -5 °C up to 35 °C)
IK-class according to IEC/EN 62262	IK 10 ≙ 20 J	IK 10 ≙ 20 J
Battery	6 V/4 Ah NC-accumulator	6 V/4 Ah or 6 V/7 Ah NC-accumulator
Rated voltage	220 V - 240 V AC	220 V - 240 V AC
Rated current	0.18 A	0.36 A
Frequency	50 - 60 Hz	50 - 60 Hz
Charging duration	≥ 24 h	≥ 24 h
Power factor cos φ	≥ 0.95	≥ 0.95
Circuit	EVG with emergency lighting supply	EVG with emergency lighting supply
Protection class	I	I
Lamp / Illuminant	2 x T26 / 18 W (T8)	2 x T26/ 36 W (T8)
Rated luminous flux	2700 lm [1]	6700 lm [1]
Lamp cap	G13 accd. to IEC 60061-1	G13 accd. to IEC 60061-1
Light output ratio	78%	78%
Luminous flux in emergency operation (1.5 h, one lamp)	880 lm[1] (65 %)	1200 lm[1] (36 %)
Luminous flux in emergency operation (3 h, one lamp)	415 lm[1] (30 %)	1040 lm[1] (31 %)
Rated emergency lighting duration	1.5 h / 3 h	1.5 h / 3 h
Dimensions (L x W x H)	900 x 188 x 130 mm	1500 x 188 x 130 mm
Connecting terminals	L, L1, L2, L3, N, PE screw-type terminals max 6 mm² single wire	L, L1, L2, L3, N, PE screw-type terminals max 6 mm² single wire
Enclosure colour	RAL 7035 light grey	RAL 7035 light grey
Enclosure material	glass-fibre reinforced polyester	glass-fibre reinforced polyester
Weight	5.4 kg	9.3 kg
Cable glands / gland plates / enclosure drilling	Ex-e cable glands M25 x 1.5 (plastic), option: M20 x 1.5 metal thread [2]	Ex-e cable glands M25 x 1.5 (plastic), option: M20 x 1.5 metal thread [2]
Degree of protection accd. to EN 60529	IP66	IP66
Protective cover / protective bowl	Polycarbonate	Polycarbonate

[1] depends on used lamps
[2] with dustcover if entry/thread is not closed

Ex-Linear light fittings for fluorescent lamps - max. ambient temperature + 60 °C -

nLLK 09 18 W - 58 W for Zone 2 and 22

The lighting solution for high temperatures up to 60 °C

The linear luminaires series nLLK 09 for fluorescent lamps has been specially designed for areas with high ambient temperatures up to 60 °C. This makes it especially suitable for use in areas with high temperatures, such as in refineries, chemical plants, etc. in hot climates and in indoor areas with a high heat load. It combines the latest lighting technology with the requirements of a harsh and hazardous environment.

Long-term safety

The luminaires of this robust lighting series with plastic housings are equipped with a highly-efficient electronic ballast, which has a reliable EOL circuit. Thus, the lamps are checked for proper operation and shut down safely in the event of a malfunction at the end of the service life. With these luminaires, you are always on the safe side.

Simple and cost-effective installation

In conjunction with the generously dimensioned terminal compartment, the standard single-ended through-wiring allows a cost-effective installation. The double-sided locking facility with 10, 20 or 24 latch points allows the protective bowl to be hinged on both sides, meaning that the fitting can be mounted on either side.

Features

- Certified for ambient temperatures up to **+60 ° C**
- Cost-effective installation due to single-ended through-wiring
- Standard dual channel ballast (2-lamp version) with EOL monitoring
- Double-sided safety lock
- High degree of protection IP66

Ordering details

Type	Content	Terminals	Through-wiring single-ended	Through-wiring twin-ended	Cable gland/ thread	Threaded plug	Blanking plug	Order No.
 **nLLK 09018/18**								
nLLK 09018/18 (2 x 18 W)	1/6-1K	1 x 6	x	–	2 x M25, plastic		1	**1 3473 218 001**
nLLK 09018/18 (2 x 18 W)	2/6-2K	2 x 6	–	x	2 x M25, plastic	2 x M25		**1 3473 218 011**
nLLK 09018/18 (2 x 18 W)	2/6-2M [1]	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 3473 218 021**
 **nLLK 09036**								
nLLK 09036 (1 x 36 W)	1/6-1K	1 x 6	x	–	2 x M25, plastic		1	**1 3473 136 001**
nLLK 09036 (1 x 36 W)	2/6-2K	2 x 6	–	x	2 x M25, plastic	2 x M25		**1 3473 136 011**
nLLK 09036 (1 x 36 W)	2/6-2M [1]	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 3473 136 021**
 **nLLK 09036/36**								
nLLK 09036/36 (2 x 36 W)	1/6-1K	1 x 6	x	–	2 x M25, plastic		1	**1 3473 236 001**
nLLK 09036/36 (2 x 36 W)	2/6-2K	2 x 6	–	x	2 x M25, plastic	1 x M25		**1 3473 236 011**
nLLK 09036/36 (2 x 36 W)	2/6-2M [1]	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 3473 236 021**
 **nLLK 09058**								
nLLK 09058 (1 x 58 W)	1/6-1K	1 x 6	x	–	2 x M25, plastic		1	**1 3473 158 001**
nLLK 09058 (1 x 58 W)	1/6-1M [1]	1 x 6	x	–	2 x M20, metal thread	1 x M20		**1 3473 158 020**
 **nLLK 09058/58**								
nLLK 09058/58 (2 x 58 W)	1/6-1K	1 x 6	x	–	2 x M25, plastic		1	**1 3473 258 001**
nLLK 09058/58 (2 x 58 W)	1/6-1M[1]	1 x 6	x	–	2 x M20, metal thread	1 x M20		**1 3473 258 020**

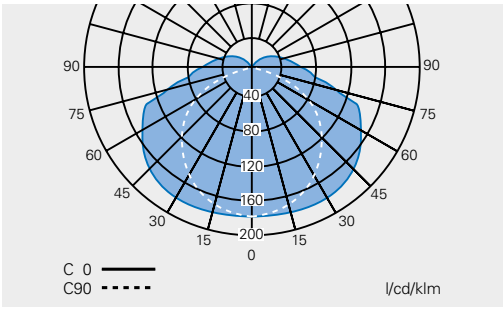
[1] with metal thread, without cable gland

Scope of delivery without lamp and fixing accessories
Metal cable glands see catalogue part 2: 2.3.12 ff

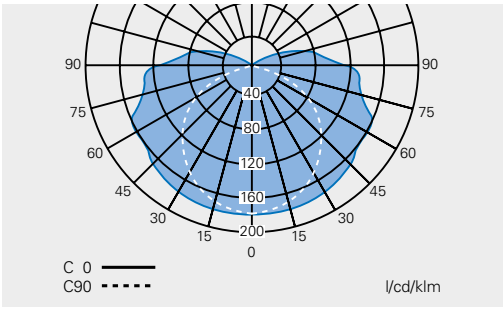
Dimension drawing / Polar curve

nLLK 09 18 W - 58 W

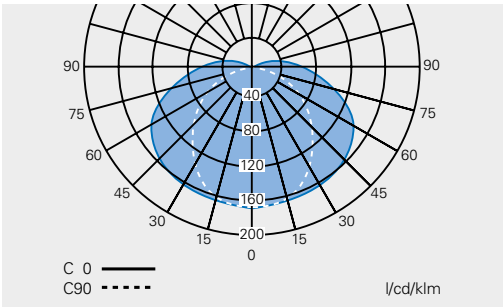
Polar curve nLLK 09018/18 / nLLK 09036/36



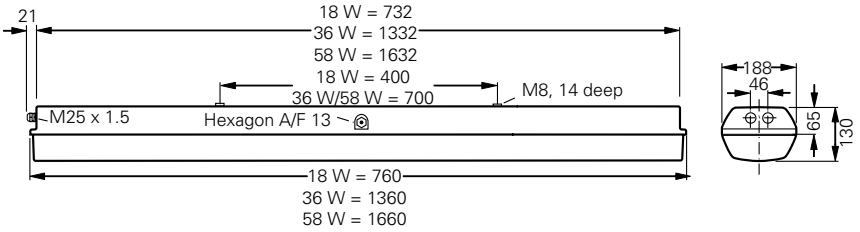
Polar curve nLLK 09036 / nLLK 09058



Polar curve nLLK 09058/58



nLLK 09...



Dimensions in mm

Technical data

	nLLK 09018/18	nLLK 09036
EC-Type Examination Certificate	BVS 10 ATEX E 038	BVS 10 ATEX E 038
Marking accd. to 2014/34/EU	Ⓔx II 3 G Ex nA de IIC T4 Ⓔx II 3 D Ex tD A22 IP66 T80 °C	Ⓔx II 3 G Ex nA de IIC T4 Ⓔx II 3 D Ex tD A22 IP66 T80 °C
Permissible ambient temperature	-25 °C up to +60 °C	-25 °C up to +60 °C
IK-class according to IEC/EN 62262	IK 10 ≙ 20 J	IK 10 ≙ 20 J
Rated voltage	220 - 254 V AC / 195 V - 250 V DC	220 - 254 V AC / 195 V - 250 V DC
Rated current	0.18 A	0.18 A
Frequency	50 - 60 Hz	50 - 60 Hz
Power factor cos φ	≥ 0.95	≥ 0.95
Circuit	EVG	EVG
Protection class	I	I
Lamp / Illuminant	2 x T26 / 18 W (T8)	1 x T26 / 36 W (T8)
Rated luminous flux	2700 lm [1]	3350 lm [1]
Lamp cap	G 13 accord. to IEC 60081-1	G 13 accord. to IEC 60081-1
Light output ratio	78 %	86 %
Dimensions (L x W x H)	760 x 188 x 130 mm	1360 x 188 x 130
Connecting terminals	L, L1, L2, L3, N, PE screw-type terminals max 6 mm^2 single wire	L, L1, L2, L3, N, PE screw-type terminals max 6 mm^2 single wire
Enclosure colour	RAL 7035 light grey	RAL 7035 light grey
Enclosure material	glass-fibre reinforced polyester	glass-fibre reinforced polyester
Weight	5.2 kg	7.2 kg
Cable glands / gland plates / enclosure drilling	Ex e cable glands M 25 x 1.5 (plastic) (optional M 20 x 1.5 metal thread)[2]	Ex e cable glands M 25 x 1.5 (plastic) (optional M 20 x 1.5 metal thread)[2]
Degree of protection accd. to EN 60529	IP66	IP66
Protective cover / protective bowl	Polycarbonate	Polycarbonate

[1] depends on used lamps
[2] with dustcover if entry/thread is not closed

Technical data

nLLK 09036/36 / nLLK 09058

Technical data

	nLLK 09036/36	nLLK 09058
EC-Type Examination Certificate	BVS 10 ATEX E 038	BVS 10 ATEX E 038
Marking accd. to 2014/34/EU	Ex II 3 G Ex nA de IIC T4 Ex II 3 D Ex tD A22 IP66 T80 °C	Ex II 3 G Ex nA de IIC T4 Ex II 3 D Ex tD A22 IP66 T80 °C
Permissible ambient temperature	-25 °C up to +60 °C	-25 °C up to +60 °C
IK-class according to IEC/EN 62262	IK 10 ≙ 20 J	IK 10 ≙ 20 J
Rated voltage	220 - 254 V AC / 195 V - 250 V DC	220 - 254 V AC / 195 V - 250 V DC
Rated current	0.34 A	0.27 A
Frequency	50 - 60 Hz	50 - 60 Hz
Power factor cos φ	≥ 0.95	≥ 0.95
Circuit	EVG	EVG
Protection class	I	I
Lamp / Illuminant	2 x T26 / 36 W (T8)	1 x T26 / 58 W (T8)
Rated luminous flux	6700 lm [1]	5200 lm [1]
Lamp cap	G 13 accord. to IEC 60081-1	G 13 accord. to IEC 60081-1
Light output ratio	78 %	83 %
Dimensions (L x W x H)	1360 x 188 x 130 mm	1660 x 188 x 130 mm
Connecting terminals	L, L1, L2, L3, N, PE screw-type terminals max 6 mm² single wire	L, L1, L2, L3, N, PE screw-type terminals max 6 mm² single wire
Enclosure colour	RAL 7035 light grey	RAL 7035 light grey
Enclosure material	glass-fibre reinforced polyester	glass-fibre reinforced polyester
Weight	7.4 kg	8.2 kg
Cable glands / gland plates / enclosure drilling	Ex e cable glands M 25 x 1.5 (plastic) (optional M 20 x 1.5 metal thread)[2]	Ex e cable glands M 25 x 1.5 (plastic) optional M 20 x 1.5 metal thread)[2]
Degree of protection accd. to EN 60529	IP66	IP66
Protective cover / protective bowl	Polycarbonate	Polycarbonate

[1] depends on used lamps
[2] with dustcover if entry/thread is not closed

Technical data

	nLLK 09058/58
EC-Type Examination Certificate	BVS 10 ATEX E 038
Marking accd. to 2014/34/EU	Ⓔx II 3 G Ex nA de IIC T4 Ⓔx II 3 D Ex tD A22 IP66 T80 °C
Permissible ambient temperature	-25 °C up to +60 °C
IK-class according to IEC/EN 62262	IK 10 ≙ 20 J
Rated voltage	220 - 254 V AC / 195 V - 250 V DC
Rated current	0.53 A
Frequency	50 - 60 Hz
Power factor cos φ	≥ 0.95
Circuit	EVG
Protection class	I
Lamp / Illuminant	2 x T26 / 58 W (T8)
Rated luminous flux	10.400 lm [1]
Lamp cap	G 13 accord. to IEC 60081-1
Light output ratio	72 %
Dimensions (L x W x H)	1660 x 188 x 130 mm
Connecting terminals	L, L1, L2, L3, N, PE screw-type terminals max 6 mm² single wire
Enclosure colour	RAL 7035 light grey
Enclosure material	glass-fibre reinforced polyester
Weight	8.4 kg
Cable glands / gland plates / enclosure drilling	Ex e cable glands M 25 x 1.5 (plastic) optional M 20 x 1.5 metal thread)[2]
Degree of protection accd. to EN 60529	IP66
Protective cover / protective bowl	Polycarbonate

[1] depends on used lamps
[2] with dustcover if entry/thread is not closed

Ex-Linear luminaires for T5 HE fluorescent lamps

nLLK 10 14 W - 35 W
(Zone 2 and 22)

The energy-saving lighting solution

Certified for use in hazardous areas in Zone 2 and 22, the linear luminaires series nLLK 10 for T5 fluorescent lamps (Ø 16 mm) combines a cutting-edge lighting technology with the requirements of a harsh and hazardous environment.

Energy-saving lighting technology

The nLLK 10 luminaires for T5 fluorescent lamps help to improve safety and to save energy. The use of T5 HE lamps with improved efficiency and high quality lighting results in a significant energy saving, which in turn reduces your operating costs significantly.

Long-term safety

The luminaires of this robust lighting series with plastic housings are equipped with a highly-efficient electronic ballast, which has a reliable EOL circuit. Thus, the lamps are checked for proper operation and shut down safely in the event of a malfunction at the end of the service life. With these luminaires, you are always on the safe side.

Simple and cost-effective installation

In conjunction with the generously dimensioned terminal compartment, the standard single-ended through-wiring allows a cost-effective installation. The double-sided locking facility with 10, 20 or 24 latch points allows the protective bowl to be hinged on both sides, meaning that the fitting can be mounted on either side.

Features

- Energy savings by modern, efficient T5 fluorescent lamps (Ø 16 mm)
- Cost-effective installation due to single-ended through-wiring
- High safety due to EVG with EOL monitoring
- Double-sided safety lock
- High degree of protection IP66

Ordering details

nLLK 10014/14

Type	Content	Terminals	Through-wiring single-ended	Through-wiring twin-ended	Cable gland/ thread	Threaded plug	Blanking plug	Order No.
nLLK 10014/14 (2 x 14 W)	1/6-1K	1 x 6	x	–	2 x M25, plastic		1	**1 3467 214 001**
nLLK 10014/14 (2 x 14 W)	2/5-2K	2 x 6	x	–	2 x M25, plastic	2 x M25	1	**1 3467 214 011**
nLLK 10014/14 (2 x 14 W)	1/6-1M [1)]	1 x 6	x	–	2 x M25, plastic	1 x M20		**1 3467 214 021**
nLLK 10014/14 (2 x 14 W)	2/6-2M [1)]	2 x 6	x	–	4 x M20, metal thread	2 x M20		**1 3467 214 031**

nLLK 10028/28

Type	Content	Terminals	Through-wiring single-ended	Through-wiring twin-ended	Cable gland/ thread	Threaded plug	Blanking plug	Order No.
nLLK 10028/28 (2 x 28 W)	1/6-1K	1 x 6	x	–	2 x M25, plastic		1	**1 3467 228 001**
nLLK 10028/28 (2 x 28 W)	2/5-2K	2 x 6	x	–	2 x M25, plastic	2 x M25	1	**1 3467 228 011**
nLLK 10028/28 (2 x 28 W)	1/6-1M [1)]	1 x 6	x	–	2 x M25, plastic	1 x M20		**1 3467 228 021**
nLLK 10028/28 (2 x 28 W)	2/6-2M [1)]	2 x 6	x	–	4 x M20, metal thread	2 x M20		**1 3467 228 031**

nLLK 10035/35

Type	Content	Terminals	Through-wiring single-ended	Through-wiring twin-ended	Cable gland/ thread	Threaded plug	Blanking plug	Order No.
nLLK 10035/35 (2 x 35 W)	1/6-1K	1 x 6	x	–	2 x M25, plastic		1	**1 3467 235 001**
nLLK 10035/35 (2 x 35 W)	2/5-2K	2 x 6	x	–	2 x M25, plastic	2 x M25	1	**1 3467 235 011**
nLLK 10035/35 (2 x 35 W)	1/6-1M [1)]	1 x 6	x	–	2 x M20, metal thread	1 x M20		**1 3467 235 021**
nLLK 10035/35 (2 x 35 W)	2/6-2M [1)]	2 x 6	x	–	4 x M20, metal thread	2 x M20		**1 3467 235 031**

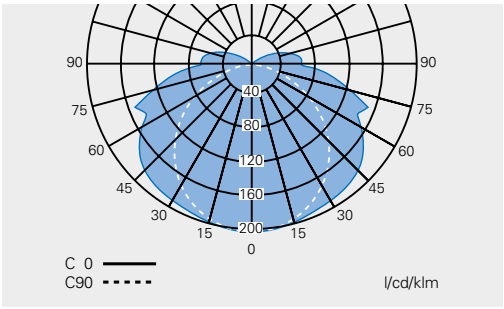
[1)] with metal thread, without cable gland

Scope of delivery without lamp and fixing accessories
Metal cable glands see catalogue part 2: 2.3.12 ff

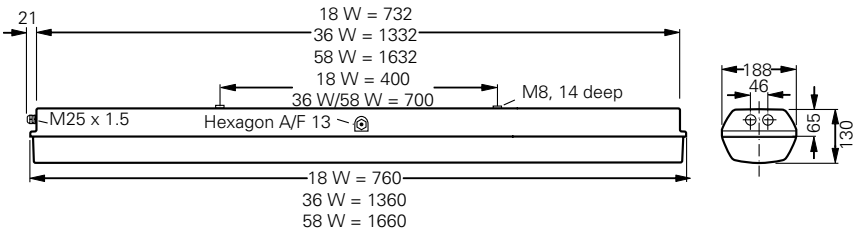
Dimension drawing / Polar curve

nLLK 10 14 W - 35 W

Polar curve nLLK 10014/14 /
nLLK 10028/28 /
nLLK 10035/35



nLLK 10...



Dimensions in mm

Technical data

	nLLK 10014/14	nLLK 10028/28
Type Examination Certificate	BVS 10 ATEX E 149	BVS 10 ATEX E 149
Marking accd. to 2014/34/EU	Ⓔx II 3 G Ex nA de IIC T4 Gc Ⓔx II 3 D Ex tc IIIC T80 °C Dc IP66	Ⓔx II 3 G Ex nA de IIC T4 Gc Ⓔx II 3 D Ex tc IIIC T80 °C Dc IP66
Permissible ambient temperature	-25 °C up to + 50 °C (to +45 °C with DGV)	-25 °C up to + 50 °C (to +45 °C with DGV)
IK-class according to IEC/EN 62262	IK 10 ≙ 20 J	IK 10 ≙ 20 J
Rated voltage	220 - 240 V AC / DC	220 - 240 V AC / DC
Rated current	0.13 A	0.26 A
Frequency	50 - 60 Hz	50 - 60 Hz
Power factor cos φ	≥ 0.95	≥ 0.95
Circuit	EVG	EVG
Protection class	I	I
Lamp / Illuminant	2 x T5 / 14 W HE	2 x T5 / 28 W HE
Rated luminous flux	2400 lm [1]	5200 lm [1]
Lamp cap	G5 accord. IEC 60061-1	G5 accord. IEC 60061-1
Light output ratio	86%	85%
Dimensions (L x W x H)	760 x 188 x 130 mm	1360 x 188 x 130 mm
Connecting terminals	L, L1, L2, L3, N, PE screw-type terminals max 6 mm² single wire	L, L1, L2, L3, N, PE screw-type terminals max 6 mm² single wire
Enclosure colour	RAL 7035 light grey	RAL 7035 light grey
Enclosure material	glass-fibre reinforced polyester	glass-fibre reinforced polyester
Weight	3.6 kg	5.8 kg
Cable glands / gland plates / enclosure drilling	Ex e cable glands M 25 x 1.5 (plastic) optional M 20 x 1.5 metal thread)[2]	Ex e cable glands M 25 x 1.5 (plastic) optional M 20 x 1.5 metal thread)[2]
Degree of protection accd. to EN 60529	IP66	IP66
Protective cover / protective bowl	Polycarbonate	Polycarbonate

[1] depends on used lamps
[2] with dustcover if entry/thread is not closed
DGV: Through-wiring 2/6

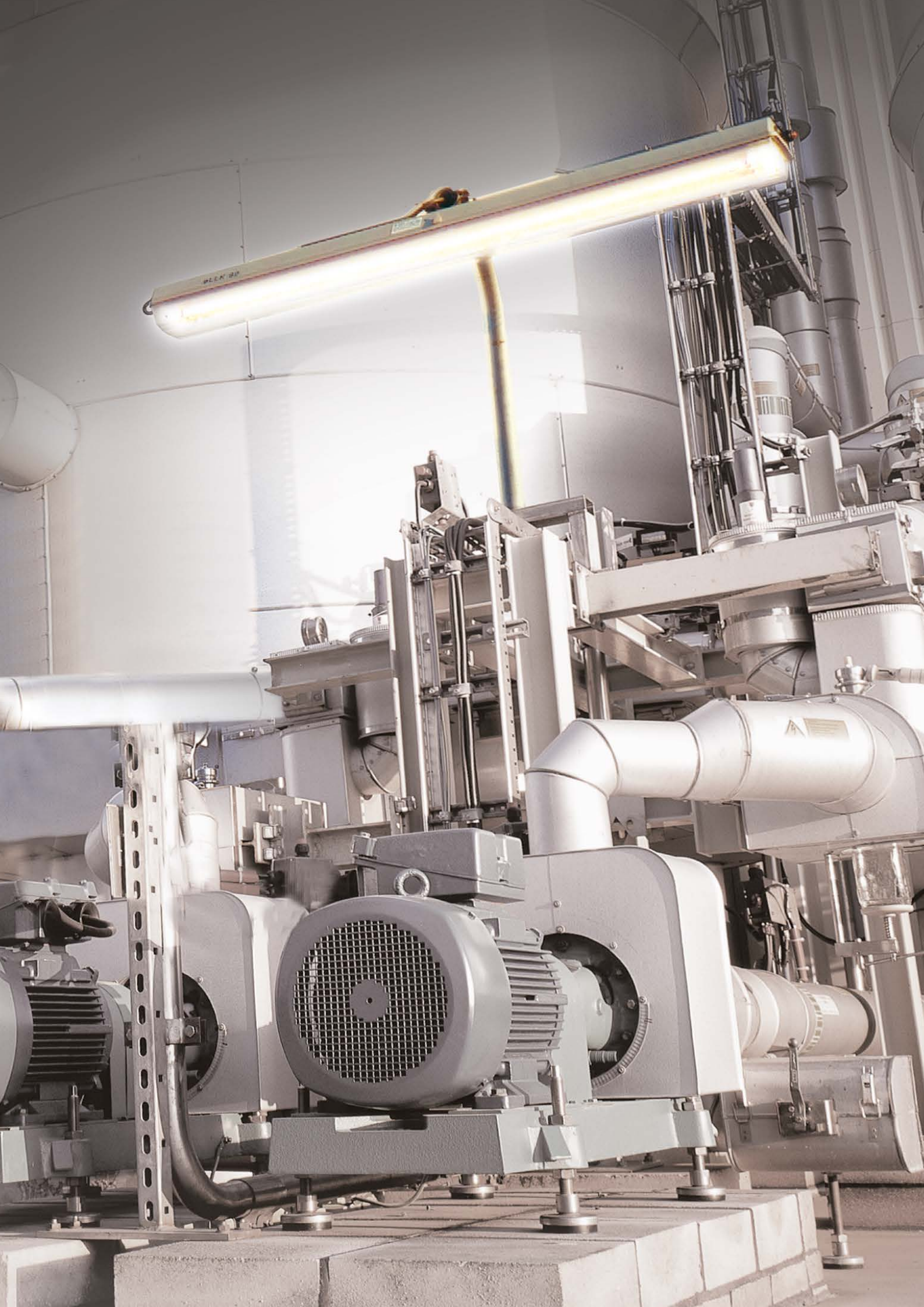
Technical data

nLLK 10035/35

Technical data

	nLLK 10035/35
Type Examination Certificate	BVS 10 ATEX E 149
Marking accd. to 2014/34/EU	Ⓔx II 3 G Ex nA de IIC T4 Gc Ⓔx II 3 D Ex tc IIIC T80 °C Dc IP66
Permissible ambient temperature	-25 °C up to + 45 °C (bis +40 °C with through-wiring 2/6)
IK-class according to IEC/EN 62262	IK 10 ≙ 20 J
Rated voltage	220 - 240 V AC / DC
Rated current	0.33 A
Frequency	50 - 60 Hz
Power factor cos φ	≥ 0.95
Circuit	EVG
Protection class	I
Lamp / Illuminant	2 x T5 / 35 W HE
Rated luminous flux	6600 lm [1]
Lamp cap	G5 accord. IEC 60061-1
Light output ratio	85%
Dimensions (L x W x H)	1660 x 188 x 130 mm
Connecting terminals	L, L1, L2, L3, N, PE screw-type terminals max 6 mm² single wire
Enclosure colour	RAL 7035 light grey
Enclosure material	glass-fibre reinforced polyester
Weight	7.3 kg
Cable glands / gland plates / enclosure drilling	Ex e cable glands M 25 x 1.5 (plastic) optional M 20 x 1.5 metal thread)[2]
Degree of protection accd. to EN 60529	IP66
Protective cover / protective bowl	Polycarbonate

[1] depends on used lamps
[2] with dustcover if entry/thread is not closed



nLLK 15 LED / nLLK 15 V-CG-S LED DALI Ex-Linear Light Fittings

Linear Light Fittings with LED Tubes (Zone 2 and 22)

The efficient LED solution for your explosion protected lighting engineering

The series of light fittings nLLK 15 LED for Aura UltiLED (Pro) long life LED tubes combines latest lighting engineering with the requirements of harsh and hazardous environments.

The explosion protected luminaires are approved for use in gas- and dust-Ex-areas fulfilling the requirements of the ATEX directive 2014/34/EU.

They are designed and tested according to the latest standards for Ex-equipment for use in Zone 2 gas Ex-areas and Zone 22 of dust Ex-areas.

The nLLK 15 LED luminaries are helping to increase your safety and save energy. The clear energy saving and the higher quality of lighting are made by use of Aura UltiLED (Pro) long life LED tubes in combination with a special designed electronic driver that will sustainably reduce your cost of operations.

Central controlled emergency lighting systems with V-CG-S

The V-CG-S light fittings can be connected to a CEAG emergency lighting installation with monitoring system.

This means, that the nLLK 15 LED V-CG-S can be integrated as a system light fitting into the practical monitoring system of CEAG group or central battery installations.

Special feature of the nLLK 15 LED V-CG-S: 100 % light output in emergency mode; both LED tubes are on!

Easy and economically to install

The standard single-sided through-wiring architecture in conjunction with the generously large terminal compartment offers a cost efficient installation. Double-sided lock with latch points allows the protective bow to be hingeable on both sides meaning the fitting can be mounted without having to pay attention to which side is the correct side.

DALI light control

The nLLK 15 LED DALI can be individually controlled and dimmed. This light fittings have an integrated DALI interface for the connection of a 2-wire control line.

Options

The series of light fittings nLLK 15 LED optionally is also available with integrated light switch. This switch automatically ensures the all-pole disconnection from mains of the open light fitting.

Features

- Replaceable driver and light source
- Connection to CEAG emergency light monitoring systems possible (V-CG-S)
- Light controlling via DALI interface as option (DALI)
- Cost efficient installation due to single sided through wiring
- Easy maintenance by double sided safety lock
- High lumen output
- High degree of protection IP 66
- Available with safety switch on request

Ordering details

Type	Content	Terminals	Through-wiring single-ended	Through-wiring twin-ended	Cable gland/ thread	Threaded plug	Blanking plug	Order No.
nLLK 15 LED 600								
nLLK 15 LED 600 (2 x 8 W)	1/6-1K	1 x 6	x	–	1 x M25, plastic	1 x M 25		**1 3475 208 001**
nLLK 15 LED 600 (2 x 8 W)	2/6-2K	2 x 6	–	x	2 x M25, plastic	2 x M25	1	**1 3475 208 011**
nLLK 15 LED 600 (2 x 8 W)	1/6-1M [1]	1 x 6	x	–	2 x M20, metal thread	1 x M20		**1 3475 208 021**
nLLK 15 LED 600 (2 x 8 W)	2/6-2M [1]	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 3475 208 031**
nLLK 15 LED 1200								
nLLK 15 LED 1200 (2 x 17 W / 26 W)	1/6-1K	1 x 6	x	–	1 x M25, plastic	1 x M 25		**1 3475 217 001**
nLLK 15 LED 1200 (2 x 17 W / 26 W)	2/6-2K	2 x 6	–	x	2 x M25, plastic	2 x M25	1	**1 3475 217 011**
nLLK 15 LED 1200 (2 x 17 W / 26 W)	1/6-1M [1]	1 x 6	x	–	2 x M20, metal thread	1 x M20		**1 3475 217 021**
nLLK 15 LED 1200 (2 x 17 W / 26 W)	2/6-2M [1]	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 3475 217 031**
nLLK 15 LED 1500								
nLLK 15 LED 1500 (2 x 23 W / 32 W)	1/6-1K	1 x 6	x	–	1 x M25, plastic	1 x M 25		**1 3475 223 001**
nLLK 15 LED 1500 (2 x 23 W / 32 W)	2/6-2K	2 x 6	–	x	2 x M25, plastic	2 x M25	1	**1 3475 223 011**
nLLK 15 LED 1500 (2 x 23 W / 32 W)	1/6-1M [1]	1 x 6	x	–	2 x M20, metal thread	1 x M20		**1 3475 223 021**
nLLK 15 LED 1500 (2 x 23 W / 32 W)	2/6-2M [1]	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 3475 223 031**
nLLK 15 LED 1200 V-CG-S								
nLLK 15 LED V-CG-S 1200 (2 x 17 W / 26 W)	1/6-1K	1 x 6	x	–	1 x M25, plastic	1 x M 25		**1 3475 217 101**
nLLK 15 LED V-CG-S 1200 (2 x 17 W / 26 W)	2/6-2K	2 x 6	–	x	2 x M25, plastic	2 x M25	1	**1 3475 217 111**
nLLK 15 LED V-CG-S 1200 (2 x 17 W / 26 W)	1/6-1M [1]	1 x 6	x	–	2 x M20, metal thread	1 x M20		**1 3475 217 121**
nLLK 15 LED V-CG-S 1200 (2 x 17 W / 26 W)	2/6-2M [1]	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 3475 217 131**
nLLK 15 LED 1500 V-CG-S								
nLLK 15 LED V-CG-S 1500 (2 x 23 W / 32 W)	1/6-1K	1 x 6	x	–	1 x M25, plastic	1 x M 25		**1 3475 223 101**
nLLK 15 LED V-CG-S 1500 (2 x 23 W / 32 W)	2/6-2K	2 x 6	–	x	2 x M25, plastic	2 x M25	1	**1 3475 223 111**
nLLK 15 LED V-CG-S 1500 (2 x 23 W / 32 W)	1/6-1M [1]	1 x 6	x	–	2 x M20, metal thread	1 x M20		**1 3475 223 121**
nLLK 15 LED V-CG-S 1500 (2 x 23 W / 32 W)	2/6-2M [1]	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 3475 223 131**
nLLK 15 LED 600/1200/1500 DALI								
nLLK 15 LED 600 DALI (2 x 8 W)	2/5-25K	2 x 6	x	–	2 x M25, plastic	2 x M25	1	**1 3475 208 211**
nLLK 15 LED 1200 DALI (2 x 17 W / 26 W)	2/5-25K	2 x 6	–	x	2 x M25, plastic	2 x M25	1	**1 3475 217 211**
nLLK 15 LED 1500 DALI (2 x 23 W / 32 W)	2/5-25K	2 x 6	x	–	2 x M25, plastic	2 x M25	1	**1 3475 223 211**

[1] with metal thread, without cable gland / Metal cable glands see catalogue part 2: 2.3.12 ff

Scope of delivery without lamp and fixing accessories. Please order LED tubes separately.

Ordering details / dimension drawing / polar curve

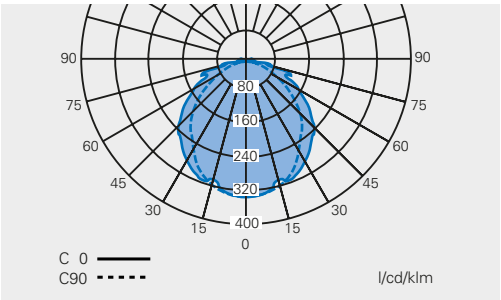
nLLK 15 LED / nLLK 15 LED DALI / nLLK 15 V-CG-S LED

Ordering details LED Lamps

Type	Application	Luminous flux	Light colour / CR	Length	Order No.
Aura UltiLED Long Life (G4) 840 8 W	nLLK 15 LED 600	1,100 lm	4,000 K / R_a 80	600 mm	**3 2475 902 002**
Aura UltiLED Long Life (G4) 840 17 W	nLLK 15 LED 1200	2,220 lm	4,000 K / R_a 80	1,200 mm	**3 2475 902 004**
Aura UltiLED Long Life (G4) 840 23 W	nLLK 15 LED 1500	3,000 lm	4,000 K / R_a 80	1,500 mm	**3 2475 902 006**
Aura UltiLED Pro Long Life (G3) 840 26 W	nLLK 15 LED 1200	3,800 lm	4,000 K / R_a 80	1,200 mm	**3 2475 902 102**
Aura UltiLED Pro Long Life (G3) 850 26 W	nLLK 15 LED 1200	3,950 lm	5,000 K / R_a 80	1,200 mm	**3 2475 902 103**
Aura UltiLED Pro Long Life (G3) 840 32 W	nLLK 15 LED 1500	4,750 lm	4,000 K / R_a 80	1,500 mm	**3 2475 902 105**
Aura UltiLED Pro Long Life (G3) 850 32 W	nLLK 15 LED 1500	4,900 lm	5,000 K / R_a 80	1,500 mm	**3 2475 902 106**

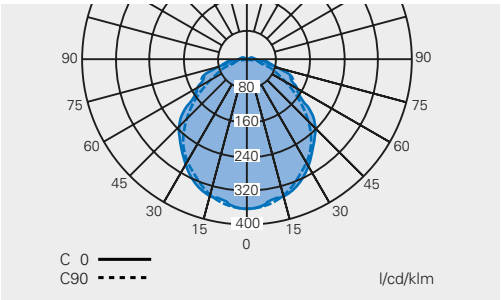
Polar curve

nLLK 15 LED 600 / DALI
nLLK 15 LED V-CG-S 600



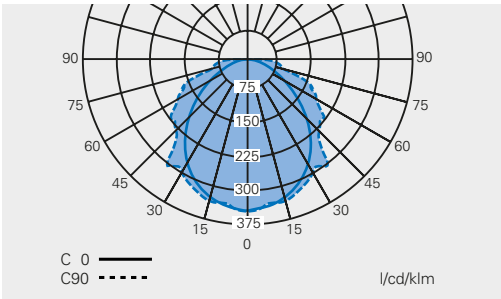
Polar curve

nLLK 15 LED 1200 / 1500 / DALI
nLLK 15 LED V-CG-S 1200/1500

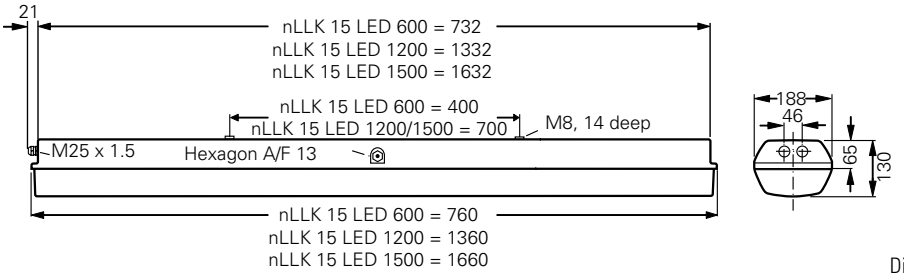


Polar curve

nLLK 15 LED 1200 / 1500 Pro
nLLK 15 LED V-CG-S 1200/1500 Pro



Dimension drawing nLLK 15...



Dimensions in mm

Technical data

	nLLK 15 LED 600 / nLLK 15 LED 600 DALI
EC-Declaration of conformity	CCH 15 ATEX 1044
Marking accd. to 2014/34/EU and 2014/34/EU	Ⓔx II 3 G Ex ec IIC T4 Gc Ⓔx II 3 D Ex tc IIIC T80 °C Dc
Permissible ambient temperature	-25 °C up to +50 °C (+55 °C on request)
Lifetime electronic driver	>160,000 h @ 25 °C
Lifetime LED tubes	L80/B10 >58,000 h @ 25 °C
IK-class according to IEC/EN 62262	IK 10 ≙ 20 J
Rated voltage	220 - 240 V AC / DC
Rated current	0.088 A
Rated power consumption	18.2 W
Frequency	0/50 - 60 Hz
Power factor cos φ	≥ 0.90
Circuit	Electronic driver
Protection class	I
Lamp / Illuminant	2 x Aura UltiLED long life 8 W
Light output ratio	83,9 %
Rated luminous flux of the luminaire	1845 lm [1]
Llght output in emergency mode	-
Lamp cap	G5 accord. IEC 60061-1
Dimensions (L x W x H)	760 x 188 x 130 mm
Connecting terminals	L, L1, L2, L3, N, PE screw-type terminals max. 6 mm² single wire
Enclosure colour	RAL 7035 light grey
Enclosure material	Glass-fibre reinforced polyester
Weight	3.6 kg
Cable glands / gland plates / enclosure drilling	Ex e cable glands M 25 x 1.5 (plastic) optional M 20 x 1.5 metal thread)[2]
Degree of protection accd. to EN 60529	IP66
Protective cover / protective bowl	Polycarbonate

[1] please order the lamps separately

[2] with dustcover if entry/thread is not closed

Technical data

nLLK 15 LED / nLLK 15 LED DALI / nLLK 15 V-CG-S LED

Technical data

	nLLK 15 LED 1200 / nLLK 15 LED 1200 DALI	nLLK 15 LED V-CG-S 1200
EC-Declaration of conformity	CCH 15 ATEX 1044	CCH 15 ATEX 1044
Marking accd. to 2014/34/EU and 2014/34/EU	Ⓔx II 3 G Ex ec IIC T4 Gc Ⓔx II 3 D Ex tc IIIC T80 °C Dc	Ⓔx II 3 G Ex ec mb ib IIC T4 Gc Ⓔx II 3 D Ex tc IIIC T80 °C Dc
Permissible ambient temperature	-25 °C up to +45 °C	-25 °C up to +40 °C
Lifetime electronic driver	>100,000 h @ 25 °C	>100,000 h @ 25 °C
Lifetime LED tubes	L80/B10 >58,000 h @ 25 °C	L80/B10 >58,000 h @ 25 °C
IK-class according to IEC/EN 62262	IK 10 ≙ 20 J	IK 10 ≙ 20 J
Rated voltage	220 - 240 V AC / DC	220 - 240 V AC / DC
Rated current	0.176 A / 0.264 A (Pro)	0.188 A / 0.276 A (Pro)
Rated power consumption	36.5 W / 54.5 W (Pro)	39 W / 57 W (Pro)
Frequency	0/50 - 60 Hz	0/50 - 60 Hz
Power factor cos φ	≥ 0.90	≥ 0.90
Circuit	Electronic driver	Electronic driver
Protection class	I	I
Lamp / Illuminant	2 x Aura UltiLED long life 17 W or 2 x Aura UltiLED Pro long life 26 W [1]	2 x Aura UltiLED long life 17 W or 2 x Aura UltiLED Pro long life 26 W [1]
Light output ratio	86,4 %	86,4 %
Rated luminous flux of the luminaire	3.800 lm / 6.400 lm (Pro)	3.800 lm / 6.400 lm (Pro)
LIght output in emergency mode	-	100 %
Lamp cap	G5 accord. IEC 60061-1	G5 accord. IEC 60061-1
Dimensions (L x W x H)	1360 x 188 x 130 mm	1360 x 188 x 130 mm
Connecting terminals	L, L1, L2, L3, N, PE screw-type terminals max. 6 mm² single wire	L, L1, L2, L3, N, PE screw-type terminals max. 6 mm² single wire
Enclosure colour	RAL 7035 light grey	RAL 7035 light grey
Enclosure material	Glass-fibre reinforced polyester	Glass-fibre reinforced polyester
Weight	5.8 kg	6.2 kg
Cable glands / gland plates / enclosure drilling	Ex e cable glands M 25 x 1.5 (plastic) optional M 20 x 1.5 metal thread)[2]	Ex e cable glands M 25 x 1.5 (plastic) optional M 20 x 1.5 metal thread)[2]
Degree of protection accd. to EN 60529	IP66	IP66
Protective cover / protective bowl	Polycarbonate	Polycarbonate

[1] please order the lamps separately

[2] with dustcover if entry/thread is not closed

Technical data

	nLLK 15 LED 1500 / nLLK 15 LED 1500 DALI	nLLK 15 LED V-CG-S 1500
EC-Declaration of conformity	CCH 15 ATEX 1044	CCH 15 ATEX 1044
Marking accd. to 2014/34/EU and 2014/34/EU	Ⓔx II 3 G Ex ec IIC T4 Gc Ⓔx II 3 D Ex tc IIIC T80 °C Dc	Ⓔx II 3 G Ex ec mb ib IIC T4 Gc Ⓔx II 3 D Ex tc IIIC T80 °C Dc
Permissible ambient temperature	-25 °C up to +45 °C	-25 °C up to +40 °C
Lifetime electronic driver	>100,000 h @ 25 °C	>100,000 h @ 25 °C
Lifetime LED tubes	L80/B10 >58,000 h @ 25 °C	L80/B10 >58,000 h @ 25 °C
IK-class according to IEC/EN 62262	IK 10 ≙ 20 J	IK 10 ≙ 20 J
Rated voltage	220 - 240 V AC / DC	220 - 240 V AC / DC
Rated current	0.237 A / 0.323 A (Pro)	0.249 A / 0.335 A (Pro)
Rated power consumption	49 W / 67 W (Pro)	51.5 W / 69.5 W (Pro)
Frequency	0/50 - 60 Hz	0/50 - 60 Hz
Power factor cos φ	≥ 0.90	≥ 0.90
Circuit	Electronic driver	Electronic driver
Protection class	I	I
Lamp / Illuminant	2 x Aura UltiLED long life 23 W or 2 x Aura UltiLED Pro long life 32 W [1]	2 x Aura UltiLED long life 23 W or 2 x Aura UltiLED Pro long life 32 W [1]
Light output ratio	86,4 %	86,4 %
Rated luminous flux of the luminaire	5.200 lm / 7.800 lm (Pro)	5.200 lm / 7.800 lm (Pro)
Llght output in emergency mode	-	100 %
Lamp cap	G5 accord. IEC 60061-1	G5 accord. IEC 60061-1
Dimensions (L x W x H)	1360 x 188 x 130 mm	1360 x 188 x 130 mm
Connecting terminals	L, L1, L2, L3, N, PE screw-type terminals max. 6 mm² single wire	L, L1, L2, L3, N, PE screw-type terminals max. 6 mm² single wire
Enclosure colour	RAL 7035 light grey	RAL 7035 light grey
Enclosure material	Glass-fibre reinforced polyester	Glass-fibre reinforced polyester
Weight	7.3 kg	7.7 kg
Cable glands / gland plates / enclosure drilling	Ex e cable glands M 25 x 1.5 (plastic) optional M 20 x 1.5 metal thread)[2]	Ex e cable glands M 25 x 1.5 (plastic) optional M 20 x 1.5 metal thread)[2]
Degree of protection accd. to EN 60529	IP66	IP66
Protective cover / protective bowl	Polycarbonate	Polycarbonate

[1] please order the lamps separately

[2] with dustcover if entry/thread is not closed

2.15

Ex-Twilight switch

2 For use in Zones 1 and 2

For the comfortable and automatic control of lighting in hazardous areas.

This screw-in twilight switch has been approved for direct installation in Ex-d and Ex-e enclosures.

The electronics and the light-sensitive sensor are encapsulated in a flameproof light alloy enclosure with a M32 x 1.5 threaded connection. The encapsulated connection cables are 500 mm long.

The photocell has an electronic circuit with a low power consumption of less than 1 W and a voltage range of 100 V AC to 260 V AC 50/60Hz and switches a rated current of 10 A or a max. power of up to 1800 VA.

The electronics switch on immediately if the light falls below the threshold values. However, there is a 2 to 5 second switching-off delay to avoid accidental switching due to light flashes.

Features

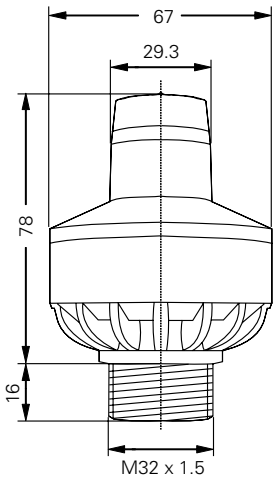
- Switching capacity up to 1800 VA
- High degree of protection IP66
- Easy to install

Ordering details

Type	Content	Order No.
GHG 640 9601 P000x		
Twilight switch GHG 640 9601	Sensitivity 4 - 15 lux	**GHG 640 9601 P0004**

Technical data

	Photocells GHG 640 9601 P000x
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex db IIC T6 Gb
EC-Type Examination Certificate	Sira 17 ATEX 1219 X
IECEx Certificate of conformity	IECEx CSA 17.0016 X
Marking accd. to IECEx	Ex db IIC T6 Gb
Permissible ambient temperature	-40 °C up to +70 °C
Rated voltage	100 V to 60 V AC
Rated current	max. 10 A
Frequency	50 - 60 Hz
Power consumption	≤ 1 W
Rated switching capacity	1800 VA
Standard cable length	approx. 0.5 m, 3 x 1.5 mm^2
Protection class	I
Degree of protection accd. to EN 60529	IP66
Weight	0.25 kg
Type of mounting	screw in thread M32 x 1.5
Enclosure material	aluminium
Enclosure colour	grey



Dimensions in mm

Fixing systems for installing luminaires

Complete systems and single components

The one-off manufacture of individual assembly systems for installing lighting systems is often very costly. The patented Complete Assembly System is a low-cost, standard fixing system for light fittings on industrial rails, walls or steel beam constructions.

Stability and material

A specially developed shaping method that ensures a high degree of stability is used for this programme. Stainless steel with optimised material strength is used in environments with aggressive media. Components that are not made of stainless steel are hot-dip galvanised after manufacture in accordance with DIN EN ISO 1461.

Assembly

The assembly systems have been designed for inside and outside areas. The compact system kits can be assembled by just one person in a very short time. All individual parts are simply fitted together and fastened by screws. Since there is no need for drilling or welding, it is possible to work in hazardous areas without a „hot work permit".

Safety

The assembly system is always installed from the safe side of the work platform, i.e. without scaffolding! The specified handrail height and the avoidance of protruding metal parts or screws in the construction provides a high standard of safety.

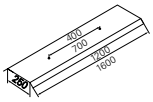
Cost-saving maintenance

The use of tilting luminaire masts results in decisive cost advantages due to minimised maintenance. Thus, for example, changing a lamp without scaffolding or assembly aids is possible for just one person in a very short time. The costs for cleaning and repair work can also be minimised.

Features

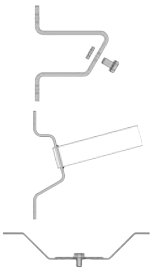
- Easy to install
- Corrosion protected (stainless steel or hot-dip galvanized)
- Extra solid construction ensures high wind load resistance

Ordering details



Type	OU	Order No.
Pole-system bent 90°		
Light pole, 90° bend and drilling hole f. LTR 48 and LTRS 48: type LM 48 - 2300/300 - FT, hot-dip galvanized	1	**2 2480 520 001**
Light pole 90° bend and drilling hole f. LTR 48 and LTRS 48: type LM 48 - 1900/300 - FT, hot-dip galvanized	1	**2 2480 520 002**
Light fitting support pipe with cable outlet: type LTR 48 - 600 - FT, hot-dip galvanized	1	**2 2480 530 001**
Light fitting support pipe with cable outlet: type LTR 48 - 1200 - FT, hot-dip galvanized	1	**2 2480 530 002**
Light fitting support pipe with cable outlet: type LTR 48 - 1500 - FT, hot-dip galvanized	1	**2 2480 530 003**
Light fitting support pipe clamp 90° twisted: type LTRS 48 - FT, hot-dip galvanized	1	**2 2480 550 012**
Pole-system bent 45°		
Light pole, 45° bend, for pole-mounting light fittings: type LMZ 48 - 1900/190 - FT, hot-dip galvanized	1	**2 2480 520 006**
Light pole, 45° bend, , e.g. for floodlights: type LM 48 - 1900/190 - FT, hot-dip galvanized	1	**2 2480 520 007**
Light pole whip form, 45° bend: type LMP 48 - 1900/1300 - FT, hot-dip galvanized	1	**2 2480 520 003**
Light pole whip form, 45° bend: type LMP 48 - 2100/1300 - FT, hot-dip galvanized	1	**2 2480 520 004**
Light pole whip form, 45° bend: type LMP 48 - 2100/800 - FT, hot-dip galvanized	1	**2 2480 520 005**
Wall-mounted light pole whip form, 45° bend, with cable outlet: type LMW 48 - 500/1300 - FT, hot-dip galvanized	1	**2 2480 520 008**
Wall-mounted light pole whip form, 45° bend, with cable outlet: type LMW 48 - 500/800 - FT, hot-dip galvanized	1	**2 2480 520 009**
Light pole fixture for wall mounting, set 2 pcs.: type LMHW 48 - FT, hot-dip galvanized	1	**2 2480 550 001**
Light pole clamp		
Light pole clamp, fixed, UMHS 48/48 - FT, hot-dip galvanized	1	**2 2480 550 002**
Light pole clamp, fixed, with pole slip protection UMHSD 48/48 - FT, hot-dip galvanized	1	**2 2480 550 003**
Light pole clamp, swivel, with pole slip protection, UMHK 48/48 - ER, stainless steel	1	**2 2480 550 004**
Light pole clamp, fixed, UMHS 48/48 - ER, stainless steel	1	**2 2480 550 005**
Light pole clamp, fixed, with pole slip protection UMHSD 48/48 - ER, stainless steel	1	**2 2480 550 006**
Light pole clamp, swivel, with pole slip protection, UMHK 48/48 - FT, hot-dip galvanized	1	**2 2480 550 007**
End caps for poles and pipes		
End cap with cable outlet Ø 15 mm: type SEL 48 - K, plastic	1	**2 2480 550 015**
End cap closed: type SEG 48 - K, plastic	1	**2 2480 550 016**
End cap open: type SEO 48 - K, plastic	1	**2 2480 550 115**
Canopy for fluorescent light fittings		
Canopy for fluorescent light fittings 18 W LSD 1200 - ER 1200 mm length, hole spacing: 400 mm	1	**2 2480 540 001**
Canopy for fluorescent light fittings 18 W LSD 1600 - ER 1600 mm length, hole spacing: 700 mm	1	**2 2480 540 002**

Ordering details



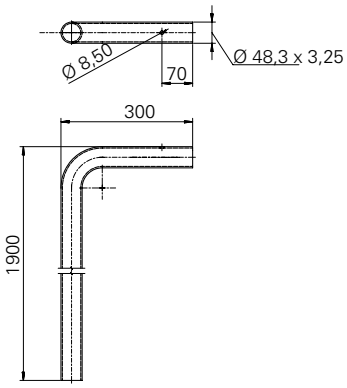
Type	OU	Order No.
Pipe clamps		
2 pcs. pipe clamps R12 (1 1/4"), Ø 38 - 42 mm with screws and polyamide washer, hot-dip galvanized	1	**2 2480 462 000**
2 pcs. pipe clamps R14 (1 1/4"), Ø 38 - 42 mm with screws and polyamide washer, stainless steel	1	**2 2480 464 000**
2 pcs. pipe clamps R22 (1 1/2"), Ø 47 - 51 mm with screws and polyamide washer, hot-dip galvanized	1	**2 2480 472 000**
2 pcs. pipe clamps R24 (1 1/2"), Ø 47 - 51 mm with screws and polyamide washer, stainless steel	1	**2 2480 474 000**
2 pcs. pipe clamps R32 (2''), Ø 56 - 60 mm with screws and polyamide washer, hot-dip galvanized	1	**2 2480 482 000**
2 pcs. pipe clamps R34 (2''), Ø 56 - 60 mm with screws and polyamide washer, stainless steel	1	**2 2480 484 000**
1 pcs. pipe clamp A8 (1 1/2") D 47 - 51 mm for AB 12.. with screws and polyamide washer, hot-dip galvanized	1	**NOR 000 005 009 211**
1 pcs. pipe clamp A9 (2") D 56 - 60 mm for AB 12.. with screws and polyamide washer, hot-dip galvanized	1	**NOR 000 005 009 229**
2 pcs. pipe clamp, two-part, for pipe mounting LB 48 - FT with screws and polyamide washer, hot-dip galvanized	1	**2 2480 550 010**
Fixing accessories		
2 pcs. luminaire mounting bracket with 30° angle, wall mounting LH 30 - FT, hot-dip galvanized	1	**2 2480 550 013**
2 pcs. luminaire mounting bracket with 45° angle, wall mounting LH 45 - FT, hot-dip galvanized	1	**2 2480 550 014**
2 pcs. wall mounting bracket with 30° angle, with screws and polyamide washer, hot-dip galvanized	1	**2 2480 000 122**
1 pcs. wall bracket 45° with screws and polyamide washer, hot-dip galvanized	1	**NOR 000 005 009 196**
1 pcs. wall bracket W 27, 15°, for pole-mounting fitting Ø 42 mm, hot-dip galvanized	1	**2 2483 027 000**
2 pcs. ceiling mounting bracket D 92 with screws and polyamide washer, stainless steel	1	**2 2480 092 000**
1 pcs. ceiling mounting bracket A5 with screws and polyamide washer, hot-dip galvanized	1	**NOR 000 005 009 162**
2 pcs. C-bracket for luminaire mounting LAB-C50 - ER, stainless steel	1	**2 2480 550 011**
2 pcs. hexagon screw M8 x 20 for luminaire mounting, with polyamide washer	1	**2 2480 054 000**
2 pcs. eye bolt M8 for luminaire mounting, hot-dip galvanized	1	**2 2480 002 000**
2 pcs. eye bolt M8 for luminaire mounting, stainless steel	1	**2 2480 004 000**
1 pcs. eye bolt M8 - A1 for luminaire mounting, hot-dip galvanized	1	**NOR 000 005 009 261**
Hexagon box spanner SW 13 for opening/closing fluorescent light fittings eLLK/M and nLLK/M	1	**3 2485 000 005**

LED-Modules / Lamps

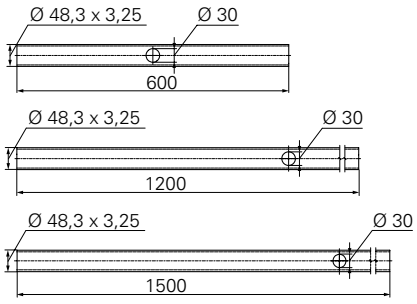
Type	Application	Order No. 4000 K	Order No. 5600 K
LED module 400	for eLLK 92 018/18 incl. conversion kit	**1 2255 213 501**	**1 2255 213 511**
LED module 800	for eLLK 92 036/36 incl. conversion kit	**1 2256 226 501**	**1 2256 226 511**
LED module 400	for eLLK 92 018/18 LED Ready	**1 2255 213 101**	**1 2255 213 111**
LED module 800	for eLLK 92 036/36 LED Ready	**1 2256 226 101**	**1 2256 226 111**

Type	Application	Order No.
Fluorescent lamp G13 T8/Ø 26 mm 18 W 840 - 1350 lm		**3 2475 900 001**
Fluorescent lamp G13 T8/Ø 26 mm 36 W 840 - 3350 lm		**3 2475 900 002**
Fluorescent lamp G13 T8/Ø 26 mm 58 W 840 - 5200 lm		**3 2475 900 003**
Fluorescent lamp G13 T8 18 W Ultimate 840		**3 2475 900 087**
Fluorescent lamp G13 T8 36 W Ultimate 840		**3 2475 900 088**
Fluorescent lamp G13 T8 58 W Ultimate 840		**3 2475 900 089**

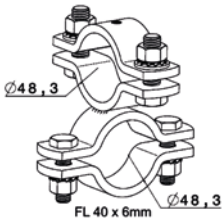
Light pole 90° bended



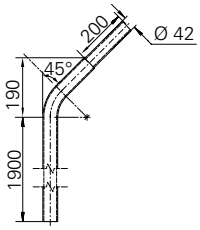
Light fitting support pipe with cable outlet



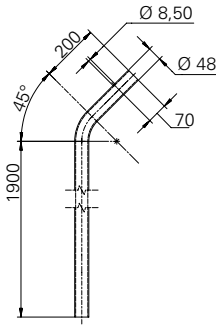
Light fitting support pipe clamp 90° twisted:



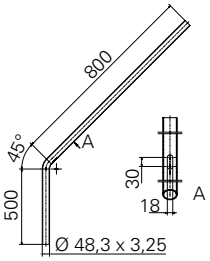
LMZ 48 - 1900/190 - FT



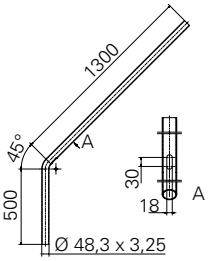
LM 48 - 1900/190 - FT



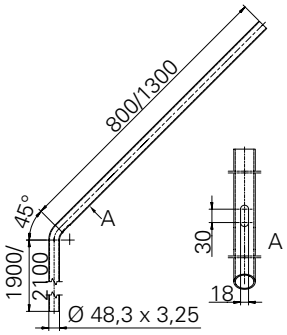
LMW 48 - 500/800 - FT



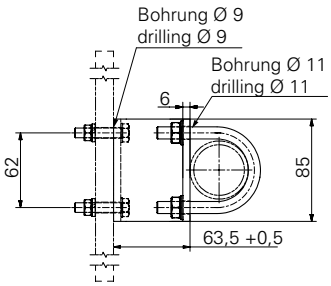
LMW 48 - 500/1300 - FT



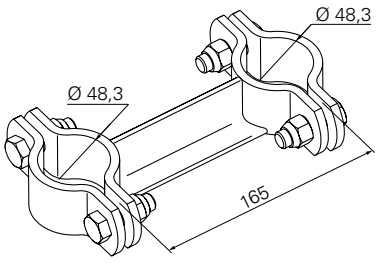
LMP 48 - 1900/1300 - FT/
LMP 48 - 2100/1300 - FT/
LMP 48 - 2100/800 - FT



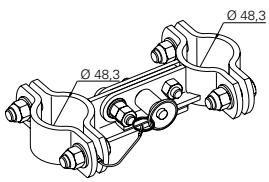
LMHW 48 - FT



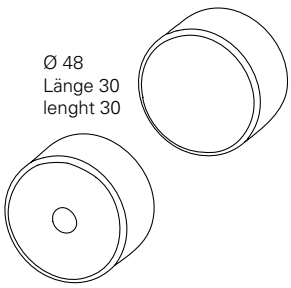
UMHS 48/48 - FT/ER - UMHSD 48/48 - FT/ER



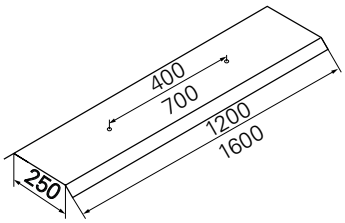
UMHK 48/48 - ER / FT



End cap SEL 48 / SEG / SEO



LSD 1200 - ER/ LSD 1600 - ER

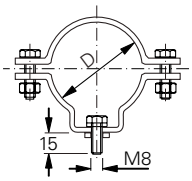


Dimensions in mm

Dimension drawing

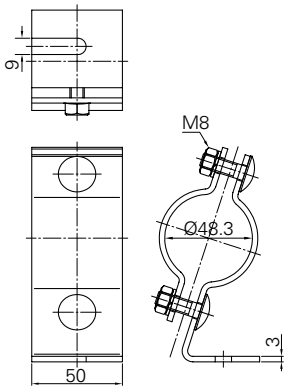
Fixing systems / Accessories

Pipe clamp

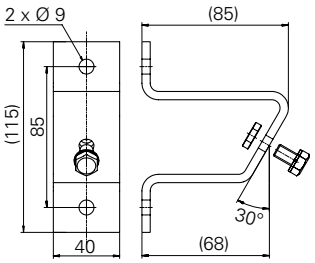


Type	D
R12/R14	38-42 mm
R22/R24/A8	47-51 mm
R32/R34/A9	56-60 mm

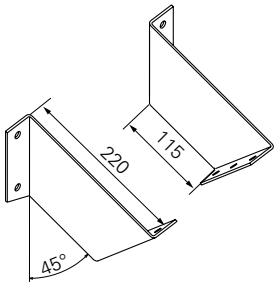
Pipe clamp LB 48 - FT



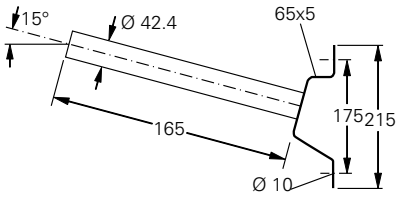
Leuchtenmontagebügel 30 °
LH 30 - FT



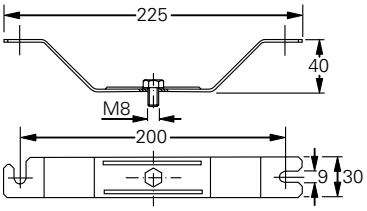
45°
LH 45 - FT



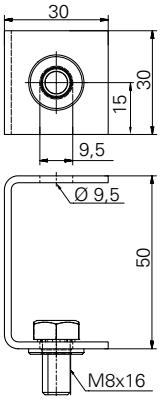
Wandarm W27



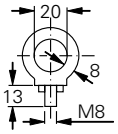
Ceiling bracket D92



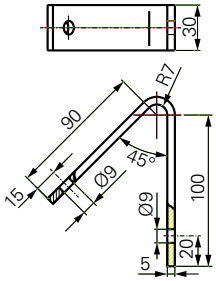
C-bracket



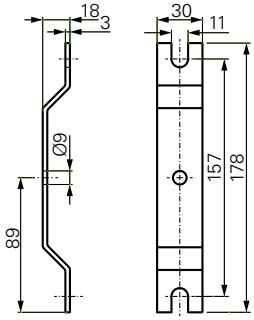
Eye bolt



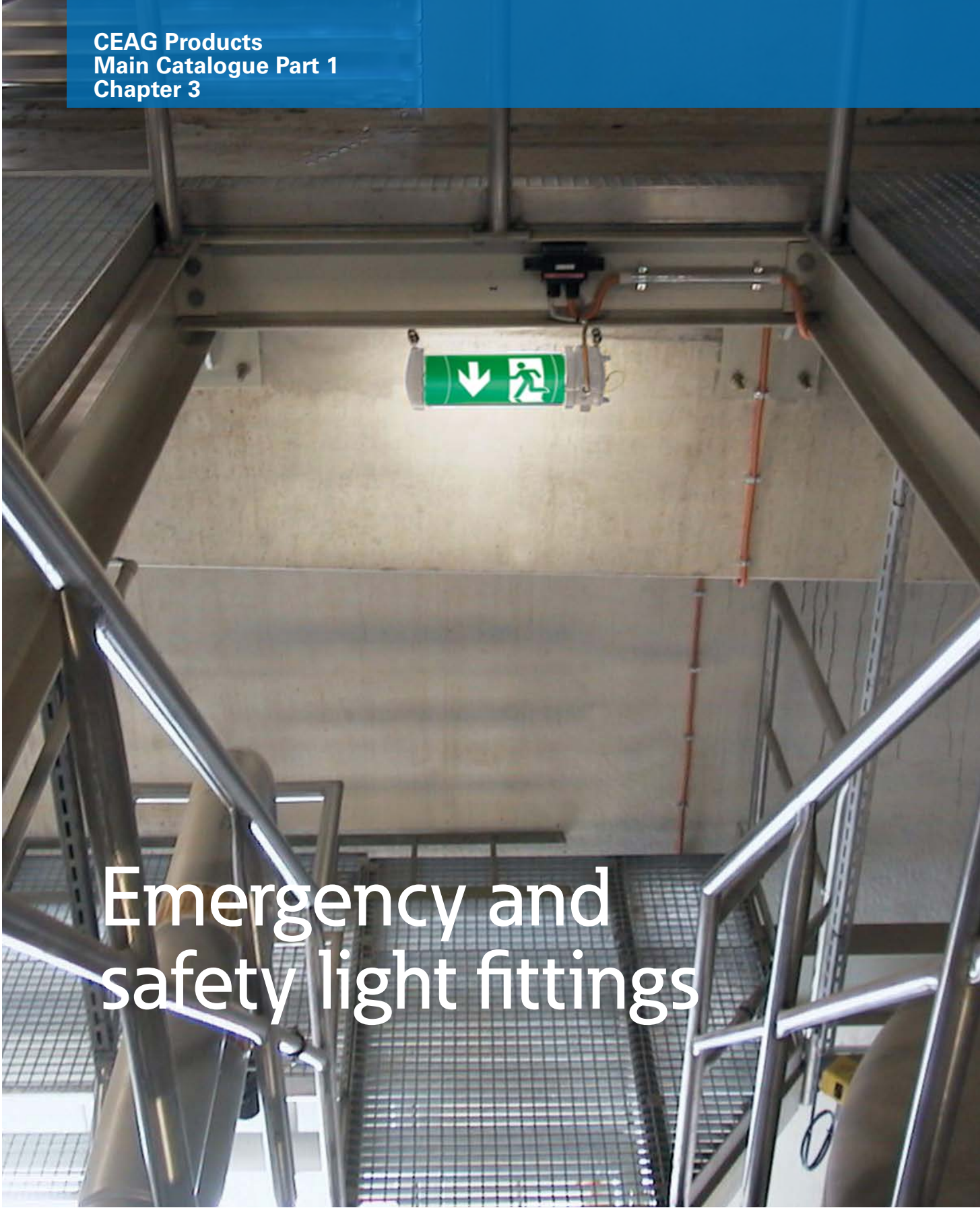
Wandbügel 45°



Ceiling bracket A5



Dimensions in mm



Emergency and safety light fittings

Ex-signal and escape sign luminaires

Applications and decision criteria

Escape sign luminaire EXIT

Emergency lighting – central or decentral

With regard to emergency lighting in hazardous areas, there are two general philosophies, which are based on the reliability of the supply source, the costs and efforts required for testing and maintenance work and the economic efficiency.

Emergency light fittings with a self-contained battery system

Emergency light fittings with self-contained battery systems provide the required emergency lighting decentrally, independent of central systems. This means that the battery, the charger and the electronics are integrated into each emergency light fitting. With regard to the availability and the redundancy, this system meets the highest requirements regarding the reliability of the supply source, in particular in safety-related sensitive areas.

However, with regard to economic efficiency, the costs and efforts involved in the testing and maintenance of each self-contained battery system and the influence of the ambient conditions on the battery life span have to be taken into account.

Taking the above safety aspects into consideration, the use of emergency light fittings with a self-contained battery system is undoubtedly the best solution for applications in large and spacious hazardous areas where the number of fittings used is limited.

The CEAG emergency light fittings with self-contained battery systems of the series EXIT N and Ex-Lite N have been designed for a 3 h emergency lighting duration. The series EE11 PL and Planete 400 are designed for a rated emergency lighting duration of 1.5 h/1 h and features partly a device for carrying out automatic function and duration tests.

Escape sign luminaire Ex-Lite

Planete 400

The LED emergency light fitting Planete 400

The Planete 400 AD DL completes our lighting portfolio with a robust emergency light fitting with self-contained battery system and state-of-the-art LED technology. An integrated micro-processor monitors the automatic function and duration test and green and yellow LEDs indicate the lighting status. The Planete 400 AD DL is equipped with 32 LEDs and has an emergency light duration of more than one hour.

supply using system light fittings with V-CG-S-Modules

A centrally monitored emergency light system using the CEAG group supply and a central battery system is employed when a large number of emergency lights can be combined and used as system light fittings.

As a rule, these battery systems are not installed in the hazardous areas and, therefore, do not have to cope with the same environmental conditions as the light fittings themselves. This usually results in an extended life span of the batteries with a

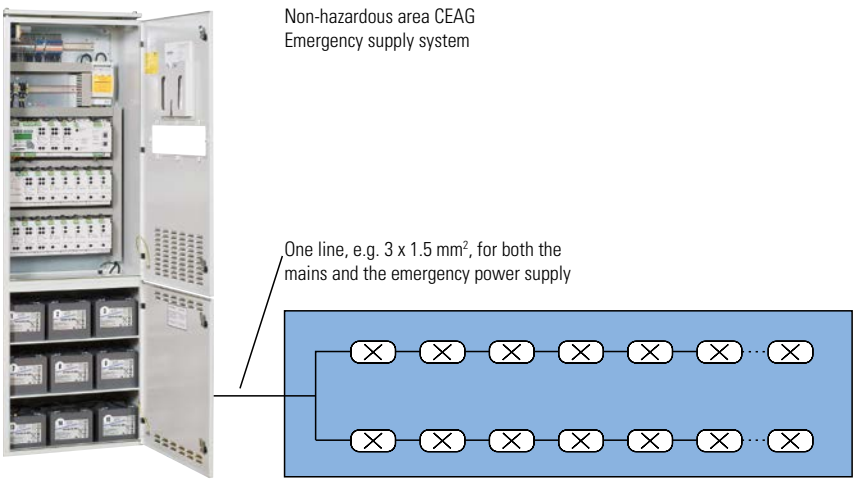
One must, of course, take the increased effort and costs involved in laying cables from the central supply system to the light fittings in the hazardous areas into consideration.

For operation in CEAG emergency lighting systems, we supply versions of our explosion-protected emergency and signal light fittings with V-CG-S modules. Amongst other things, this monitoring module controls the data exchange with the central emergency lighting unit and reports the operating status and any malfunctions.

ule, all CEAG light fittings that are equipped accordingly as individually monitored light fittings can also be connected to a CEAG emergency lighting installation with monitoring facility. This means that explosion-protected light fittings of the series EXIT V-CG-S, Ex-Lite V-CG-S, dKLK 23 V-CG-S and AB 12108-EVG can also be integrated as system light fittings in the practical monitoring system.

lowing significant advantages:

- Automatic performance of the necessary function and duration tests with a central recording of all operating functions and error reports
- Enormous cost savings as manual testing is no longer necessary
- Freely programmable switching mode for mixed operation with one end circuit; i.e. a choice of permanent or standby modus as well as a switching with the general lighting.
- High degree of safety of emergency lighting due to constant display of availability
- Simplified installation by using line supply for data communication
- Mains and emergency power supply have a common connection
  - No separate data line is required
  - Up to 20 light fittings can be connected and addressed to one circuit.



Ex-escape sign luminaires

EXIT for Zone 1 and Zone 21 / Exit 2 for Zone 2 and Zone 22

3 Moulded plastic version with LED-technique

Leading the way in hazardous areas

The EXIT series of explosion-protected escape sign luminaires 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 hazardous areas.

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 is 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 high-grade polycarbonate: the escape signs comply with the latest standards.

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

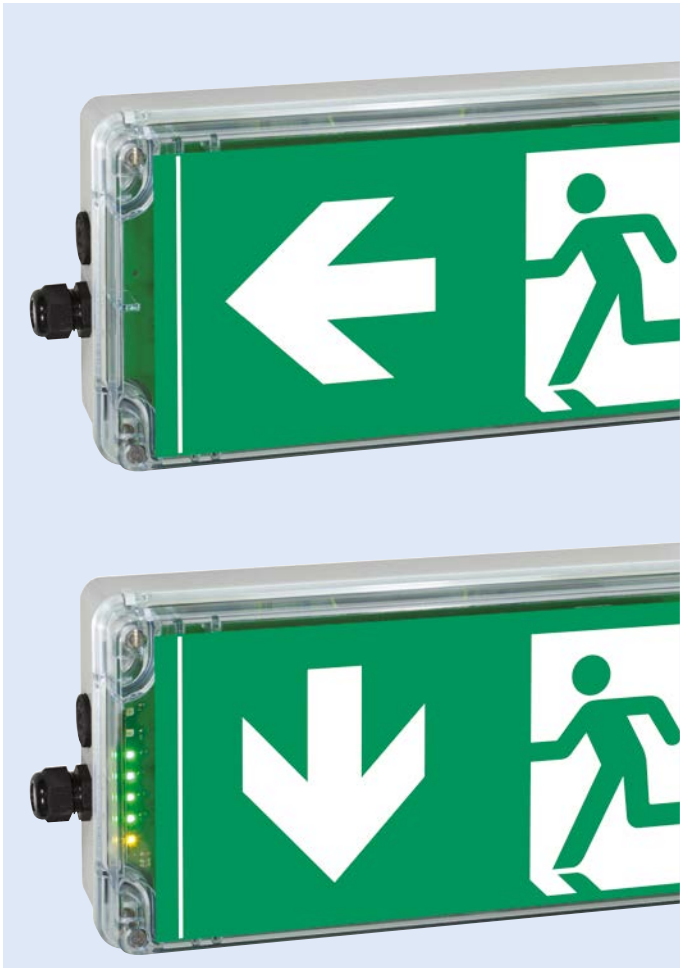
As an emergency lighting luminaire with self-contained battery system for maintained operation, the EXIT N and the EXIT 2 N features an NC battery and automatic function monitoring with operating time test.

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.

Pictogram accord. to ISO 7010

Pictogram accord. to DIN 4844

Pictogram accord. to EN 1838



Features

- All-plastic polycarbonate 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 „EXIT" series are available as mains luminaires "EXIT" and „EXIT 2", e.g. for specially safeguarded industrial networks in production plants, as "EXIT V-CG-S" and „EXIT 2 V-CG-S" emergency lighting luminaires with individual function monitoring for use in CEAG emergency lighting supply systems, as well as "EXIT-N" and „EXIT 2 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 robust, all-plastic polycarbonate housing in the high degree of protection IP66, the **EXIT** 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). The **EXIT 2** series can be used in hazardous areas with explosive gas atmospheres (Zones 2) and explosive dust atmospheres (Zones 22).

Conformity to standards

The EXIT 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 potentially explosive atmospheres. The housing of this luminaire is made of high-grade polycarbonate and it goes without saying that the escape signs 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 approx. 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 difficult to access.

For international use

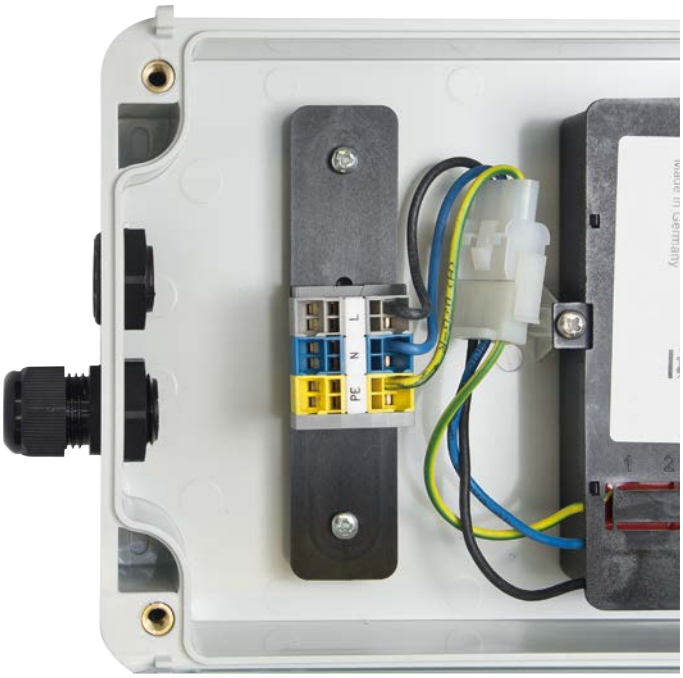
The LED escape sign luminaire of the EXIT series was designed to meet the requirements of a large number of different safety concepts. Thanks to the wide input voltage range from 110 V to 277 V AC and up to 250 V DC, this luminaire can be used internationally, whereby the supply circuits of the LED circuits are intrinsically safe.

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

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 EXIT 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.

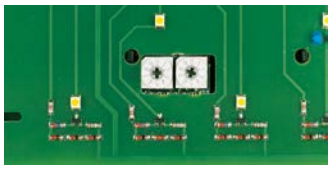


pluggable connection for an easy replacement of components

CEAG emergency lighting supply unit (non-hazardous area)

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 is 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.



Address switch of EXIT V-CG-S

Better safe than sorry

In addition to the EXIT/EXIT 2 for use as a mains luminaire, e.g. for specially safeguarded industrial networks in production plants, there is also the EXIT V-CG-S/EXIT 2 V-CG-S version with easy function monitoring. In conjunction with the V-CG-S monitoring module with coding switch up to 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.

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.

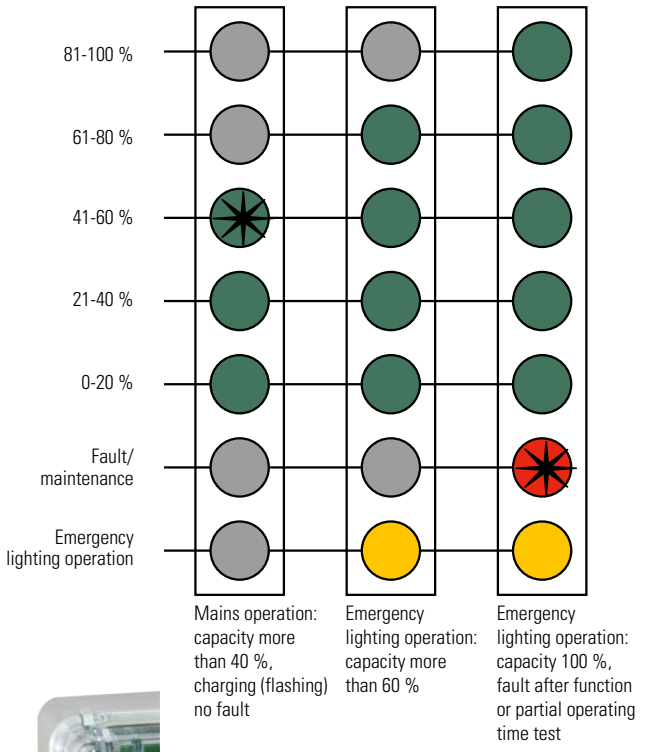
Emergency lighting luminaires with self-contained battery systems

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 EXIT N/EXIT 2 N escape sign luminaire. Five green LEDs supply constant information on the charge status 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 status 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 approx. 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

EXIT / EXIT 24 V / EXIT N / EXIT V-CG-S for Zone 1/21

Ordering details

Type	Scope of delivery	Cable gland/Thread: Plastic cable glands M20	Cable gland/Thread: Screw plug M20	Cable gland/Thread: Metal thread M20	Standard pictogram ISO 7010 Order No.	optional pictogram according to DIN 4844 Order No.	optional pictogram according to EN 1838 Order No.
 EXIT	including cover with silk-screen pictogram (arrow 3h)	1 x M20	1 x M20		**1 2191 000 021**	**1 2191 000 001**	**1 2191 000 011**
	including cover with silk-screen pictogram (arrow 9h)	1 x M20	1 x M20		**1 2191 000 022**	**1 2191 000 002**	**1 2191 000 012**
	including cover with silk-screen pictogram (arrow 6h)	1 x M20	1 x M20		**1 2191 000 023**	**1 2191 000 003**	**1 2191 000 013**
	including cover with silk-screen pictogram (arrow 3h)			2 x M20	**1 2191 000 121**	**1 2191 000 101**	**1 2191 000 111**
	including cover with silk-screen pictogram (arrow 9h)			2 x M20	**1 2191 000 122**	**1 2191 000 102**	**1 2191 000 112**
	including cover with silk-screen pictogram (arrow 6h)			2 x M20	**1 2191 000 123**	**1 2191 000 103**	**1 2191 000 113**
 EXIT 24 V	including cover with silk-screen pictogram (arrow 3h)	1 x M20	1 x M20		**1 2191 024 021**	**1 2191 024 001**	**1 2191 024 011**
	including cover with silk-screen pictogram (arrow 9h)	1 x M20	1 x M20		**1 2191 024 022**	**1 2191 024 002**	**1 2191 024 012**
	including cover with silk-screen pictogram (arrow 6h)	1 x M20	1 x M20		**1 2191 024 023**	**1 2191 024 003**	**1 2191 024 013**
	including cover with silk-screen pictogram (arrow 3h)			2 x M20	**1 2191 024 121**	**1 2191 024 101**	**1 2191 024 111**
	including cover with silk-screen pictogram (arrow 9h)			2 x M20	**1 2191 024 122**	**1 2191 024 102**	**1 2191 024 112**
	including cover with silk-screen pictogram (arrow 6h)			2 x M20	**1 2191 024 123**	**1 2191 024 103**	**1 2191 024 113**
 EXIT N	including cover with silk-screen pictogram (arrow 3h)	1 x M20	1 x M20		**1 2191 030 021**	**1 2191 030 001**	**1 2191 030 011**
	including cover with silk-screen pictogram (arrow 9h)	1 x M20	1 x M20		**1 2191 030 022**	**1 2191 030 002**	**1 2191 030 012**
	including cover with silk-screen pictogram (arrow 6h)	1 x M20	1 x M20		**1 2191 030 023**	**1 2191 030 003**	**1 2191 030 013**
	including cover with silk-screen pictogram (arrow 3h)			2 x M20	**1 2191 030 121**	**1 2191 030 101**	**1 2191 030 111**
	including cover with silk-screen pictogram (arrow 9h)			2 x M20	**1 2191 030 122**	**1 2191 030 102**	**1 2191 030 112**
	including cover with silk-screen pictogram (arrow 6h)			2 x M20	**1 2191 030 123**	**1 2191 030 103**	**1 2191 030 113**
 EXIT V-CG-S	including cover with silk-screen pictogram (arrow 3h)	1 x M20	1 x M20		**1 2191 020 021**	**1 2191 020 001**	**1 2191 020 011**
	including cover with silk-screen pictogram (arrow 9h)	1 x M20	1 x M20		**1 2191 020 022**	**1 2191 020 002**	**1 2191 020 012**
	including cover with silk-screen pictogram (arrow 6h)	1 x M20	1 x M20		**1 2191 020 023**	**1 2191 020 003**	**1 2191 020 013**
	including cover with silk-screen pictogram (arrow 3h)			2 x M20	**1 2191 020 121**	**1 2191 020 101**	**1 2191 020 111**
	including cover with silk-screen pictogram (arrow 9h)			2 x M20	**1 2191 020 122**	**1 2191 020 102**	**1 2191 020 112**
	including cover with silk-screen pictogram (arrow 6h)			2 x M20	**1 2191 020 123**	**1 2191 020 103**	**1 2191 020 113**
 EXIT	including cover, clear, without pictogram	1 x M20	1 x M20		**1 2191 000 004**		
	including cover, clear, without pictogram			2 x M20	**1 2191 000 104**		
EXIT 24 V	including cover, clear, without pictogram	1 x M20	1 x M20		**1 2191 024 004**		
	including cover, clear, without pictogram			2 x M20	**1 2191 024 104**		
EXIT N	including cover, clear, without pictogram	1 x M20	1 x M20		**1 2191 030 004**		
	including cover, clear, without pictogram			2 x M20	**1 2191 030 104**		
EXIT V-CG-S	including cover, clear, without pictogram	1 x M20	1 x M20		**1 2191 020 004**		
	including cover, clear, without pictogram			2 x M20	**1 2191 020 104**		

Other silk-screen pictograms or inscriptions available on request

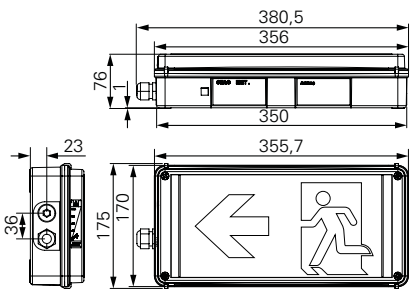
A wide selection of cable glands can be found at www.crouse-hinds.de/products or in the catalogue Part 2, Section 3


arrow 3h


arrow 9 h


arrow 6 h

EXIT / EXIT V-CG-S / EXIT N



Dimensions in mm

Ordering details

	Type	Scope of delivery	Cable gland/Thread			Standard pictogram ISO 7010	
			Plastic cable glands M20	Screw plug M20	Metal thread M20		Order No.
	EXIT 2	including cover with silk-screen pictogram (arrow 3h)	1 x M20	1 x M20			**1 2193 000 021**
		including cover with silk-screen pictogram (arrow 9h)	1 x M20	1 x M20			**1 2193 000 022**
		including cover with silk-screen pictogram (arrow 6h)	1 x M20	1 x M20			**1 2193 000 023**
		including cover with silk-screen pictogram (arrow 3h)			2 x M20		**1 2193 000 121**
		including cover with silk-screen pictogram (arrow 9h)			2 x M20		**1 2193 000 122**
		including cover with silk-screen pictogram (arrow 6h)			2 x M20		**1 2193 000 123**
	EXIT 2 24 V	including cover with silk-screen pictogram (arrow 3h)	1 x M20	1 x M20			**1 2193 024 021**
		including cover with silk-screen pictogram (arrow 9h)	1 x M20	1 x M20			**1 2193 024 022**
		including cover with silk-screen pictogram (arrow 6h)	1 x M20	1 x M20			**1 2193 024 023**
		including cover with silk-screen pictogram (arrow 3h)			2 x M20		**1 2193 024 121**
		including cover with silk-screen pictogram (arrow 9h)			2 x M20		**1 2193 024 122**
		including cover with silk-screen pictogram (arrow 6h)			2 x M20		**1 2193 024 123**
	EXIT 2 N	including cover with silk-screen pictogram (arrow 3h)	1 x M20	1 x M20			**1 2193 030 021**
		including cover with silk-screen pictogram (arrow 9h)	1 x M20	1 x M20			**1 2193 030 022**
		including cover with silk-screen pictogram (arrow 6h)	1 x M20	1 x M20			**1 2193 030 023**
		including cover with silk-screen pictogram (arrow 3h)			2 x M20		**1 2193 030 121**
		including cover with silk-screen pictogram (arrow 9h)			2 x M20		**1 2193 030 122**
		including cover with silk-screen pictogram (arrow 6h)			2 x M20		**1 2193 030 123**
	EXIT 2 V-CG-S	including cover with silk-screen pictogram (arrow 3h)	1 x M20	1 x M20			**1 2193 020 021**
		including cover with silk-screen pictogram (arrow 9h)	1 x M20	1 x M20			**1 2193 020 022**
		including cover with silk-screen pictogram (arrow 6h)	1 x M20	1 x M20			**1 2193 020 023**
		including cover with silk-screen pictogram (arrow 3h)			2 x M20		**1 2193 020 121**
		including cover with silk-screen pictogram (arrow 9h)			2 x M20		**1 2193 020 122**
		including cover with silk-screen pictogram (arrow 6h)			2 x M20		**1 2193 020 123**
	EXIT 2	including cover, clear, without pictogram	1 x M20	1 x M20			**1 2193 000 004**
		including cover, clear, without pictogram			2 x M20		**1 2193 000 104**
	EXIT 2 24 V	including cover, clear, without pictogram	1 x M20	1 x M20			**1 2193 024 004**
		including cover, clear, without pictogram			2 x M20		**1 2193 024 104**
	EXIT 2 N	including cover, clear, without pictogram	1 x M20	1 x M20			**1 2193 030 004**
		including cover, clear, without pictogram			2 x M20		**1 2193 030 104**
	EXIT 2 V-CG-S	including cover, clear, without pictogram	1 x M20	1 x M20			**1 2193 020 004**
		including cover, clear, without pictogram			2 x M20		**1 2193 020 104**

Other silk-screen pictograms or inscriptions available on request

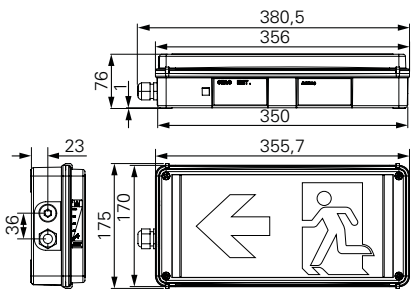
A wide selection of cable glands can be found at www.crouse-hinds.de/products or in the catalogue Part 2, Section 3


arrow 3h


arrow 9 h


arrow 6 h

EXIT 2 / EXIT 2 V-CG-S / EXIT 2 N



Dimensions in mm

Technical data

EXIT / EXIT 24 V / EXIT N / EXIT V-CG-S for Zone 1/21

Technical data

	EXIT / EXIT 24 V	EXIT N	EXIT V-CG-S
EC-Type Examination Certificate	BVS 09 ATEX E 029	BVS 09 ATEX E 029	BVS 09 ATEX E 029
IECEx Certificate of Conformity	IECEx BVS 13.0017	IECEx BVS 13.0017	IECEx BVS 13.0017
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex e ib mb IIC T6/T5 Gb Ⓔx II 2 D Ex tb IIIC T80°C Db	Ⓔx II 2 G Ex e ib mb IIC T5/T4 Gb Ⓔx II 2 D Ex tb IIIC T80°C Db“	Ⓔx II 2 G Ex e ib mb IIC T6/T5 Gb Ⓔx II 2 D Ex tb IIIC T80°C Db
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 T6/T5 Gb Ex tb IIIC T80°C Db
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	-20 °C up to +40°C (T6) -20 °C up to +50°C (T5)
Battery		12 V/800 mAh NC-Accu	
Rated power consumption	approx. 6 VA	approx. 10 VA	approx. 6 VA
Rated voltage	110 V - 277 V AC 110 V - 250 V DC	110 V - 277 V AC 110 V - 250 V DC	220 V - 254 V AC 195 V - 250 V DC
Rated voltage EXIT 24 V	12 - 24 V DC (-15 % / + 20 %)		
Rated current AC/DC	220 V = 20 mA, 110 V = 40 mA	230 V ≃ 50 mA, 110 V ≃100 mA	220 V = 20 mA, 110 V = 40 mA
Frequency	DC and 50 - 60 Hz (AC)	DC and 50 - 60 Hz (AC)	DC and 50 - 60 Hz (AC)
Charging duration for capacity > 90 %		24 h	
Power factor cos φ	≥ 0.95	≃ 0.5	≥ 0.95
Circuit	electronic power supply	electronic power supply	electronic power supply
Protection class	I	I	I
Viewing distance	25 m	25 m	25 m
Lamp / Illuminant	high output-LEDs, white	high output-LEDs, white	high output-LEDs, white
Rated emergency lighting duration		approx. 3 h	
Dimensions (L x W x H)	356 x 175 x 76 mm	356 x 175 x 76 mm	356 x 175 x 76 mm
Connecting terminals	3 x loop terminal 2.5 mm² [1)]	3 x loop terminal 2.5 mm² [1)]	3 x loop terminal 2.5 mm² [1)]
Enclosure colour	grey, RAL 7035	grey, RAL 7035	grey, RAL 7035
Enclosure material	Polycarbonate	Polycarbonate	Polycarbonate
Weight	2 kg	2.5 kg	2.2 kg
Cable glands / gland plates / enclosure drilling	1 x Ex-e cable glands M20 x 1.5 (plastic) / 1 x Ex-e-screw plug M20 or 2 x M20 x1.5 metal thread, 1 x screw plug M20	1 x Ex-e cable glands M20 x 1.5 (plastic) / 1 x Ex-e-screw plug M20 or 2 x M20 x1.5 metal thread, 1 x screw plug M20	1 x Ex-e cable glands M20 x 1.5 (plastic) / 1 x Ex-e-screw plug M20 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	Polycarbonate	Polycarbonate	Polycarbonate

[1)] Option: 3 x 4 mm² screw terminals



Technical data

	EXIT 2/ EXIT 2 24 V	EXIT 2 N	EXIT 2 V-CG-S
Type Examination Certificate	BVS 15 ATEX E 074	BVS 15 ATEX E 074	BVS 15 ATEX E 074
IECEx Certificate of Conformity	IECEx BVS 15.0065	IECEx BVS 15.0065	IECEx BVS 15.0065
Marking accd. to 2014/34/EU	Ⓔx II 3 G Ex e ic mc IIC T6/T5 Gc Ⓔx II 3 D Ex tc IIIC T80°C Dc	Ⓔx II 3 G Ex e ic mc IIC T5/T4 Gc Ⓔx II 3 D Ex tc IIIC T80°C Dc	Ⓔx II 3 G Ex e ic mc IIC T6/T5 Gc Ⓔx II 3 D Ex tc IIIC T80°C Dc
Marking accd. to IECEx	Ex e ic mc IIC T6/T5 Gc Ex tc IIIC T80°C Dc	Ex e ic mc IIC T6/T5 Gc Ex tc IIIC T80°C Dc	Ex e ic mc IIC T6/T5 Gc Ex tc IIIC T80°C Dc
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	-20 °C up to +40°C (T6) -20 °C up to +50°C (T5)
Battery		12 V/800 mAh NC-Accu	
Rated power consumption	approx. 6 VA	approx. 10 VA	approx. 6 VA
Rated voltage	110 V - 277 V AC 110 V - 250 V DC	110 V - 277 V AC 110 V - 250 V DC	220 V - 254 V AC 195 V - 250 V DC
Rated voltage EXIT 24 V	12 - 24 V DC (-15 % / + 20 %)		
Rated current AC/DC	220 V = 20 mA, 110 V = 40 mA	230 V ≃ 50 mA, 110 V ≃100 mA	220 V = 20 mA, 110 V = 40 mA
Frequency	DC and 50 - 60 Hz (AC)	DC and 50 - 60 Hz (AC)	DC and 50 - 60 Hz (AC)
Charging duration for capacity > 90 %		24 h	
Power factor cos φ	≥ 0.95	≃ 0.5	≥ 0.95
Circuit	electronic power supply	electronic power supply	electronic power supply
Protection class	I	I	I
Viewing distance	25 m	25 m	25 m
Lamp / Illuminant	high output-LEDs, white	high output-LEDs, white	high output-LEDs, white
Rated emergency lighting duration		approx. 3 h	
Dimensions (L x W x H)	356 x 175 x 76 mm	356 x 175 x 76 mm	356 x 175 x 76 mm
Connecting terminals	3 x loop terminal 2 x 2.5 mm² [1)]	3 x loop terminal 2 x 2.5 mm² [1)]	3 x loop terminal 2 x2.5 mm² [1)]
Enclosure colour	grey, RAL 7035	grey, RAL 7035	grey, RAL 7035
Enclosure material	Polycarbonate	Polycarbonate	Polycarbonate
Weight	2 kg	2.5 kg	2.2 kg
Cable glands / gland plates / enclosure drilling	1 x Ex-e cable glands M20 x 1.5 (plastic) / 1 x Ex-e-screw plug M20 or 2 x M20 x1.5 metal thread, 1 x screw plug M20	1 x Ex-e cable glands M20 x 1.5 (plastic) / 1 x Ex-e-screw plug M20 or 2 x M20 x1.5 metal thread, 1 x screw plug M20	1 x Ex-e cable glands M20 x 1.5 (plastic) / 1 x Ex-e-screw plug M20 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	Polycarbonate	Polycarbonate	Polycarbonate

[1)] Option: 3 x 4 mm² screw terminals

Ex-Escape sign luminaires

Ex-Lite

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.

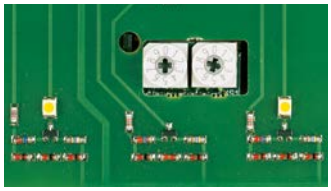
Ex-Lite ZE for NEC-application

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.

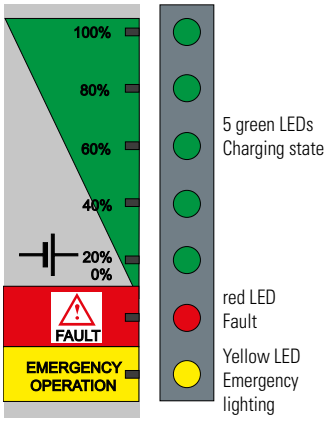
Better safe than sorry

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.

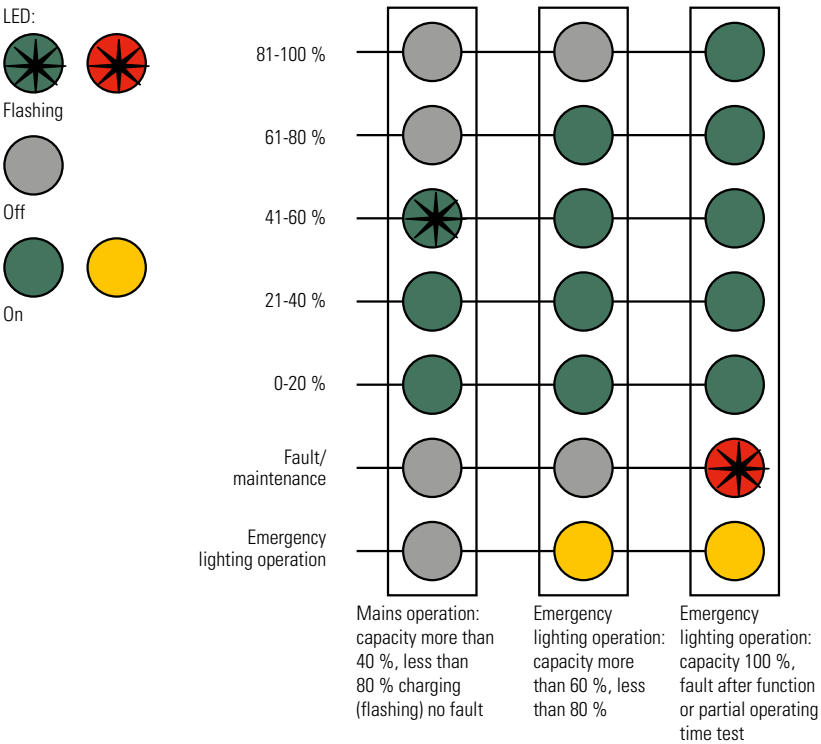
After ca. 3 months a partial operating time test (35 mins.) is initiated automatically. If a minimum emergency lighting operating time of 30 minutes is not reached, it is signalized by the flashing red LED. After the cause of the fault has been eliminated, e.g. by charging or replacing the battery, the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

Low temperature version down to -40 °C

A new version extending the temperature range from -40 °C up to +50 °C is available for the Ex-Lite LT and from -40 °C to +40 °C for the Ex-Lite NLT.

This means that the requirements for countries with extremely low ambient temperatures can be fulfilled.

A special luminaire heating system allows a safe charging / discharging of the Ex-Lite NLT, even at temperatures below the physically determined limit of -10 ° C.



Ordering details / Dimension drawing

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

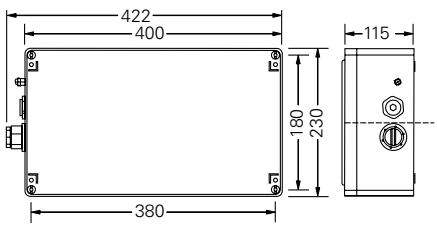
Ordering details standard temperature

	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.	optional pictogram accord. to EN 1838 Order No.
	Ex-Lite	including cover with pictogram (arrow 3h)	1 x M25	1 x M25		**1 2191 011 021**	**1 2191 011 001**	**1 2191 011 011**
		including cover with pictogram (arrow 9h)	1 x M25	1 x M25		**1 2191 011 022**	**1 2191 011 002**	**1 2191 011 012**
		including cover with pictogram (arrow 6h)	1 x M25	1 x M25		**1 2191 011 023**	**1 2191 011 003**	**1 2191 011 013**
		including cover with pictogram (arrow 3h)			2 x M20	**1 2191 011 121**	**1 2191 011 101**	**1 2191 011 111**
		including cover with pictogram (arrow 9h)			2 x M20	**1 2191 011 122**	**1 2191 011 102**	**1 2191 011 112**
		including cover with pictogram (arrow 6h)			2 x M20	**1 2191 011 123**	**1 2191 011 103**	**1 2191 011 113**
	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**	**1 2191 021 011**
		including cover with pictogram (arrow 9h)	1 x M25	1 x M25		**1 2191 021 022**	**1 2191 021 002**	**1 2191 021 012**
		including cover with pictogram (arrow 6h)	1 x M25	1 x M25		**1 2191 021 023**	**1 2191 021 003**	**1 2191 021 013**
		including cover with pictogram (arrow 3h)			2 x M20	**1 2191 021 121**	**1 2191 021 101**	**1 2191 021 111**
		including cover with pictogram (arrow 9h)			2 x M20	**1 2191 021 122**	**1 2191 021 102**	**1 2191 021 112**
		including cover with pictogram (arrow 6h)			2 x M20	**1 2191 021 123**	**1 2191 021 103**	**1 2191 021 113**
	Ex-Lite N	including cover with pictogram (arrow 3h)	1 x M25	1 x M25		**1 2191 031 021**	**1 2191 031 001**	**1 2191 031 011**
		including cover with pictogram (arrow 9h)	1 x M25	1 x M25		**1 2191 031 022**	**1 2191 031 002**	**1 2191 031 012**
		including cover with pictogram (arrow 6h)	1 x M25	1 x M25		**1 2191 031 023**	**1 2191 031 003**	**1 2191 031 013**
		including cover with pictogram (arrow 3h)			2 x M20	**1 2191 031 121**	**1 2191 031 101**	**1 2191 031 111**
		including cover with pictogram (arrow 9h)			2 x M20	**1 2191 031 122**	**1 2191 031 102**	**1 2191 031 112**
		including cover with pictogram (arrow 6h)			2 x M20	**1 2191 031 123**	**1 2191 031 103**	**1 2191 031 113**
	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**		
	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

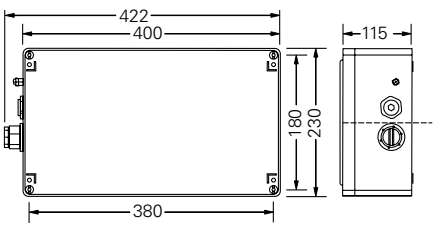
Ordering details deep temperature down to -40 °C

	Type	Scope of delivery	Cable gland/Thread			Standard Pictogram ISO 7010	optional Pictogram accord. to	
			Plastic cable glands	Screw plug	Metal thread		DIN 4844 	EN 1838 
						Order No.	Order No.	Order No.
	Ex-Lite LT	including cover with pictogram (arrow 3h)	1 x M25	1 x M25		**1 2191 013 021**	**1 2191 013 001**	**1 2191 013 011**
		including cover with pictogram (arrow 9h)	1 x M25	1 x M25		**1 2191 013 022**	**1 2191 013 002**	**1 2191 013 012**
		including cover with pictogram (arrow 6h)	1 x M25	1 x M25		**1 2191 013 023**	**1 2191 013 003**	**1 2191 013 013**
		including cover with pictogram (arrow 3h)			2 x M20	**1 2191 013 121**	**1 2191 013 101**	**1 2191 013 111**
		including cover with pictogram (arrow 9h)			2 x M20	**1 2191 013 122**	**1 2191 013 102**	**1 2191 013 112**
		including cover with pictogram (arrow 6h)			2 x M20	**1 2191 013 123**	**1 2191 013 103**	**1 2191 013 113**
	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**	**1 2191 021 011**
		including cover with pictogram (arrow 9h)	1 x M25	1 x M25		**1 2191 021 022**	**1 2191 021 002**	**1 2191 021 012**
		including cover with pictogram (arrow 6h)	1 x M25	1 x M25		**1 2191 021 023**	**1 2191 021 003**	**1 2191 021 013**
		including cover with pictogram (arrow 3h)			2 x M20	**1 2191 021 121**	**1 2191 021 101**	**1 2191 021 111**
		including cover with pictogram (arrow 9h)			2 x M20	**1 2191 021 122**	**1 2191 021 102**	**1 2191 021 112**
		including cover with pictogram (arrow 6h)			2 x M20	**1 2191 021 123**	**1 2191 021 103**	**1 2191 021 113**
	Ex-Lite NLT	including cover with pictogram (arrow 3h)	1 x M25	1 x M25		**1 2191 033 021**	**1 2191 033 001**	**1 2191 033 011**
		including cover with pictogram (arrow 9h)	1 x M25	1 x M25		**1 2191 033 022**	**1 2191 033 002**	**1 2191 033 012**
		including cover with pictogram (arrow 6h)	1 x M25	1 x M25		**1 2191 033 023**	**1 2191 033 003**	**1 2191 033 013**
		including cover with pictogram (arrow 3h)			2 x M20	**1 2191 033 121**	**1 2191 033 101**	**1 2191 033 111**
		including cover with pictogram (arrow 9h)			2 x M20	**1 2191 033 122**	**1 2191 033 102**	**1 2191 033 112**
		including cover with pictogram (arrow 6h)			2 x M20	**1 2191 033 123**	**1 2191 033 103**	**1 2191 033 113**
	Ex-Lite LT	including cover, clear, without pictogram	1 x M25	1 x M25		**1 2191 013 004**		
		including cover, clear, without pictogram			2 x M20	**1 2191 013 104**		
	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 NLT	including cover, clear, without pictogram	1 x M25	1 x M25		**1 2191 033 004**		
		including cover, clear, without pictogram			2 x M20	**1 2191 033 104**		

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 LT / Ex-Lite V-CG-S / Ex-Lite NLT




arrow 3h


arrow 9 h


arrow 6 h

Dimensions in mm

Technical data

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

Technical data

	Ex-Lite / Ex-Lite LT / Ex-Lite 24 V	Ex-Lite V-CG-S	Ex-Lite N / Ex-Lite NLT
EC-Type Examination Certificate	PTB 02 ATEX 2111	PTB 02 ATEX 2111	PTB 02 ATEX 2111
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex e ib mb IIC T6/T5 Gb Ⓔx II 2 D Ex tb IIIC T80°C Db	Ⓔx II 2 G Ex e ib mb IIC T6/T5 Gb Ⓔx II 2 D Ex tb IIIC T80°C Db	Ⓔx II 2 G Ex e ib mb IIC T5/T4 Gb Ⓔx 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 T6/T5 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 Ex-Lite LT	-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 -40 °C up to +40 °C Ex-Lite NLT +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

C SA® US

C SA® US

Ex-emergency luminaires

Planete 400 AD DL LED emergency lighting luminaire with a self-contained battery system made of metal for Zone 1 and 21
AB 12108-EVG safety luminaire made of metal for Zone 1 and 21
EE 11 PL emergency lighting luminaire with a self-contained battery system made of metal for Zone 1 and 21

The robust safety concept for hazardous areas

With its robust flameproof enclosure made of copper-free aluminium (Cu < 0.1%), the high degree of protection IP67 and the protective tube made of borosilicate glass with high mechanical and thermal resistance, this luminaire series is ideal for use in areas with adverse environmental conditions.

Central monitoring

The Ex luminaire AB 12108-EVG is equipped with an electronic ballast and with an 8-W fluorescent lamp for mains and emergency lighting. 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.

LED emergency lighting luminaires with a self-contained battery system

The new Planete 400 AD DL completes our lighting portfolio with a robust light fitting in modern LED technology. An integrated micro-processor monitors the automatic function and duration test and green and yellow LEDs indicate the lighting status. The Planete 400 AD DL is equipped with 32 LEDs and ensures emergency duration of more than an hour. During mains supply (maintained operation) all LED will be on with reduced light output.

The classic solution for decentralized use

The Ex light fitting EE 11 PL with a self-contained battery system is fitted with an 11 W compact fluorescent lamp and is suitable for non-maintained operation. It has an additional 3 W for permanent lighting and is designed for a 1.5 hour emergency lighting duration. The charge status and the mains supply are also indicated by LEDs. The housing is made of a copper-free aluminium and has a borosilicate glass tube.

They are used for illuminating emergency exit routes, as well as an emergency light fitting for the identification of exits.

Features

- Housing made of copper-free aluminium with a borosilicate glass tube
- High degree of safety IP67
- 8 W fluorescent lamp for main and emergency lighting (AB 12 108-EVG)
- Maintenance-free LED illuminant with long lifespan (Planete 400)
- 11 W compact fluorescent lamp for emergency lighting (EE 11 PL)
- Operation and monitoring possible from CEAG emergency lighting system

Ordering details

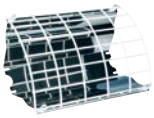
Type	Rated voltage	Thread	Ex-d Blanking plug	Order No.
Planete 400 AD DL	220 - 240 V AC	2 x 3/4" NPT, metal thread	1	**NOR 000 005 160 055**
Planete 400 AD DL		2 x M25, metal thread	1	**NOR 000 005 160 056**
AB 12108-EVG		2 x 3/4" NPT, metal thread	1	**NOR 000 005 060 820**
EE 11 PL 220 - 240 V, 1.5 h	220 - 240 V AC	2 x M25, metal thread	1	**NOR 000 005 160 010**
EE 11 PL 108 - 127 V, 1.5 h	108 - 127 V AC	2 x M25, metal thread	1	**NOR 000 005 160 011**
EE 11 PL 220 - 240 V, 1.5 h	220 - 240 V AC	2 x 3/4" NPT, metal thread	1	**NOR 000 005 160 013**
EE 11 PL 108 - 127 V, 1.5 h	108 - 127 V AC	2 x 3/4" NPT, metal thread	1	**NOR 000 005 160 014**

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

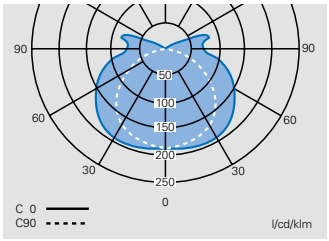
Accessories

Type	OU	Order No.
Pictogram foil with arrow 3 h	1	**NOR 000 000 506 915**
Pictogram foil with arrow 9 h	1	**NOR 000 000 506 907**
Pictogram foil with arrow 6 h	1	**NOR 000 000 506 966**
Pictogram foil with arrow 12 h	1	**400 71 354 383**
Pictogram foil with „EXIT"	1	**NOR 000 000 506 965**
Reflector RAB 108 (AISI 304)	1	**NOR 003 045 060 471**
Reflector RAB 108 (AISI 304) + guard (steel white epoxy coating)	1	**NOR 003 045 060 819**
Reflector RAB 108 (AISI 316)	1	**NOR 003 165 060 471**
Reflector RAB 108 (AISI 316) + guard (steel white epoxy coating)	1	**NOR 003 165 060 819**

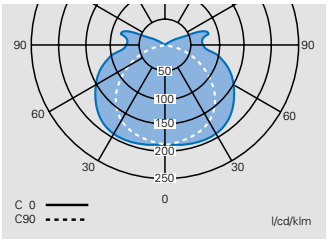


Polar curves / dimension drawing

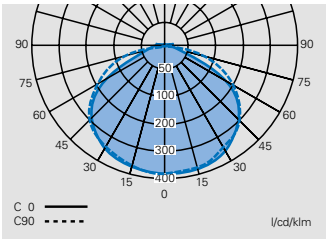
AB 12108 EVG / EE 11 PL / Planete 400 AD DL



Polar curve
AB 12108-EVG

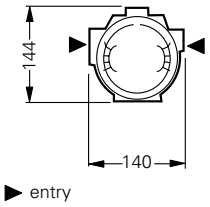


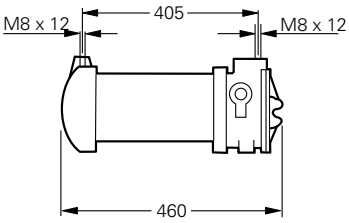
Polar curve
EE 11 PL



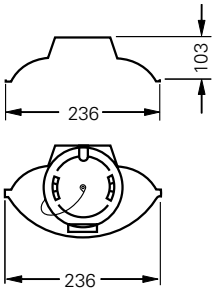
Polar curve
Planete 400

AB 12108-EVG / EE 11 PL / Planete 400





Reflector / Reflector with guard



Dimensions in mm



Technical data

	Planete 400 AD DL	AB 12108 EVG	EE 11 PL
EC-Type Examination Certificate	LOM 03 ATEX 2036 X	LOM 02 ATEX 2013 X	LOM 03 ATEX 2036 X
IECEx Certificate of Conformity		IECEx BKI 07.0008 X	
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex d IIC T6 Gb Ⓔx II 2 D Ex tb IIIC T85 °C Db	Ⓔx II 2 G Ex d IIC T6/T5 Gb Ⓔx II 2 D Ex tb IIIC T58 °C/T73 °C Db	Ⓔx II 2 G Ex d IIC T6 Gb Ⓔx II 2 D Ex tb IIIC T85 °C Db
Marking accd. to IECEx		Ex de IIC T6/T5 Gb Ex tb IIIC T58 °C/T73 °C Db	
Permissible ambient temperature specified data	-20 °C up to +55 °C -5 °C up to +35 °C	-20 °C up to +55 °C (temperature class T5), -20 °C up to +40 °C (temperature class T6) -20 °C up to +40 °C	-20 °C up to +55 °C -5 °C up to +35 °C
Battery	1.7 Ah NC-accumulator		4 Ah NC-accumulator
Rated power consumption	1.1 W	approx. 16 VA	approx. 16 VA
Rated voltage	220 - 240 V AC	220 - 230 V AC 220 V DC +25 %/-20 %	220 - 240 V AC
Rated voltage (optional)			108 V - 127 V AC
Frequency	50 -60 Hz	50 Hz	50 -60 Hz
Charging duration	≥ 14 h		≥ 24 h
Power factor cos φ	0.95	0.95	0.95
Rated operating duration	1.0 h	for central battery system	1.5 h
Circuit		EVG	
Protection class	I	I	I
Viewing distance	12 m	12 m	12 m
Lamp / Illuminant	32 LEDs , 5.5 W	1 x 8 W/T5-fluorescent lamp for mains- and emergency operation	1 x 11 W compact fluorescent lamp for emergency operation
Lamp cap	--	G5 accord. IEC 60061	2G7 accord. IEC 60061
Luminous flux in mains operation	16 lm	450 lm [1]	--
Luminous flux in emergency operation	471 lm	337 lm (75 %) [1]	630lm [1]
Pilot lamp			white LED
Dimensions (L x W x H)	460 x 144 x 140 mm	460 x 144 x 140 mm	460 x 144 x 140 mm
Connecting terminals	L, N and PE: 2 x 2, 5 mm² / PE ext. 2 x 6 mm²	L, N and PE: 2 x 2, 5 mm² / PE ext. 2 x 6 mm²	L, N and PE: 2 x 2, 5 mm² / PE ext. 2 x 6 mm²
Enclosure colour	grey RAL 7032 (body), RAL 7016 (cover)	grey RAL 7032 (body), RAL 7016 (cover)	grey RAL 7032 (body), RAL 7016 (cover)
Enclosure material	copper-free aluminium with powder coating	copper-free aluminium with powder coating	copper-free aluminium with powder coating
Weight	5.0 kg	5.3 kg	5.6 kg
Cable glands / gland plates / enclosure drilling	2 x 3/4" thread, 1 x 3,/4" screw plug or 2 x M25 thread, 1 x M25 screw plug	2 x 3/4" thread, 1 x 3,/4" screw plug or 2 x M25 thread, 1 x M25 screw plug	2 x 3/4" thread, 1 x 3,/4" screw plug or 2 x M25 thread, 1 x M25 screw plug
Type of mounting	ceiling-/wall mounting	ceiling-/wall mounting	ceiling-/wall mounting
Degree of protection accd. to EN 60529	IP67	IP67	IP67
Protective cover / protective bowl	borosilicate glass	borosilicate glass	borosilicate glass

[1] depends on used lamps

Ex-signal and escape sign luminaire

dKLK 23 / dKLK 23 LED

3 Plastic design for Zone 1 and 21

Securing and signalling

These light fittings meet the requirements of ATEX-Directive 2014/34/EU for temperature class T6. They are certified for use in hazardous areas in Zones 1 and 2 with a temperature class up to T6, as well as for explosive dust atmospheres in Zones 21 and 22. What is more, they also meet the requirements in accordance with EN 60598, Part 2.22 for emergency lighting.

The Ex light fittings dKLK 23 are suited for compact fluorescent lamps with an integrated electronic ballast and outputs of 5-8 W. If a flash module is fitted in the housing (optional), the light fitting can be used also as a strobe light.

The dKLK 23 LED version is supplied with a 6 W LED lamp. This combines the innovative LED technology with main features, such as:

- Energy saving
- Environmentally friendly because mercury free
- Long service life
- Cost-saving due to long maintenance intervals
- Ideally suited for intermittent operation as flashing light

The housing is made of a fibreglass reinforced polyester and the protective globe of a transparent or coloured polycarbonate.

When fitted with coloured protective cover, they are also used as signal lights. In combination with the exit cubes, they are used as emergency lighting luminaires.

The luminaire is connected using a flameproof eXLink coupler plug or via a flameproof cable gland.

With the optional V-CG-S monitoring module with coding switch for max. 20 addresses, they can be connected as individually monitored emergency lighting luminaires to the CEAG emergency lighting supply system (dKLK 23 V-CG-S).

Features

- Signal light fitting, also with coloured protective globe, for use in environments in temperature class T6
- For compact fluorescent lamps with integrated EVG
- Optionally, LED-lamp
- For ceiling and wall mounting
- High degree of protection IP66
- Connection to the CEAG emergency lighting supply systems with individual monitoring possible
- Optional flash module

Ordering details

Type	Scope of delivery	Colour of protective cover	Order No.
dKLK 23/eXLink	1 x eXLink coupler 2-pol. + PE for cable Ø 7.5 - 11 mm	clear	**GHG 871 1001 R0001**
dKLK 23/eXLink	1 x eXLink coupler 2-pol. + PE for cable Ø 7.5 - 11 mm	red	**GHG 871 1101 R0001**
dKLK 23/eXLink	1 x eXLink coupler 2-pol. + PE for cable Ø 7.5 - 11 mm	green	**GHG 871 1201 R0001**
dKLK 23/eXLink	1 x eXLink coupler 2-pol. + PE for cable Ø 7.5 - 11 mm	blue	**GHG 871 1301 R0001**
dKLK 23 V-CG-S /eXLink [1]	1 x eXLink coupler 2-pol. + PE for cable Ø 7.5 - 11 mm, with V-CG-S-module and address-switch	clear	**GHG 871 2001 R0001**

dKLK 23/Ex d	1 x Ex-d-cable gland M20 x 1.5 for Ø 7 - 12 mm	clear	**GHG 871 1001 R0101**
dKLK 23/Ex d	1 x Ex-d-cable gland M20 x 1.5 for Ø 7 - 12 mm	red	**GHG 871 1101 R0101**
dKLK 23/Ex d	1 x Ex-d-cable gland M20 x 1.5 for Ø 7 - 12 mm	green	**GHG 871 1201 R0101**
dKLK 23/Ex d	1 x Ex-d-cable gland M20 x 1.5 for Ø 7 - 12 mm	blue	**GHG 871 1301 R0101**
dKLK 23 V-CG-S /Ex d [1]	1 x Ex-d-cable gland M20 x 1.5 for Ø 7 - 12 mm with V-CG-S-module and address-switch	clear	**GHG 871 2001 R0101**

dKLK 23 LED/eXLink	1 x eXLink coupler 2-pol. + PE for cable Ø 7.5 - 11 mm	clear	**GHG 871 4021 R0001**
dKLK 23 LED/eXLink	1 x eXLink coupler 2-pol. + PE for cable Ø 7.5 - 11 mm	red	**GHG 871 4121 R0001**
dKLK 23 LED/eXLink	1 x eXLink coupler 2-pol. + PE for cable Ø 7.5 - 11 mm	green	**GHG 871 4221 R0001**
dKLK 23 LED/eXLink	1 x eXLink coupler 2-pol. + PE for cable Ø 7.5 - 11 mm	blue	**GHG 871 4321 R0001**

dKLK 23 LED/Ex d	1 x Ex-d-cable gland M20 x 1.5 for Ø 7 - 12 mm	clear	**GHG 871 4021 R0101**
dKLK 23 LED/Ex d	1 x Ex-d-cable gland M20 x 1.5 for Ø 7 - 12 mm	red	**GHG 871 4121 R0101**
dKLK 23 LED/Ex d	1 x Ex-d-cable gland M20 x 1.5 for Ø 7 - 12 mm	green	**GHG 871 4221 R0101**
dKLK 23 LED/Ex d	1 x Ex-d-cable gland M20 x 1.5 for Ø 7 - 12 mm	blue	**GHG 871 4321 R0101**

1) For connection to CEAG emergency supply systems, with address switch for 20 addresses.

A wide selection of cable glands can be found at www.crouse-hinds.de/products or in the catalogue Part 2, Section 3

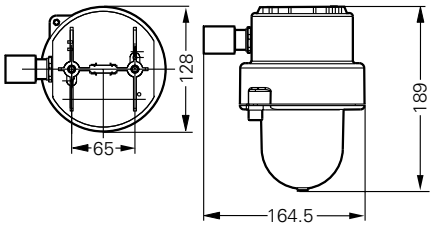
Accessories

Type	Order No.
Flash module Eurolite E27 Strobe	**GHG 870 1912 R0001**
Exit sign cube (242 x 227 x 242 mm)	**400 71 344 115**
Compact fluorescent lamp 7 W with EVG	**GHG 870 9302 P0002**
Philips Master LED lamp 6W E27 CW 55	**GHG 870 1914 R0001**

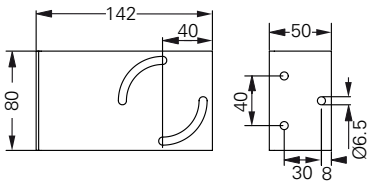
Dimension drawing / Polar curve

dKLK 23 / dKLK 23 LED / dKLK 23 V-CG-S

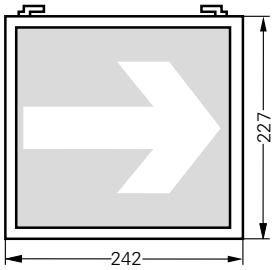
dKLK 23

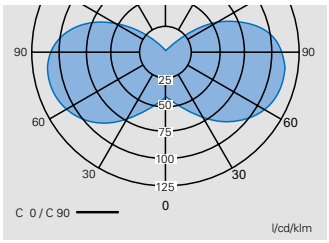


Mounting bracket



Exit sign cube





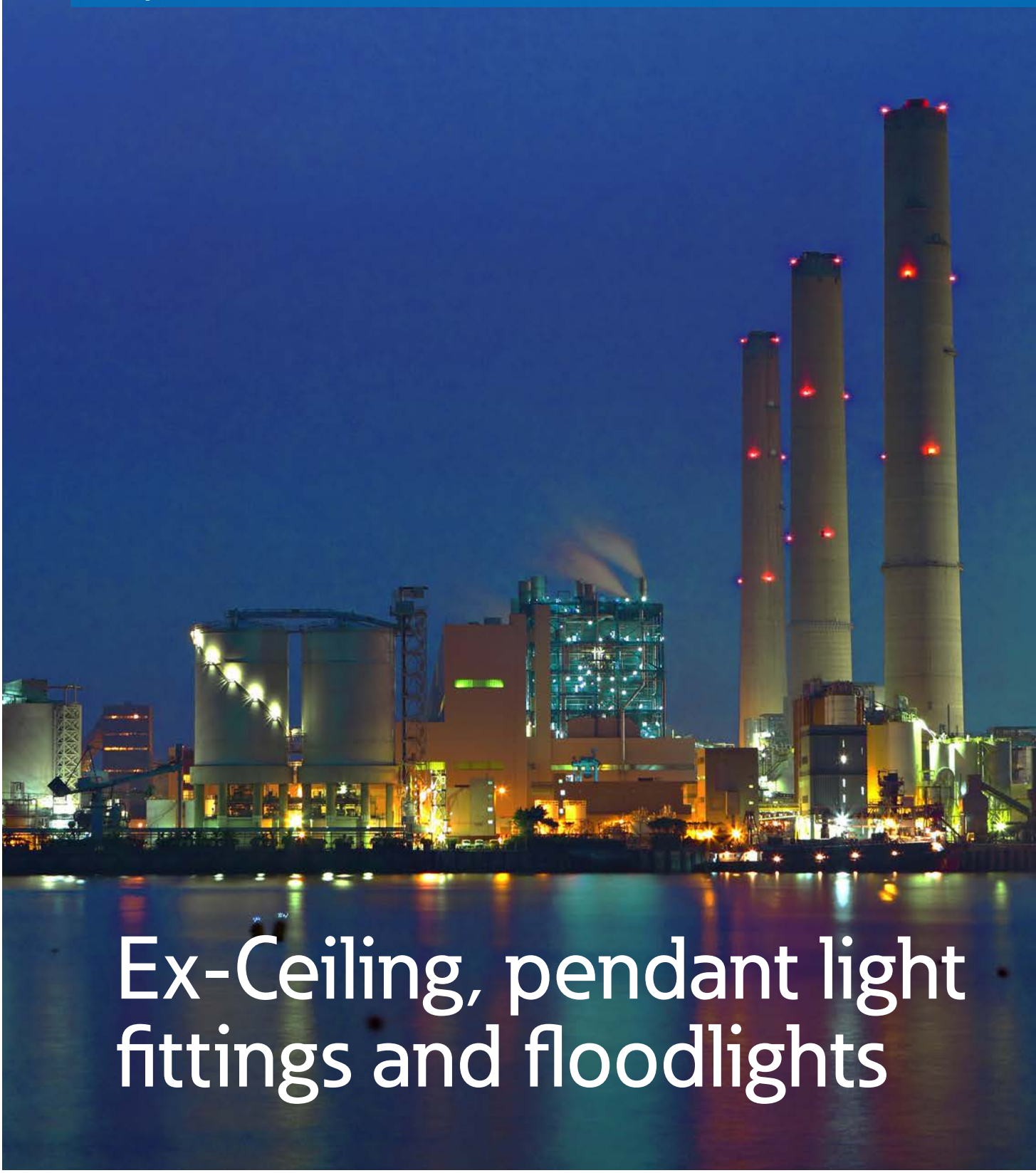
Polar curve
dKLK 23 / dKLK 23 V-CG-S

Dimensions in mm

Technical data

	dKLK 23	dKLK 23 LED	dKLK 23 V-CG-S
EC-Type Examination Certificate	BVS 10 ATEX E 003	BVS 10 ATEX E 003	BVS 10 ATEX E 003
IECEx Certificate of Conformity	IECEx BVS 10.0003	IECEx BVS 10.0003	IECEx BVS 10.0003
Marking accd. to 2014/34/EU	Ⓔx II 2G Ex d IIC T6 Gb Ⓔx II 2D Ex tb IIIC T80°C Db IP66	Ⓔx II 2G Ex d IIC T6 Gb Ⓔx II 2D Ex tb IIIC T80°C Db IP66	Ⓔx II 2G Ex d IIC T6 Gb Ⓔx II 2D Ex tb IIIC T80°C Db IP66
Marking accd. to IECEx	Ex d IIC T6 Gb Ex tb IIIC T80°C Db	Ex d IIC T6 Gb Ex tb IIIC T80°C Db	Ex d IIC T6 Gb Ex tb IIIC T80°C Db
Permissible ambient temperature	-20 °C up to +45 °C (dept. on lamp power and operating position)	-20 °C up to +40 °C	-20 °C up to +45 °C (dept. on lamp power and operating position)
Rated voltage	230 V AC / 230 V DC	230 V AC	230 V AC / 230 V DC
Rated current	approx. 30 mA	approx. 30 mA	approx. 40 mA
Frequency	50 - 60 Hz (AC)	50 - 60 Hz (AC)	50 - 60 Hz (AC)
Power factor cos φ	≥ 0.95	≥ 0.95	≥ 0.95
Protection class	I	I	I
Lamp / Illuminant	Compact-fluorescent lamp with integrated electr. ballast, lamp cap E27, lamp power 5-8 W, manufacturer Philips MASTER PL Electronic 5W/8 W or equivalent; flashmodule (see accessories)	Philips Master LED 6 W	Compact-fluorescent lamp with integrated electr. ballast, lamp cap E27, lamp power 5-8 W, manufacturer Philips MASTER PL Electronic 5W/8 W or equivalent;
Rated luminous flux	approx. 400 lm (7/8 W) [1]	approx. 470 lm [1]	approx. 400 lm (7/8 W) [1]
Lamp cap	E27 accord. IEC 60238	E27 accord. IEC 60238	E27 accord. IEC 60238
Dimensions (L x W x H)	164.5 x 189 x 128 mm	164.5 x 189 x 128 mm	164.5 x 189 x 128 mm
Connecting terminals	flameproof inlet eXLink, 3-pole, 2 + PE, cage clamp terminal for cable Ø 8-11 mm, max. 1.5 mm² or flameproof cable gland M20 x 1.5 for cable Ø 7 - 12 mm; terminal L, N, PE max. 2.5 mm² clamp terminal	flameproof inlet eXLink, 3-pole, 2 + PE, cage clamp terminal for cable Ø 8-11 mm max. 1.5 mm² or flameproof cable gland M20 x 1.5 for cable Ø 7 - 12 mm, terminal L, N, PE max. 2.5 mm² clamp terminal	flameproof inlet eXLink, 3-pole, 2 + PE, cage clamp terminal for cable Ø 8-11 mm max. 1.5 mm² or flameproof cable gland M20 x 1.5 for cable Ø 7 - 12 mm, terminal L, N, PE max. 2.5 mm² clamp terminal
Enclosure colour	RAL 1013	RAL 1013	RAL 1013
Enclosure material	Glass-fibre reinforced polyester	Glass-fibre reinforced polyester	Glass-fibre reinforced polyester
Weight	1.7 kg	1.7 kg	1.7 kg
Degree of protection accd. to EN 60529	IP66	IP66	IP66
Protective cover / protective bowl	Polycarbonate	Polycarbonate	Polycarbonate

[1] depends on used lamps



Ex-Ceiling, pendant light fittings and floodlights

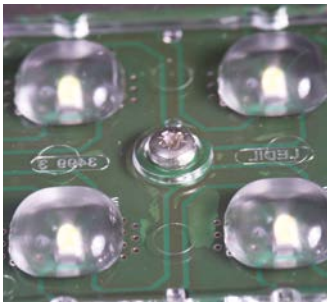
Explosion-protected pendant light fittings and floodlights

The suitable lighting technology for your application

Normally high pressure discharge lamps are used in combination with pendant light fittings and floodlights. They provide a high light output and a relatively long life span. Depending on the required light colour, HP metal halide lamps

or HP sodium vapour lamps are usually fitted.

The innovating white high-power LED technology has an extreme long life span. Moreover, it is insensitive to vibrations and shocks. With its very high efficiency, it enables a higher intensity of light with lower power consumption. The compact design and the relatively low heat generation allows the use of this technology in small luminaire housings.



Field of application

For this reason, these are the preferred light fittings for use in areas that are hard to access and where replacing lamps is time-consuming and difficult.

Pendant light fittings and floodlights are the ideal solution for the illumination of locations with high suspension heights

that require a high illumination level or the illumination of large complexes, surfaces or objects. Explosion-protected light fittings are used in both indoor and outdoor hazardous areas, on- and offshore areas, in production plants and storage buildings, in the chemical, petrochemical and pharmaceutical industry, as well as for the illumination of outside areas such as loading zones, harbour areas and petrol depots. Particularly in offshore areas, lighting solutions with LED technology are being used more and more because of their resistance to vibration.

Harsh operating conditions

Explosion-protected CEAG pendant light fittings and floodlights for the Zones 1, 2, 21 and 22 guarantee a safe and reliable operation, even under difficult operating conditions such as extremely high or low ambient temperatures, high humidity, dusts or aggressive explosive atmospheres. Among other things, the high ingress protection level of the light fittings, which are required for these conditions is assured even after a long period of use. A long service life and a high reliability of the used electrical and mechanical components make these lamps extremely cost-effective.

Replacing lamps made easy

We also have an efficient solution if under certain conditions a replacement of the lamps on site is not possible, e.g. when ambient temperatures are very low or due to the presence of an explosive atmosphere. With the CEAG floodlights series FZD, you simply replace the complete lamp cartridge. This speeds up the lamp replacement and helps to keep down the maintenance costs. A fast re-availability of the light fixture is ensured even under extreme environmental conditions and low ambient temperatures of -40 ° C. The actual replacement of the lamps in the lamp cartridge can be carried out later, for example in the workshop.

Even at extreme temperatures

We have developed suitable solutions specifically for use in environmental conditions with extremely low temperatures.

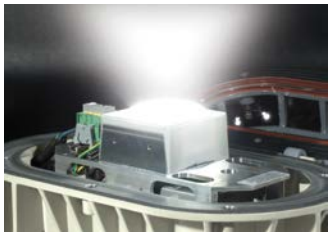
The AB 12 NAV 70 Arctic ceiling light fitting has been certified for use at ambient temperatures down to minus 50 °C and the FLT 10 floodlight for an extreme temperature range from minus 55 ° C to plus 55 ° C.

Ex-Ceiling light fittings AB 80 / AB 05 LED / AB 05 / AB 12 NAV 70

(Zone 1, 2, 21, 22)

The wall and ceiling light fixtures for particularly difficult operating conditions

The impact-resistant and flameproof luminaires of the series AB 80, AB 05 and AB 12 provide a safe and reliable light - even at extreme ambient temperatures and under extreme environmental conditions, such as those encountered in the oil and gas production industry, in- and outdoor areas of chemical plants or in heavy industry. This is due to the robust powder-coated light metal housing, stainless steel screws and a cover or tube made of scratch-resistant borosilicate glass.



The proper illuminant for your application

The AB 05 LED luminaire has an innovative 22 W LED module. The outstanding features are not only the high energy efficiency but also the resistance to shock and vibration. The luminaires of the series AB 05 and AB 80 can be fitted with incandescent or energy-saving lamps and they are used for lighting outdoor pathways or walkways and corridors. High-pressure discharge lamps are used in the luminaire series AB 05 and AB 12 NAV for lighting applications requiring a high illumination level at particularly low ambient temperatures.

AB 80 - the standard solution

This light fitting can be fitted with incandescent lamps with an E27 socket up to 100 W and is used as a wall or ceiling light

in the chemical industry. Due to the robust enclosure and the ambient temperature range up to +55°C, this light fitting is suitable for a wide variety of applications.

AB 05 LED - robust against vibrations

This extremely robust luminaire with integral wire guard and its high-efficiency LED module is resistant against shocks and vibrations, has an extremely long lamp life and has also been approved for extremely low ambient temperatures as low as minus 55 ° C. Due to an optimised light distribution for low and medium suspension heights, the AB 05 LED is ideal for illuminating walkways, corridors, stairways and storage rooms and for use in all areas with limited space.

AB 05 - solid and reliable

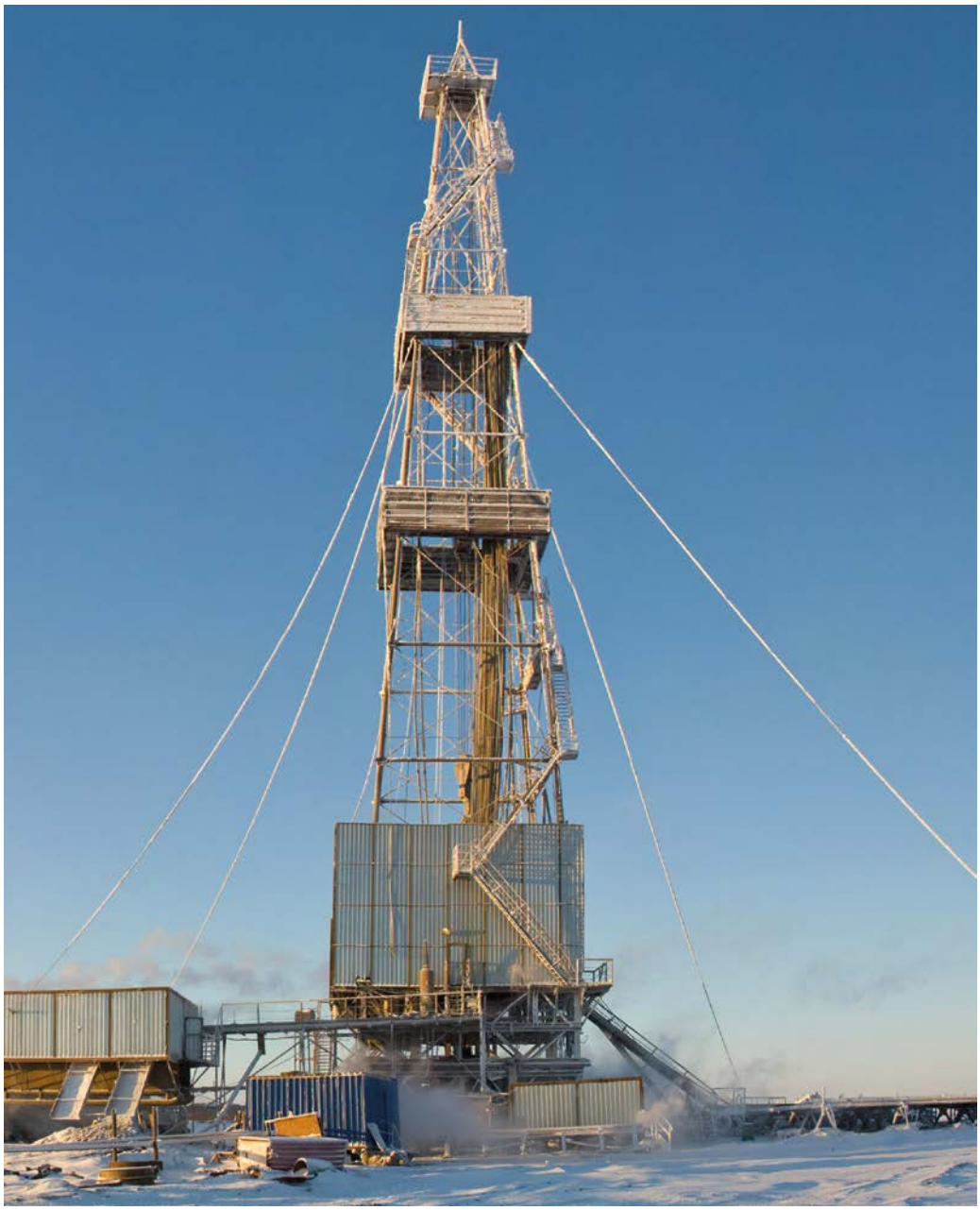
The winning features of the robust housing with integral wire guard are its light weight and easy installation. The ballast for high pressure discharge lamps is mounted on a removable frame. This simplifies maintenance. An internal aluminium reflector provides a uniform light distribution.

Features

- Extremely rugged design for extremely harsh environments
- Various illuminants can be used
- Wide ambient temperature range depending on the version (-55 ° C to +55 ° C)
- High degree of protection up to IP 67

AB 12 NAV 70 - even for extreme cold environments

This compact Ex-d light fixture for high pressure sodium lamps is suitable for individual lighting solutions for areas with limited mounting space. Lamp, ballast and ignitor are incorporated on a compact module, which allows easy re-lamping and maintenance work. An optional external reflector allows individual illumination of working places. The **Arctic** version even allows the use of this versatile light fitting in extreme temperature ranges from minus 50 °C up to plus 50 °C within the highest explosion group IIC, e.g. for hydrogen atmospheres.



Ordering details

AB 80 / AB 05 LED / AB 05 ...

Ordering details

Type	Lamp/ Illuminant	Rated luminous flux 1)	Weight	Metal thread	Plug	Dust cap	Order No.
AB 80							
AB 80	IGA 60 W, 100 W / TC-DSE 11 W/ LED E27 lamp up to 13 W	710 lm / 1360 lm / 660 lm	6.6 kg	2 x 3/4'' NPT	1 x 3/4'' screw plug		**NOR 000 005 120 124**
AB 80	IGA 60 W, 100 W / TC-DSE 11 W/ LED E27 lamp up to 13 W	710 lm	6.6 kg	2 x M25	1 x M25 screw plug	x	**NOR 000 005 120 123**
AB05 LED including LED-module							
AB 05 LED	LED module 22 W	2000 lm	7.0 kg	1 x M20	-	x	**AB05 251 011 0301**
AB 05 LED	LED module 22 W	2000 lm	7.0 kg	1 x M25	-	x	**AB05 251 021 0301**
AB 05 LED	LED module 22 W	2000 lm	7.0 kg	2 x M20	1 x M20 Ex-d	x	**AB05 251 111 0301**
AB 05 LED	LED module 22 W	2000 lm	7.0 kg	2 x M25	1 x M25 Ex-d	x	**AB05 251 221 0301**
AB 05 Ex-e							
AB 05 Ex-e	IGA 60 W	710 lm	5.9 kg	1 x M20	-	x	**AB05 531 011 0001**
AB 05 Ex-e	IGA 60 W	710 lm	5.9 kg	1 x M25	-	x	**AB05 531 021 0001**
AB 05 Ex-e	IGA 60 W	710 lm	5.9 kg	2 x M25	1 x M25 Ex-d	x	**AB05 531 111 0001**
AB 05 Ex-e	IGA 60 W	710 lm	5.9 kg	1 x M25	-	x	**AB05 531 221 0001**
AB 05 Ex nR							
AB 05 Ex nR	HSE 70 W	5600 lm	5.4 kg	1 x M20	-	x	**AB05 611 011 0001**
AB 05 Ex nR	HSE 70 W	5600 lm	6.9 kg	1 x M25	-	x	**AB05 611 021 0002**
AB 05 Ex nR	HSE 70 W	5600 lm	5.4 kg	2 x M20	1 x M20 Ex-d	x	**AB05 611 111 0001**
AB 05 Ex nR	HSE 70 W	5600 lm	5.4 kg	2 x M25	1 x M25 Ex-d	x	**AB05 611 221 0001**
AB 05 Ex nR	HME 80 W	3800 lm	6.9 kg	2 x M25	1 x M25 Ex-d	x	**AB05 621 221 0001**
AB 05 Ex nR	IGA 200 W	3100 lm	6.9 kg	1 x M25	-	x	**AB05 631 021 0001**
AB 05 Ex-d IIB +H2							
AB 05 Ex-d IIB +H2	HSE 70 W	5600 lm	6.9 kg	1 x M20	-	x	**AB05 111 011 0001**
AB 05 Ex-d IIB +H2	HSE 70 W	5600 lm	6.9 kg	1 x NPT 1/2"	-	x	**AB05 111 031 0001**
AB 05 Ex-d IIB							
AB 05 Ex-d IIB	HSE 70 W	5600 lm	6.9 kg	1 x M20	-	x	**AB05 211 011 0001**
AB 05 Ex-d IIB	HSE 70 W	5600 lm	6.9 kg	1 x M20	1 x M20 Ex-d	x	**AB05 211 111 0001**

[1] depends on used lamps

Scope of delivery without lamp and fixing accessories, if not stated otherwise.
Metal cable glands see catalogue part 2: 2.3.12 ff

Ordering details

Type	Lamp/ Illuminant	Rated luminous flux [1]	Weight	Metal thread	Plug	Dust cap	Order No.
AB 12 NAV 70 ...							
AB 12 NAV 70, IIC G2 -20 °C up to +40 °C	HSE 70 W	5600 lm	5.3 kg	2 x 3/4" NPT	1 x 3/4'' Ex-d	x	**NOR 000 005 060 074**
AB 12 NAV 70, IIB G2 -45 °C up to +55 °C	HSE 70 W	5600 lm	5.3 kg	2 x 3/4" NPT	1 x 3/4'' Ex-d	x	**NOR 000 005 060 075**
AB 12 NAV 70 Arctic ...							
AB 12 NAV 70 Arctic IIC, -50 °C up to +40 °C	HST 70 W	5600 lm	5.6 kg	2 x 3/4" NPT	1 x 3/4'' Ex-d	x	**1 1750 000 353**
AB 12 NAV 70 Arctic IIC, -50 °C up to +40 °C	HST 70 W	5600 lm	5.6 kg	2 x M25	1 x M25 Ex-d	x	**1 1750 000 354**

[1] depends on used lamps

Scope of delivery without lamp and fixing accessories, if not stated otherwise.
Metal cable glands see catalogue part 2: 2.3.12 ff

Accessories

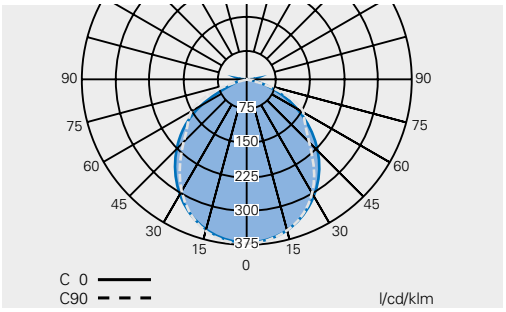
Type	Content	Application	OU	Order No.
GAB 80	Wire guard, galvanized	AB 80	1	**NOR 000 005 120 439**
Lamp HSE 70 W	High pressure sodium lamp 70 W E27	AB 05, AB 12 NAV 70	1	**3 2475 900 012**
Lamp HST 70 W	High pressure sodium lamp 70 W E27	AB 12 NAV 70 Arctic	1	**3 1750 301 070**
D92	Ceiling mounting bracket incl. screws and polyamide washer - Stainless steel (2 pcs.)	AB 12 NAV 70	1	**2 2480 092 000**
A5	Ceiling bracket hot galvanized (1 pc.)	AB 12 NAV 70	1	**NOR 000 005 009 196**
BFP 45	Wall bracket 45° hot galvanized (1 pc.)	AB 12 NAV 70	1	**NOR 003 045 060 471**
Reflector RAB 108	Material: AISI 304	AB 12 NAV 70	1	**NOR 003 045 060 471**
Reflector RAB 108	Material: AISI 304 with wire guard white	AB 12 NAV 70	1	**NOR 003 045 060 819**
Reflector RAB 108	Material: AISI 316	AB 12 NAV 70	1	**NOR 003 165 060 471**
Reflector RAB 108	Material: AISI 316 with wire guard white	AB 12 NAV 70	1	**NOR 003 165 060 819**

Metal cable glands see catalogue part 2, page 2.3.12 ff

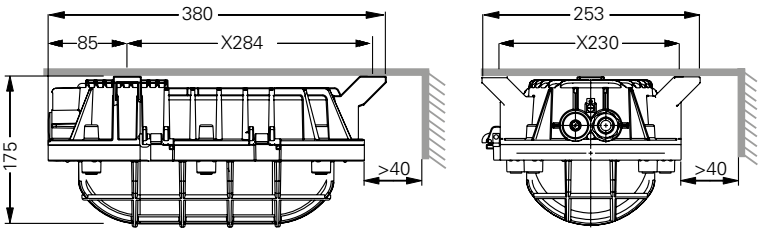
Dimension drawing / Polar curve

AB ...

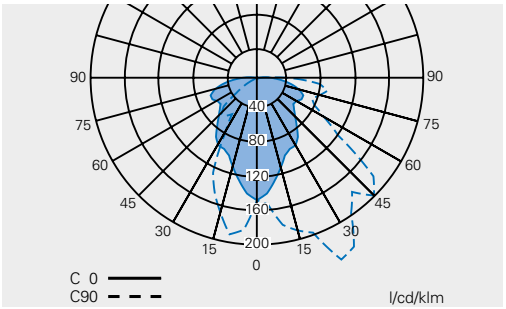
Polar curve AB 05 LED



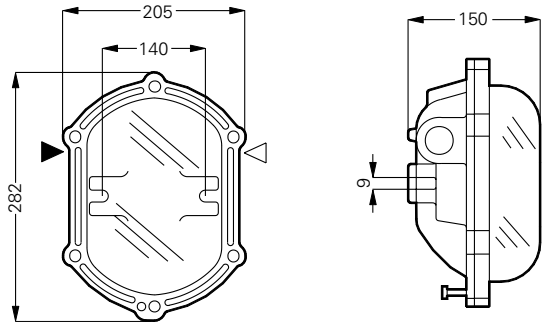
AB 05 LED



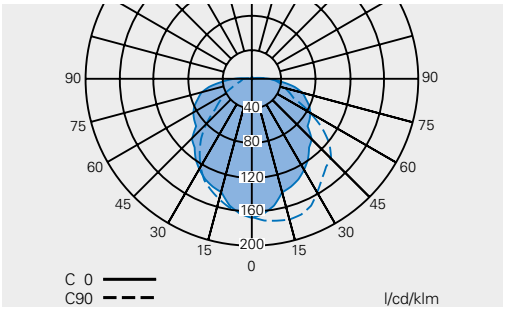
Polar curve AB 05 Ex de



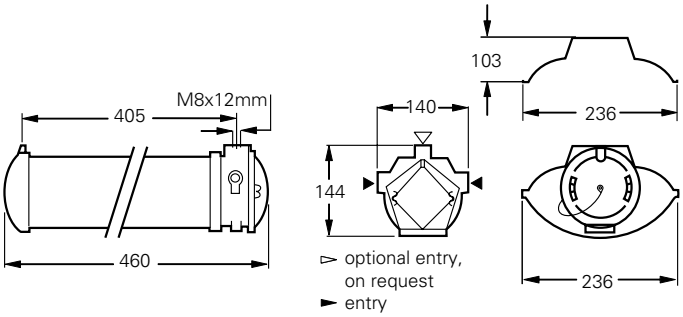
AB 80



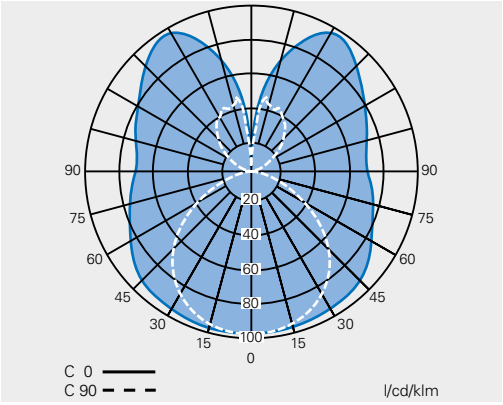
Polar curve AB 05 nR



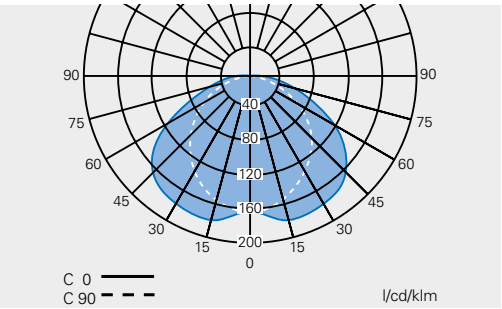
AB 12 NAV



Polar curve AB 12 NAV 70 without reflector



Polar curve AB 12 NAV 70 with reflector



Dimensions in mm

Technical data

	AB 80	AB 05 LED
EC-Type Examination Certificate	LOM 01 ATEX 2041 X	BVS 09 ATEX E 014 X
IECEx Certificate of Conformity		IECEx BVS 09.0032X
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex d IIB T4.. T6 Gb	Ⓔx II 2 G Ex d IIB T6 (Tu ≤ +40°C)/T5 Gb Ⓔx II 2 D Ex tb IIIC T80 °C (Tu ≤ +40°C)/T100 °C Db IP66
Marking accd. to IECEx		Ex d IIB T6 (Tu ≤ +40°C)/T5 Gb Ex tb IIIC T80°C (Tu ≤ +40°C)/T100°C Db
Permissible ambient temperature	-20 °C up to +55 °C	-55 °C up to +55 °C
Rated voltage	max. 250 V	230 V AC
Frequency		50 - 60 Hz
Power consumption		approx. 23 W
Protection class	I	I
Lamp / Illuminant	Incandescent lamp	LED module 22 W (incl.)
Rated luminous flux	[1]	
Rated luminous flux of the luminaire (typical, ± 10 %)		1453 lm
Lamp cap	E27	LED module
Light output ratio	60 %	100 %
Dimensions (L x W x H)	282 x 205 x 150 mm	360 x 230 x 175 mm
Connecting terminals	L1, N, PE: 2 x 2.5 mm^2	L1, N, PE: type MUT 4, 2 x 4 mm^2
Enclosure earth	2 x 6 mm^2	2 x 6 mm^2
Enclosure colour	Epoxy paint, body RAL 7032	Epoxy paint, body RAL 7032
Enclosure material	cast iron	light alloy
Weight	6.6 kg	7.0 kg
Cable glands / gland plates / enclosure drilling	2 x M25 x 1.5 or 2 x 3/4'' NPT (with adaptor)	1 x M20/M25 x 1.5, 2 x M20/M25 x 1.5, 1 x 3/4" NPT or 2 x 3/4'' NPT on request
Type of mounting	ceiling/wall mounting	ceiling/wall mounting
Degree of protection accd. to EN EN 60598	IP65	IP66
Protective cover / protective bowl	borosilicate glass	borosilicate glass
Screw plugs	1 x M25 or 3/4'' NPT Ex-d screw plug	1 x M20/M25 or 3/4" NPT Ex-d screw plug

[1] depends on used lamps

Technical data

AB 05 Ex-e / AB 05 Ex nR

Technical data

	AB 05 Ex-e	AB 05 Ex nR
Type Examination Certificate		BVS 07 ATEX E 151
EC-Type Examination Certificate	BVS 07 ATEX E 152 X	
IECEx Certificate of Conformity	IECEx BVS 10.0070X	IECEx BVS 10.0071
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de IIC T3 [2]/T2 Gb Ⓔx II 2 D Ex tb IIIC T125 °C Db IP66	Ⓔx II 3 G nR II T4/T3 Gc Ⓔx II 3 D Ex tc IIIC T100°C/ T125°C/ T140°C Dc IP66
Marking accd. to IECEx	Ex de IIC T3 [2]/T2 Gb Ex tb IIIC T125 °C Db IP66	Ex nR IIC T4/T3 Gc Ex tc IIIC T100°C/T125°C/T140°C Dc IP66
Permissible ambient temperature	-20 °C up to +55 °C	-55 °C up to +55 °C
Rated voltage	max. 250 V	230 V AC
Frequency	50 - 60 Hz	50 - 60 Hz
Power factor cos φ		≥ 0.9
Protection class	I	I
Lamp / Illuminant	Incandescent lamp max. 60 W	incandescent lamp max. 200 W, high pressure sodium lamp HSE 70 W, compact fluorescent lamp max. 23 W
Rated luminous flux	710 lm [1]	[1]
Lamp cap	E27 accord. IEC 60238	E27 accord. IEC 60238
Light output ratio	70 %	70 %
Dimensions (L x W x H)	360 x 230 x 175 mm	360 x 230 x 175 mm
Connecting terminals	L1, N, PE: 2 x 2.5 mm²	L1, N, PE: 2 x 2.5 mm²
Enclosure earth	2 x 6 mm²	2 x 6 mm²
Enclosure colour	Epoxy paint, body RAL 7032	Epoxy paint, body RAL 7032
Enclosure material	light alloy	light alloy
Weight	5.9 kg	6.9 kg
Cable glands / gland plates / enclosure drilling	1 x M20/M25 x 1.5, 2 x M20/M25 x 1.5, 1 x 3/4" NPT or 2 x 3/4" NPT	1 x M20/M25 x 1.5, 2 x M20/M25 x 1.5, 1 x 3/4" NPT or 2 x 3/4" NPT
Type of mounting	ceiling-/wall mounting	ceiling-/wall mounting
Degree of protection accd. to EN 60529	IP66	IP66
Protective cover / protective bowl	borosilicate glass	borosilicate glass
Screw plugs	max. 1 x M20/M25 or 3/4" NPT Ex-d screw plug	max. 1 x M20/M25 or 3/4" NPT Ex-d screw plug

[1] depends on used lamps

[2] T3 when using a 60 W incandescent lamp accord. to EN 60064 and DIN 49810 with"T"-marking

Additional luminaire data AB 05 Ex nR

Lamp	Power	Luminous flux [1]	Temperature class II 2/3 G	max. surface temp. II 2/3 D
Compact fluorescent lamp [2]	23 W	1450 lm	T4	T 130 °C
High pressure sodium lamp	70 W	5600 lm	T4	T 125 °C
Incandescent lamp IGA	200 W	3150 lm	T3	T 140 °C

[1] depends on used lamps / [2] $T_U \leq 30$ °C

Technical data

	AB 05 Ex-d IIB +H2 / AB 05 Ex-d IIB	AB12 NAV70 / AB 12 NAV 70 Arctic
EC-Type Examination Certificate	PTB 08 ATEX 1001 X	LOM 02 ATEX 2013X
IECEx Certificate of Conformity		IECEx BKI 07.0008X
Marking accd. to 2014/34/EU	Ex II 2 G Ex d IIB (+H2) T4/T3 Gb / Ex II 2 G Ex d IIB T4/T3 Db	Ex II 2 G Ex d IIB/IIC T3 Gb Ex II 2 D Ex t IIIC T155 °C Db Ex II 2 G Ex d IIC T3 Gb Ex II 2 D Ex t IIIC T155 °C Db
Marking accd. to IECEx		Ex d IIB T3 / Ex d IIC T3 Ex tD A21 IP66 T150°C
Permissible ambient temperature	-20 °C up to +55 °C	-20 °C up to +55 °C (gas-group IIC); -45 °C up to +55 °C (gas-group IIB) / -50 °C up to +40 °C (Arctic)
Rated voltage	230 V AC	230 V AC
Rated current		0.36 A
Frequency	50 - 60 Hz / 50 Hz	50 Hz
Power factor cos φ	≥ 0.9	≥ 0.9
Protection class	I	I
Lamp name	incandescent lamp up to 200 W, high pressure sodium lamp HSE 70 W	High pressure sodium lamp HST 70 W
Rated luminous flux	[1]	5600 lm [1]
Lamp cap	E27 accord. IEC 60238	E27 accord. IEC 60238
Light output ratio	70 %	51%
Dimensions (L x W x H)	360 x 230 x 175 mm	460 x 140 x 144 / 530 x 140 x 144
Connecting terminals	L1, N, PE: 2 x 2.5 mm²	L1, N, PE: 2 x 2.5 mm², PE: 2 x 6 mm²
Enclosure earth	2 x 6 mm²	2 x 6 mm²
Enclosure colour	Epoxy paint, body RAL 7032	Epoxy paint, body RAL 7032
Enclosure material	light alloy	light alloy
Weight	6.9 kg	5.3 kg / 5.6 kg
Cable glands / gland plates / enclosure drilling	1 x M20/M25 x 1.5, 2 x M20/M25 x 1.5, 1 x 3/4" NPT or 2 x 3/4" NPT	2 x 3/4" thread (Ex-d) / 2 x 3/4" or 2 x M25 thread (Ex-d)
Type of mounting	ceiling-/wall mounting	ceiling-/wall mounting
Degree of protection accd. to EN 60529	IP66	IP67
Protective cover / protective bowl	borosilicate glass	borosilicate glass
Screw plugs	max. 1 x M20/M25 or 3/4" NPT Ex-d screw plug	1 x 3/4" Ex-d screw plug

[1] depends on used lamps

Additional luminaire data AB 05 Ex-d IIB +H2 / AB 05 Ex-d IIB

Lamp	Power	Luminous flux [1]	Permissible ambient temperature	Temperature class II 2 G
Incandescent lamp IGA	40 W	430 lm	-20 °C up to +55 °C	T4
Incandescent lamp IGA	60 W	3100 lm	-20 °C up to +55 °C	T4
Incandescent lamp IGA	100 W	1380 lm	-20 °C up to +55 °C	T4
Incandescent lamp IGA	200 W	3150 lm	-20 °C up to +55 °C	T4
High pressure sodium lamp	70 W	5600 lm	-20 °C up to +40 °C	T4

[1] depends on used lamps

Ex-Pendant light fittings AB 50 / SPG 1N / AB 51 / EVI 200 / EVI 500 / EV35 LED

(Zone 1, 2, 21, 22)

The pendant light fitting series for a wide variety of applications

The explosion-protected pendant light fittings for incandescent and energy-saving lamps, high intensity discharge and induction lamps can be used with their different housing solutions in different areas. The robust flameproof luminaires have been in use in many industrial plants for many years and have stood the test of time.

AB 50 / SPG 1N and AB 51

This larger series of pendant light fittings is suitable for incandescent and mixed-light lamps. The robust light alloy enclosure allows a wide range of applications. The protective glass dome is made of borosilicate glass and is extremely impact and heat resistant. The reflector and all external screws are made of stainless steel. Easy replacement of lamps is made possible by opening the PTFE-coated connection ring. Both devices (the protective glass dome and connection ring) are provided with hinges to allow easy access. Thanks to their robust design, these light fittings are suitable for use in the chemical industry and are certified for ambient temperatures from- 55 ° C to + 55 ° C.

EVI the powerful pendant light fitting series

This larger series of pendant light fittings is suitable for incandescent and mixed-light lamps. The robust light alloy enclosure allows a wide range of applications. The protective glass dome is made of borosilicate glass and is extremely impact and heat resistant. The reflector and all external screws are made of stainless steel. Easy replacement of lamps is made possible by opening the PTFE-coated connection ring. Both devices (the protective glass dome and connection ring) are provided with hinges to allow easy access. Thanks to their robust design, these light fittings are suitable for use in the chemical industry and are certified for ambient temperatures from- 55 ° C to + 55 ° C.

Features

- Different housing solutions with different light sources for nearly every application
- Robust design for harsh environments
- With large Ex-d or Ex-e terminal compartment
- Wide ambient temperature range depending on the version from -50 °C up to +55 °C
- CU-Certificate for Eurasian Economic Community available
- High degree of protection IP 66
- Meets the highest corrosion protection and mechanical strength requirements

EV 35 - the efficient solution for your illumination concept for hazardous areas

The robust Ex-pendant light fitting EV 35 LED with energy saving LED-module combines state-of-the-art lighting engineering with the requirements of harsh and hazardous environments. With an efficient LED technology and with no harmful UV radiation, this series of light fittings provides a perfect illumination. Together with an internal reflector, this light fitting can also be used as a downlight.

And, last but not least, the long life and the low power consumption of the LED module helps to keep down running costs. Thanks to the extremely solid construction of the housing, this series of pendant light fittings is resistant to impact, vibrations and shocks. As a result, they provide an ideal lighting concept for applications in harsh and hazardous environments.

Even extreme ambient temperatures from-50°C up to +55 °C are no problem for the robust LED technology of the light fittings.

Ordering details

Pendant light fittings

Ordering details

Type	Lamp / Illuminant	Rated luminous flux [3]	Weight	Metal thread	Threaded plug	Dust cap	Order No.
AB 50 ... (IU = direct entry, IXM = indirect entry)							
AB 50 IU	IGA 60 W, 100 W, 75 W halogen	710 lm / 1360 lm	1.6 kg	2 x 3/4" NPT	1 x 3/4" Ex-d	x	**NOR 000 115 110 289**
AB 50 IXM	IGA 60 W, 100 W, 75 W halogen	710 lm / 1360 lm	2.2 kg	2 x M25	1 x M25 Ex-e	x	**NOR 000 115 110 320**
AB 50 IU, -50 °C up to +55 °C	60 W, 100 W, 75 W halogen	710 lm / 1360 lm	1.6 kg	2 x 3/4" NPT	1 x 3/4" Ex-d	x	**NOR 000 115 110 389**
AB 50 IXM, -50 °C up to +55 °C	60 W, 100 W, 75 W halogen	710 lm / 1360 lm	2.2 kg	2 x M25	1 x M25 Ex-e	x	**NOR 000 115 110 420**
SPG 1N	60 W, 100 W, 75 W halogen	710 lm / 1360 lm	2.2 kg	2 x M25	1 x M25 Ex-e	x	**NOR 000 005 110 745**
AB 51 ... (IU = direct entry, IX = indirect entry)							
AB 51 IU	[2]		3.6 kg	2 x 3/4" NPT	1 x 3/4" Ex-d	x	**NOR 000 115 110 396**
AB 51 IU, -50 °C up to +55 °C	[2]		3.6 kg	2 x M25	1 x M25 Ex-d	x	**NOR 000 115 110 497**
AB 51 IU	[2]		3.6 kg	2 x M25	1 x M25 Ex-d	x	**NOR 000 115 110 496**
AB 51 IU, -50 °C up to +55 °C	[2]		3.6 kg	2 x 3/4" NPT	1 x 3/4" Ex-d	x	**NOR 000 115 110 397**
AB 51 IX (indirect entry)	[2]		4.5 kg	2 x M25	1 x M25 Ex-e	x	**NOR 000 115 110 437**
AB 51 IX (indirect entry) -50 °C up to +55 °C	[2]		4.5 kg	2 x M25	1 x M25 Ex-e	x	**NOR 000 115 110 438**
AB 51 ... (direct entry)							
AB 51 M 80 V	HME 80 W	3800 lm	7.5 kg	2 x 3/4" NPT	1 x 3/4" Ex-d	x	**NOR 000 115 110 893**
AB 51 M 80 V, -45 °C up to +55 °C	HME 80 W	3800 lm	7.5 kg	2 x 3/4" NPT	1 x 3/4" Ex-d	x	**NOR 000 115 110 863**
AB 51 M 80 V, -45 °C up to +55 °C	HME 80 W	3800 lm	7.5 kg	2 x M25	1 x M25 Ex-d	x	**NOR 000 115 110 864**
AB 51 M 125 V	HME 125W	6300 lm	7.5 kg	2 x 3/4" NPT	1 x 3/4" Ex-d	x	**NOR 000 115 110 890**
AB 51 M 125 V, -45 °C up to +55 °C	HME 125W	6300 lm	7.5 kg	2 x 3/4" NPT	1 x 3/4" Ex-d	x	**NOR 000 115 110 891**
AB 51 S 70 V2 NI	HSE/HIE 70 W	5600 lm	7.5 kg	2 x 3/4" NPT	1 x 3/4" Ex-d	x	**NOR 000 115 110 905**
AB 51 S 70 V2 MI	HSE/HIE 70 W	5600 lm	7.5 kg	2 x M25	1 x M25 Ex-d	x	**NOR 000 115 110 904**
AB 51 S 70 V2 NLTI, -45 °C up to +55 °C	HSE/HIE 70 W	5600 lm	7.5 kg	2 x 3/4" NPT	1 x 3/4" Ex-d	x	**NOR 000 115 110 907**
AB 51 S 70 V2 MLTI, -45 °C up to +55 °C	HSE/HIE 70 W	5600 lm	7.5 kg	2 x M25	1 x M25 Ex-d	x	**NOR 000 115 110 906**
AB 51 M 125 V	HME 125W	6300 lm	7.5 kg	2 x M25	1 x M25 Ex-d	x	**NOR 000 115 110 990**
AB 51 M 125 V, -45 °C up to +55 °C	HME 125W	6300 lm	7.5 kg	2 x M25	1 x M25 Ex-d	x	**NOR 000 115 110 991**
EVI 200 ... (UD = direct entry, XM = indirect entry)							
EVI 200 UD	[1]	[1]	8.2 kg	2 x 3/4" NPT	1 x 3/4" Ex-d	x	**NOR 000 005 110 753**
EVI 200 XM,	[1]	[1]	9 kg	2 x M25	1 x M25 Ex-e	x	**NOR 000 115 110 941**
EVI 200 UD, -50 °C up to +55 °C	[1]	[1]	8.2 kg	2 x 3/4" NPT	1 x 3/4" Ex-d	x	**NOR 000 115 110 753**
EVI 200 XM, -50 °C up to +55 °C	[1]	[1]	9 kg	2 x 3/4" NPT	1 x 3/4" Ex-e	x	**NOR 000 115 110 943**
EVI 500 ... (UD = direct entry, XM = indirect entry)							
EVI 500 UD	[1]	[1]	12.8 kg	2 x 3/4" NPT	1 x 3/4" Ex-d	x	**NOR 000 005 110 761**
EVI 500 UD, -50 °C up to +55 °C	[1]	[1]	12.8 kg	2 x 3/4" NPT	1 x 3/4" Ex-d	x	**NOR 000 005 110 763**
EVI 500 XM	[1]	[1]	13.6 kg	2 x M25	1 x M25 Ex-e	x	**NOR 000 115 110 942**
EVI 500 XM, -50 °C up to +55 °C	[1]	[1]	13.6 kg	2 x 3/4" NPT	1 x 3/4" Ex-e	x	**NOR 000 115 110 944**

[1] see table luminaire data S. 1.4.20 - 1.4.21 [2] see table luminaire data page 1.4.20 (w/o HID lamps)
[3] depends on used lamps

Ordering details

Type	Lamp / Illuminant	Weight	Metal thread	Threaded plug	Dust cap	Order No.
EV 35 ... including LED-module (UD = direct entry, XM = indirect entry)						
EV 35 UD LED	LED module 22 W	9.1 kg	2 x M25	1 x M25 Ex-d	x	**NOR 000 115 110 600**
EV 35 XM LED	LED module 22 W	10.05 kg	2 x M25	1 x M25 Ex-e	x	**NOR 000 115 110 605**
EV 35 UD LED R0	LED module 22 W with internal relector	9.1 kg	2 x M25	1 x M25 Ex-d	x	**NOR 000 115 110 610**
EV 35 XM LED R0	LED module 22 W with internal relector	10.05 kg	2 x M25	1 x M25 Ex-e	x	**NOR 000 115 110 630**

[1] see table luminaire data S. 1.4.21

Accessories

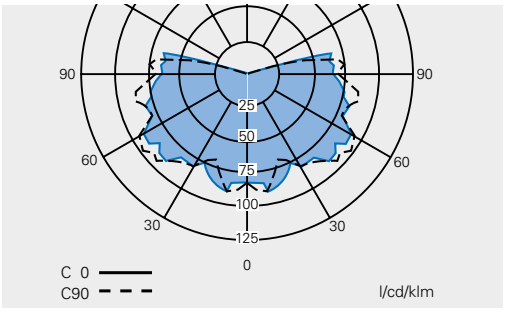
Type	Content	Application	OU	Order No.
ER	External reflector painted steel	AB 50	1	**NOR 000 115 110 718**
PC. EV 200	External reflector	AB 51/EVI 200	1	**NOR 000 005 110 894**
PC. EV 500	External reflector	EVI 500	1	**NOR 000 005 110 901**
BC. EV	Pole mounting bracket for Ø 44 - 64 mm	EV ...	1	**NOR 000 005 110 836**
AS.EV/AB	Ceiling mounting bracket	EV ...	1	**NOR 000 005 110 828**
SP. EV 200	Wall mounting bracket	AB 51/EVI 200	1	**NOR 000 005 110 935**
SP. EV 500	Wall mounting bracket	EVI 500	1	**NOR 000 005 110 943**
AS.AB51	Ceiling bracket AISI 316	AB 51	1	**NOR 003 165 110 000**
SPU.EV/AB	Wall mounting bracket, adjustable	EV ...	1	**NOR 000 005 110 951**
G. EV 200	Wire guard	AB 51/EVI 200	1	**NOR 000 005 110 860**
G. EV 500	Wire guard	EVI 500	1	**NOR 000 005 110 878**
KEY, EV	Luminaire key	EV ...	1	**NOR 000 005 110 886**
CEV/AB	Eye bolt	AB 50/ EV ...	1	**NOR 000 005 110 852**
C.AB51	Eye bolt AISI 316	AB 51	1	**NOR 003 165 110 001**
WG	Wire guard, galvanized	AB 50	1	**NOR 000 115 110 875**
HSE 70 W	High pressure sodium lamp 70 W E27	AB 51 S 70	1	**3 2475 900 012**
HIE 70 W	High pressure metal halide lamp 70 W E27	AB 51 S 70...	1	**3 2475 900 010**

Scope of delivery without lamp and fixing accessories, if not stated otherwise.
Metal cable glands see catalogue part 2: 2.3.12 ff

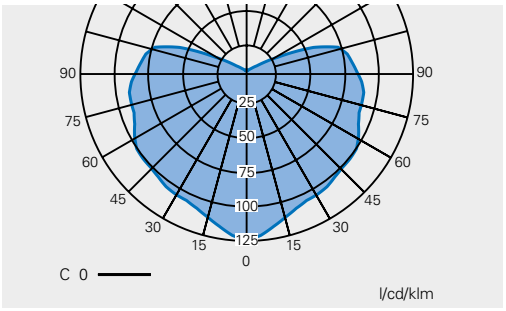
Polar curve

Pendant light fittings

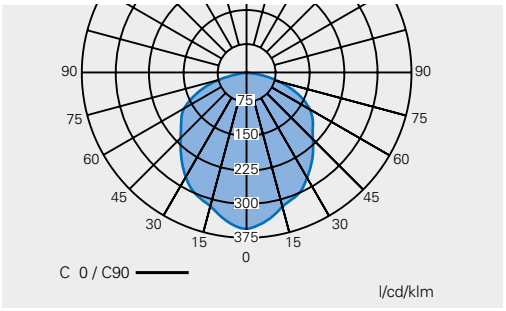
Polar curve AB 50 IU



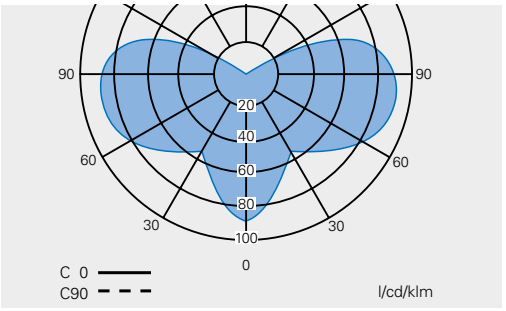
Polar curve AB 51 IU



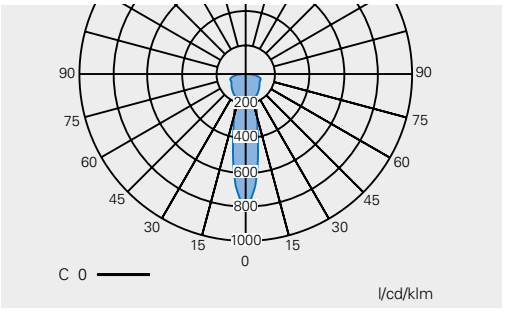
Polar curve EV 35 LED without internal reflector



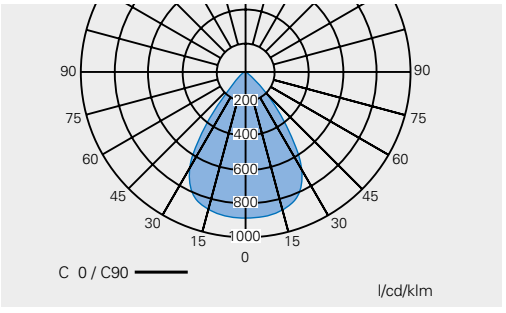
Polar curve EVI 200/500 without external reflector



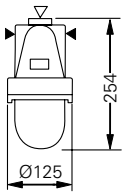
Polar curve EVI 200/500 with external reflector



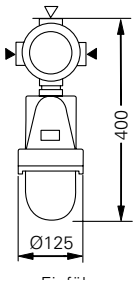
Polar curve EV 35 LED with internal reflector



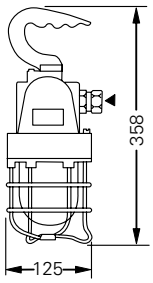
AB 50 IU



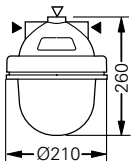
AB 50 IXM



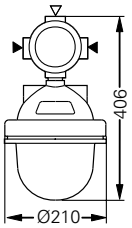
SPG 1N



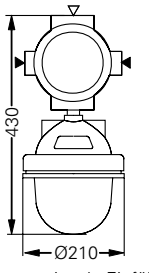
AB 51 IU



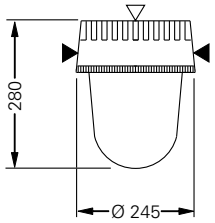
AB 51 IX



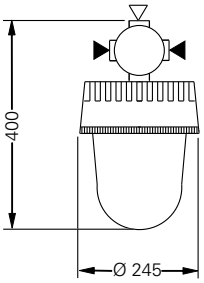
AB 51 ..V



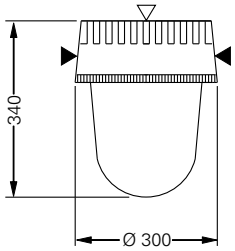
EVI 200 UD



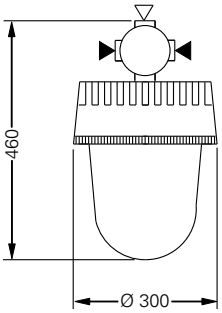
EVI 200 XM



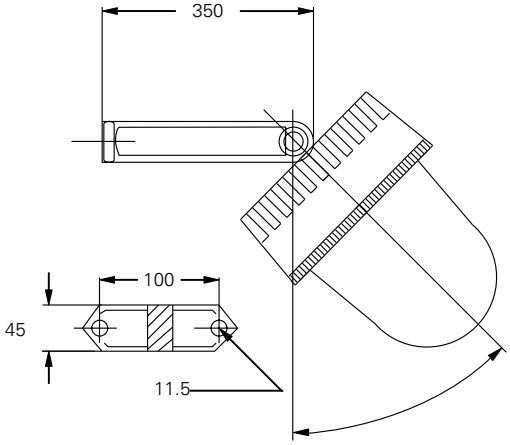
EVI 500 UD



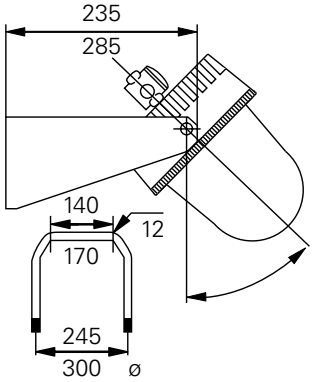
EVI 500 XM



SPU EV/AB

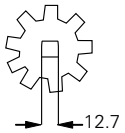


SP.EV 200/500

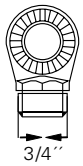


► entry
▻ optional entry, on request

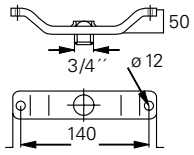
KEY.EV



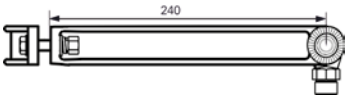
CEV/AB



AS.EV/AB



BC. EV



Dimensions in mm

Technical data

AB 50 / SPG 1N / AB 51

Technical data

	AB 50 / SPG 1N	AB 51
EC-Type Examination Certificate	LOM 02 ATEX 2018 X	LOM 02 ATEX 2020 X
IECEx Certificate of Conformity	IECEx BKI 07.0032X	IECEx BKI 07.0028X
Marking accd. to 2014/34/EU	Ⓔx II 2 D Ex d/de IIC T3 / T6 Ⓔx II 2 D Ex tD A21 IP66 T ..°C	Ⓔx II 2 G Ex d IIC T [1] Gb Ⓔx II 2 G Ex de IIC T [1] Gb (Indirect entry) Ⓔx II 2 D Ex t IIIC T [1] Db
Marking accd. to IECEx	Ex d IIC T3…T6 or Ex de IIC T3…T6 (indirect entry) Ex tD A21 IP66 T145°...T85°C	Ex de IIC T3…T6 Ex tD A21 IP67 T152°C...T86°C
Permissible ambient temperature	-20 °C up to +55 °C -50 °C up to +55 °C (option: AB 50)	-20 °C up to +55 °C / -50 °C up to +55 °C option: IGA / -45 °C up to +55 °C option: HS./HI.
Rated voltage	max. 250 V	max. 250 V (AB 51..); 230 V AC (AB 51 M/S)
Frequency	50 Hz	50 Hz
Power consumption	max.100 VA	max.200 VA
Protection class	I	I
Lamp / Illuminant	60 W, 100 W, 75 W halogen	[1]
Rated luminous flux	[1]	[1]
Lamp cap	E27 accord. IEC 60238	E27 accord. IEC 60238
Light output ratio	68 %	75 %
Connecting terminals	L, N, PE: 1 x 2.5 mm^2 or 2 x 1.5 mm^2, PE ext. 2 x 6 mm^2	L, N, PE: 1 x 2.5 mm^2 or 2 x 1.5 mm^2 (IU), 2 x 2.5 mm^2 (IX and M/S), PE ext. 2 x 6 mm^2
Enclosure colour	epoxy paint, body RAL 7032	epoxy paint, body RAL 7032
Enclosure material	light alloy	light alloy
Weight	1.6 kg	3.6 kg
Cable glands / gland plates / enclosure drilling	2 x 3/4" or M25 thread (Ex-d), 1 x plugged (UI and M/S) / 2 x M25 x 1.5, 1 x plugged (IX)	2 x 3/4" or M25 thread (Ex-d), 1 x plugged (UI and M/S) / 2 x M25 x 1.5, 1 x plugged (IX)
Type of mounting	ceiling-/wall mounting (AB 50), portable light fixture (SPG 1N)	ceiling-/wall mounting
Degree of protection accd. to EN 60529	IP66	IP66
Protective cover / protective bowl	borosilicate glass	borosilicate glass

[1] see table luminaire data

Additional luminaire data AB 51

			Temperature class II 2 G		max. surface temp. II 2 D	
Lamp	**Power**	**Luminous flux [2]**	**$T_U \leq 40$ °C**	**$T_U \leq 55$ °C**	**$T_U \leq 40$ °C**	**$T_U \leq 55$ °C**
Incandescent lamp IGA 65	150 W	2200 lm	T3	T3	T 132 °C	T 147 °C
Incandescent lamp IGA 80	200 W	3100 lm	T3	T3	T 137 °C	T 152 °C
Halogen lamp IQT	75 W	1100 lm	T5	T4	T 88 °C	T 103 °C
Halogen lamp IQT	150 W	2500 lm	T4	T3	T 123 °C	T 138 °C
Compact fluorescent lamp	max 32 W [3]		T6	–	T 85 °C	–
High pressure sodium lamp HSE	50 W	3400 lm	T5	T4	T 86 °C	T 101 °C
High pressure sodium lamp HSE	70 W	5600 lm	T4	T4	T 97 °C	T 112 °C
Metal halide lamp HIE	70 W	5900 lm	T4	T4	T 110 °C	T 125 °C

[2] depends on used lamps / [3] $T_U \leq 30$ °C



Technical data

	EVI 200	EVI 500	EV 35 LED
EC-Type Examination Certificate	LOM 02 ATEX 2012 X	LOM 02 ATEX 2012 X	LOM 10 ATEX 2075
IECEx Certificate of Conformity	IECEx BKI 07.0031X	IECEx BKI 07.0031X	
Marking accd. to 2014/34/EU	(Ex) II 2 G Ex de IIC T[1)] Gb (XM = indirect entry) (Ex) II 2 G Ex d IIC T[1)] Gb (UD = direct entry) (Ex) II 2 D Ex tD A21 IP67 T[1)] °C Db	(Ex) II 2 G Ex de IIC T[1)] Gb (XM = indirect entry) (Ex) II 2 G Ex d IIC T[1)] Gb (UD = direct entry) (Ex) II 2 D Ex tD A21 IP67 T[1)] °C Db	(Ex) II 2 G Ex de IIC T[1)] Gb (XM = indirect entry) (Ex) II 2 G Ex d IIC T[1)] Gb (UD = direct entry) (Ex) II 2 D Ex tD A21 IP67 T[1)] °C Db
Marking accd. to IECEx	Ex de IIC T[1)] Ex tD A21 IP67 T[1)] °C	Ex d / de IIC T [1)] Ex tD A21 IP67 T [1)]	
Permissible ambient temperature	-20 °C up to +55 °C -50 °C up to +55 °C (option)	-20 °C up to +55 °C --50 °C up to +55 °C (option)	-50 °C up to +55 °C
Rated voltage	max. 250 V	max. 250 V	220 - 240 V AC
Frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Power consumption	max. 200 VA	max. 500 VA	approx. 23 W
Protection class	I	I	I
Lamp / Illuminant	[1)]	[1)]	LED module with electronic driver
Rated luminous flux	[1)]	[1)]	
Rated luminous flux of the luminaire (typical, ± 10 %)			2113 lm (w/o reflector)/ 1798 lm (with reflector)
Lamp cap	E27 accord. IEC 60238	E40 accord. IEC 60238	
Light output ratio	75 %	75 %	100 %
Dimensions (L x W x H)	280 mm x Ø 245 mm (200 UD), 400 x Ø 225 mm (200 XM)	340 x Ø 300 mm (500 UD), 460 x Ø 300 mm (500 XM)	280 mm x Ø 245 mm
Connecting terminals	L, N, PE: 1 x 2.5 mm^2 or 2 x 1.5 mm^2 (UD), 2 x 2.5 mm^2 (XM); PE ext. 2 x 6 mm^2	L, N, PE: 1 x 2.5 mm^2 or 2 x 1.5 mm^2 (UD), 2 x 2.5 mm^2 (XM); PE ext. 2 x 6 mm^2	L, N, PE: 1 x 2.5 mm^2 or 2 x 1.5 mm^2 (UD), 2 x 2.5 mm^2 (XM) PE ext. 2 x 6 mm^2
Enclosure colour	epoxy paint, body RAL 7032 / ring RAL 6005	epoxy paint, body RAL 7032 / cover RAL 7016 / ring RAL 6005	epoxy paint, body RAL 7032 / ring RAL 6005
Enclosure material	light alloy	light alloy	light alloy
Weight	8.2 kg (UD/ 9 kg (XM)	12.8 kg (UD)/ 13.6 kg (XM)	9.1 kg
Cable glands / gland plates / enclosure drilling	2 x 3/4" or M25 thread (Ex-d), 1 x plugged (UD), 2 x M25 thread Ex-e, 1 x plugged (XM)	2 x 3/4" or M25 thread (Ex-d), 1 x plugged (UD), 2 x M25 thread Ex-e, 1 x plugged (XM)	M25 thread (Ex-d), 1 x plugged (UD) 2 x M25 thread (Ex-e), 1 x plugged (XM)
Type of mounting	ceiling-/wall mounting	ceiling-/wall mounting	ceiling-/wall mounting
Degree of protection accd. to EN 60529	IP66	IP66	IP66
Protective cover / protective bowl	borosilicate glass	borosilicate glass	borosilicate glass, clear

[1)] see table luminaire data

Additional luminaire data EVI

				Temperature class II 2 G		max. surface temp. II 2 D	
Lamp	**Power**	**Luminous flux [2)]**	**Type**	$T_U \le 40$ °C	$T_U \le 55$ °C	$T_U \le 40$ °C	$T_U \le 55$ °C
Incandescent lamp IGA 65	150 W	2200 lm	EVI 200	T4	T4	T 105 °C	T 120 °C
Incandescent lamp IGA 80	200 W	3100 lm	EVI 200	T4	T4	T 115 °C	T 130 °C
Incandescent lamp IGA 90	300 W	5000 lm	EVI 500	T4	T4	T 115 °C	T 130 °C
Incandescent lamp IGA 110	500 W	8400 lm	EVI 500	T3	T3	T 155 °C	T 170 °C

[2)] depends on used lamps

Ex Pendant light fittings for high-pressure discharge lamps EV. / dHLS / EVZ

(Zone 1, 2, 21, 22)

Ex pendant light fittings for high-pressure discharge lamps

These EV, dHLS and EVZ luminaire series are designed for the use of high-pressure discharge lamps. Ballasts and lamps are located in a common housing. The flameproof enclosures are connected via an easy-to-mount Ex-e terminal compartment. The protective cover is made of borosilicate glass and is extremely impact and heat resistant. All external screws are made of stainless steel. The lamp replacement is done by opening the PTFE coated connection ring. Both the glass dome and the connection ring are hinged for easy access. Depending on the type, the light fittings are certified for ambient temperatures from - 45 °C up to 55 °C.

EV pendant light fitting with 2 housing sizes

The EV pendant light series is suitable for use with sodium or metal halide high-pressure discharge lamps. The small enclosure solution can be used with lamps up to 125 W. The large enclosure solution is suitable for lamps with a power consumption of up to 250 W.

dHLS – the robust pendant light

The robust dHLS pendant light fitting has been certified for hazardous areas in Zones 1 and 2 and is suitable for 250 W and 400 W high pressure lamps . The housing is made of a light alloy with a powder coating. Because of its high operational safety, it has been used in chemical plants and on- and offshore platforms for illuminating large areas and selective large objects for many years now. The light fitting is fitted with a dome-shaped glass cover and can also be fitted with an external reflector.

EVZ - highly versatile

The EVZ pendant light fittings are available in 2 versions for 70 W to 150 W and 150 W to 400 W. The luminaire can be fitted with a swivel bracket for wall or pole mounting. Two external reflectors and a protective guard are available as an option.

Features

- Various enclosure-size solutions
- For high-pressure discharge lamps
- Robust design for harsh environments
- Large Ex-e terminal compartment
- Wide ambient temperature range depending on the version from -45 ° C up to +55 ° C
- CU-Certificate for Eurasian Economic Community available
- Meets the highest standards of corrosion protection and mechanical strength

Ordering details

Type	Lamp / Illuminant	Rated luminous flux [2]	Weight	Metal thread/ plastic cable gland	Threaded plug	Dust cap	Order No.
EV. ...							
EVS 70 ZM	HSE 70 W	5600 lm	14 kg	2 x M25	1 x M25 Ex-e	x	**NOR 000 115 110 880**
EVS 70 ZM, -45 °C up to +55 °C	HSE 70 W	5600 lm	14 kg	2 x M25	1 x M25 Ex-e	x	**NOR 000 115 110 886**
EVS 150 ZM	HSE 150 W	14000 lm	22.4 kg	2 x M25	1 x M25 Ex-e	x	**NOR 000 115 110 883**
EVS 150 ZM -45 °C up to +55 °C	HSE 150 W	14000 lm	22.4 kg	2 x M25	1 x M25 Ex-e	x	**NOR 000 115 110 887**
EVS 250 ZM	HSE 250 W	25000 lm	22.4 kg	2 x M25	1 x M25 Ex-e	x	**NOR 000 115 110 882**
EVS 250 ZM, -45 °C up to +55 °C	HSE 250 W	25000 lm	22.4 kg	2 x M25	1 x M25 Ex-e	x	**NOR 000 115 110 888**
EVH 250 ZM	HIE 250 W	17000 lm	22.4 kg	2 x M25	1 x M25 Ex-e	x	**NOR 000 115 110 945**
EVH 250 ZM, -45 °C up to +55 °C	HIE 250 W	17000 lm	22.4 kg	2 x M25	1 x M25 Ex-e	x	**NOR 000 115 110 889**
dHLS 85 ...							
dHLS 85250 HSE IND	HSE 250 W	25000 lm	30 kg	1 x M25 plastic	1 x M25 Ex-e	x	**CGS 123 8688 P2001**
dHLS 85250 HSE KOMP [1]	HSE 250 W	25000 lm	37 kg	1 x M25 plastic	1 x M25 Ex-e	x	**CGS 123 8688 P3001**
dHLS 85400 HSE IND	HSE 400 W	48000 lm	30 kg	1 x M25 plastic	1 x M25 Ex-e	x	**CGS 123 8788 P2001**
dHLS 85400 HSE KOMP [1]	HSE 400 W	48000 lm	37 kg	1 x M25 plastic	1 x M25 Ex-e	x	**CGS 123 8788 P3001**
dHLS 85400 HSE IND -50 °C up to +50 °C	HSE 400 W	48000 lm	30 kg	1 x M25 plastic	1 x M25 Ex-e	x	**CGS 123 8788 P2002**
EVZ small enclosure							
EVZIS2M075 - 230 V AC	HSE 70 W	5600 lm	10 kg	2 x M25	1 x M25 Ex-e	x	**CCL 1077 028 /S6E**
EVZIS2M076 - 240 V AC	HSE 70 W	5600 lm	10 kg	2 x M25	1 x M25 Ex-e	x	**CCL 1077 040 /S6E**
EVZIS2M105 - 230 V AC	HSE 100 W	8800 lm	11 kg	2 x M25	1 x M25 Ex-e	x	**CCL 1077 088 /S6E**
EVZIS2M106 - 240 V AC	HSE 100 W	8800 lm	11 kg	2 x M25	1 x M25 Ex-e	x	**CCL 1077 100 /S6E**
EVZIS2M155 - 230 V AC	HSE 150 W	14000 lm	12 kg	2 x M25	1 x M25 Ex-e	x	**CCL 1077 148 /S6E**
EVZIS2M156 - 240 V AC	HSE 150 W	14000 lm	12 kg	2 x M25	1 x M25 Ex-e	x	**CCL 1077 160 /S6E**
EVZIM2M075 - 230 V AC	HIE 70 W	5100 lm	10 kg	2 x M25	1 x M25 Ex-e	x	**CCL 1077 034 /S6E**
EVZIM2M076 - 240 V AC	HIE 70 W	5100 lm	10 kg	2 x M25	1 x M25 Ex-e	x	**CCL 1077 046 /S6E**
EVZIM2M105 - 230 V AC	HIE 100 W	7800 lm	11 kg	2 x M25	1 x M25 Ex-e	x	**CCL 1077 094 /S6E**
EVZIM2M106 - 240 V AC	HIE 100 W	7800 lm	11 kg	2 x M25	1 x M25 Ex-e	x	**CCL 1077 106 /S6E**
EVZIM2M155 - 230 V AC	HIE 150 W	11000 lm	12 kg	2 x M25	1 x M25 Ex-e	x	**CCL 1077 154 /S6E**
EVZIM2M156 - 240 V AC	HIE 150 W	11000 lm	12 kg	2 x M25	1 x M25 Ex-e	x	**CCL 1077 166 /S6E**

[1] with installed ballast enclosure on top cos φ ≥ 0.9
[2] depends on used lamps

Scope of delivery without lamp and fixing accessories, if not stated otherwise.
Metal cable glands see catalogue part 2: 2.3.12 ff

Ordering details / Accessories

Pendant light fittings

Ordering details

Type	Lamp / Illuminant	Rated luminous flux [2]	Weight	Metal thread	Threaded plug	Dust cap	Order No.
EVZ large enclosure							
EVZIS2M255 - 230 V AC	HSE 250 W	25000 lm	16 kg	2 x M25	1 x M25 Ex-e	x	**CCL 1075 088 /S6E**
EVZIS2M256 - 240 V AC	HSE 250 W	25000 lm	16 kg	2 x M25	1 x M25 Ex-e	x	**CCL 1075 100 /S6E**
EVZIS2M405 - 230 V AC	HSE 400 W	48000 lm	18 kg	2 x M25	1 x M25 Ex-e	x	**CCL 1075 136 /S6E**
EVZIS2M406 - 240 V AC	HSE 400 W	48000 lm	18 kg	2 x M25	1 x M25 Ex-e	x	**CCL 1075 142 /S6E**
EVZIS2M605 - 230 V AC	HST 600 W	90000 lm	20 kg	2 x M25	1 x M25 Ex-e	x	**CCL 1075 196 /S6E**
EVZIS2M606 - 240 V AC	HST 600 W	90000 lm	20 kg	2 x M25	1 x M25 Ex-e	x	**CCL 1075 202 /S6E**
EVZIM2M255 - 230 V AC	HIE 250 W	19000 lm	16 kg	2 x M25	1 x M25 Ex-e	x	**CCL 1075 094 /S6E**
EVZIM2M256 - 240 V AC	HIE 250 W	19000 lm	16 kg	2 x M25	1 x M25 Ex-e	x	**CCL 1075 106 /S6E**
EVZIM2M405 - 230 V AC	HIT 400 W	33000 lm	18 kg	2 x M25	1 x M25 Ex-e	x	**CCL 1075 166 /S6E**
EVZIM2M406 - 240 V AC	HIT 400 W	33000 lm	18 kg	2 x M25	1 x M25 Ex-e	x	**CCL 1075 172 /S6E**

[2] depends on used lamps

Accessories

Type	Content	Application	OU	Order No.
G. EV 200	Wire guard	EV.. small enclosure	1	**CHR 2100 3**
G. EV 500	Wire guard	EV.. large enclosure	1	**CHR 8208 FS**
PC. EV 200	External reflector	EV.. 70-125 ..	1	**NOR 000 005 110 894**
PC. EV 500	External reflector	EV.. 150-250 ..	1	**NOR 000 005 110 901**
KEY, EV	Luminaire key	EV..	1	**NOR 000 005 110 886**
CEV/AB	Eye bolt	EV..	1	**NOR 000 005 110 852**
SPU.EV/AB	Wall mounting bracket, adjustable	EV..	1	**NOR 000 005 110 951**
AS.EV	Ceiling bracket	EV..	1	**NOR 000 005 110 828**
BC. EV	Pole mounting bracket for poles Ø 44 - 64 mm	EV..and EVZ	1	**NOR 000 005 110 836**
SP. EV 200	Wall mounting bracket	EV 70..-125 ..	1	**NOR 000 005 110 935**
SP. EV 500	Wall mounting bracket	EV 150..-250 ..	1	**NOR 000 005 110 943**
RS	Eye bolt M10 (10 pcs.) galvanised	dHLS 85	1	**GHG 690 1921 R0003**
L 218	Mounting bracket for inductive version	dHLS 85	1	**GHG 690 1913 R0001**
L 430	Mounting bracket for compensated version	dHLS 85	1	**GHG 690 1913 R0002**
AR	External reflector metal, powder coating white	dHLS 85	1	**CGS 223 7990 P1000**
U-bracket	for ceiling- and wall mounting	EVZ - small enclosure	1	**CCL 1076 001**
U-bracket	for ceiling- and wall mounting	EVZ - large enclosure	1	**CCL 1076 002**
RA725	Asymmetrical external reflector	EVZ - small enclosure	1	**750 283**
RD725	Symmetrical external reflector	EVZ - small enclosure	1	**7502 86**
RA	Asymmetrical external reflector	EVZ - large enclosure	1	**CHR 9973**
RD	Symmetrical external reflector	EVZ - large enclosure	1	**CHR 9972**
Wire guard	Stainless steel SS316	EVZ - small enclosure	1	**CHR 8138**
Wire guard	Stainless steel SS316	EVZ - large enclosure	1	**CHR 7870**
Eye bolt		EVZ	1	**CHR 6196**
HSE 70 W	High pressure sodium lamp 70 W E27	EVS 70, EVZIS2M07	1	**3 2475 900 012**
HSE 100 W	High pressure sodium lamp 100 W E40	EVZIS2M10	1	**3 2475 900 013**
HSE 150 W	High pressure sodium lamp 150 W E40	EVS 150, EVZIS2M15	1	**3 2475 900 014**
HSE 250 W	High pressure sodium lamp 250 W E40	EVS 250, dHLS 85250, EVZIS2M25	1	**CGS 3238 600 P1009**
HSE 400 W	High pressure sodium lamp 400 W E40	EVS 4000, dHLS 85400, EVZIS2M40	1	**CGS 3238 700 P1009**
HSE 600 W	High pressure sodium lamp 600 W E40	EVZIS2M60	1	**on request**

Scope of delivery without lamp and fixing accessories, if not stated otherwise. Metal cable glands see catalogue part 2: 2.3.12 ff

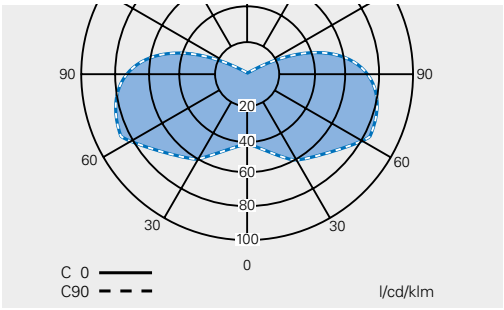
Type	Content	Application	OU	Order No.
HIE 70 W	High pressure metal halide lamp 70 W E27	EVZIM2M07	1	**3 2475 900 010**
HIE 100 W	High pressure metal halide lamp 100 W E27	EVZIM2M10	1	**3 2475 900 011**
HIE 150 W	High pressure metal halide lamp 150 W E40	EVZIM2M15	1	**on request**
HIE 250 W/	High pressure metal halide lamp 250 W E40	EVH 250, EVZIM2M25	1	**3 2475 900 017**
HIE 400 W/	High pressure metal halide lamp 400 W E40	EVZIM2M40	1	**3 2475 900 018**

Scope of delivery without lamp and fixing accessories, if not stated otherwise.
Metal cable glands see catalogue part 2: 2.3.12 ff

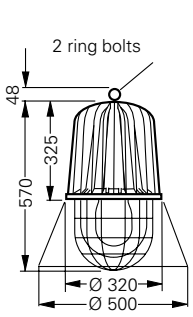
Other lamps on request

4

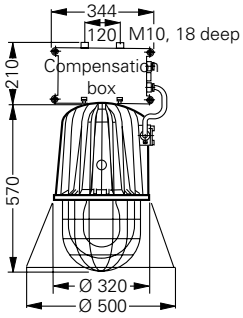
Polar curve without external reflector dHLS



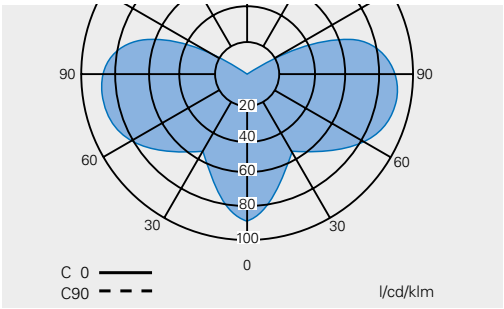
dHLS 85 ... ind.



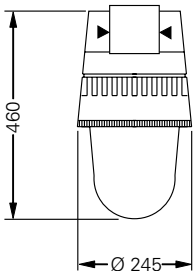
dHLS 85 ... comp.



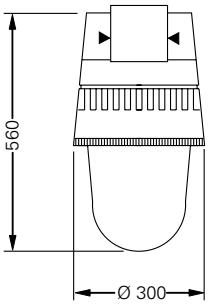
Polar curve EV 200/500 without external reflector



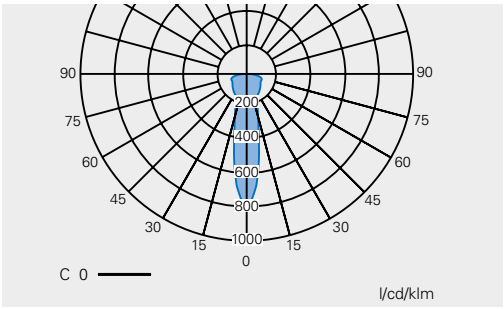
EV ... 70 - 125 ZM



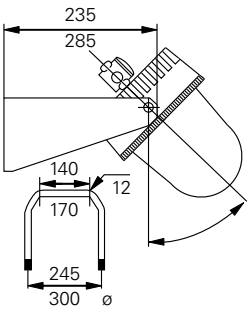
EV ... 150 - 250 ZM



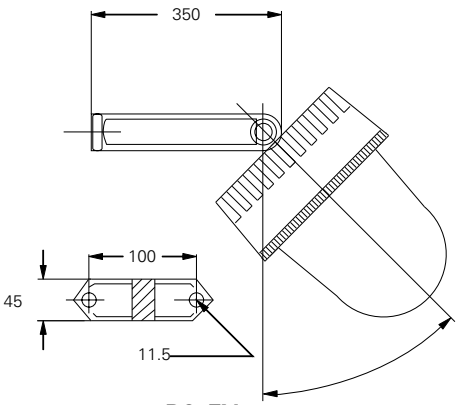
Polar curve EV 200/500 with external reflector



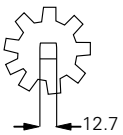
SP.EV 200/500



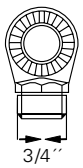
SPU EV/AB



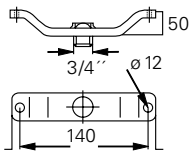
KEY.EV



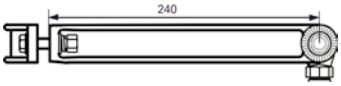
CEV/AB



AS.EV



BC. EV

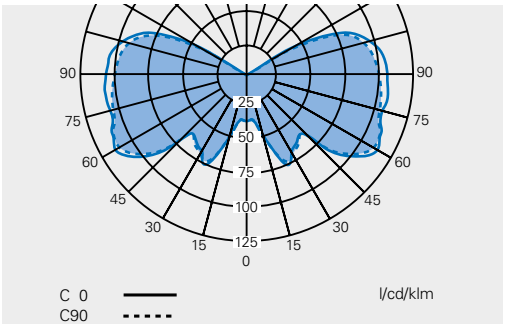


Dimensions in mm

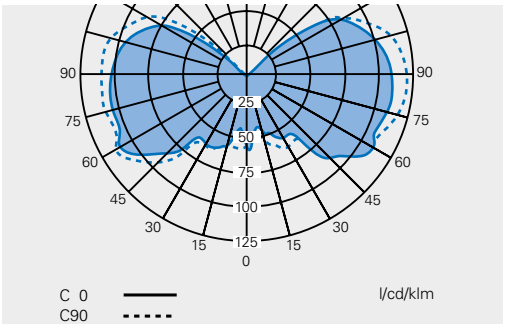
Polar curve / Dimension drawing

Pendant light fittings

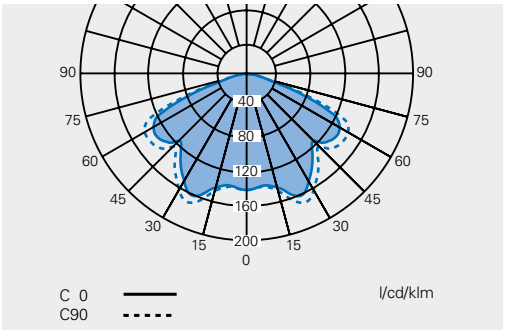
Polar curve EVZ small enclosure



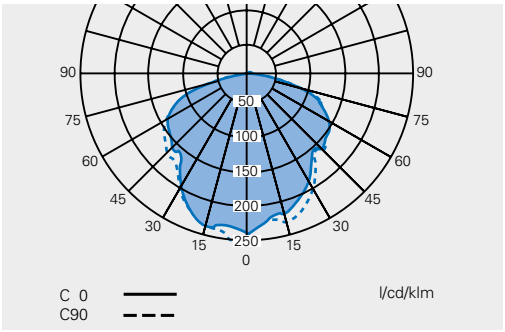
Polar curve EVZ large enclosure



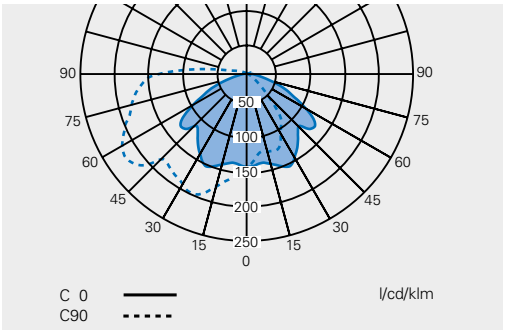
Polar curve EVZ small enclosure with reflector RD



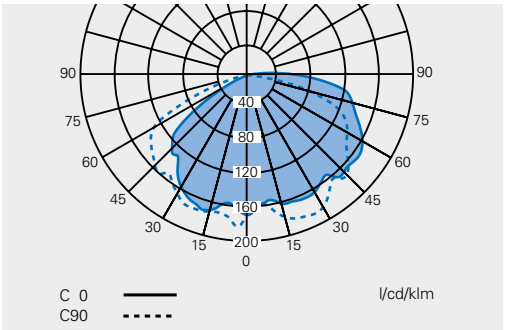
Polar curve EVZ large enclosure with reflector RD



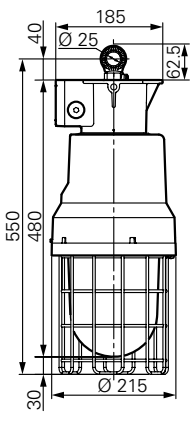
Polar curve EVZ small enclosure with reflector RA



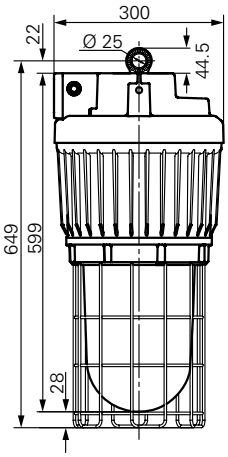
Polar curve EVZ large enclosure with reflector RA



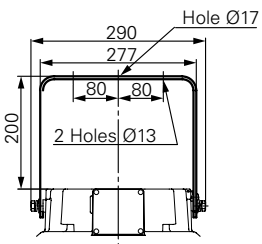
EVZ small enclosure



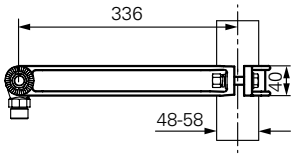
EVZ large enclosure



U-bracket



Bracket for pole mounting



Dimensions in mm

Technical data

	EV. ≤ 125 W (small enclosure)	EV. ≤ 250 W (large enclosure)
EC-Type Examination Certificate	LOM 02 ATEX 2012 X	LOM 02 ATEX 2012 X
IECEx Certificate of Conformity	IECEx BKI 07.0031X	IECEx BKI 07.0031X
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de IIC T[1] Db Ⓔx II 2 D Ex tb IIIC T...ºC Db	Ⓔx II 2 G Ex de IIC T[1] Db Ⓔx II 2 D Ex tb IIIC T...ºC Db
Marking accd. to IECEx	Ex de IIC T[1] Gb Ex tD A21 IP67 T[1]	Ex de IIC T[1] Ex tD A21 IP67 T[1]
Permissible ambient temperature	-20 °C up to +55 °C -45 °C up to +55 °C (option)	-20 °C up to +55 °C -45 °C up to +55 °C (option)
Rated voltage	230 V AC	230 V AC
Frequency	50 Hz	50 Hz
Power factor cos φ	≥ 0.85	≥ 0.85
Circuit	electromagnetical	electromagnetical
Protection class	I	I
Lamp / Illuminant	HME 125 W, HSE 70 W	HME 250 W, HSE 150 - 250 W, HIE 250 W
Lamp name	high pressure sodium lamp	high pressure sodium lamp, Metal-halide lamp
Rated luminous flux	[1]	[1]
Lamp cap	E27 accord. IEC 60238	E40 accord. IEC 60238
Light output ratio	76 %	76 %
Dimensions (L x W x H)	480 mm x Ø 245 mm	560 mm x Ø 300 mm
Connecting terminals (Ex-e)	L, N, PE: 2 x 2.5 mm² PE external 2 x 6 mm²	L, N, PE: 2 x 2.5 mm² PE external 2 x 6 mm²
Enclosure colour	epoxy paint, body RAL 7032 / cover RAL 7016 / ring RAL 6005	epoxy paint, body RAL 7032 / cover RAL 7016 / ring RAL 6005
Enclosure material	light alloy	light alloy
Weight	14.1 kg	22.4 kg
Cable glands / gland plates / enclosure drilling	2 x M25 thread (Ex-e), 1 x plugged	2 x M25 thread (Ex-e), 1 x plugged
Type of mounting	ceiling mounting	ceiling mounting
Degree of protection accd. to EN 60529	IP66	IP66
Protective cover / protective bowl	borosilicate glass	borosilicate glass

[1] see table luminaire data

Additional luminaire data EV.

				Enclosure size		Temperature class II 2 G		max. surface temp. II 2 D	
Lamp	**Power**	**luminous flux[2]**	**Type**	**small**	**large**	**T_U ≤ 40 °C**	**T_U ≤ 55 °C**	**T_U ≤ 40 °C**	**T_U ≤ 55 °C**
High pressure sodium lamp HSE	70 W	5600 lm	EVS 70 ZM	X		T5	T4	T95°C	T110°C
High pressure sodium lamp HSE	150 W	14000 lm	EVS 150 ZM		X	T5	T4	T90°C	T105°C
High pressure sodium lamp HSE	250 W	25000 lm	EVS 250 ZM		X	T4	T4	T115°C	T130°C
Metal halide lamp HIE	250 W	19000 lm	EVH 250 ZM		X	T4	T3	T125°C	T140°C

[2] depends on used lamps

4.4 Technical data

dHLS 85

4

Technical data

	dHLS 85
EC-Type Examination Certificate	DMT 03 ATEX E 039
IECEx Certificate of Conformity	IECEx BVS 11.0066
Marking accd. to 2014/34/EU	Ex II 2 G Ex de IIC T3 Gb
Marking accd. to IECEx	Ex de IIC T3 Gb
Permissible ambient temperature	-20 °C up to +50 °C / -20 °C up to +55 °C (250 W) -50 °C up to +50 °C (option)
Rated voltage	230 V AC
Frequency	50 Hz
Power factor cos φ	0.5 ind. / 0.9 comp. [2]
Circuit	inductive circuit / compensated circuit [2]
Protection class	I
Lamp / Illuminant	HSE/HME 250 - 400 W
Lamp name	Mercury vapour, high pressure sodium lamp
Rated luminous flux	[1]
Lamp cap	E40 accord. IEC 60238
Connecting terminals	L, N, PE max. 2 x 2.5 mm^2
Enclosure material	light alloy with powder coating
Weight	30 kg
Cable glands / gland plates / enclosure drilling	1 x M25 x 1.5 for cables from Ø 8 - 17 mm 1 x M25 x 1.5 with blanking plug
Type of mounting	ceiling mounting
Degree of protection accd. to EN 60529	IP65
Protective cover / protective bowl	borosilicate glass

[1] see table luminaire data
[2] with installed ballast enclosure on top

Additional luminaire data dHLS 85

Lamp	Power	luminous flux[2]	Type
High pressure sodium lamp HSE	250 W	25000 lm	dHLS 85250
High pressure sodium lamp HSE	400 W	48000 lm	dHLS 85400

Technical data

	EVZ (small enclosure)	EVZ (large enclosure)
EC-Type Examination Certificate	TÜV 12 ATEX 7169X	TÜV 12 ATEX 7169X
IECEx Certificate of Conformity	IECEx CQM 11.0002	IECEx CQM 11.0002
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex d e IIC T* Gb [1)] Ⓔx II 2 D Ex tD A21 IP66 T* [1)]	Ⓔx II 2 G Ex d e IIC T* Gb [1)] Ⓔx II 2 D Ex tD A21 IP66 T* [1)]
Marking accd. to IECEx	Ex d e IIC T* Gb [1)] Ex tD A21 IP66 T* [1)]	Ex d e IIC T* Gb [1)] Ex tD A21 IP66 T* [1)]
Permissible ambient temperature	-40 °C up to +55 °C	-40 °C up to +55 °C
Frequency	50 Hz	50 Hz
Power factor cos φ	≥ 0.9	≥ 0.9
Protection class	I	I
Lamp / Illuminant	HSE 70 - 150 W, HIE 70 - 150 W	HSE 250 - 600 W, HIE 250 - 400 W
Lamp name	High pressure sodium lamp, Metal halide lamp	High pressure sodium lamp, Metal halide lamp
Rated luminous flux	[1)]	[1)]
Lamp cap	E27 accord. IEC 60238 (HSE 70 W, HIE. 70 - 150 W) E40 accord. IEC 60238 (HSE 100 - 150 W)	E40 accord. IEC 60238
Dimensions (L x W x H)	Ø 215 mm x 480 mm	Ø 300 mm x 599 mm
Connecting terminals (Ex-e)	3 x 2 x 4 mm² (L, N, PE) max. 2 Leiter	3 x 2 x 4 mm² (L, N, PE) max. 2 Leiter
Enclosure colour	grey	grey
Enclosure material	copper free aluminium	copper free aluminium
Weight	14.1 kg	22.4 kg
Cable glands / gland plates / enclosure drilling	2 x M25 thread, 1 x M25 Ex-e screw plug	2 x M25 thread, 1 x M25 Ex-e screw plug
Type of mounting	ceiling mounting	ceiling mounting
Degree of protection accd. to EN 60529	IP66	IP66
Protective cover / protective bowl	toughened glass	toughened glass

[1)] see table luminaire data

Additional luminaire data EVZ

				Temperature class II 2 G		max. surface temp. II 2 D	
Lamp	**Power**	**luminous flux[2)]**	**Type**	**T_U ≤ 40 °C**	**T_U ≤ 55 °C**	**T_U ≤ 40 °C**	**T_U ≤ 55 °C**
High pressure sodium lamp HSE	70 W	5600 lm	EVZIS*07*	T5	T4	83 °C	98 °C
High pressure sodium lamp HSE	100 W	8800 lm	EVZIS*10*	T5	T4	94 °C	109 °C
High pressure sodium lamp HSE	150 W	14000 lm	EVZIS*15*	T4	T4	113 °C	128 °C
High pressure sodium lamp HSE	250 W	25000 lm	EVZIS*25*	T3	T3	134 °C	149 °C
High pressure sodium lamp HSE	400 W	48000 lm	EVZIS*40*	T3	T3	146 °C	161 °C
High pressure sodium lamp HSE	600 W	90000 lm	EVZIS*60*	T3	T3	167 °C	182 °C
Metal halide lamp HIE	70 W	5100 lm	EVZIM*07*	T5	T4	83 °C	98 °C
Metal halide lamp HIE	100 W	7800 lm	EVZIM*10*	T4	T4	97 °C	112 °C
Metal halide lamp HIE	150 W	11000 lm	EVZIM*15*	T4	T4	111 °C	126 °C
Metal halide lamp HIE	250 W	19000 lm	EVZIM*25*	T3	T3	132 °C	147 °C
Metal halide lamp HIE	400 W	33000 lm	EVZIM*40*	T3	T3	167 °C	182 °C

[2)] depends on used lamps

Ex-Floodlight PXLED

Complete series of LED floodlights replacing 100 up to 600 W conventional light sources (Zone 1, 2, 21, 22)

Lighting under harsh conditions

The new modular LED floodlight series PXLED is suited for nearly every kind of lighting task in hazardous areas, including applications in on- and offshore, heavy industrial, chemical, petrochemical, oil and gas, pharmaceuticals, shipyards, dockyards, power generation, paper mills and wastewater treatment indoor and outdoor with potentially explosive areas under harsh conditions like vibrations, dust, moisture or corrosive atmospheres and extreme temperatures. The PXLED comes with a standard U-shaped mounting bracket for ceiling and wall mounting.

Replacement of conventional light fittings up to 600 W

With a luminous flux from 5,000 lm up to 32,000 lm this floodlight series can be used to replace nearly every floodlight with conventional light sources with an equivalent power consumption from 70 W up to 600 W.

High efficient LED technology

High efficient power LED module with 110 Lumen/Watt enables up to 70 % energy-cost savings compared to conventional HID lamp.

Safety first

All PXLED multi-module floodlights from size 10L to 30L are equipped with a multichannel LED driver. This driver provides for each LED-module a separate power channel circuit. Even if one circuit fails, all other LED-modules are still working.

Modular design - just use the size you need

Thanks to the modular design of the PXLED series you can exactly choose the lumen output you need. There is no need to over/underdesign your lighting project. Six sizes are available from nominal 5.000 lm to more than 30.000 lm with a step-wide of 5000 lm.

Easy to install

A stainless steel swivel bracket with adjustable setting angle allows an easy alignment of the floodlight. A fixing screw

secures the alignment. The swivel bracket provides up to five Ø13 mm fixing holes for a safe assembly.

Together with two cable gland a large terminal compartment in Ex-e design allows cost saving through-wiring without additional terminal boxes.

The used Ex-e terminals can clamp up to 6 mm² wiring.

Internal and external PE-terminals allows nearly all cabling technique.

5 YEAR WARRANTY

Features

- High efficiency: up to 110 lm/W
- Operating temperature -50 °C up to +55 °C
- Suitable for Explosion Group IIC / IIIC environments
- Broad range of light output from 5,000 lm up to 32,000 lm
- Wide and narrow beam pattern (asymmetric beam on request)
- Long lifetime
- Ex-e compartment for driver & terminal for easy installation and maintenance

Designed for long lifetime

High ambient temperatures can drive the LED chip-temperature into a not permissible range. This would reduce the life-span of the LEDs tremendously. Eaton provides an enclosure design with large cooling pipes and a innovated heat reduction design.

Tests, done under the worst conditions have shown, that the LED-chip temperature is always below critical values. The designed life span for the LED (L80) is more than 60,000 h even at +55°C ambient temperature

The Eaton LED driver is especially designed for the harsh conditions of hazardous environments. According to EN 61000-4-5 an electronic device must withstand a surge pulse of 1 kV between L- N, our LED driver is designed to withstand 4 kV between L- N and L, N - PE.

All electronic components with self-heating are over dimensioned to ensure a maximum maintenance-free period. The driver has an own Ex-certification "q" and is mounted within the Ex-e compartment.

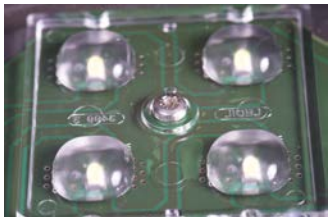
In the very unlikely event of a driver failure this unit can be exchanged separately from the floodlight.

Light distribution for various applications

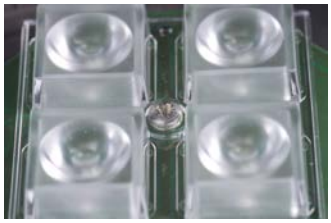
Beside the various lumen output packages, different light distributions can be realised with the PXLED-series.

A wide beam pattern as well as a narrow beam pattern is realized by the use of special designed lens caps for the LEDs. In addition, asymmetric light distributions are also available for special applications.

With a light transmission factor of more that 90 % we are able to offer a system efficiency of more than 110 lm/W.



wide beam lens caps

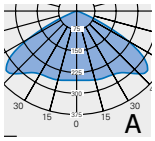


narrow beam lens caps

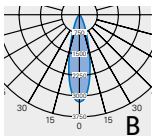
Type key for PXLED floodlight series

PXLED 10L A 7 57 C T0 E01

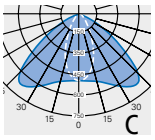
Type of fitting:	Size of fitting[1]:	Light distribution:	CRI [2]:	CCT [3]:	Front glass:	Terminals:	Cable entries/glands:
PXLED	5L = 5000 lm 10L=10000 lm 15L=15000 lm 20L=20000 lm 25L=25000 lm 30L=30000 lm	A = wide beam B = narrow beam C = asymetric1 D = asymetric2	7 = CRI >70 X = other on request	57 = 5700 K XX = other on request	C = clear F = frosted on request	T0 = type 2410 - max. 6 mm² TX= others on request	E01= 2 x M25 metal gland type ADE 1F2 E05= 2 x M25 plastic threaded plug E11= 1 x M25 metal gland type ADE 1F2, 1 x M25 plastic threaded plug EXX= others on request



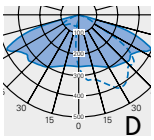
type V



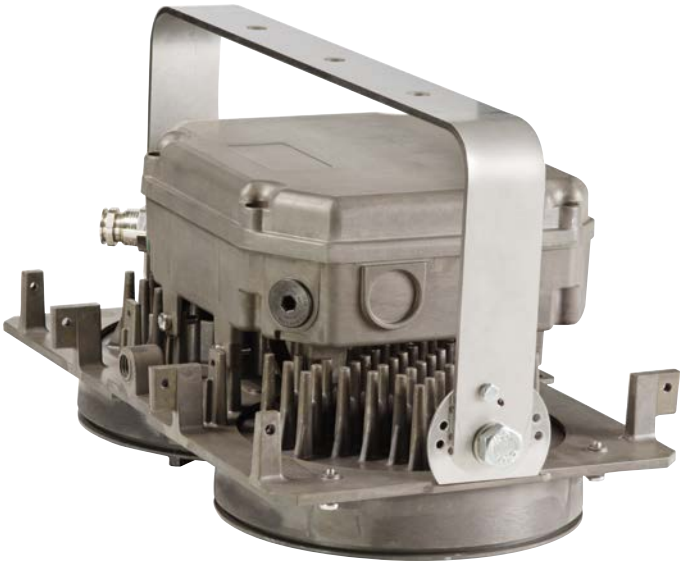
type VII



type I



type III



1) the lumen value is a design value and will not show the actual lumen output
2) CRI = Colour Rendering Index
3) CCT= Correlated Colour Temperature

Ordering details

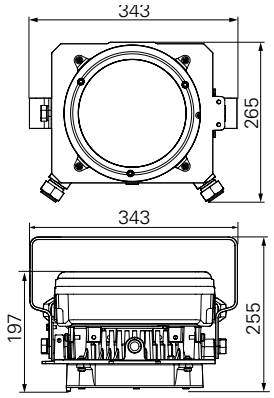
PXLED for Ex-Zone 1, 2, 21 and 22

Ordering details PXLED

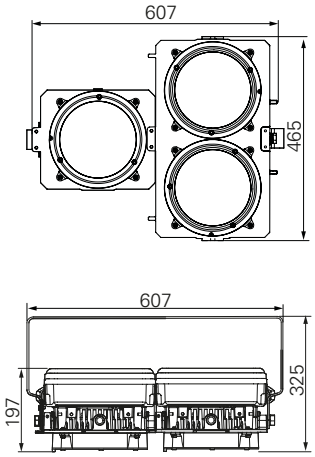
	Type	Lamp / illuminant	Light distribution *)	Description / Power	Cable glands	Order No..
	PXLED 5L B 757 C E01	LED system 5.386 lm	narrow beam	LED floodlight with swivel bracket 49 W	2 x M25 metal cable gland ADE 1F2 for Ø 10 - 17 mm	**1 3042 110 001**
	PXLED 5L B 757 C E05				2 x M25 plastic threaded plug	**1 3042 110 005**
	PXLED 5L A 757 C E01	LED system 5.207 lm	wide beam	LED floodlight with swivel bracket 49 W	2 x M25 metal cable gland ADE 1F2 for Ø 10 - 17 mm	**1 3042 111 001**
	PXLED 5L A 757 C E05				2 x M25 plastic threaded plug	**1 3042 111 005**
	PXLED 10L B 757 C E01	2 LED systems 10.772 lm	narrow beam	LED floodlight with swivel bracket 98 W	2 x M25 metal cable gland ADE 1F2 for Ø 10 - 17 mm	**1 3042 210 001**
	PXLED 10L B 757 C E05				2 x M25 plastic threaded plug	**1 3042 210 005**
	PXLED 10L A 757 C E01	2 LED systems 10.414 lm	wide beam	LED floodlight with swivel bracket 98 W	2 x M25 metal cable gland ADE 1F2 for Ø 10 - 17 mm	**1 3042 211 001**
	PXLED 10L A 757 C E05				2 x M25 plastic threaded plug	**1 3042 211 005**
	PXLED 15L B 757 C E01	3 LED systems 16.158 lm	narrow beam	LED floodlight with swivel bracket 147 W	2 x M25 metal cable gland ADE 1F2 for Ø 10 - 17 mm	**1 3042 310 001**
	PXLED 15L B 757 C E05				2 x M25 plastic threaded plug	**1 3042 310 005**
	PXLED 15L A 757 C E01	3 LED systems 15.621 lm	wide beam	LED floodlight with swivel bracket 147 W	2 x M25 metal cable gland ADE 1F2 for Ø 10 - 17 mm	**1 3042 311 001**
	PXLED 15L A 757 C E05				2 x M25 plastic threaded plug	**1 3042 311 005**
	PXLED 20L B 757 C E01	4 LED systems 21.544 lm	narrow beam	LED floodlight with swivel bracket 196 W	2 x M25 metal cable gland ADE 1F2 for Ø 10 - 17 mm	**1 3042 410 001**
	PXLED 20L B 757 C E05				2 x M25 plastic threaded plug	**1 3042 410 005**
	PXLED 20L A 757 C E01	4 LED systems 20.828 lm	wide beam	LED floodlight with swivel bracket 196 W	2 x M25 metal cable gland ADE 1F2 for Ø 10 - 17 mm	**1 3042 411 001**
	PXLED 20L A 757 C E05				2 x M25 plastic threaded plug	**1 3042 411 005**
	PXLED 25L B 757 C E01	5 LED systems 26.930 lm	narrow beam	LED floodlight with swivel bracket 245 W	2 x M25 metal cable gland ADE 1F2 for Ø 10 - 17 mm	**1 3042 510 001**
	PXLED 25L B 757 C E05				2 x M25 plastic threaded plug	**1 3042 510 005**
	PXLED 25L A 757 C E01	5 LED systems 26.035 lm	wide beam	LED floodlight with swivel bracket 245 W	2 x M25 metal cable gland ADE 1F2 for Ø 10 - 17 mm	**1 3042 511 001**
	PXLED 25L A 757 C E05				2 x M25 plastic threaded plug	**1 3042 511 005**
	PXLED 30L B 757 C E01	6 LED systems 32316 lm	narrow beam	LED floodlight with swivel bracket 294 W	2 x M25 metal cable gland ADE 1F2 for Ø 10 - 17 mm	**1 3042 610 001**
	PXLED 30L B 757 C E05				2 x M25 plastic threaded plug	**1 3042 610 005**
	PXLED 30L A 757 C E01	6 LED systems 31242 lm	wide beam	LED floodlight with swivel bracket 294 W	2 x M25 metal cable gland ADE 1F2 for Ø 10 - 17 mm	**1 3042 611 001**
	PXLED 30L A 757 C E05				2 x M25 plastic threaded plug	**1 3042 611 005**

*) Asymmetric light distribution on request

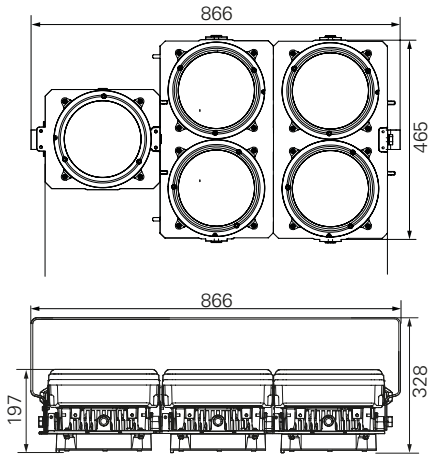
PXLED 5L



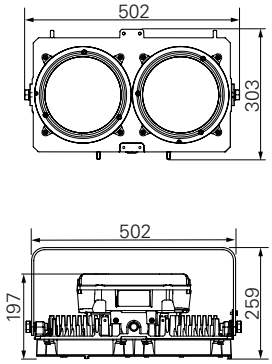
PXLED 15L



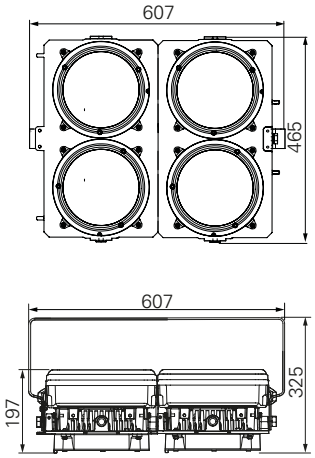
PXLED 25L



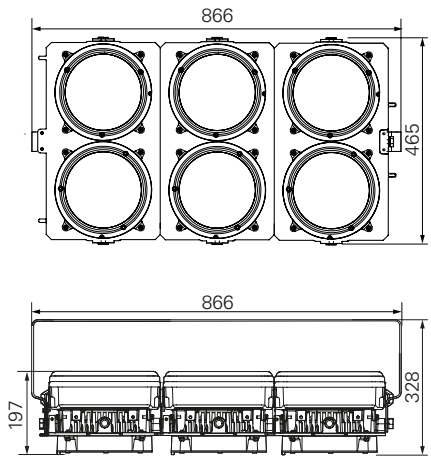
PXLED 10L



PXLED 20L

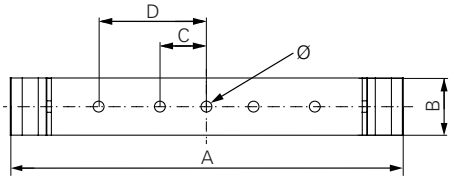


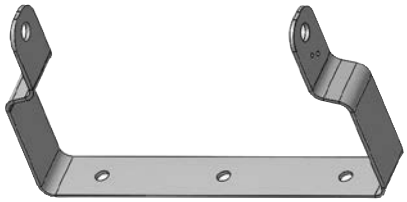
PXLED 30L



Dimensions in mm

Swivel bracket





Swivel bracket for PXLED - Dimensions

Dimensions in mm	A	B	C	D	Ø
PXLED 05	343	50	120	-	13
PXLED 10	476	50	120	-	13
PXLED 15	606	50	120	-	13
PXLED 20	606	50	120	-	13
PXLED 25	858	50	120	270	13
PXLED 30	858	50	120	270	13

Technical data, Polar curve,

PXLED for Ex-Zone 1, 2, 21 and 22

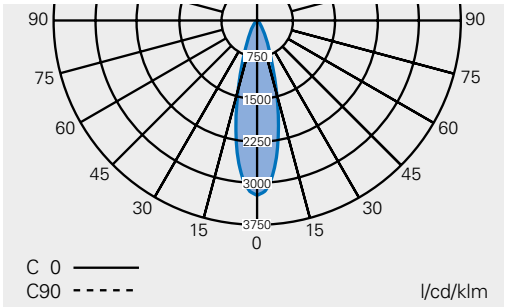
Technical data

	PXLED 5L	PXLED 10L	PXLED 15L	PXLED 20L	PXLED 25L	PXLED 30L
Type Examination Certificate	BVS 17 ATEX E 013 X					
IECEx Certificate of conformity	IECEx BVS 17.0004 X					
Marking accd. 2014/34/EU	⟨Ex⟩ II 2 G Ex db eb op is q IIC T4 Gb/ ⟨Ex⟩ II 2 D Ex tb op is IIIC T100°C Db					
Marking accd. to IECEx	Ex db eb op is q IIC T4 Gb/ Ex tb op is IIIC T100°C Db					
Certification accd. to TR CU 012/2011 EAC [1]	RU C-DE.AA87.B.00594					
Permissible ambient temperature	-50 °C up to +55 °C					
LED lifetime L80	>200,000 h @ 25 °C / 60,000 h @ +55 °C					
Driver lifetime C10	>100,000 h @ 25 °C / 60,000 h @ +55 °C					
Rated voltage	110 - 277 V AC / 127 - 270 V DC					
Rated current [2]	0.24 A	0.48 A	0.72 A	0.96 A	1.20 A	1.44 A
Frequency	0/50 - 60 Hz					
Power factor cos φ [1]	≥ 0.95					
Circuit	Electronic driver					
Protection class	I					
Light distribution	Wide beam and narrow beam (asymmetric beam on request)					
Light colour / CRI	5700 K / R_a >70 (other colours on request)					
Enclosure colour	Dark grey					
Connecting terminals	6 poles standard (L, L1, L2, L3, N, PE / up to 6 mm² / others on request)					
Enclosure material	Anodized copper-free Aluminium					
Weight	9.9 kg	14.4 kg	24.3 kg	28.7 kg	38.5 kg	41.1 kg
Cable glands / gland plates / enclosure drilling	2 x M25 (Ex-e) metal thread nickel plated (E01) or 2 x M25 (Ex-e) threaded plug (E05) (others on request)					
Degree of protection accd. to EN 60529	IP66/67 (coming soon)					
Protective cover / protective bowl	Toughened glass, clear (frosted on request)					
Swivel bracket	AiSi 316L stainless steel					

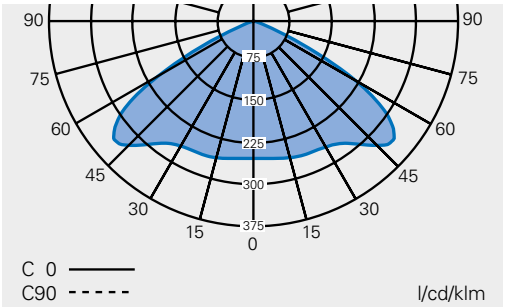
[1]) Please ask our sales service for the special Order No.
[2]) Typical value at 230 V

Polar curve

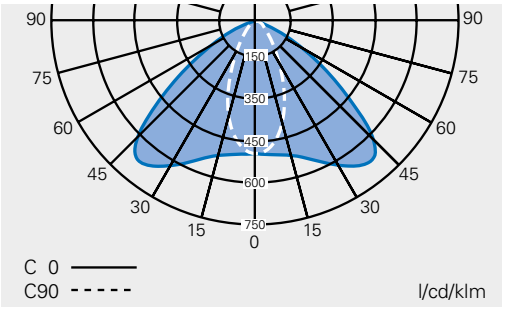
Polar curve PXLED 5L - 30L, narrow beam - type VII



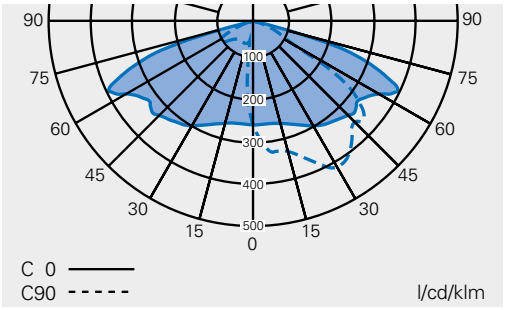
Polar curve PXLED 5L - 30L, wide beam - type V



Polar curve PXLED 5L - 30L,asymmetric - type I



Polar curve PXLED 5L - 30L,asymmetric - type III



Marine/Offshore

Cold environment

Industrial production area

Heavy Industry

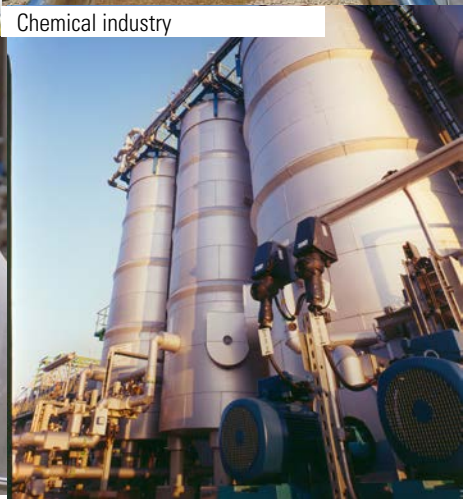
Oil & Gas

Pharmaceutical industry

Refineries

Extreme Conditions

Chemical industry



Ex Floodlights for high-pressure discharge lamps, series PX 04 and FLT 10

(Zone 1, 2, 21, 22)

The powerful floodlights for harsh environments

Thanks to the high degree of protection IP66, the robust floodlights of the series PX 04 and FLT 10 for hazardous areas are suitable for the illumination of large areas and objects under harsh environmental conditions, such as those found in industrial, chemical and petrochemical plants, on- and offshore oil and gas production plants, pipelines, refineries and loading ramps. High-pressure discharge lamps from 70 W to 600 W provide a high illuminance level.

PX 04 - multifunctional

The PX 04 light fitting enclosure is made of copper-free aluminium. The protective glass cover is made of scratchproof borosilicate glass; it protects the internal reflector against harmful environmental conditions.

Depending on the application, a wide beam or a narrow beam reflector can be chosen. All external screws are made of stainless steel. The easy-to-maintain electrical connection is made via a flanged-on Ex-e connection compartment. The ballast with thermal protection and a pulse ignitor with automatic shut off provides additional safety. The floodlight features an adjustable mounting bracket that allows an optimum focussing of the light.

FLT 10 - for Arctic conditions

Specially designed for use in areas with extremely low temperatures, the FLT 10 was developed as a version of the tried and tested PX 04 floodlight. Thanks to its highly polished aluminium reflector, the FLT 10 has a high lighting efficiency of 62%. Depending on the application, a wide beam or a narrow beam reflector can be chosen. The housing design and connections are the same as those of the PX 04. As it has been certified for ambient temperatures from -55 °C up to +55 °C, the FLT 10 is the ideal light source for use in extreme climates.

Features

- Floodlight for high-pressure discharge lamps
- Robust design for harsh environments
- High degree of protection IP 66
- With large Ex-e terminal compartment
- Depending on the version, large ambient temperature range from -55 °C up to +55 °C
- CU-Certificate for Eurasian Economic Community available
- Meets the highest corrosion protection and mechanical strength requirements

Ordering details

Type	Content	Lamp / Illuminant	Reflector	Rated luminous flux [1]	Weight	Metal thread	Threaded plug	Order No.
PX								
PX 0405	-20 °C up to +55 °C	IQT - 500 W	narrow beam	10000 lm	23 kg	2 x M25	1 x M25	**NOR 000 115 170 209**
PX 0405	-20 °C up to +55 °C	IQT 500 W	wide beam	10000 lm	23 kg	2 x M25	1 x M25	**NOR 000 115 170 309**
PX 0407	-20 °C up to +55 °C	HIT / HST 70 W	narrow beam	5100/6000 lm	23 kg	2 x M25	1 x M25	**NOR 000 115 170 230**
PX 0415	-20 °C up to +55 °C	HIT / HST 150 W	narrow beam	11000/15000 lm	31 kg	2 x M25	1 x M25	**NOR 000 115 170 233**
PX 0415	-20 °C up to +55 °C	HIT / HST 150 W	wide beam	14000/15000 lm	31 kg	2 x M25	1 x M25	**NOR 000 115 170 333**
PX 0425	-20 °C up to +55 °C	HIT / HST 250 W	narrow beam	19000/28000 lm	31 kg	2 x M25	1 x M25	**NOR 000 115 170 227**
PX 0425	-20 °C up to +55 °C	HIT / HST 250 W	wide beam	19000/28000 lm	31 kg	2 x M25	1 x M25	**NOR 000 115 170 327**
PX 0440H	-20 °C up to +55 °C	HIT 400 W	narrow beam	33000 lm	31 kg	2 x M25	1 x M25	**NOR 000 115 170 222**
PX 0440H	-20 °C up to +55 °C	HIT 400 W	wide beam	33000 lm	31 kg	2 x M25	1 x M25	**NOR 000 115 170 322**
PX 0440S	-20 °C up to +55 °C	HST 400 W	narrow beam	48000 lm	31 kg	2 x M25	1 x M25	**NOR 000 115 170 221**
PX 0440S	-20 °C up to +55 °C	HST 400 W	wide beam	48000 lm	31 kg	2 x M25	1 x M25	**NOR 000 115 170 321**
PX 0460	-20 °C up to +55 °C	HST 600 W	narrow beam	90000 lm	31 kg	2 x M25	1 x M25	**NOR 000 115 170 215**
PX 0460	-20 °C up to +55 °C	HST 600 W	wide beam	90000 lm	31 kg	2 x M25	1 x M25	**NOR 000 115 170 315**
FLT								
FLT 1007	-55°C up to +55 °C	HIT / HST 70 W	wide beam	5100/6000 lm	41 kg	2 x M25	1 x M25	**FLT10 0 07271 W002**
FLT 1007	-55°C up to +55 °C	HIT / HST 70 W	narrow beam	5100/6000 lm	41 kg	2 x M25	1 x M25	**FLT10 0 07271 N002**
FLT 1010	-55°C up to +55 °C	HIT / HST 100 W	wide beam	10000/9000 lm	41 kg	2 x M25	1 x M25	**FLT10 0 10401 W002**
FLT 1010	-55°C up to +55 °C	HIT / HST 100 W	narrow beam	10000/9000 lm	41 kg	2 x M25	1 x M25	**FLT10 0 10401 N002**
FLT 1015	-55°C up to +55 °C	HIT / HST 150 W	wide beam	11000/15000 lm	41 kg	2 x M25	1 x M25	**FLT10 0 15401 W002**
FLT 1015	-55°C up to +55 °C	HIT / HST 150 W	narrow beam	11000/15000 lm	41 kg	2 x M25	1 x M25	**FLT10 0 15401 N002**
FLT 1025	-55°C up to +55 °C	HIT / HST 250 W	wide beam	19000/28000 lm	41 kg	2 x M25	1 x M25	**FLT10 0 25401 W002**
FLT 1025	-55°C up to +55 °C	HIT / HST 250 W	narrow beam	19000/28000 lm	41 kg	2 x M25	1 x M25	**FLT10 0 25401 N002**
FLT 1040	-55°C up to +40 °C	HIT 400 W	wide beam	33000 lm	41 kg	2 x M25	1 x M25	**FLT10 I 40401 W002**
FLT 1040	-55°C up to +40 °C	HIT 400 W	narrow beam	33000 lm	41 kg	2 x M25	1 x M25	**FLT10 I 40401 N002**
FLT 1040	-55°C up to +40 °C	HST 400 W	wide beam	48000 lm	41 kg	2 x M25	1 x M25	**FLT10 S 40401 W002**
FLT 1040	-55°C up to +40 °C	HST 400 W	narrow beam	48000 lm	41 kg	2 x M25	1 x M25	**FLT10 S 40401 N002**

[1] depends on used lamps

Scope of delivery without lamp and fixing accessories, if not stated otherwise.
Metal cable glands see catalogue part 2: 2.3.12 ff

Accessories

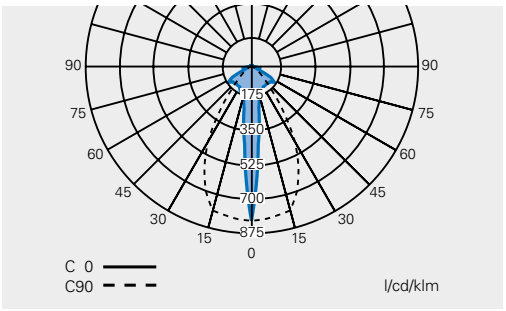
Type	Content	Application	OU	Order No.
SB	2 St pipe clamp Ø 48 mm up to Ø 64 mm incl. fixing screws	PX 04 / FLT 10	1	**NOR 000 005 170 583**
ATP	portable stand, painted steel	PX 04 / FLT 10 ..	1	**NOR 000 005 170 715**
PAH	horizontal steel shade, painted steel	PX 04 / FLT 10 ..	1	**NOR 000 005 170 608**
PAV	vertical steel shade, painted steel	PX 04 / FLT 10 ..	1	**NOR 000 005 170 591**
HIT 250 W	Metal halide lamp 250 W E40	PX 04 / FLT 10 ..	1	**CGS 323 7990 P1007**
HIT 400 W	Metal halide lamp 400 W E40	PX 04 / FLT 10 ..	1	**CGS 323 7990 P1008**
HST 250 W	High pressure sodium lamp 250 W E40	PX 04 / FLT 10 ..	1	**3 2475 900 016**
HST 400 W	High pressure sodium lamp 400 W E40	PX 04 / FLT 10 ..	1	**3 2475 900 015**
HST 70 W	High pressure sodium lamp 70 W E40	PX 04 / FLT 10		**3 1750 301 070**

Other lamps on request

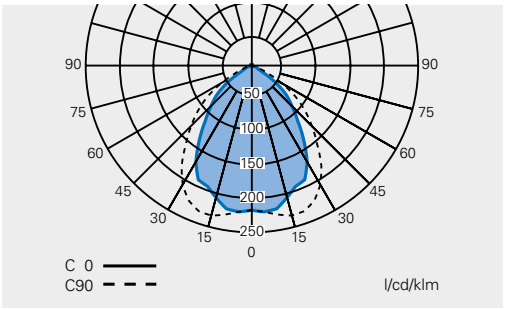
Dimension drawing / Polar curve

PX 04 / FLT 10

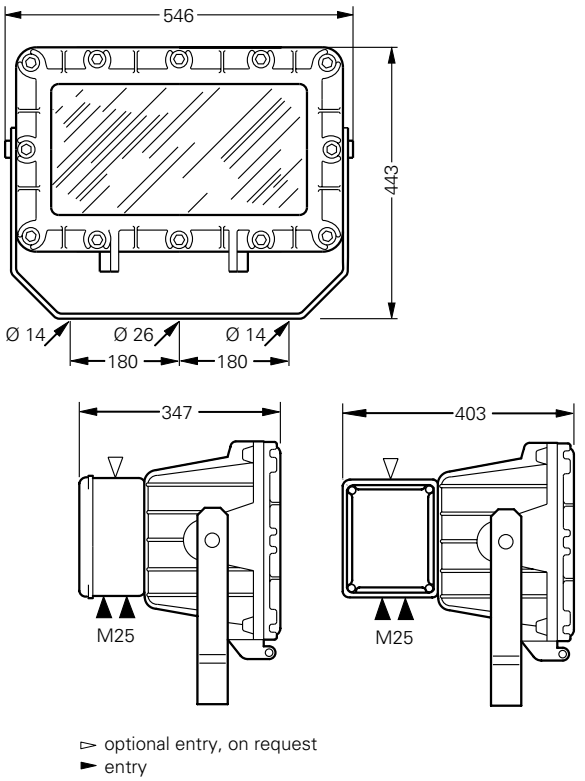
Polar curve with narrow beam reflector



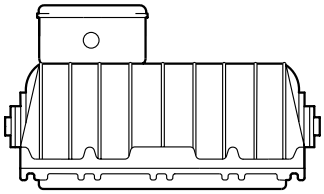
Polar curve with wide beam reflector



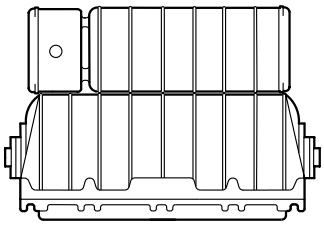
PX 04 and FLT 10



without ballast for QT- and HME-SB-lamps



with ballast for all high pressure discharge lamps



Dimensions in mm

Technical data

	PX 04	FLT 10
EC-Type Examination Certificate	BVS 09 ATEX E 050 X	BVS 09 ATEX E 050 X
IECEx Certificate of Conformity	IECEx BVS-10.0009X	IECEx BVS-10.0009X
Marking accd. to 2014/34/EU	Ⓔx II 2G Ex d eb IIB T2-T4 [1] Gb Ⓔx II 2D Ex tb IIIC T85°C-T210°C [1] Db	Ⓔx II 2G Ex de IIB T3-T4 [1] Gb Ⓔx II 2D Ex tb IIIC T130°C-T190°C [1] Db
Marking accd. to IECEx	Ex de IIB T2-T4 Ex tD A21 IP66 T85°C - 210°C	Ex de IIB T3-T4 Ex tD A21 IP66 T130°C - 190°C
Permissible ambient temperature	-20 °C up to +55 °C	-55°C up to +55 °C
Rated voltage without control gear	≤ 250 V AC	--
Rated voltage with control gear	230 V AC	230 V AC
Frequency	50 Hz	50 Hz
Power factor cos φ	> 0.85	> 0.85
Circuit	compensated circuit	compensated circuit
Protection class	I	I
Lamp name	High pressure sodium lamp HST, Metal halide lamp HIT	High pressure sodium lamp HST, Metal halide lamp HIT
Rated luminous flux	[2]	[2]
Lamp cap	E40 accord. IEC 60238	E40 accord. IEC 60238
Light output ratio	62 %	60 %
Dimensions (L x W x H)	546 x 443 x 396 mm	546 x 443 x 403 mm
Connecting terminals (Ex-e)	L1, N: 2 x 4 mm^2; PE: 2 x 6 mm^2	L1, N: 2 x 4 mm^2; PE: 2 x 6 mm^2
Enclosure earth	2 x 6 mm^2	2 x 6 mm^2
Enclosure colour	grey	grey
Enclosure material	Light alloy	Light alloy
Weight	31 kg	41 kg
Cable glands / gland plates / enclosure drilling	Indirect entries (Ex-e): 2 x M25 x 1.5 thread 1 x plugged M25 screw plug	Indirect entries (Ex-e): 2 x M25 x 1.5 thread 1 x plugged M25 screw plug
Type of mounting	ceiling mounting	ceiling mounting
Degree of protection accd. to EN 60529	IP66	IP66
Protective cover / protective bowl	borosilicate glass	borosilicate glass
Reflector	polished aluminium reflector	polished aluminium reflector

[1] see table page 1.4.36
[2] see table luminaire data S. 1.4.36

Additional luminaire data PX 04

Lamp	Power	Rated luminous flux[1)]	Temperature class II 2 G		max. surface temp. II 2 D	
			$T_U \leq 40$ °C	$T_U \leq 55$ °C	$T_U \leq 40$ °C	$T_U \leq 55$ °C
PX 0407	HS - 70 W	6000 lm	T4	T4	T85 °C	T100 °C
PX 0407	HI. - 70 W	5100 lm	T4	T4	T90 °C	T105 °C
PX 0415	HS. - 150 W	15000 lm	T4	T4	T115 °C	T130 °C
PX 0415	HI. - 150 W	11000 lm	T4	T4	T105 °C	T120 °C
PX 0425	HS. - 250 W	28000 lm	T4	T3	T130 °C	T145 °C
PX 0425	HI. - 250 W	19000 lm	T4	T3	T130 °C	T145 °C
PX 0440	HST - 400 W	48000 lm	T3	T3	T175 °C	T190 °C
PX 0440	HIT - 400 W	33000 lm	T3	T3	T170 °C	T185 °C
PX 0460	HST - 600 W	90000 lm	T3	T2	T195 °C	T210 °C
PX 0405	IQT - 500 W	10000 lm	T3	T2	T185 °C	T200 °C

[1)] depends on used lamps

Additional luminaire data FLT 10

Lamp	Power	rated luminous flux[1)]	Temperature class II 2 G		max. surface temp. II 2 D	
			$T_U \leq 40$ °C	$T_U \leq 55$ °C	$T_U \leq 40$ °C	$T_U \leq 55$ °C
FLT 1007	HS - 70 W	6000 lm	T4	T4	T115 °C	T130 °C
FLT 1007	HI. - 70 W	5100 lm	T4	T4	T115 °C	T130 °C
FLT 1015	HS. - 150 W	15000 lm	T4	T4	T115 °C	T130 °C
FLT 1015	HI. - 150 W	11000 lm	T4	T4	T115 °C	T130 °C
FLT 1025	HS. - 250 W	28000 lm	T4	T3	T145 °C	T160 °C
FLT 1025	HI. - 250 W	19000 lm	T4	T3	T145 °C	T160 °C
FLT 1040	HST - 400 W	48000 lm	T3	--	T190 °C	--
FLT 1040	HIT - 400 W	33000 lm	T3	--	T190 °C	--

[1)] depends on used lamps

Ex-Floodlights for high-pressure discharge lamps, series FZD 04

(Zone 1, 2, 21, 22)

The maintenance- and installation-friendly FZD 04 floodlights for harsh operating conditions

Due to the spatial separation of the lamp module, lamp base and ballast, this powerful and robust spotlight for high-pressure discharge lamps can be installed and maintained in an easy and quick way. The Ex-e ballast enclosure with the compensation capacitor can be mounted within arm's reach. Only the light Ex-e enclosure made of copper-free aluminium for the ignitor is mounted at the desired mounting height of the floodlight and the Ex-d lamp module is simply plugged in and locked. This allows a one-man installation without a crane or other lifting tools.

Flexibility due to modular design

All the components of the modular Ex floodlight have been certified separately as components. The flameproof lamp module can be easily separated from the housing once the locking screw has been loosened. Two sealing systems in the degree of protection IP66 ensure permanently protected Ex-d contacts.

There is no need to switch off the mains voltage to separate the module from the luminaire.

This means that a simple lamp change and easy cleaning of the lamp modules is possible, even outside the hazardous area. Optionally, the module can be fitted with narrow-angle and wide-angle reflectors – these can even be fitted retrospectively and without any additional installation work.

A special advantage

The simple and quick exchanging of the lamp module means that changing the lamp is not a problem, even under extreme weather or climate conditions (snow, ice, and particularly low ambient temperatures).

For extreme environmental conditions

The FZD 04 floodlight series with its maintenance-friendly replaceable lamp module and its large operating/ambient temperature range from -45 °C up to +45 °C is the ideal solution for illuminating large areas and plants in challenging climates.

Features

- Easy lamp replacement due to the Ex-d lamp module
- Modular design of housing Ex-e/Ex-d
- High degree of protection IP 66
- Optional internal wide beam or narrow beam reflector
- Can be used in ambient temperatures as low as-45 °C
- CU-Certificate for Eurasian Economic Community available

Ordering details



FZD 04 with cable gland

Type	Version[2]	Lamp / Illuminant	Reflector	Rated luminous flux [1]	Weight	Cable gland/ thread	Screw plug	Order No.
FZD 04 250 W	GRP	HIT / HST 250 W	narrow beam	19000 / 28000 lm	23.9 kg	1 x M25 for Ø 8-17 mm	1 x M25	**NOR 000 005 192 505**
FZD 04 250 W	GRP	HIT / HST 250 W	wide beam	19000 / 28000 lm	23.9 kg	1 x M25 for Ø 8-17 mm	1 x M25	**NOR 000 005 192 506**
FZD 04 400 W	GRP	HIT 400 W	narrow beam	33000 lm	23.9 kg	1 x M25 for Ø 8-17 mm	1 x M25	**NOR 000 005 194 105**
FZD 04 400 W	GRP	HIT 400 W	wide beam	33000 lm	23.9 kg	1 x M25 for Ø 8-17 mm	1 x M25	**NOR 000 005 194 106**
FZD 04 400 W	GRP	HST 400 W	narrow beam	48000 lm	23.9 kg	1 x M25 for Ø 8-17 mm	1 x M25	**NOR 000 005 194 005**
FZD 04 400 W	GRP	HST 400 W	wide beam	48000 lm	23.9 kg	1 x M25 for Ø 8-17 mm	1 x M25	**NOR 000 005 194 006**
FZD 04 250 W	st. steel	HIT / HST 250 W	narrow beam	19000 / 28000 lm	24.9 kg	1 x M25 for Ø 8-17 mm	1 x M25	**NOR 000 005 192 501**
FZD 04 250 W	st. steel	HIT / HST 250 W	wide beam	19000 / 28000 lm	24.9 kg	1 x M25 for Ø 8-17 mm	1 x M25	**NOR 000 005 192 502**
FZD 04 400 W	st. steel	HIT 400 W	narrow beam	33000 lm	24.9 kg	1 x M25 for Ø 8-17 mm	1 x M25	**NOR 000 005 194 101**
FZD 04 400 W	st. steel	HIT 400 W	wide beam	33000 lm	24.9 kg	1 x M25 for Ø 8-17 mm	1 x M25	**NOR 000 005 194 102**
FZD 04 400 W	st. steel	HST 400 W	narrow beam	48000 lm	24.9 kg	1 x M25 for Ø 8-17 mm	1 x M25	**NOR 000 005 194 001**
FZD 04 400 W	st. steel	HST 400 W	wide beam	48000 lm	24.9 kg	1 x M25 for Ø 8-17 mm	1 x M25	**NOR 000 005 194 002**



FZD 04 without cable gland

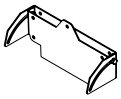
Type	Version[2]	Lamp / Illuminant	Reflector	Rated luminous flux [1]	Weight	Cable gland/ thread	Screw plug	Order No.
FZD 04 250 W	GRP	HIT / HST 250 W	narrow beam	19000 / 28000 lm	23.9 kg	2 x M25, metal thread	1 x M25	**NOR 000 005 192 507**
FZD 04 250 W	GRP	HIT / HST 250 W	wide beam	19000 / 28000 lm	23.9 kg	2 x M25, metal thread	1 x M25	**NOR 000 005 192 508**
FZD 04 400 W	GRP	HIT 400 W	narrow beam	33000 lm	23.9 kg	2 x M25, metal thread	1 x M25	**NOR 000 005 194 107**
FZD 04 400 W	GRP	HIT 400 W	wide beam	33000 lm	23.9 kg	2 x M25, metal thread	1 x M25	**NOR 000 005 194 108**
FZD 04 400 W	GRP	HST 400 W	narrow beam	48000 lm	23.9 kg	2 x M25, metal thread	1 x M25	**NOR 000 005 194 007**
FZD 04 400 W	GRP	HST 400 W	wide beam	48000 lm	23.9 kg	2 x M25, metal thread	1 x M25	**NOR 000 005 194 008**
FZD 04 250 W	st. steel	HIT / HST 250 W	narrow beam	19000 / 28000 lm	24.9 kg	2 x M25, metal thread	1 x M25	**NOR 000 005 192 503**
FZD 04 250 W	st. steel	HIT / HST 250 W	wide beam	19000 / 28000 lm	24.9 kg	2 x M25, metal thread	1 x M25	**NOR 000 005 192 504**
FZD 04 400 W	st. steel	HIT 400 W	narrow beam	33000 lm	24.9 kg	2 x M25, metal thread	1 x M25	**NOR 000 005 194 103**
FZD 04 400 W	st. steel	HIT 400 W	wide beam	33000 lm	24.9 kg	2 x M25, metal thread	1 x M25	**NOR 000 005 194 104**
FZD 04 400 W	st. steel	HST 400 W	narrow beam	48000 lm	24.9 kg	2 x M25, metal thread	1 x M25	**NOR 000 005 194 003**
FZD 04 400 W	st. steel	HST 400 W	wide beam	48000 lm	24.9 kg	2 x M25, metal thread	1 x M25	**NOR 000 005 194 004**

[1] depends on used lamps
[2] GRP: ballast enclosure made from GRP-material / St.S: ballast enclosure made from stainless steel 316L

Scope of delivery without lamp and fixing accessories, if not stated otherwise.
Metal cable glands see catalogue part 2: 2.3.12 ff

Ordering details

Floodlights



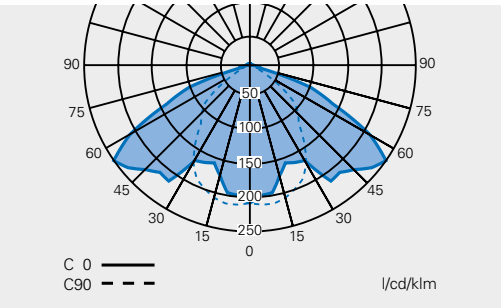
Accessories FZD 04

Type	Content	FZD 04 250 W	FZD 04 400 W	OU	Order No.
Lamp module	Lamp module 250 W/400 W complete with internal reflector				
	narrow beam	X	X	1	**1 3041 000 011**
	wide beam	X	X	1	**1 3041 000 012**
Slip fitter	Adapter for 1 1/4" pole mounting (Innen-Ø = 47.5 mm) compl. with fixing screws	X	X	1	**NOR 000 005 190 021**
Slip fitter	Adapter for 2" pole mounting (Innen-Ø = 66 mm) compl. with fixing screws	X	X	1	**NOR 000 005 190 022**
Swivel bracket	Adjustable hinge for wall-/pole mounting	X	X	1	**NOR 000 005 190 023**
Mounting plate	Stainless steel for wall-/pole mounting (pipe clamps not included)	X	X	1	**NOR 000 005 190 026**
Pipe clamp	1 1/4" pipe clamp (1 pcs.) galvanized Ø 38 - 42 mm²	X	X	1	**2 2480 462 000**
Pipe clamp	1 1/4" pipe clamp (1 pcs.) Stainless steel Ø 38 - 42 mm²	X	X	1	**2 2480 464 000**
Pipe clamp	1 1/2" pipe clamp (1 pcs.) galvanized Ø 47 - 51 mm²	X	X	1	**2 2480 472 000**
Pipe clamp	2" pipe clamp (1 pcs.) galvanized Ø 56 - 60 mm²	X	X	1	**2 2480 482 000**
HIT 250 W	Metal halide lamp 250 W E40	X	–	1	**CGS 323 7990 P1007**
HIT 400 W	Metal halide lamp 400 W E40	–	X	1	**CGS 323 7990 P1008**
HST 250 W	High pressure sodium lamp 250 W E40	X	–	1	**3 2475 900 016**
HST 400 W	High pressure sodium lamp 400 W E40	–	X	1	**3 2475 900 015**

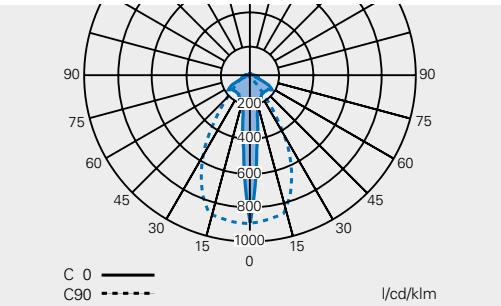
Scope of delivery without lamp and fixing accessories, if not stated otherwise.
Metal cable glands see catalogue part 2: 2.3.12 ff

Other lamps on request

FZD ... with reflector wide beam



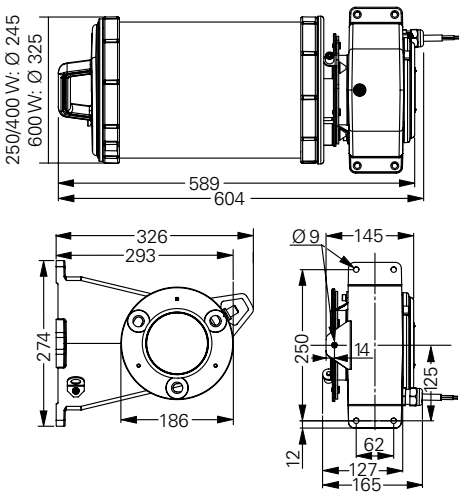
FZD ... with reflector narrow beam



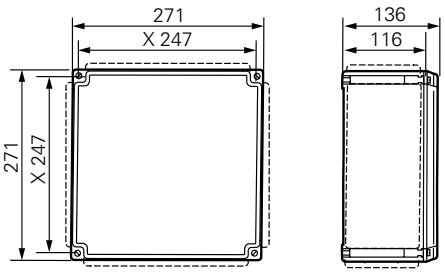
Dimension drawing

FZD 04

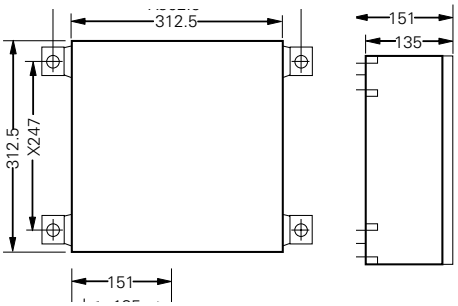
FZD 04 250/400 W



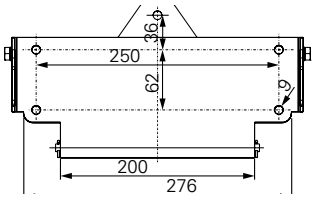
Ballast enclosure: plastic version

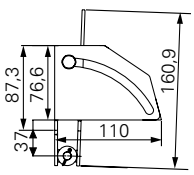


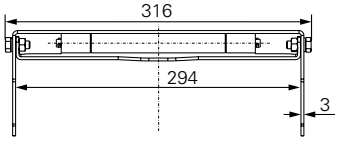
Ballast enclosure: stainless steel version



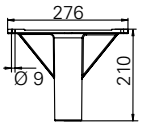
Swivel bracket



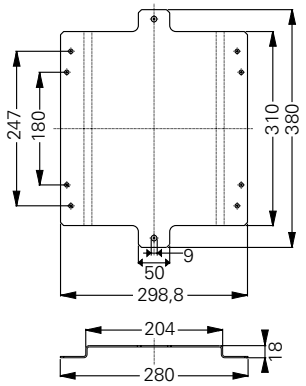




Slip fitter



Mounting plate



Dimensions in mm

Technical data

	FZD 04
EC-Type Examination Certificate	BVS 10 ATEX E 139 X
IECEx Certificate of Conformity	IECEx BKI 07.0002
Marking accd. to 2014/34/EU	Ex II 2 G Ex de mb q IIC T3/T4 [1] Gb Ex II 2 D Ex tb IIIC T [1] Db IP66
Permissible ambient temperature	-45 °C up to +45 °C
Rated voltage	230 V AC [2]
Rated current	150 W: 0.8 A / 250 W: 1.3 A / 400 W: 2.10 A
Frequency	50 Hz [2]
Power factor cos φ	> 0.9
Circuit	Compensated circuit
Protection class	I
Lamp / Illuminant	HST / HIT
Lamp name	High pressure sodium lamp / metal halide lamp
Rated luminous flux	[3]
Lamp cap	E40 accord. IEC 60238
Light output ratio	66 %
Dimensions (L x W x H)	See dimension drawing
Connecting terminals	L, N, PE: 2 x 4 mm² + 4 mm² PE (Ballast enclosure), L, N, PE: 2 x 2.5 mm² + 2.5 mm² PE (lamp module)
Enclosure colour	Grey
Enclosure material	Ballast enclosure: glass-fibre reinforced polyester or stainless steel, floodlight enclosure: light alloy
Weight	Lamp module: approx. 10.6 kg Floodlight enclosure: approx. 4.3 kg Ballast enclosure: 9 kg (glass-fibre reinforced polyester) Ballast enclosure: 10 kg (stainless steel)
Cable glands / gland plates / enclosure drilling	1 x M25 x 1.5 with plastic-cable glands Ex-e M25 for non-amoured cable Ø 8 - 17 mm (floodlight enclosure) [4] 3 x M25 x 1.5, 2 x M25 plastic cable gland Ex-e for cable Ø 8 - 17 mm 1 x M25 plugged (ballast enclosure)[5]
Type of mounting	Ceiling-/wall mounting
Degree of protection accd. to EN 60529	IP66
Protective cover / protective bowl	Borosilicate glass
Reflector	Polished aluminium reflector

[1] see table
[2] other voltages and frequencies on request
[3] see table luminaire data
[4] Connection for ballast
[5] one for connection of the floodlight enclosure, two for line supply

Additional luminaire data FZD 04

		Temperature class II 2 G		max. surface temp. II 2 D	
Lamp	**Luminous flux[1]**	**T_U ≤ 40 °C**	**T_U ≤ 45 °C**	**T_U ≤ 40 °C**	**T_U ≤ 45 °C**
HST / HIT 150 W	15000 lm	T4	T4	T 125 °C	T 130 °C
HST / HIT 250 W	28000 lm	T3	T3	T 145 °C	T 150 °C
HST / HIT 400 W	48000 lm	T3	–	T 190 °C	–

[1] depends on used lamps

Ex-Floodlight for high-pressure discharge lamps dTLS 85

(Zone 1, 2)

Ex-floodlight for high-pressure discharge lamps

The robust dTLS 85 floodlight and the GHG 664 emergency pack for use in hazardous areas in Zones 1 and 2 are suitable for illuminating large areas and objects. Due to the high degree of protection IP66, they are best suited for harsh environments, such as offshore oil and gas production plants or industrial, chemical and petrochemical plants, oil and gas production plants, pipelines, refineries and loading ramps. High-pressure discharge lamps from 70 W to 250 W provide a high illuminance level.

dTLS 85 - versatile

The dTLS 85 floodlight has a robust Ex-d enclosure made of powder copper-free aluminium with a powder-coating. The pressed-in, threaded ring for the flameproof joints made of brass. This facilitates the replacement of lamps, even after a longer operating period. The protective glass is made of scratchproof borosilicate glass; it protects the lighting technology against harmful environmental influences. The floodlight has been designed for outdoor use. The vaporized reflectors are designed for various angles of light diffusion.

The easy-to-maintain electrical connection is made via an Ex-e terminal compartment. The floodlight features an adjustable mounting bracket that allows an optimum focussing of the light.

GHG 664 emergency pack

This robust and extremely reliable emergency supply unit was developed specifically for use on offshore installations and ships. In the event of a power failure, the GHG 664 emergency pack allows the battery-back-up operation of the dTLS 85070 P floodlight with a 70 W high pressure sodium lamp for a period of 1.5 hours. When used in combination with the powerful explosion-protected dTLS 85070 P floodlight, escape routes and evacuation equipment (life boats, life rafts, abseiling equipment or rescue cushions, etc.) can be safely illuminated, even from larger distances. The GHG 664 emergency pack has a flameproof enclosure for electronics components and a flanged-on, increased safety enclosure for the battery and the terminals. The dTLS 85070 floodlight, which is to be mounted separately, features a powerful lighting technology, with which, for example, at a mounting height of 9 m, an area of 15 x 15 m can be illuminated with 1 lux.

Features

- For the efficient illumination of large objects
- Robust housing made of light alloy with powder coating
- Easy lamp replacement, even after a long period of use
- High-gloss reflectors for different diffusion angles
- Large Ex-e connection box for easy installation
- CU-Certificate for Eurasian Economic Community available
- GHG664 emergency pack: safe light for evacuation equipment in hazardous areas with an emergency light duration of 1.5 hrs during power failure; maintained and non-maintained with switch-off device (only 220- 240 V)
- Suitable for use on offshore platforms and ships

Ordering details

Type	Content	Lamp / illuminant	Reflector	Rated luminous flux [1]	Weight	Cable gland/ thread	Screw plug	Order No.
dTLS 85								
dTLS 85250 S	with diffuser lens, inductive	HIT-DE / HST-DE 250 W	wide beam reflector	20000 lm /28000 lm	25 kg	1 x M25 for Ø 8-17 mm, plastic	1 x M25	**CGS 123 8588 P0001**
dTLS 85250 S -40 °C up to +40 °C	with diffuser lens, inductive	HIT-DE / HST-DE 250 W	wide beam reflector	20000 lm /28000 lm	25 kg	1 x M25 for Ø 8-17 mm, plastic	1 x M25	**CGS 123 8588 P0004**
dTLS 85250 S	with diffuser lens, compen-sated circuit	HIT-DE / HST-DE 250 W	wide beam reflector	20000 lm /28000 lm	32 kg	1 x M25 for Ø 8-17 mm, plastic	1 x M25	**CGS 123 8588 P1001**
dTLS 85250 P	with parabolic reflector, inductive	HIT-DE / HST-DE 250 W	narrow beam	20000 lm /28000 lm	25 kg	1 x M25 for Ø 8-17 mm, plastic	1 x M25	**CGS 123 8588 P0002**
dTLS 85250 P	with parabolic reflector, comp.	HIT-DE / HST-DE 250 W	narrow beam	20000 lm /28000 lm	32 kg	1 x M25 for Ø 8-17 mm, plastic	1 x M25	**CGS 123 8588 P1002**
dTLS 85070 P	with parabolic reflector, comp.	HST-DE 70 W	narrow beam	6800 lm	22 kg	1 x M25 for Ø 8-17 mm, plastic	1 x M25	**CGS 123 8588 P0003**

Emergency power supply unit GHG 664								
Power supply unit 230 - 240 V AC	incl. battery with dTLS 85070 P	HST-DE 70 W	narrow beam	6800 lm	48 kg	2 x M20, metal	1 x M20 screw plug (metal)	**GHG 660 1915 R0001**
Power supply unit 120 V AC	incl. battery with dTLS 85070 P	HST-DE 70 W	narrow beam	6800 lm	48 kg	2 x M20, metal	1 x M20 screw plug (metal)	**GHG 660 1915 R0002**
Power supply unit 230 -240 V AC	incl. battery, without light fitting				48 kg	2 x M20, metal	1 x M20 screw plug (metal)	**GHG 664 5001 R0001**

Accessories dTLS 85250 and dTLS 85070

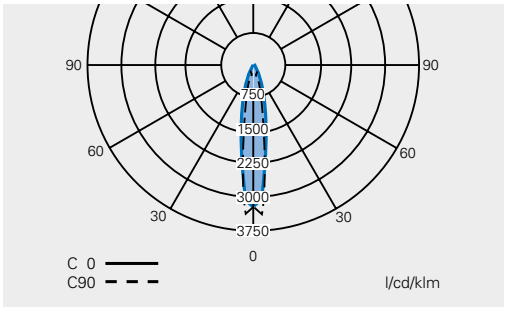
Type	Content	dTLS 85250	dTLS 85070	OU	Order No.
RS	Eye bolt M10 (10 pcs.) galvanised	x	x	1	**GHG 690 1921 R0003**
L 218	Mounting bracket for inductive version	x	x	1	**GHG 690 1913 R0001**
L 430	Mounting bracket for compensated version	x		1	**GHG 690 1913 R0002**
HST-DE 250 W	High pressure sodium lamp 250 W-DE Fc2	x		1	**CGS 323 8500 P1009**
HIT-DE 250 W	Metal halide lamp 250 W-DE Fc2	x		1	**CGS 323 7990 P1009**
HST-DE 70 W	High pressure sodium lamp 70 W-DE Rx 7s		x	1	**GHG 690 9216 P0001**

Scope of delivery without lamp and fixing accessories, if not stated otherwise.
Metal cable glands see catalogue part 2: 2.3.12 ff

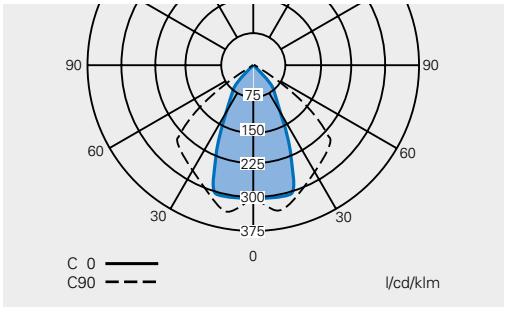
Dimension drawing / Polar curve

dTLS 85

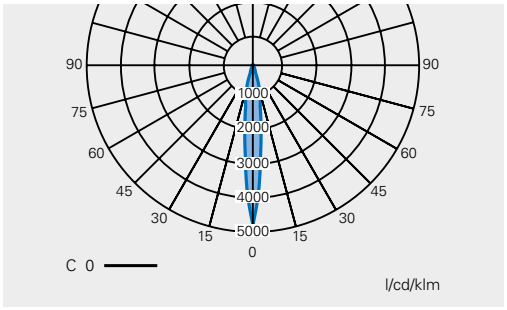
Polar curve
with reflector narrow beam dTLS 85250



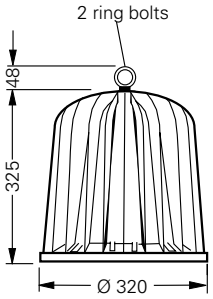
Polar curve
with reflector wide beam reflector dTLS 85250



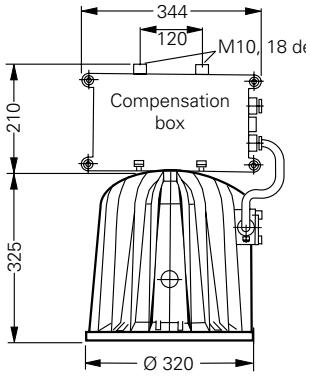
Polar curve
with reflector dTLS 85070



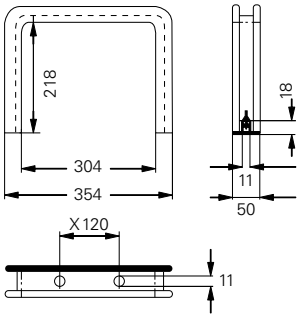
dTLS 85250 ind.
dTLS 85070 comp.



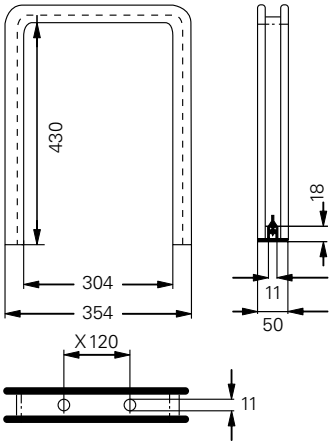
dTLS 85250 comp.



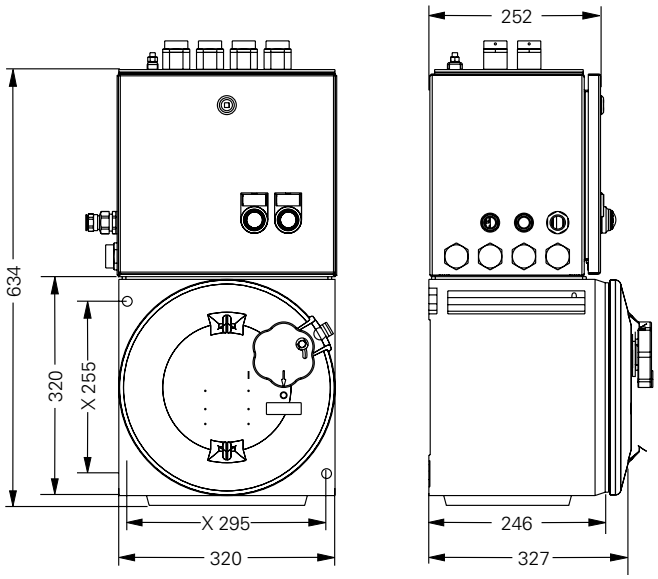
L 218



L 430



GHG 664



Dimensions in mm

Technical data

	dTLS 85 250 / dTLS 85070	Emergency power supply unit GHG 664
EC-Type Examination Certificate	DMT 03 ATEX E 039	PTB 07 ATEX 2002 X
IECEx Certificate of Conformity	IECEx BVS 11.0066	
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex de IIC T3 Gb (dTLS 85250) Ⓔx II 2 G Ex de IIC T4 Gb (dTLS 85070)	Ⓔx II 2 G Ex de IIC T6
Marking accd. to IECEx	Ex de IIC T3 Gb / ---	
Permissible ambient temperature	-50 °C up to +55 °C dTLS 85250 ind. -20 °C up to +55 °C dTLS 85250 comp. -20 °C up to +55 °C dTLS 85070	-20 °C up to +40 °C -5 °C up to +40 °C (specified data)
Output voltage		230 -240 V AC/ 120 V AC
Battery		2 x 12 V, 12 Ah Pb (sealed lead acid accumulator)
Rated voltage	230 V AC	230 V / 120 V
Rated current	3 A (ind.), 1.5 A (comp.) dTLS 85250 0.38 A (comp.) dTLS 85070	max. 0.6 A (charging + floodlight)
Power factor cos φ	0.4 (ind.), ≥ 0.9 (comp.) / ≥ 0,9 (dTLS 85070)	≥ 0.9
Frequency	50 Hz	50 - 60 Hz
Charging duration		≤ 24 h
Power consumption		≤ 50 VA (charging)
Max. output power		80 VA
Circuit	Inductive circuit, compensated circuit (..250)/ electronic driver (..070)	Electronic driver
Protection class	I	I
Lamp / Illuminant	HIT-DE 250 W/HST-DE 250 W (dTLS 85250) HST-DE 70 W (dTLS 85070)	
Rated luminous flux [1)]	HIT-DE 250 W: 19000 lm / HST-DE 250 W: 25000 lm HST-DE 70 W: 6800 lm	[1)]
Lamp cap	Fc2 / RX7s accord. IEC 60061	
Light output ratio	72 % 46 % with diffuser lens	
Rated emergency lighting duration		1.5 h
Dimensions (L x W x H)	Ø 320 x 325 mm	320 x 327 x 634 mm
Connecting terminals	L, N, PE max. 2 x 2.5 mm²	L, L1, N, PE max. 2 x 6 mm² mains supply 3 x 2.5 mm² connection to light fitting
Enclosure colour	grey	grey
Enclosure material	light alloy with powder coating,	light alloy with sea water resistant powder coating
Weight	25 kg / 32 kg (with compensation box)	48 kg
Cable glands / gland plates / enclosure drilling	1 x M25 x 1.5 for cables from Ø 8 - 17 mm 1 x M25 x 1.5 with blanking plug	2 x M20 x 1.5 for cables from Ø 7 - 12 mm (mains supply) 1 x M25 x 1.5 for cables from Ø 11.5- 18 mm (connection to light fitting)
Type of mounting	Ceiling-/wall mounting	Floor/wall monting
Degree of protection accd. to EN 60529	IP66	IP66
Protective cover / protective bowl	Borosilicate glass	
Reflector	Polished aluminium reflector	

[1)] depends on used lamps

Ex-LED-Floodlight LPL LED

(Zone 1, 2, 21, 22)

The powerful LED floodlight for harsh operating conditions

Due to the particularly robust and solid design of the enclosure in combination with the vibration resistance of the LED module, the LPL LED floodlight is insensitive to impact, shocks, and vibrations. As a result, the LPL LED represents the ideal lighting concept for use in areas with difficult environmental conditions. Thanks to the LED technology, extreme temperatures from- 36 °C up to + 55 °C are not a problem. The rugged, flameproof light metal enclosure in the degree of protection IP 66 and the impact-resistant light output meets the highest corrosion protection and mechanical resistance requirements.

An efficient lighting technology

The LPL LED lighting series offers the latest lighting technology with a high luminous flux and, at the same time, an extremely low energy requirement. The LED modules provide a long service life combined with a high level of efficiency. With a power consumption of 53 W to 105 W, the LPL LED lighting series is ideal for replacing 70 W to 250 W light fittings with high pressure discharge lamps, whereby, the low energy consumption and the long service life (> 50,000 h) of the LED module keep operating costs pleasantly low.

Multiple applications

The LPL LED lighting series is suitable for medium and high suspension heights. It is the ideal solution for the illumination of open spaces, indoor areas and roads in industrial installations. Further applications include on- and offshore plants in the oil and gas industry, chemical plants, waste disposal facilities, shipyards, power stations and mills where extreme amounts of dirt and moisture and increased mechanical hazard are to be expected. A U-shaped mounting bracket for wall and ceiling installation of the LPL LED is included.

Features

- High-power LED modules with up to 63% energy saving
- Flameproof enclosure for Zones 1, 2, 21 and 22 and temperature class T6
- Wide temperature range from-36 °C to +55 °C
- CU-Certificate for Eurasian Economic Community available
- High degree of protection IP 66 for harsh environments
- Large Ex-e terminal compartment for ease of installation

Ordering details

Type	Content	Lamp / illuminant	rated luminous flux of the luminaire [1]	Weight	Metal thread	Screw plug	Order No.
LPL LED							
LPL06-C57-5L	with mounting bracket	High power LED-module 53 W (scope of delivery)	5127 lm	17 kg	2 x M25	2 x M25	**CCL 121 4001 AE**
LPL06-C57-7L	with mounting bracket	High power LED-module 70 W (scope of delivery)	6998 lm	17 kg	2 x M25	2 x M25	**CCL 121 4003 AE**
LPL06-C57-9L	with mounting bracket	High power LED-module 87 W (scope of delivery)	8645 lm	17 kg	2 x M25	2 x M25	**CCL 121 4004 AE**
LPL06-C57-10L	with mounting bracket	High power LED-module 105 W (scope of delivery)	10272 lm	17 kg	2 x M25	2 x M25	**CCL 121 4005 AE**

Accessories

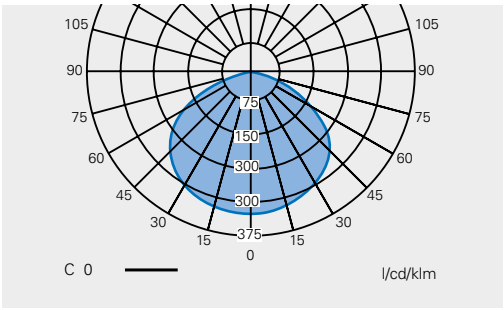
Type	Content	OU	Order No.
PMB	Pole mounting bracket with fixing screws for use with mounting bracket	1	**NOR 000 005 110 836**

Scope of delivery without fixing accessories, if not stated otherwise.
Metal cable glands see catalogue part 2: 2.3.12 f

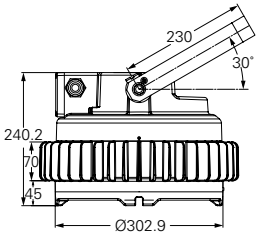
Dimension drawing / Polar curve

LPL LED

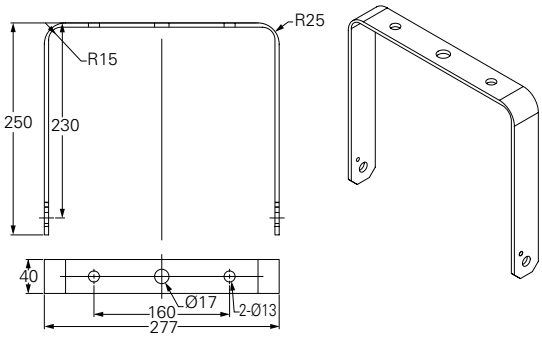
Polar curve LPL06 LED



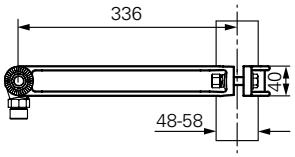
LPL 06 LED



Mounting bracket



Pole mounting bracket



Dimensions in mm

Technical data

	LPL06 LED
EC-Type Examination Certificate	ITS 14 ATEX 18105X
IECEx Certificate of Conformity	IECEx UL 15.0077X
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex d e IIC T5/T6 Gb Ⓔx II 2 D Ex tb IIIC T80°C/T95 °C Db IP66
Marking accd. IECEx	Ex d e IIC T5/T6 Gb Ex tb IIIC T80°C/T95 °C Db IP66
Permissible ambient temperature	-36 °C up to +55 °C / -36 °C up to +50 °C (LPL06-C57-10L)
Rated voltage	100 V - 277 V AC
Frequency	50 - 60 Hz
Fixture lifetime	50.000 h at t_a = + 55 °C / 120.000 h at +25 °C
Power consumption	max. 105 W (see table luminaire data)
Power factor cos φ	≥ 0.9
Circuit	Electronic driver
Protection class	I
Lamp name	High power LED-module [1]
Light colour	5700 K cool white (CRI 70) / 3000 K (CRI 80) on request
Dimensions (L x W x H)	Ø 350 x 240 mm
Connecting terminals	3 x 0.5 mm² up to 4.0 mm², max 6.0 mm² single wire
Enclosure colour	Grey
Enclosure material	Copper free aluminium
Weight	17 kg
Cable glands / gland plates / enclosure drilling	2 x M25 x 1.5 thread, 1 x with Ex-e screw plug [2]
Type of mounting	Ceiling-/wall mounting
Degree of protection accd. to EN 60529	IP66
Protective cover / protective bowl	Toughened glass

[1] Scope of delivery
[2] M20 on request

Additional luminaire data

Type	Rated luminous flux of the luminaire (± 10 %)	Rated power	Permissible ambient temperature	Temperature Class T_e Gas	Temperature Class T °C Dust
LPL06 LED					
LPL06-C57-5L	5127 lm	53 W	-36 °C up to + 55 °C	T6	T 80 °C
LPL06-C57-7L	6998 lm	70 W	-36 °C up to + 55 °C	T6	T 80 °C
LPL06-C57-9L	8645 lm	87 W	-36 °C up to + 55 °C	T6	T 80 °C
LPL06-C57-10L	10272 lm	105 W	-36 °C up to + 50 °C	T5	T 95 °C

Ex-Tank inspection luminaire KFL

(Zone 1, 2, 21, 22)

The compact luminaire for the process industry

The robust and compact explosion-protected KFL tank inspection light fitting is used in all sectors of the process industry for the illumination of boiler interiors, tanks and agitators. The light features special mounting stands which can be attached to different inspection windows of sizes DN 40 to DN 200 in accordance with DIN 28120. As an option, the KFL can be easily carried and stably placed by a carry handle for temporary illumination. The housing is made of copper-free aluminium and has a lens made of impact-resistant borosilicate glass. The aluminium collar has a PTFE coating (Teflon) and is sealed with a Viton seal.

Multifunctional use

In addition to the use for illuminating boilers, this tank inspection light fitting can be used in combination with a carry handle as a maintenance and repair light. High-voltage halogen reflector lamps as well as high-power LED lamps can be used. In addition to that, versions are also available in low voltage applictations for halogen reflector as well as for LED lamps.

The extremely robust design of this fitting, the resistance to chemicals and UV and the high degree of protection IP 66 allow the use of this light fitting even under extremely harsh conditions.

Features

- Compact design
- Portable version with carry handle available
- Ready to connect for 230 V AC and low voltage 12/24 V AC/DC
- With 50 W halogen reflector lamp or high-power LED lamp up to 10 W
- High luminous efficacy
- Generously dimensioned terminal compartment
- Mounting onto inspection windows according to DIN 28120
- High degree of protection IP66

Ordering details

Type	Content	Lamp / Illuminant	Weight	Cable gland/ thread	Threaded plug	Order No.
KFL						
KFL 7 LED	incl. lamp	GU10 lamp socket 5.5 W 230 V LED (incl.)	3 kg	2 x M25, metal thread	1 x M25	**NOR 000 005 140 906**
KFL 7 LED	without lamp	GU5.3 lamp socket (without lamp) for LED lamps up to 10 W 12/24 V	3 kg	2 x M25, metal thread	1 x M25	**NOR 000 005 140 031**
KFL 50 IM	incl. lamp	GU10 lamp socket 50 W 230 V Halogen (incl.)	3 kg	2 x M25, metal thread	1 x M25	**NOR 000 005 140 900**
KFL 50 IM	incl. lamp	GU5.3 lamp socket 50 W 24 V Halogen (incl.)	3 kg	2 x M25, metal thread	1 x M25	**NOR 000 005 140 030**
KFL 50 IM	incl. lamp	BA15 D lamp socket 50 W 12 V Halogen (incl.)	3 kg	2 x M25, metal thread	1 x M25	**NOR 000 005 140 920**
Portable KFL 7 LED	incl. lamp, carry handle	GU10 lamp socket 5.5 W 230 V LED (incl.)	6 kg	2 x M25, metal thread	1 x M25	**NOR 000 005 140 907**
Portable KFL 7 LED	without lamp incl. carry handle	GU5.3 lamp socket (without lamp) for LED lamps up to 10 W 12/24 V	6 kg	2 x M25, metal thread	1 x M25	**NOR 000 005 140 032**

Accessories

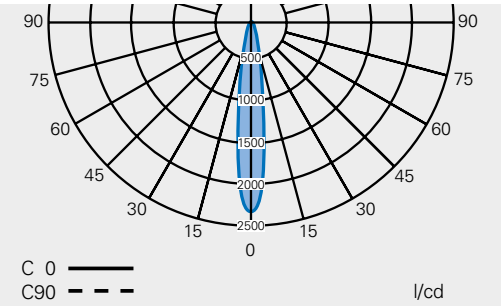
Type	Content	Application	Order unit	Order No.
LED lamp	LED lamp 5.5 W Socket GU 10	KFL 7 LED	1	**NOR 000 000 514 531**
Lamp	Halogen reflector lamp 230 V/50 W, socket GU 10	KFL 50 IM	1	**NOR 000 000 514 529**
Lamp	Halogen reflector lamp 24 V/50 W, 38° socket GU 5.3	KFL 50 IM	1	**NOR 000 000 514 524**
Lamp	Halogen reflector lamp 12 V/50 W, 8° socket BA 15D	KFL 50 IM	1	**NOR 000 000 514 687**
AT	Carry handle	KFL..	1	**NOR 000 005 140 809**
PAD	Antiglare shield	KFL..	1	**NOR 000 005 140 700**
PI	Mounting stands bended	KFL..	1	**NOR 000 005 140 776**

Scope of delivery without lamp, if not stated otherwise.
Metal cable glands see catalogue part 2: 2.3.12 ff

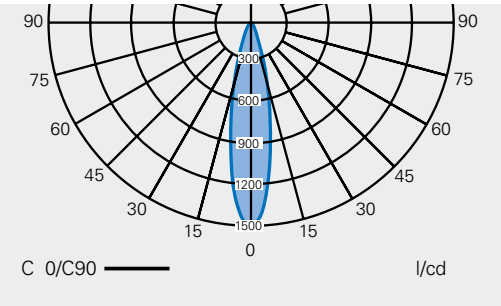
Dimension drawing / Polar curve

KFL

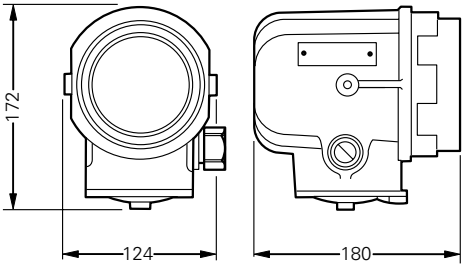
Polar curve KFL 50 IM



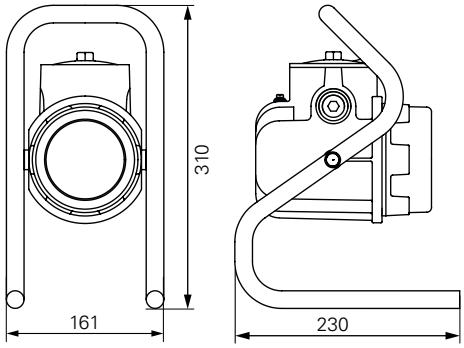
Polar curve KFL 50 IM / 7 LED



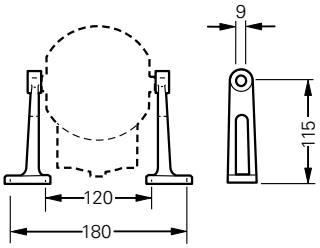
KFL 50 IM / 7 LED



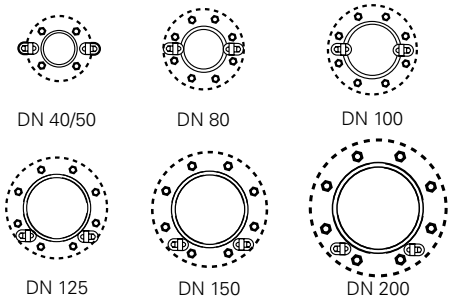
Portable KFL 7 LED



Light fixing facility PI



Allowed tank windows, nominal width



Dimensions in mm

Technical data

	KFL 50 / KFL 50 IM	KFL 7 LED / KFL 7 LED low voltage / Portable KFL 7 LED
EC-Type Examination Certificate	LOM 02 ATEX 2035	LOM 02 ATEX 2035
IECEx Certificate of Conformity	IECEx BKI 07.0009	
Marking accd. to 2014/34/EU	Ex II 2 G Ex d e IIC T3...T4 Gb Ex II 2 D Ex tb IIIC T105 °C...T140 °C	Ex II 2 G Ex d e IIC 6 Gb Ex II 2 D Ex tb IIIC T85 °C
Marking accd. to IECEx	Ex de IIC T3 Ex tD A21 IP67 T140 °C	
Permissible ambient temperature	-50 °C up to +55 °C	-50 °C up to +55 °C
Rated voltage	230 V AC / 12/24 V AC/DC	100 - 240 V AC / 12/24 V DC
Frequency	0 / 50 - 60 Hz	0 / 50 - 60 Hz
Protection class	I	I
Lamp name	50 W high voltage type Sylvania, others on request [1]	5.5 W / up to 10 W LED GU 10, [1]
Lamp cap	GU10 / GU5.3 / BA5 D accord. IEC 60061 [1]	GU10 / GU5.3 accord IEC 60061 [1]
Rated luminous flux of the luminaire (typical, ± 10 %)	depends on lamp	depends on lamp
Dimensions (L x W x H)	180 x 124 x 172 mm	180 x 124 x 172 mm
Dimensions carry handle (portable)	230 x 158 x 310 mm	230 x 158 x 310 mm
Connecting terminals	2 x 2.5 mm², PE internal and external 6.0 mm²	2 x 2.5 mm², PE internal and external 6.0 mm²
Enclosure colour	Grey	Grey
Enclosure material	Light alloy with powder coating	Light alloy with powder coating
Weight	3 kg	3 kg / 6 kg (Portable KFL 7 LED)
Cable glands / gland plates / enclosure drilling	1 x M25 x 1.5 thread, 1 x M25 Ex-e screw plug	1 x M25 x 1.5 thread, 1 x M25 Ex-e screw plug
Degree of protection accd. to EN 60529	IP66	IP66
Protective cover / protective bowl	Toughened glass	Toughened glass

[1] Scope of delivery

Ex-Pendant light fittings and floodlights of the series VMV LED

(Zone 2, 21, 22)

The powerful floodlight with LED technology VMV LED

The energy-saving VMV pendant light fittings and floodlights with LED technology are ideal for all general lighting applications in hazardous areas in Zone 2 and hazardous dust areas in Zones 21 and 22. With the integrated high-power LED technology, these lights can be used to replace comparable conventional light sources with an equivalent capacity of up to 1000 W.

LED technology for heavy-duty use

Due to the particularly solid construction of the housing and the vibration resistance of the LED module, the VMV floodlight is resistant to impact, shock and vibration. As a result, it represents the ideal lighting concept for use in areas with difficult environmental conditions. Thanks to the non-sensitive LED technology, even extreme temperatures from- 40 °C up to +65 °C are not a problem. The robust, powder-coated light metal housing in the degree of protection IP66 and the impact-resistant lens meet the highest corrosion protection and mechanical resistance requirements. The advantages of the integrated, advanced LED technology with a high luminous flux and, at the same time, an extremely low energy consumption are a long service life and a high level of efficiency. With a power consumption of 29 W to 232 W, it is ideal for replacing 70 W to 1000 W light fittings with high pressure lamps.

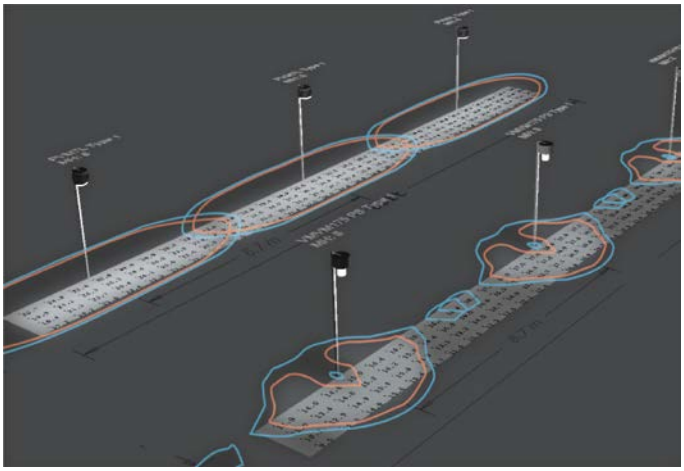
The best lighting technology for every application

The VMV LED pendant light fittings and floodlights series are available with 3 different custom optics:

Type V has a symmetric light distribution and is optimised for general area illumination.

Type III has an asymmetrical light distribution and is, therefore, suitable for near-edge mounting (wall mounting) for surface illumination

Type I has a narrow light distribution and is ideal for lighting roads and pathways.



Champ VMV with Type I optics (left row) compared to conventional fixtures (on the right)

Features

- High power LED modules
- Multiple drivers
- High efficient heat sink design for optimised thermal management
- Wide temperature range from -40 °C up to +65 °C (depends on type)
- High degree of protection IP66 for harsh environments
- Dimmable by control input 0-10 V

Ordering details

Enclosure type 1

Enclosure type 2

Enclosure type 3

Type	Lamp / Illuminant	Rated luminous flux of the luminaire (± 10 %)	Weight	Cable gland/ thread	Threaded plugs	Enclosure type	Order No.
VMV LED lamp module with LEDs (without top mounting module, please order separately)							
VMV LED 3L	29 W Typ V	3515 lm	8.1 kg	–	–	1	**1 2364 745**
VMV LED 5L	43 W Typ V	5335 lm	8.1 kg	–	–	1	**1 2364 746**
VMV LED 7L	62 W Typ V	7195 lm	8.1 kg	–	–	1	**1 2365 201**
VMV LED 9L	85 W Typ V	9226 lm	8.1 kg	–	–	1	**1 2365 202**
VMV LED 11L	113 W Typ V	11440 lm	8.1 kg	–	–	1	**1 2396 576**
VMV LED 13L	130 W Type V	13266 lm	16.3 kg	–	–	2	**1 2442 415**
VMV LED 17L	168 W Type V	18793 lm	16.3 kg	–	–	2	**1 2442 952**
VMV LED 21L	196 W Type V	22110 lm	20.0 kg	–	–	3	**1 2442 986**
VMV LED 25L	232 W Type V	26531 lm	20.0 kg	–	–	3	**1 2443 020**
VMV LED 3L	29 W Typ I	3360 lm	8.1 kg	–	–	1	**1 2374 698**
VMV LED 5L	43 W Typ I	5045 lm	8.1 kg	–	–	1	**1 2375 046**
VMV LED 7L	62 W Typ I	6803 lm	8.1 kg	–	–	1	**1 2375 106**
VMV LED 9L	85 W Typ I	8823 lm	8.1 kg	–	–	1	**1 2375 186**
VMV LED 11L	113 W Typ I	10730 lm	8.1 kg	–	–	1	**1 2401 259**
VMV LED 13L	130 W Type I	12842 lm	16.3 kg	–	–	2	**1 2442 930**
VMV LED 17L	168 W Type I	18195 lm	16.3 kg	–	–	2	**1 2442 963**
VMV LED 21L	196 W Type I	21404 lm	20.0 kg	–	–	3	**1 2442 997**
VMV LED 25L	232 W Type I	25685 lm	20.0 kg	–	–	3	**1 2443 031**
VMV LED 3L	29 W Typ III	3309 lm	8.1 kg	–	–	1	**1 2374 782**
VMV LED 5L	43 W Typ III	4468 lm	8.1 kg	–	–	1	**1 2375 047**
VMV LED 7L	62 W Typ III	6025 lm	8.1 kg	–	–	1	**1 2375 107**
VMV LED 9L	85 W Typ III	8618 lm	8.1 kg	–	–	1	**1 2375 187**
VMV LED 11L	113 W Typ III	10660 lm	8.1 kg	–	–	1	**1 2402 998**
VMV LED 13L	130 W Type III	12493 lm	16.3 kg	–	–	2	**1 2442 941**
VMV LED 17L	168 W Type III	17699 lm	16.3 kg	–	–	2	**1 2442 974**
VMV LED 21L	196 W Type III	20822 lm	20.0 kg	–	–	3	**1 2443 009**
VMV LED 25L	232 W Type III	24987 lm	20.0 kg	–	–	3	**1 2443 042**

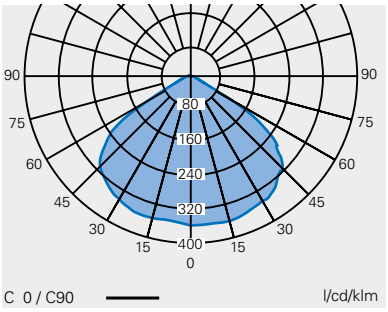
Type	Content	Weight	Cable gland/ thread	Threaded plugs	Order No.
VMV LED top mounting module, (without lamp module, please order separately)					
JM5 [1])	top mounting module for 1 1/2" pole mounting, 25°	1.6 kg	1 x 3/4'' thread	–	**22 250**
PM5	top mounting module for 1 1/2" pole mounting, straight	2.5 kg	1 x 3/4'' thread	–	**00 080**
CM20	top mounting module with M20 ceiling mounting	1.3 kg	4 x M20 thread	4 x M20	**1 1843 088**
TWM20	top mounting module with M20 wall mounting	2.0 kg	4 x M20 thread	4 x M20	**1 1832 237**
S812	mounting bracket (can only be used with top mounting module CM20)	1.0 kg	–	–	**1 2268 927**
JGA5520	Pole adapter for M20 cable gland (JM5/PM5)	0.45 kg	1 1/2" NPT pole thread, 1 x M20 thread		**1 1826 774**
JGA5525	Pole adapter for M25 cable gland (JM5/PM5)	0.45 kg	1 1/2" NPT pole thread, 1 x M25 thread		**1 1826 777**

[1]) only for VMV 3L-11L

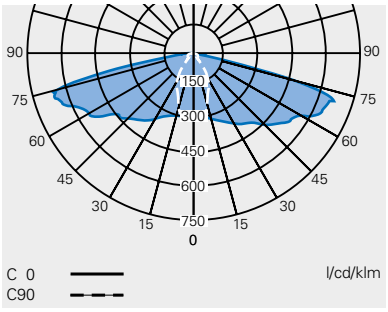
Polar curve / Dimension drawing

VMV LED

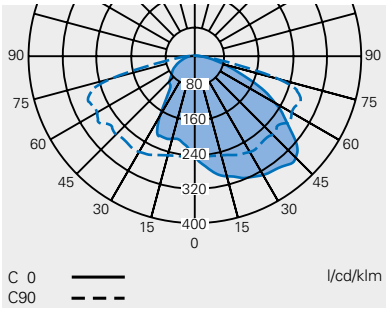
Polar curve VMV LED Type V



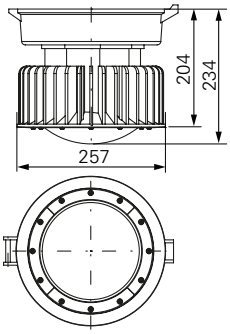
Polar curve VMV LED Type I



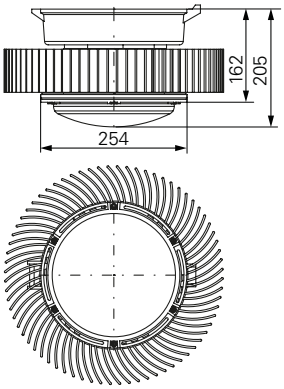
Polar curve VMV LED Type III



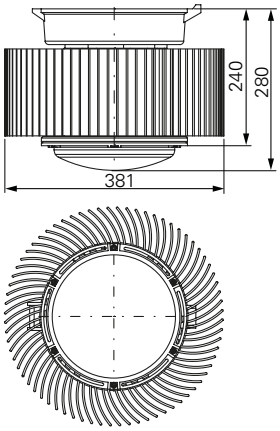
VMV LED
Enclosure type 1



Enclosure type 2

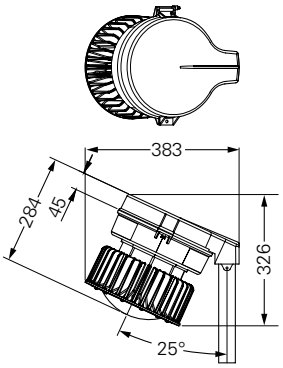


Enclosure type 3

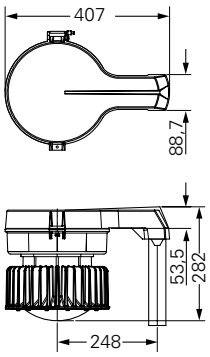


VMV LED

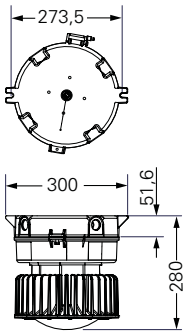
with top mounting module JM5



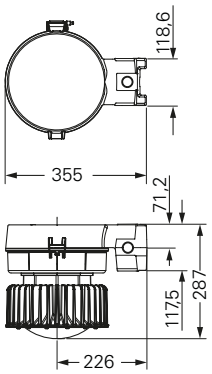
with top mounting module PM5



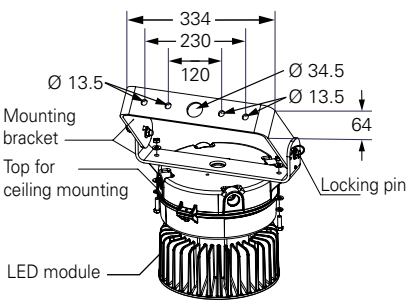
with top mounting module CM20



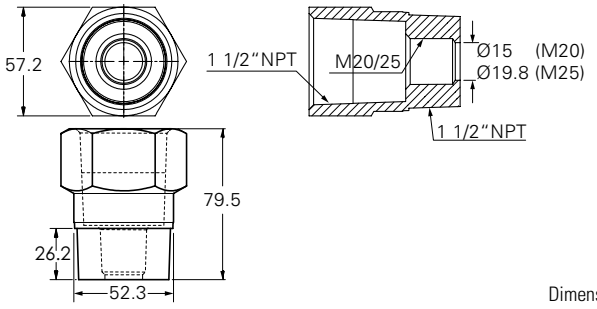
with top mounting module TWM20



Mounting bracket S812



Pole adapter JGA5520 / JGA5525



Dimensions in mm



Technical data

	VMV LED 3L - 11L	VMV LED 13L - 17L	VMV LED 21L - 25L
Type Examination Certificate (gas)	DEMKO 13 ATEX 1475031X	DEMKO 13 ATEX 1475031X	DEMKO 13 ATEX 1475031X
EC-Type Examination Certificate (dust)	DEMKO 13 ATEX 1305741X	DEMKO 13 ATEX 1305741X	DEMKO 13 ATEX 1305741X
IECEx Certificate of Conformity	IECEx UL 13.0052X	IECEx UL 14.0031X	IECEx UL 14.0031X
Marking accd. to 2014/34/EU	Ⓔx II 3 G Ex nA nR IIC T6/T5 Gc Ⓔx II 2 D Ex tb IIIC T92/T87/72°C Db IP66	Ⓔx II 3 G Ex nA nR IIC T6/T5 Gc Ⓔx II 2 D Ex tb IIIC T87/72°C Db IP66	Ⓔx II 3 G Ex nA nR IIC T6/T5 Gc Ⓔx II 2 D Ex tb IIIC T87/72°C Db IP66
Marking accd. to IECEx	Ex nA nR IIC T6 Gc / Ex tb IIIC T87°C/T72 °C Db IP66	Ex nA nR IIC T6/T5 Gc / Ex tb IIIC T81°C/T66 °C Db IP66	Ex nA nR IIC T6/T5 Gc / Ex tb IIIC T86°C/T71 °C Db IP66
Permissible ambient temperature	-40 °C up to +65 °C	-40 °C up to +55 °C	-40 °C up to +55 °C
Lifetime fixture	200,000 h at t_a = +25 °C 60,000 h at t_a = +65 °C	170,000 h at t_a = +25 °C 60,000 h at t_a = +55 °C	170,000 h at t_a = +25 °C 60,000 h at t_a = +55 °C
Rated voltage	120 - 277 V AC / 108 - 250 V DC	100 - 277 V AC / 108 - 250 V DC	100 - 277 V AC / 108 - 250 V DC
Frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Power	1)	1)	1)
Power factor cos φ	> 0.9	> 0.9	> 0.9
Circuit	electronic driver	electronic driver	electronic driver
Dimming control input	0 -10 V, 15 - 100 %	0 -10 V, 15 - 100 %	0 -10 V, 15 - 100 %
Protection class	I	I	I
Lamp / Illuminant	LED System, scope of delivery	LED System, scope of delivery	LED System, scope of delivery
Light colour/CRI	5000 K/70, 3000 K/80 on request	5000 K/70, 3000 K/80 on request	5000 K/70, 3000 K/80 on request
Rated luminous flux of the luminaire (typical, ± 10 %)	1)	1)	1)
Dimensions (L x W x H)	280 x 295 x 230 mm	381 x 381 x 197 mm	381 x 381 x 274 mm
Connecting terminals	L, N, PE max. 2 x 2.5 mm²	L, N, PE max. 2 x 2.5 mm²	L, N, PE max. 2 x 2.5 mm²
Enclosure colour	grey/black	grey/black	grey/black
Enclosure material	Copper-free aluminium with epoxy-powder coating	Copper-free aluminium with epoxy-powder coating	Copper-free aluminium with epoxy-powder coating
Weight	8.1 kg	16.3 kg	20.0 kg
Degree of protection accd. to EN 60529	IP66	IP66	IP66
Protective cover / protective bowl	Heat- and impact-resistant glass 2)	Heat- and impact-resistant glass 2)	Heat- and impact-resistant glass 2)

1) See table luminaire data
2) Polycarbonate lens on request / frosted cover on request

Additional luminaire data

Type	Power	luminous flux of the luminaire type V (± 10 %)	Temperature class II 3 G			max. surface temp. II 2 D		
			TU ≤ 40 °C	TU ≤ 55 °C	TU ≤ 65 °C	TU ≤ 40 °C	TU ≤ 55 °C	TU ≤ 65 °C
VMV LED								
VMV 3L LED	29 W	3515 lm	T6	T5	T4	T72 °C	T87 °C	T92 °C
VMV 5L LED	43 W	5335 lm	T6	T5	T4	T72 °C	T87 °C	T92 °C
VMV 7L LED	62 W	7195 lm	T6	T5	T4	T72 °C	T87 °C	T92 °C
VMV 9L LED	85 W	9226 lm	T6	T5	T4	T72 °C	T87 °C	T92 °C
VMV 11L LED	113 W	11440 lm	T6	T5	T4	T72 °C	T87 °C	T92 °C
VMV 13L LED	131 W	13226 lm	T6	T5		T66 °C	T81 °C	
VMV 17L LED	168 W	18793 lm	T6	T5		T66 °C	T81 °C	
VMV 21L LED	196 W	22110 lm	T6	T5		T71 °C	T86 °C	
VMV 25L LED	232 W	26531 lm	T6	T5		T71 °C	T86 °C	

Ex-Pendant light fittings and floodlights of the series NVMV

(Zone 2, 21, 22)

NVMV pendant light fittings for high-pressure discharge lamps

The NVMV series of pendant light fittings for high-pressure discharge lamps in IEC metallic design is suitable for operation in hazardous areas in Zone 2 and Zones 21/22, in particular in harsh environments with high mechanical load, moisture and dust.

The lights are available in 2 sizes: The small enclosure for lamps from 70 W to 250 W (preferably 70-150 W); the large enclosure for lamps of 250 W and 400 W. All versions can be operated with both HSE and HIE lamps and are suitable for low and medium suspension heights. Thanks to their high degree of ingress protection and wide temperature range, this series can also be used under extreme conditions.

Wide range of applications

The NVMV lighting series is suitable for wall, ceiling and pole mounting. This makes them the ideal solution for almost any industrial applications, such as the illumination of open spaces, indoor areas and roadways in industrial plants in the oil and gas industry, chemical plants, waste disposal facilities, shipyards, power stations and mills.

Features

- NVMV S / M pendant light fittings for high pressure discharge lamps
- From 70 W to 400 W
- Wide temperature range from-45 °C up to +55 °C
- High degree of ingress protection IP66 for harsh environments

Ordering details

Type	Lamp / illuminant	Rated luminous flux	Weight	Cable gland/ thread	Screw plug	Order No.
NVMV small enclosure, with ceiling mounting						
S2MC 075 O 00	70 W HSE	5600 lm [1]	7.6 kg	4 x M25 x 1.5	4 x M25	**CCL 0807 178E**
S2MC 105 O 00	100 W HSE	8500 lm [1]	7.6 kg	4 x M25 x 1.5	4 x M25	**CCL 0807 184E**
S2MC 155 O 00	150 W HSE	14500 lm [1]	7.6 kg	4 x M25 x 1.5	4 x M25	**CCL 0807 190E**
S2MC 255 O 00	250 W HSE	27000 lm [1]	7.6 kg	4 x M25 x 1.5	4 x M25	**CCL 0807 196E**
M2MC 075 O 00	70 W HIE	5200 lm [1]	7.6 kg	4 x M25 x 1.5	4 x M25	**CCL 0807 113E**
M2MC 105 O 00	100 W HIE	8500 lm [1]	7.6 kg	4 x M25 x 1.5	4 x M25	**CCL 0807 119E**
M2MC 155 O 00	150 W HIE	12500 lm [1]	7.6 kg	4 x M25 x 1.5	4 x M25	**CCL 0807 125E**
M2MC 255 O 00	250 W HIE	19000 lm [1]	7.6 kg	4 x M25 x 1.5	4 x M25	**CCL 0807 137E**
NVMV small enclosure, with wall mounting						
S2MW 075 O 00	70 W HSE	5600 lm [1]	8 kg	4 x M25 x 1.5	4 x M25	**CCL 0807 202E**
S2MW 105 O 00	100 W HSE	8500 lm [1]	8 kg	4 x M25 x 1.5	4 x M25	**CCL 0807 208E**
S2MW 155 O 00	150 W HSE	14500 lm [1]	8 kg	4 x M25 x 1.5	4 x M25	**CCL 0807 214E**
S2MW 255 O 00	250 W HSE	27000 lm [1]	8 kg	4 x M25 x 1.5	4 x M25	**CCL 0807 220E**
M2MW 075 O 00	70 W HIE	5200 lm [1]	8 kg	4 x M25 x 1.5	4 x M25	**CCL 0807 143E**
M2MW 105 O 00	100 W HIE	8500 lm [1]	8 kg	4 x M25 x 1.5	4 x M25	**CCL 0807 149E**
M2MW 155 O 00	150 W HIE	12500 lm [1]	8 kg	4 x M25 x 1.5	4 x M25	**CCL 0807 155E**
M2MW 255 O 00	250 W HIE	19000 lm [1]	8 kg	4 x M25 x 1.5	4 x M25	**CCL 0807 167E**
NVMV small enclosure, for pole mounting						
S5NJ 075 O 00	70 W HSE	5600 lm [1]	8 kg	1 x 1 1/2" NPT		**CCL 0807 225E**
S5NJ 105 O 00	100 W HSE	8500 lm [1]	8 kg	1 x 1 1/2" NPT		**CCL 0807 226E**
S5NJ 155 O 00	150 W HSE	14500 lm [1]	8 kg	1 x 1 1/2" NPT		**CCL 0807 227E**
S5NJ 255 O 00	250 W HSE	27000 lm [1]	8 kg	1 x 1 1/2" NPT		**CCL 0807 228E**
M5NJ 075 O 00	70 W HIE	5200 lm [1]	8 kg	1 x 1 1/2" NPT		**CCL 0807 172E**
M5NJ 105 O 00	100 W HIE	8500 lm [1]	8 kg	1 x 1 1/2" NPT		**CCL 0807 173E**
M5NJ 155 O 00	150 W HIE	12500 lm [1]	8 kg	1 x 1 1/2" NPT		**CCL 0807 174E**
M5NJ 255 O 00	250 W HIE	19000 lm [1]	8 kg	1 x 1 1/2" NPT		**CCL 0807 176E**
NVMV large enclosure, for ceiling mounting						
S2MC 255 OL 0	250 W HSE	27000 lm [1]	21 kg	4 x M25 x 1.5	4 x M25	**CCL 1030 119E**
S2MC 405 OL 0	400 W HSE	48000 lm [1]	21 kg	4 x M25 x 1.5	4 x M25	**CCL 1030 145E**
M2MC 255 OL 0	250 W HIE	19000 lm [1]	21 kg	4 x M25 x 1.5	4 x M25	**CCL 1030 106E**
M2MC 405 OL 0	400 W HIE	34000 lm [1]	21 kg	4 x M25 x 1.5	4 x M25	**CCL 1030 132E**
NVMV large enclosure, for wall mounting						
S2MW 255 OL 0	250 W HSE	27000 lm [1]	21.4 kg	4 x M25 x 1.5	4 x M25	**CCL 1030 125E**
S2MW 405 OL 0	400 W HSE	48000 lm [1]	21.4 kg	4 x M25 x 1.5	4 x M25	**CCL 1030 151E**
M2MW 255 OL 0	250 W HIE	19000 lm [1]	21.4 kg	4 x M25 x 1.5	4 x M25	**CCL 1030 112E**
M2MW 405 OL 0	400 W HIE	34000 lm [1]	21.4 kg	4 x M25 x 1.5	4 x M25	**CCL 1030 138E**
NVMV large enclosure, for pole mounting						
S5NJ 255 OL 0	250 W HSE	27000 lm [1]	21.4 kg	1 x 1 1/2" NPT		**CCL 1030 130E**
S5NJ 405 OL 0	400 W HSE	48000 lm [1]	21.4 kg	1 x 1 1/2" NPT		**CCL 1030 156E**
M5NJ 255 OL 0	250 W HIE	19000 lm [1]	21.4 kg	1 x 1 1/2" NPT		**CCL 1030 117E**
M5NJ 405 OL 0	400 W HIE	34000 lm [1]	21.4 kg	1 x 1 1/2" NPT		**CCL 1030 143E**

[1] depends on used lamps

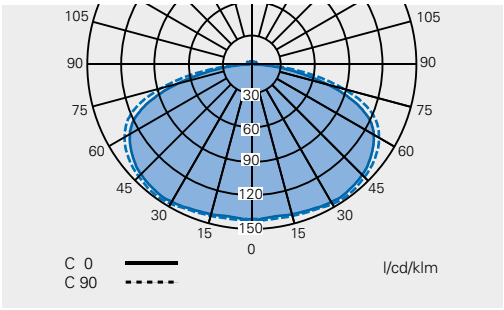
Accessories for NVMV...

Type	Content	small enclosure	large enclosure	OU	Order No.
P 22	Wire guard made from stainless steel	X		1	**78 24**
RD 70	External reflector, symmetrically	X		1	**11 718**
RD 739	External reflector, symmetrically		X	1	**25 90**
RA 70	External reflector, asymmetrically	X		1	**96 20**
RA 739	External reflector, asymmetrically		X	1	**25 88**
S 890	Quick installation bracket	X		1	**11 923 847**
CHR	Installation bracket for rope/chain fixing method	X	X	1	**CHR 7326**
P 33	Wire guard made from stainless steel		X	1	**26 249**
HSE 70 W	High pressure sodium lamp 70 W E27	X		1	**3 2475 900 012**
HSE 100 W	High pressure sodium lamp 100 W E40	X		1	**3 2475 900 013**
HSE 150 W	High pressure sodium lamp 150 W E40	X		1	**3 2475 900 014**
HSE 250 W	High pressure sodium lamp 250 W E40	X	X	1	**CGS 3238 600 P1009**
HSE 400 W	High pressure sodium lamp 400 W E40			1	**CGS 3238 700 P1009**
HIE 70 W	High pressure metal halide lamp 70 W E27	X		1	**3 2475 900 010**
HIE 100 W	High pressure metal halide lamp 100 W E27	X		1	**3 2475 900 011**
HIE 150 W	High pressure metal halide lamp 150 W E27	X		1	**3 2475 900 019**
HIE 250 W/	High pressure metal halide lamp 250 W E40	X	X	1	**3 2475 900 017**
HIE 400 W/	High pressure metal halide lamp 400 W E40	X	X	1	**3 2475 900 018**

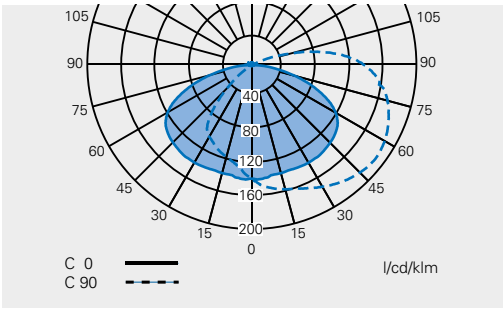
Scope of delivery without lamp and fixing accessories, if not stated otherwise.
Metal cable glands see catalogue part 2: 2.3.12 ff

NVMV small enclosure

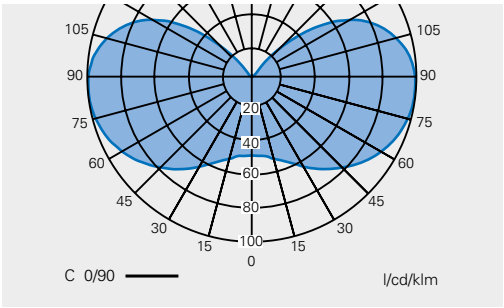
Polar curve NVMV 70 - 250 W (with external reflector RD 70)



Polar curve NVMV 70 - 250 W (with external reflector RA 70)

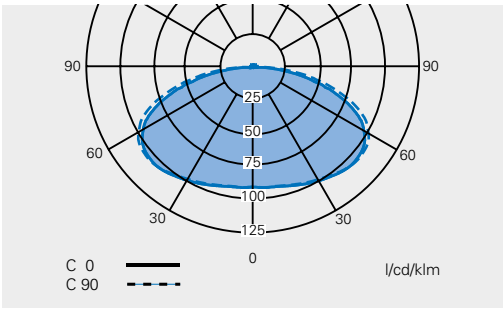


Polar curve NVMV 70 - 250 W (without external reflector)

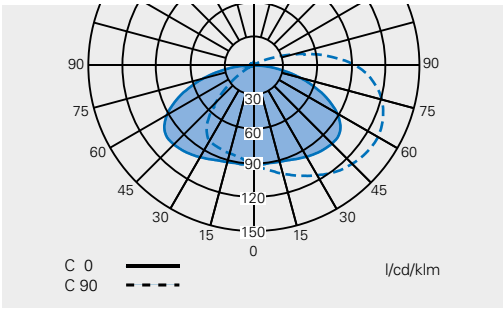


NVMV large enclosure

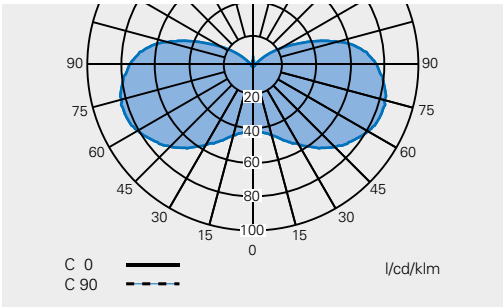
Polar curve NVMV 250 - 400 W (with external reflector RD 739)



Polar curve NVMV 250 - 400 W (with external reflector RA 739)



Polar curve NVMV 250 - 400 W (without external reflector)



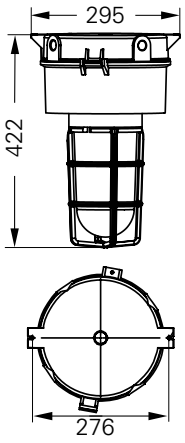
Dimensions in mm

Dimension drawing

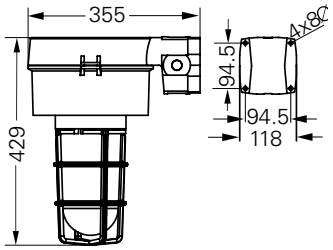
NVMV

NVMV small enclosure

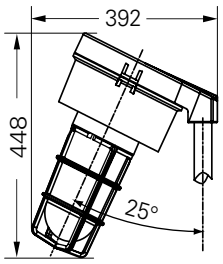
Ceiling mounting



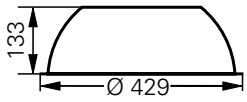
Wall mounting



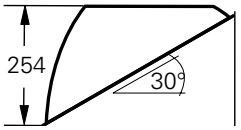
Pole mounting 25 °



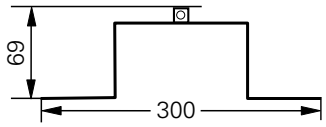
Reflector RD70



Reflector RD70

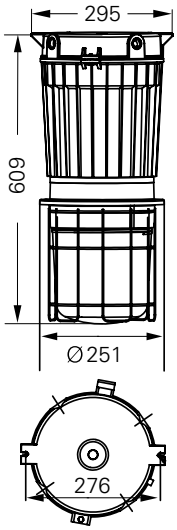


Mounting bracket

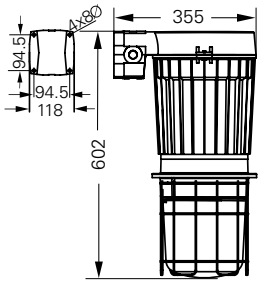


NVMV large enclosure

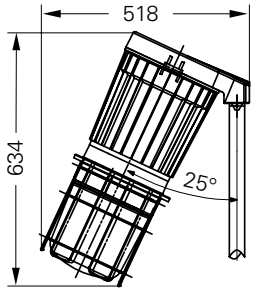
Ceiling mounting



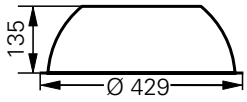
Wall mounting



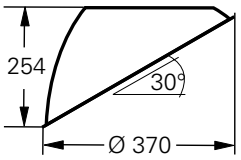
Pole mounting 25 °



Reflector RD 739



Reflector RD 739



Technical data

	NVMV - small enclosure	NVMV - large enclosure
Type Examination Certificate	LCIE 10 ATEX 1005 (Gas) LCIE 10 ATEX 3029 (Dust)	LCIE 10 ATEX 1005 (Gas) LCIE 10 ATEX 3029 (Dust)
EC-Type Examination Certificate	Ⓔx II 3 G Ex nR IIC T [1] Ⓔx II 2 D Ex tb IIIC T [1] °C Db IP66	Ⓔx II 3 G Ex nR IIC T [1] Ⓔx II 2 D Ex tb IIIC T [1] °C Db IP66
Permissible ambient temperature	-45 °C up to +55 °C	-45 °C up to +55 °C
Rated voltage	230 V AC [2]	230 V AC [2]
Frequency	50 Hz [2]	50 Hz [2]
Power factor cos φ	> 0.9	> 0.9
Circuit	conventional ballast	conventional ballast
Protection class	I	I
Lamp / Illuminant	HSE / HIE 70 - 150 W	HSE / HIE 250 - 400 W
Lamp name	High pressure sodium lamp / Metal-Halide lamp	High pressure sodium lamp / Metal-Halide lamp
Rated luminous flux	[1]	[1]
Lamp cap	E27 / E40	E40
Light output ratio	74 %	78 %
Connecting terminals	L, N, PE max. 3 x 6 mm^2	L, N, PE max. 3 x 6 mm^2
Enclosure colour	grey	grey
Enclosure material	light alloy with powder coating	light alloy with powder coating
Weight	7.6 kg	21 kg
Cable glands / gland plates / enclosure drilling	thread 4 x M25 x 1.5 with Blanking plug	thread 4 x M25 x 1.5 with Blanking plug
Degree of protection accd. to EN 60529	IP66	IP66
Protective cover / protective bowl	borosilicate glass	borosilicate glass

Additional luminaire data

Type	Power	luminous flux of the luminaire [3]	Temperature class II 2 G		max. surface temp. II 2 D	
			without reflector	with reflector	without reflector	with reflector
NVMV... (small enclosure - SE)						
HSE	70 W	5600 lm	T4	T4	114 °C	119 °C
HSE	100 W	8800 lm	T4	T4	114 °C	119 °C
HSE	150 W	14000 lm	T3	T3	137 °C	155 °T
HSE	250 W	25000 lm	T3	T2	183 °C	204 °C
HIE	70 W	5100 lm	T4	T4	114 °C	119 °C
HIE	100 W	7800 lm	T4	T4	114 °C	119 °C
HIE	150 W	11000 lm	T3	T3	137 °C	155 °C
HIE	250 W	19000 lm	T3	T2	183 °C	204 °C
NVMV... (large enclosure - LE)						
HSE	250 W	25000 lm	T3	T3	152 °C	152 °C
HSE	400 W	48000 lm	T3	T3	174 °C	190 °C
HIE	250 W	33000 lm	T3	T3	152 °C	152 °C
HIE	400 W	34000 lm	T3	T2	174 °C	208 °C

[1] see table luminaire data
[2] other voltages and Frequencies on request
[3] depends on used lamps

Ex-Floodlights of the series FMV LED / NFMV / NSSFMV

(Zone 2, 21, 22)

The powerful LED floodlights FMV/nFMV...LED

The new series of energy-saving FMV floodlights in LED technology are ideal for all general lighting applications in explosive gas atmospheres Zone 2 and in explosive dust atmospheres Zone 21 and 22.

The floodlights with a light output from 3189 lm up to 15181 lm can be used to replace comparable conventional light sources with an equivalent power of 50 W up to >1000 W. The new types NFMV 25L and 50L can even replace highest luminous flux power up to >1000 W of conventional HP lamps.

High efficient power LED modules with more than 112 lumen per watt enables up to 70 % energy cost reduction compared to HID fixtures.

LED technology for harsh environments

Due to the particularly solid construction of the housing and the vibration resistance of the LED module, the FMV LED floodlight is resistant to impact, shock and vibration. As a result, it represents the ideal lighting concept for use in areas with difficult environmental conditions. Thanks to the non-sensitive LED technology, even extreme temperatures from-40 °C up to +55 °C are not a problem. The robust, powder coated light metal housing in the degree of protection IP 66 and an impact-resistant lens meet the highest corrosion protection and mechanical resistance requirements. The advantages of the integrated, advanced LED technology with a high luminous flux and, at the same time, an extremely low energy consumption are a long service life and a high level of efficiency.

NFMV floodlights for high-pressure discharge lamps

The NFMV floodlights with high-gloss internal reflectors for high-pressure discharge lamps from 150 W up to 400 W are suited for operation in hazardous areas in Zone 2 and Zone 21 and ambient temperatures of-25 °C to +50 / 45 °C. The light metal housing with an epoxy resin powder coating and a glass that is resistant to temperature changes and impacts meets the requirements for the degree of protection IP66. The modular design allows a fast and economical installation. A durable sealing system for use in extreme ambient conditions offers additional security. The restricted breathing design allows high light outputs and, at the same time, a favourable temperature class T3.

Stainless steel NSSFMV floodlights for particularly harsh environments

The NSSFMV floodlights with high-gloss internal reflectors for high-pressure discharge lamps from 150 W to 400 W fulfil the requirements for hazardous areas in Zone 2 and Zone 22 and ambient temperatures from-25 °C to +55 / 50 °C particularly in harsh environments with a high level of mechanical load, moisture and dust. The stainless steel enclosure with a temperature-change and impact-resistant glass meets the requirements of the degree of protection IP66. The modular design allows a fast and economical installation. A durable sealing system for use in extreme ambient conditions offers additional security. The restricted breathing design allows high light outputs and, at the same time, a favourable temperature class T3.

Wide range of applications

The particularly rugged construction, the high degree of protection and the wide temperature range make these light fittings particularly suitable for offshore applications, in the oil and gas industry and in chemical plants, where explosive atmospheres are to be expected. Further applications include use in explosive gas atmospheres in Zone 2 areas such as oil refineries, ships and drilling platforms, chemical, petrochemical and LNG facilities, waste and wastewater facilities, as well as industrial applications indoors and outdoors. Applications in explosive dust atmospheres in Zone 21 and 22 include flour mills, sugar mills, food production, wood processing and other plants with combustible dusts. The NFMV / NSSFMV floodlights feature an adjustable mounting bracket and are suitable for wall and ceiling mounting in medium and large suspension heights. Accessories for pole mounting are also available.

Features

- FMV LED floodlights for high power LED modules
- NFMV and NSSFMV luminaires for high-pressure discharge lamps from 150 W to 400 W
- Wide temperature range according to type from-45 °C up to +55 °C
- High degree of protection IP66 for harsh environments

Ordering details

Type	Lamp / illuminant	Rated luminous flux of the luminaire	Weight	Cable gland/ thread	Screw plug	Order No.
FMV LED						
FMV 3L CY/UNV1 76 M20	LED System 28 W [1]	3189 lm	13.9 kg	2 x M20 metal thread	1 x M20	**1 2564 443**
FMV 5L CY/UNV1 76 M20	LED System 45 W [1]	5183 lm	13.9 kg	2 x M20 metal thread	1 x M20	**1 2564 445**
FMV 7L CY/UNV1 76 M20	LED System 62 W [1]	7095 lm	13.9 kg	2 x M20 metal thread	1 x M20	**1 2564 446**
FMV 9L CY/UNV1 76 M20	LED System 79 W [1]	9132 lm	14.5 kg	2 x M20 metal thread	1 x M20	**1 2564 383**
FMV 11L CY/UNV1 76 M20	LED System 99 W [1]	11107 lm	14.5 kg	2 x M20 metal thread	1 x M20	**1 2564 382**
FMV 13L CY/UNV1 76 M20	LED System 112 W [1]	13100 lm	14.5 kg	2 x M20 metal thread	1 x M20	**1 2564 384**
FMV 15L CY/UNV1 76 M20	LED System 131 W [1])	15.181 lm	14.5 kg	2 x M20 metal thread	1 x M20	**1 2595 564**
FMV 3L CY/UNV1 76 M25	LED System 28 W [1]	3189 lm	13.9 kg	2 x M25, metal thread	1 x M25	**1 2564 448**
FMV 5L CY/UNV1 76 M25	LED System 45 W [1]	5183 lm	13.9 kg	2 x M25, metal thread	1 x M25	**1 2564 449**
FMV 7L CY/UNV1 76 M25	LED System 62 W [1]	7095 lm	13.9 kg	2 x M25, metal thread	1 x M25	**1 2564 450**
FMV 9L CY/UNV1 76 M25	LED System 79 W [1]	9132 lm	14.5 kg	2 x M25, metal thread	1 x M25	**1 2564 451**
FMV 11L CY/UNV1 76 M25	LED System 99 W [1]	11107 lm	14.5 kg	2 x M25, metal thread	1 x M25	**1 2564 452**
FMV 13L CY/UNV1 76 M25	LED System 112 W [1]	13100 lm	14.5 kg	2 x M25, metal thread	1 x M25	**1 2564 385**
FMV 15L CY/UNV1 76 M25	LED System 131 W [1])	15.181 lm	14.5 kg	2 x M25 metal thread	1 x M25	**1 2595 600**

nFMV 25L						
NFMV 25L CY/UNV1 76 M20	LED System 263 W [1])	26.240 lm	23.6 kg	2 x M20, metal thread, 1 x M20 cable gland Ø 10 - 16 mm	1 x M20	**1 2521 842**

nFMV 50L						
NFMV 50L CY/UNV1 76 M20	LED System 531 W [1])	53.890 lm	48.1 kg	2 x M20, metal thread, 1 x M20 cable gland Ø 10 - 16 mm	1 x M20	**1 2649 227**

NFMV						
NFMV HSE 150 W, 230 V 50 Hz	HSE 150 W	14000 lm	15.5 kg	2 x M20 metal thread	1 x M20	**NOR 000 005 180 021**
NFMV HSE 150 W, 240 V 50 Hz	HSE 150 W	14000 lm	15.5 kg	2 x M20 metal thread	1 x M20	**NOR 000 005 180 022**
NFMV HSE/HIE 250 W, 230 V 50 Hz	HSE/HIE 250 W	25000 lm / 19000 lm	16.9 kg	2 x M20 metal thread	1 x M20	**NOR 000 005 180 024**
NFMV HSE/HIE 250 W, 240 V 50 Hz	HSE/HIE 250 W	25000 lm / 19000 lm	16.9 kg	2 x M20 metal thread	1 x M20	**NOR 000 005 180 025**
NFMV HSE/HIE 400 W, 230 V 50 Hz	HSE/HIE 400 W	48000 lm / 33000 lm	15.5 kg	2 x M20 metal thread	1 x M20	**NOR 000 005 180 027**
NFMV HSE/HIE 400 W, 240 V 50 Hz	HSE/HIE 400 W	48000 lm / 33000 lm	15.5 kg	2 x M20 metal thread	1 x M20	**NOR 000 005 180 028**
NSSFMV						
NSSFMV SY 150, 230 V 50 Hz M25	150 W HSE	14000 lm	16.9 kg	2 x M25, metal thread	2 x M25	**CCL 110 3421**
NSSFMV SY 250, 230 V 50 Hz M25	250 W HSE	25000 lm	17.5 kg	2 x M25, metal thread	2 x M25	**CCL 110 3469**
NSSFMV MY 250, 230 V 50 Hz M25	250 W HIE	19000 lm	17.5 kg	2 x M25, metal thread	2 x M25	**CCL 110 3470**
NSSFMV SY 400, 230 V 50 Hz M25	400 W HSE	48000 lm	18.6 kg	2 x M25, metal thread	2 x M25	**CCL 110 3517**
NSSFMV MY 400, 230 V 50 Hz M25	400 W HIE	33000 lm	18.9 kg	2 x M25, metal thread	2 x M25	**CCL 110 3518**

[1] scope of delivery

Accessories

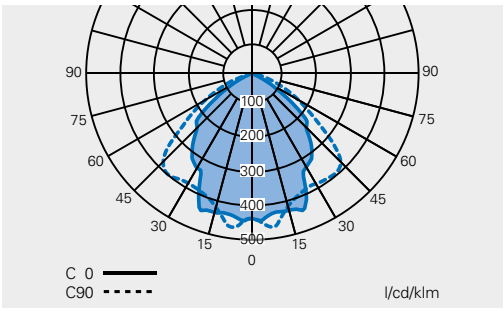
Type	Content	OU	Rated luminous flux	Order No.
Slip fitter 2" for pole mounting		1		**20 49**
HSE 150 W	high pressure sodium lamp 150 W E40	1	14000 lm	**NOR 000 000 511 300**
HSE 250 W	high pressure sodium lamp 250 W E40	1	25000 lm	**CGS 3238 600 P1009**
HSE 400 W	high pressure sodium lamp 400 W E40	1	48000 lm	**CGS 3238 700 P1009**
HIE 250 W	Metal-halide lamp 250 W	1	17000 lm	**CGS 323 7990 P1007**
HIE 400 W	Metal-halide lamp 400 W	1	33000 lm	**CGS 323 7990 P1008**

Wire guard and external visor on request for FMV LED
Scope of delivery without lamp and fixing accessories, if not stated otherwise. Metal cable glands see catalogue part 2: 2.3.12 ff

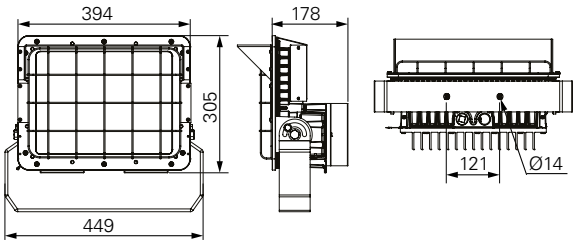
Dimension drawing / Polar curve

FMV LED / NFMV / NSSFMV

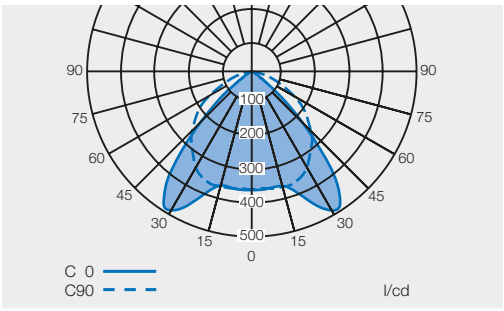
Polar curve FMV LED



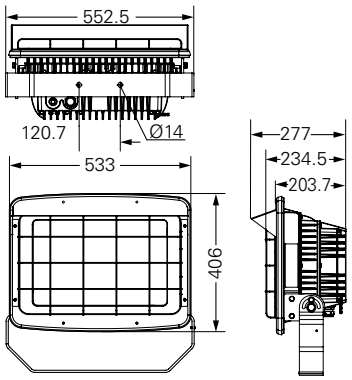
FMV LED



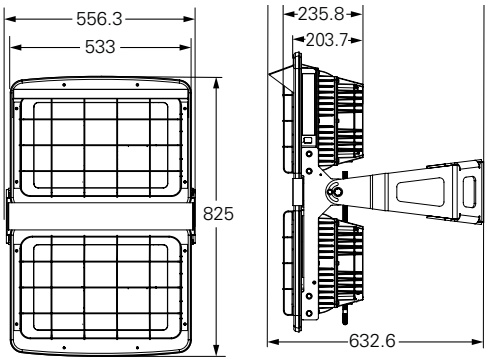
Polar curve nFMV 25L/50L wide beam



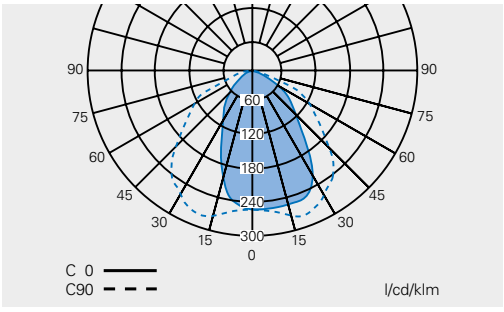
nFMV 25L LED



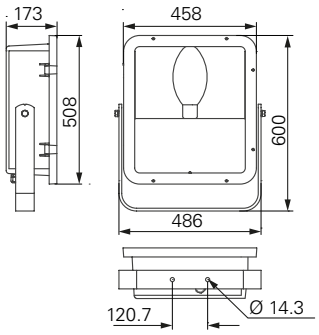
nFMV 50L LED



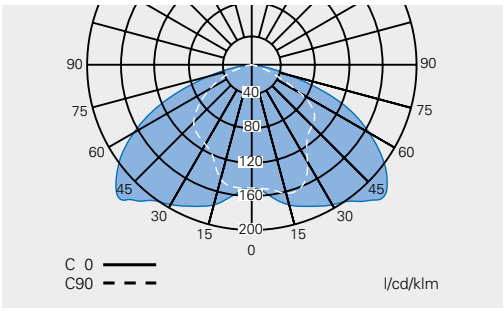
Polar curve NFMV 150 - 400 W



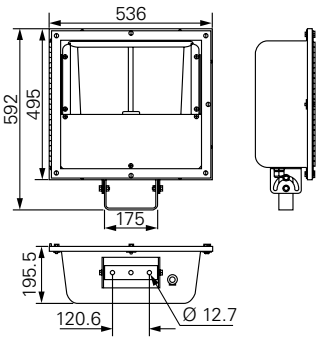
NFMV



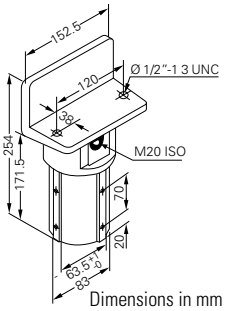
Polar curve NSSFMV



NSSFMV



Slip fitter



Dimensions in mm



Technical data

	FMV LED	nFMV LED 25/50L
Type Examination Certificate (gas)	DEMKO 15 ATEX 1383X	DEMKO 15 ATEX 1225X
EC-Type Examination Certificate (dust)	DEMKO 15 ATEX 1377X	DEMKO 15 ATEX 1226X
IECEx Certificate of Conformity	IECEx UL 15.0029	IECEx UL 15.0040X
Marking accd. to 2014/34/EU	Ⓔx II 3 G Ex nA IIC T5/ T4 Gc Ⓔx II 2 D Ex tb IIIC T65 °C/T80 °C Db	Ⓔx II 3 G Ex nA IIC T4 Gc Ⓔx II 2 D Ex tb IIIC T76°C Db IP66
Marking accd. to IECEx	Ex nA IIC T5/T4 Gc Ex tb IIIC T65 °C/T80 °C Db	Ex nA IIC T4 Gc Ta -30 °C to +55 °C Ex tb IIIC T 76 °C Db Ta -30 °C to +40 °
Permissible ambient temperature	-40 °C up to +55 °C	-30 °C bis +55 °C (gas) / -30 °C up to +40 °C (dust)
Lifetime fixture	60,000 h at t_a = +55 °C / 150,000 h at t_a = +25 °C	50,000 h bei t_a = +55 °C / 100,000 h bei t_a = +25 °C
Rated voltage	100 - 277 V AC /108 - 250 V DC	120 - 277 V AC /127 - 250 V DC
Frequency	50 - 60 Hz	0/50 - 60 Hz
Power factor cos φ	≥ 0.9	≥ 0.9
Circuit	electronic driver	electronic driver
Protection class	I	I
Lamp / Illuminant	LED System 28 - 131 W	LED System 263 W (NFMV 25L) / LED System 531 W (NFMV 50L)
Light colour / CRI	5000 K / R_a 70, 3000 K / R_a 80 on request	5000 K / R_a 70
Dimensions (L x W x H)	394 x 178 x 305 mm	533 x 204 x 406 mm (NFMV 25L) / 533 x 204 x 825 mm (NFMV 50L)
Connecting terminals	L, N and PE; 2 x 4 mm²	L, N and PE; 2 x 4 mm²
Enclosure colour	grey	grey
Enclosure material	light alloy with powder coating	light alloy with powder coating
Weight	14.5 kg	23,6 kg (NFMV 25L) / 48,1 kg (NFMV 50L)
Cable glands / gland plates / enclosure drilling	metal thread 2 x M20 x 1.5, 1 x M20 plugged or metal thread 2 x M25 x 1.5, 1 x M25 plugged	metal thread 2 x M25 x 1.5, 1 x M25 plugged [1)]
Type of mounting	mounting bracket	mounting bracket
Degree of protection accd. to EN 60529	IP66	IP66
Protective cover / protective bowl	borosilicate glass	borosilicate glass

Additional luminaire data

Type	Power	Rated luminous flux of the luminaire (± 10 %)	Temperature class II 3 G	
			TU ≤ 40 °C	TU ≤ 55 °C
FMV LED				
FMV 3L LED	28 W	3189 lm	T5	T4
FMV 5L LED	45 W	5183 lm	T5	T4
FMV 7L LED	62 W	7095 lm	T5	T4
FMV 9L LED	79 W	9132 lm	T5	T4
FMV 11L LED	99 W	11107 lm	T5	T4
FMV 13L LED	112 W	13100 lm	T5	T4
FMV 15L LED	131 W	15181 lm	T5	T4
nFMV 25L LED	263 W	26.240 lm	T4	T4
nFMV 25L LED	531 W	53.890 lm	T4	T4

Technical data

NFMV / NSSFMV

Technical data

	NFMV	NSSFMV
Type Examination Certificate	DEMKO 10 ATEX 0907694	LCIE 11 ATEX 1014 X (Gas) LCIE 11 ATEX 3101 X (Staub)
EC-Type Examination Certificate	DEMKO 10 ATEX 147285	
IECEx Certificate of Conformity		IECEx CQM 12.0004X
Marking accd. to 2014/34/EU	Ex II 3 G Ex nR II T3 Ex II 2 D Ex tD A21 IP66 T [2]	Ex II 3 G Ex nR II T3/T2 Ex II 2 D Ex tb IIIC T [2] Db
Marking accd. to IECEx		Ex nR IIC T3/T2 Gc Ex tb IIIC T125°C/T205°C IP66
Permissible ambient temperature	-25 °C up to +55 °C (< 400 W) -25 °C up to +50 °C (400 W)	-45 °C up to +55 °C (≤ 250 W)/ -45 °C up to +50 °C (400 W)
Rated voltage	230 V [1]	230 V [1]
Frequency	50 Hz [1]	50 Hz [1]
Power factor cos φ	≥ 0.9	≥ 0.9
Protection class	I	I
Lamp / Illuminant	HSE/HIE lamp 150 - 400 W	HSE/HIE lamp 150 - 400 W
Lamp cap	E40 accord. IEC 60238	E40 accord. IEC 60238
Rated luminous flux	[1]	[1]
Light output ratio	60 %	68 %
Dimensions (L x W x H)	600 x 458 x 173 mm	592 x 535 x 193 mm
Connecting terminals	L, N and PE; 2 x 4 mm^2	L, N, PE max. 2 x 2.5 mm^2
Enclosure colour	grey	natual
Enclosure material	light alloy with powder coating	stainless steel
Weight	15.5 kg	16.9 kg
Cable glands / gland plates / enclosure drilling	2 x M20 x 1.5 thread, 1 x M20 plugged	2 x M20 x 1.5 thread, 1 x M20 plugged
Type of mounting	mounting bracket	mounting bracket
Degree of protection accd. to EN 60529	IP66	IP66
Protective cover / protective bowl	borosilicate glass	borosilicate glass

Additional luminaire data NFMV and NSSFMV

Type	Power	Rated luminous flux [3]	Temperature class II 3 G			max. surface temp. II 2 D		
			$T_U \leq 40$ °C	$T_U \leq 50$ °C	$T_U \leq 55$ °C	$T_U \leq 40$ °C	$T_U \leq 50$ °C	$T_U \leq 55$ °C
NFMV...								
HSE	150 W	14000 lm	T5	T3	--	T100 °C	T200 °C	--
HSE	250 W	25000 lm	T5	T3	--	T100 °C	T200 °C	--
HIE	250 W	19000 lm	T3		T3	T200 °C		T200 °C
HSE / HIE	400 W	48000 lm / 33000 lm	T3	T3	--	T200 °C	T200 °C	--
NSSFMV...								
HSE	150 W	14000 lm	T4	T3	T3	T125 °C	T135 °C	T140 °C
HSE / HIE	250 W	25000 lm / 19000 lm	T3	T3	T3	T160 °C	T170 °C	T175 °C
HSE / HIE	400 W	48000 lm / 33000 lm	T3	T2	--	T195 °C	T205 °C	--

[1] other frequencies on request
[2] see table luminaire data
[3] depends on used lamps

Index of order code

Index of order code

Index of order code

Notice

Crouse-Hinds Series Products

The safety you rely on.

See the complete offering of hazardous and industrial products at www.crouse-hinds.de.

U.S. (Global Headquarters): Eaton's Crouse-Hinds Division

1201 Wolf Street
Syracuse, NY 13208

(866) 764-5454
FAX: (315) 477-5179
FAX Orders Only:
(866) 653-0640

CrouseCustomerCTR@Eaton.com

For more information:
If further assistance is required, please contact an authorized Eaton Distributor, Sales Office, or Customer Service Department.

Australia
Phone +61-2-8787-2777
Fax +61-2-9609-2342
crousehindsanz@eaton.com

China
Phone +86-21-2899-3600
Fax +86-21-2899-4055
ECHsales@eaton.com

Great Britain
Phone +44-247-630-89 30
Fax +44-247-630-10 27
sales5@eaton.com

India
Phone +91-124-4683888
Fax +91-124-4683899
cchindia@eaton.com

Canada
Toll Free +1-800-265-0502
Fax +1-800-263-9504
Fax orders only:
+1-866-653-0645

Korea
Phone +82-2-3484-6783
Fax +82-2-3484-6778
CCHK-sales@eaton.com

Mexico/Latin America/ Caribbean
Phone +52-555-804-4000
Fax +52-555-804-4020
ventascentromex@eaton.com

Spain
Phone +34-9-37362710
Fax +34-9-37835055
sales.CCH.es@
cooperindustries.com

Middle East (Dubai)
Phone +971-4-427-2522 / 2500
Fax +971-4-429-8521
CHMEsales@eaton.com

The Netherlands
Phone +31-10-2452145
Fax +31-10-2452121
CHRD_mail@eaton.com

Norway
Phone +47-32-244600
Fax +47-32-244646
CHLIoffice@eaton.com

Singapore:
Phone +65-6645-9888
Fax +65-6297-4819
CHSI-Sales@eaton.com

Turkey
Phone +90-216-464-20-20
Fax +90-216-464-20-10
infoEGTurkey@eaton.com

Russia
Phone +7-495 510-24-27
Fax +7-495 510-24-28
info@cooper.ru.com
www.cooper-russia.ru

Eaton
Neuer Weg – Nord 49
D-69412 Eberbach

Phone +49 (0) 6271/806-500
Fax +49 (0) 6271/806-476
E-mail info-ex@eaton.com
Internet www.crouse-hinds.de

Powering Business Worldwide

Eaton
1000 Eaton Boulevard
Cleveland, OH 44122
United States
Eaton.com

Printed in USA
Publication No. BR 2236
Article No. 30080002236
September 2017

Eaton's Crouse-Hinds Division
1201 Wolf Street
Syracuse, NY 13208
(866) 764-5454
CrouseCustomerCTR@Eaton.com